

Ministry of Planning



National Development Plan

2018-2022



Republic of Iraq



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June 2018

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Abbreviations

bpd	Barrels per day
BSA	Board of Supreme Audit
CoI	Commission of Integrity
CoM	Council of Ministers
COMSEC	General Secretariat for the Council of Ministers
COSIT	Central Statistical Organisation
CSOs	Civil society organisations
dpb	Dollars per barrel
GDP	Gross Domestic Product
IDPs	Internally displaced persons
IGOs	Inspector General Offices
IMF	International Monetary Fund
IQD	Iraqi Dinar
kWh	Kilowatt/hour
KRI	Kurdistan Region of Iraq (Kurdistan)
MMbbl	Million barrels (oil volume)
MMbpd	Million barrels per day
MMscf	Million standard cubic feet (gas volume)
MMscfd	Million standard cubic feet per day
MW	Megawatt
MWh	Megawatt/hour
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoP	Ministry of Planning
NACS	National Anti-Corruption Strategy
NDP	National Development Plan
PPP	Public-private partnership
PHCs	Primary healthcare centres
PSDS	Private Sector Development Strategy
RBM	Result-based management
R&D	Research and development
SOEs	State-owned enterprises
t	Metric tonne
TI	Transparency International

Statement by the Minister of Planning

The fact that Iraq has endured successive crises and challenges has exacerbated problems and deepened their impact and effects. Recent developments have resulted in pressure on human capital, lack of jobs and low human development, as well as massive destruction of infrastructure. The situation calls for urgent implementation of long-term national programmes, plans and policies to develop the country's human and physical capabilities.

Interdependent and mutually reinforcing goals and benefits are undoubtedly of interest to all partners. This calls us today to pursue a policy of prosperity partnership with all social groups, while everyone seeks to make their human and civilizational contributions as a symbol of the future, a platform for available opportunities, and a home for the spirit of innovation, creativity, science and artistic talent. We must always look forward to the future as drawn by Iraq Vision 2030 and as translated by the National Development Plan 2018-2022.

NDP 2018-2022 is guided by four main pillars, which are present throughout its chapters and which represent the main concerns in overcoming the current development challenges, namely:

- Good governance and associated pillars and components;
- Developing the private sector as a vital anchor for progress and development and a transformer of economic diversification policies;
- Post-crisis reconstruction and development of affected provinces; and
- Reducing multidimensional poverty in the provinces.

The NDP focuses on recovery and reconstruction efforts in the directly affected provinces, and on development and investment in the indirectly affected provinces. It attempts to highlight national reform priorities that help address the structural causes that impede development promotion. As such, the NDP is more a policy and programme plan, rather than a project plan focused on improving asset management.

Thus, the NDP mainly focuses on citizens who need to be aware, and on driving the process of economic activity, creating livelihoods, and providing a basis for long-term development by strengthening the provision of basic services across Iraq.

The fate of Iraq in all its areas and communities is in the hands of its people, and today it has the means to engage them on a path of great ambition shared by all – that is, to build and strengthen our human and physical capabilities; to adopt harmonious, constructive and effective choices; and to accelerate and deepen the foundations of reform.

In these hopeful times, we hope that NDP 2018-2022 will provide a solid foundation to strengthen and develop partnerships among all, on a strong basis of trust, shared responsibility and faith in the capacities of the Iraqi society.

Dr Salman Al-Jumaili

Minister of Planning

Chairman of the High NDP Development Committee

Baghdad, June 2018

Acknowledgment

This national document has been completed after nearly two years of active and systematic effort by experts at the Ministry of Planning (MoP)– with an active participation of all ministries, non-ministry entities, provinces, representatives of the private sector, civil society organisations and academics, and under significant changes to the country’s situation during a period of severe security and economic crises – and building on all the indicators and evidence available on Iraq’s strengths and capacity to overcome adversity and crises.

For all of this, we have to express appreciation and gratitude to all those who contributed to the development of the five-year NDP document – in particular the Minister of Planning and Chairman of the High NDP Development Committee Dr Salman Al-Jumaili, whose guidance and flexibility given to the technical committee and sector teams facilitated greatly the completion of the task.

We would also like to thank the General Secretariat for the Council of Ministers (COMSEC), the Prime Minister’s Advisory Commission, the Prime Minister’s Office, ministries, non-ministry entities, all provinces and representatives of the federations and unions to NDP development committees for their effective and fruitful cooperation in the course of developing the NDP.

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We are proud and highly value the effort made by the chairpersons and members of the NDP technical and sectoral committees and all MoP staff who, in one way or another, contributed to the various stages of NDS development and worked actively over the past two years.

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We hope that this document will be a key guideline for a comprehensive development programme that represents Iraq’s post-crisis recovery scenario and the first step toward realising Iraq Vision 2030.

Dr Maher Hammd Johan

Undersecretary of Planning for Technical Affairs
Chairman of the Technical NDP Development Committee
Baghdad, June 2018





Introduction

Iraq is a country of diverse and multiple ethnicities, religions, resources, and physical and human resources. These resources can make Iraqi distinctive development model by using such diversity as “a historic opportunity that can turn into an extraordinary success story.” Particularly in recent decades, the experiences of nations and peoples have clearly shown that crises can foster change – and even miracles– as crises are the driving stimulus for development.

The National Development Plan (NDP) 2018-2022 is the most significant step forward in Iraq’s sustainable development journey (Iraq Vision 2030) towards the future we aspire to as a developed country in all dimensions: economically, politically, culturally, socially, ecologically, psychologically and spiritually. The NDP focuses on Iraq’s commitment to growth which seeks reconciliation, stabilisation and prosperity, which is based on civilizational heritage and balanced values, and where all share in the opportunities to build an interdependent and mutually reinforcing society.

NDP 2018-2022 is guided by a set of sectoral policies and strategies primarily based on human capital and a socially responsible economy that seeks to optimally mobilise and efficiently allocate resources to improve the quality of life in a secure, stable and sustainable environment.

Accordingly, NDP 2018-2022 seeks to pave the way for the livelihoods and aspirations of future Iraqis. It represents the Government’s commitment to realising the aspirations of the Iraqi people.


The current NDP 2018-2022 addresses challenges in a balanced manner. It is guided by the goals of Vision 2030 in order to drive the course towards a developed economy and a healthy and cohesive society that embraces all. The NDP also provides for new opportunities for growth, especially given continued international and regional support for Iraq.

The next five years are expected to be also difficult, with persistent challenges and uncertainties in the global economy, expectations of fluctuating crude oil prices, and continuing risks affecting stabilisation efforts domestically in an unstable regional environment. Additionally, there is need for more determination to fight corruption and to enhance productivity – in order to drive economic growth. There is also need to strengthen the fiscal situation while ensuring adequate public financing to respond to the growing population – in order to successfully capitalise on Iraq’s demographic opportunity, as well as to raise the GDP per capita for the poor.

The period of development of NDP 2018-2022 has been marked by accelerated events and changes and a persistent uncertainty at different levels. It started with the idea for an emergency plan ,moving on to response plan, and ending with a plan for reconstruction and development. Therefore, the NDP prioritisation paths revolve around policy-making as an essential instrument for growth ,and they depart from projects linked to asset formation (focusing rather on asset management improvement policies).

In a context of intolerance, bias and prime loyalty to groups, it is difficult to create opportunities for stability and partnership with dominant groups. It is therefore urgent to provide a more inclusive public space to counteract the state of fragmentation and divide between rival groups, while the presence of resolute and determined leadership remains an indicator for success.

A plan developed under a complex financial, security and social crisis should include carefully defined action priorities – including a different vision, new approaches to problems and challenges, and a different scope of government intervention. That is why the NDP, using the result-based management (RBM) approach, has set out a range of goals at different levels, adapted to appear as key goals with priorities to be more explicit and guiding to executing entities and development partners. Therefore, the issues of concern that will be transformed into key goals in the NDP include means of achievement reinforced by more policies and less government funding.



The RBM approach was selected because it is the intention of the Government to go beyond the patriarchal role of a State that citizens are accustomed to. For a number of reasons, the State can no longer play this role, and indeed, it should not play this role while fulfilling its social obligations to citizens. On the other hand, linking the NDP to projects at the early stages of preparation did not reflect reality, resulting in a NDP which is closer to a policy plan than to a project plan.

Therefore, the NDP is guided by four main pillars, which are present throughout its chapters and which represent the main concerns in overcoming the current development challenges, namely:

- Laying the foundations for good governance and associated pillars and components;
- Developing the private sector as a vital anchor for progress and development;
- Post-crisis reconstruction and development of affected provinces; and
- Reducing multidimensional poverty in the provinces.

In order to overcome funding constraints and to provide a favourable business environment that stimulates all economic activities, the NDP gives priority to addressing: economic sectors that remain underdeveloped, the disintegration of community structures, weaknesses in governmental and institutional roles, the limited role of the domestic private sector, and the private sector reluctance to invest in Iraq.



Methodology

NDP 2018-2022 steps on an analysis of the status quo to map specific paths for prioritisation. In this context, the Iraqi economy was analysed in its macro, sectoral and spatial dimensions (whenever relevant data and information were available). The NDP chapters also convey a comprehensive analysis of infrastructures, public services, human and social development and poverty alleviation.

Result-based management (RBM) approach was used to develop the NDP under a realistic framework in line with the information available on the status quo, as well as to review what was achieved under the previous NDP 2013-2017.

In order to implement NDP 2018-2022, the following supplementary documents have been developed (to be subsequently published):

1. Operational Investment Project Plan 2018-2019
2. Strategic Provincial Urbanisation Framework
3. Spatial Plan Summary 2018-2022, and
4. NDP Implementation Follow-up Guide.

NDP 2018 - 2022 General Framework

1. NDP Vision

**“Laying the foundations for a developmental-
focused, effective and socially responsible State”
“Facilitating post-recovery recovery”**

The circumstances of developing NDP 2018-2022 – including economic, political, social and environmental aspects – have differed from those faced by NDP 2013-2017, and they have also prevented the achievement of the goals of NDP 2013-2017.

NDP 2018-2022 represents a different period of time in the development planning process, influenced by political, financial, economic and social constraints. This has required to formulate the NDP goals and development path using an economic management approach to development, within a framework that responds to these constraints down to the recovery and start-up phase.

NDP 2018-2022 takes as a frame of reference the national goals of the sectoral strategies, national documents and international Sustainable Development Goals 2015-2030 – in order to ensure that the identification of goals and priorities address the Iraq Vision 2030. Therefore, this NDP will be the first of three NDPs covering the period 2018-2030, outlining the future we want, which aims to achieve sustainable growth, social justice and an environment free from pollution, and to improve the quality of life to enhance human dignity.

2. NDP 2018-2022 development imperatives

The Council of Ministers’ Decision No. 209 of 2016 provides the overall operational framework for the development of NDP 2018-2022, which aims at reducing the consequences of the crises and challenges that have disrupted economic and social stability and environmental sustainability in Iraq. It specifically targets:

- The preparedness to design and implement stabilisation and reconstruction response policies and to ensure community peace in areas liberated from terrorist groups;
- The high levels of multidimensional poverty and poverty among internally-displaced persons (IDPs) – affecting respectively over 20% and nearly 42% of the total population of Iraq – which require pro-poor economic, social and environmental targets, with priority given to poor IDPs;
- The capacity to adapt and allocate resources to improve the management of fixed capital assets to ensure their development and sustainability in accordance with competency standards;
- The multiplicity, diversity and persistence of shocks caused by radicalism, terrorism, violence and insecurity, which have created interconnected cycles of vulnerability and fragility, increased risks and undermined sustainable livelihoods – which has affected the quality and sustainability of life;

- Iraq's decreasing rankings on indicators for integrity and transparency. According to Transparency International, Iraq is one of the most corrupt countries in the world, showing that it stands far from international standards of good governance; and
- The declining values of human development indicators by national and international standards.

3. Philosophy of the NDP development model

"Adopt a model for balanced growth that stimulates productive sectors (industry and agriculture) based on improved asset management policies that strengthen infrastructure efficiency (water, sewage, electricity, construction, transport, communication, storage, health and education) by channelling investment sectorally and spatially ,in accordance with comparative advantage principle, and based on the integration of development decision-making and implementation across administration levels and the private sector, in order to optimally exploit oil revenues to premise economic diversification."

4. Assumptions

1. Continued security risks
2. Limited financial resources
3. The need to observe Iraq's Stand-By Arrangement (SBA) 2017–2020 with the IMF
4. Funding gaps for planned and under implementation projects
5. Weak anti-commodity dumping policies
6. Increased need of IDP humanitarian response policy
7. Poor and uncoordinated sectoral policymaking
8. Corruption and associated practices that hinder development
9. Fragile domestic environment and fragmented societal structures that hamper national reconciliation
10. High rates of consumer spending and continued income inequality
11. Low productivity of public investment spending and limited private investment spending, and
12. Weak response by local development authorities to big spatial variations.

5. Underlying principles

1. Rule of law and access to justice
2. NDP implementation is Mandatory
3. Administrative decentralisation
4. Sustainability
5. Community empowerment and equal opportunities
6. Progressive economic transformation, and
7. Humanitarian response.

6. Economic management approach

“A state that adopts and plays targeted development roles in policy-making, while involving the private sector as an active partner in the identification and implementation of economic, social and environmental priorities through a variety of partnership arrangements, and while establishing a favourable environment which attracts capital and experts and which is based on efficiency and genuine competition under conditions of good governance, allows to foster a social market economy model as economic management approach.”

7. Challenges

I. Institutional challenges

- 1. Low efficiency of institutional performance.** The State administration continues to fail to adopt sound economic calculations and principles of efficient management of public resources in a holistic framework. This failure is deepened by: continuing disconnect between Government investment programmes and State budget allocations; failure to place public finances and their monetary contents in a broader context and across long-term horizons; and poor economic management interest in the diversification of the productive structure of the Iraqi economy.
- 2. Overstaffing and low productivity of labour force.** A number of factors have contributed to a reluctance to rebuild and restructure Government agencies under a management reform programme aimed to reduce costs while ensuring efficiency and proper resource management – including: overstaffing in Government management, low performance, unjustified waste of resources, service of personal and factional interests, and behaving as if a government position allows to deal with State property as a personal right of its employees and thus the state should not jeopardize their privileges and incentives.
- 3. Financial and administrative corruption.** Corruption has deepened; it has transformed from a behavioural issue of certain groups into an integral and core aspect of institutional structures linked to serving interests that impede development. Corruption leads to depletion and waste of public money and it diverts a major part of income and output out of the economic system. According to the TI Governance Index, in 2015 Iraq was one of the top 10 corrupt countries in the world.

II. Economic challenges

- 1. Poor investment climate.** The investment climate continues to deteriorate, influenced by a combination of political, economic, institutional, legislative, legal and regulatory factors which in turn affect the level of and ability to attract foreign investment. This is evidenced in international indicators: e.g. in 2016, Iraq ranked 165th from 190 countries on the Ease of Doing Business Index and it scored only 27.3 of 100 on the Investment Attraction Index.
- 2. Disrupted production structure.** Between 2010 and 2015, the oil sector remained the main contributor to GDP (actually, it increased from 51.26% to 55.1%), due to the lack of an economic diversification policy. The GDP contribution of both agriculture and manufacturing dropped – respectively from 4.17% and 2.1% in 2010 to 2.02% and 0.84% in 2015.
- 3. Trade imbalance.** The lack of a trade policy that considers the economic conditions required to maintain international competitiveness, the growing imbalance in the GDP structure, and the low exchange rate of the Iraqi dinar have led to (1) a clear trade imbalance, evidenced in the increase in the oil export to 99% of total Iraqi exports and the high diversification of import structure, and (2) significant economic openness, with the ratio of foreign trade to GDP reaching 50.25% in 2015.

4. **Imbalanced budget structure.** Oil revenues continue to be the top contributor to public budget revenues – comprising 85.9% of the estimated total income for 2017 (IQD 79.011 trillion). This renders the budget susceptible to external shocks from fluctuating oil prices, internal imbalances of non-oil revenue diversification, and high estimated operational expenditure (IQD 75.217 trillion, or 74.7% of the total estimated budget). In result, the planned deficit of the 2017 Budget amounted to IQD 21.6 trillion.
5. **High public debt.** The huge reliance on public debt (internal and external) to cover the budget deficit is a constraint on development rather than an alternative to financing the budget from non-oil sources. Additionally, in the absence of coherent and harmonised macroeconomic policies to manage debt efficiently, this debt is a burden for present and future generations. The planned deficit constitutes 21.6% of the estimated budget and it will be financed through internal and external loans. Thus, as of 13/12/2017, the public debt has reached IQD 135851 billion.
6. **Underdeveloped banking system.** Due to obsolete technologies in use, outdated management methods, redundant administrative staff who fail to keep up with modern technologies, the absence of an enabling environment to deal with customers, and a weak marketing of non-traditional banking products, banks have been unable to keep abreast of modern banking and management systems. This is evidenced in e.g. the high value of doubtful debts (IQD 3079.7 billion in 2015), which has placed a burden on financial stability, with the ratio of credit failures of government banks reaching 67.1%.
7. **Large informal sector.** Poor private investment resulting from a worsening investment climate has expanded small-scale economic activities that are not controlled by the government and operate outside the public tax and insurance framework. They are not included in GDP calculations and operate at the expense of the activities of the formal economy. Outputs, practices and dealings in the informal sector are uncontrolled at the economic and societal levels.
8. **Limited role of the private sector.** The deteriorated working and investment environment, slow adoption of (i.e. disregard for) the commodity dumping policy, and lack of participation in the design and implementation of economic policy goals have perpetuated the limited role of the private sector in the development process. In 2015, the private sector contributed barely 44.6% of GDP (at current prices) and 35% of fixed capital formation (at constant prices).

III. Social challenges

1. Development indicators reflect the situation of human development in Iraq (health, education, living standards, etc.). According to the global Human Development Report 2016, with Human Development Index of 0.649 (medium human development), Iraq ranks 121st from 188 countries.
2. The dominance of sub-loyalties (pre-state) and weak rule of law and access to justice have generated structural deficits, which continuously raise problems. Additionally, the lack of societal will and instruments for empowerment and the wide fragmentation and disruption of the societal fabric have disrupted development and sustainability.
3. High levels of multidimensional poverty caused by successive crises and armed conflicts – and the associated terror, violence and displacements – have destabilised society and caused insecurity.
4. The weakening and disintegration of social policies has aggravated and compounded the social cost of crises, thus threatening the quality of life and the well-being of society.
5. Major social crises and poor protectionist policies have increased the size of vulnerable groups (disabled, elderly, widows, orphans, etc.), causing the rate of vulnerability to rise to over 50% in 2016. The conditions of displacement have also produced complex fragility (vulnerable groups + displacement), linked to the scale of terrorism and violence and the resulting conditions of forced displacement.

6. The gender gap continues to undermine the foundations of development, due to traditional stereotypes of women's roles that are influenced by the dominance of patriarchal culture rooted in the social structure. This has led to low participation of women in economic, social and political activities and limited leadership roles for women in legislative and political institutions.
7. The inability of the State and society to accommodate and integrate young people in public life and provide them with decent work opportunities threatens the pillars of stability and social security and pushes some of them to migrate abroad. The unemployment rate for the age group 15 years and above is 10.8% (11.5% in urban and 8.8% in rural areas). The underemployment rate (less than 35 hours of work per week) is 28.2%.
8. Large areas of Iraq were occupied by terrorist ISIL for nearly three years. Occupation, social processes and curricula for children and youth in occupied areas have driven a rise in radical ideology, terrorism and violence. These factors will have profound psychological and social consequences that undermine the unity and cohesion of the social fabric.
9. Education at all levels has not seen progress in quality, geographical spread or coverage of infrastructure; illiteracy and dropout rates and the gender gap remain persistently high. This threatens the educational system and prevents it from keeping abreast of international developments in the fields of knowledge.
10. Healthcare services are characterised by continuous decline, limited access, inability to meet the actual needs of the population, and high migration levels of medical professionals. This has led to imbalanced indicators in healthcare (e.g. doctors/population).

IV. Environmental challenges

1. **Environmental pollution from conflict.** The environment in Iraq has been in adverse relationship with conflict. Conflicts have resulted in environmental pollution and serious damage, with repercussions on the economy, society and individuals. This is evidenced in Iraq's ranking on international indicators – e.g. Iraq has ranked 116th from 180 countries on the Environmental Performance Index.
2. **Spread of informal housing development.** Iraq lacks effective urban planning or a national housing policy to help manage the risks of crises and conflicts. With increasing poverty rates, the number of housing units in informal settlements (slums) in Iraq has increased to 347 000, or 7% of the total number of housing units, while slums now accommodate as much as 8% of the total population. This demonstrates the dire consequences of a lack of urban planning.
3. **Lack of integrated environmental management and inadequate environmental legislation.** Environmental management has been ineffective in limiting the sources and effects of pollution – due to war and conflict, but above all, due to clear shortcomings in environmental legislation. The latter results in lack of national response at the level of policy, goals and interventions, as well as selectivity for options in administrative, legislative and executive coverage which reduce opportunities for progress.
4. **Desertification.** Desertification and salinisation are pronounced due to the hot and dry climate and the hydrological and topographic aspects of soils. They are, however, aggravated by human activities (cultivation and irrigation procedures), which result in wider affected areas. In turn, this causes the emergence of other types of desertification, loss of vegetation, and it hampers the development of agriculture (especially in central and southern Iraq). Desert land amounts to 50% of Iraq's area, posing a serious threat to food security.
5. **Climate change.** Iraq and other Arab countries will be at the heart of the major climate problem facing the world – namely, global warming effects and the risks of rising temperatures by 2050. Expected effects are shortage of rainfall and spread of drought and aridity. This is a threat to food security, social stability, water resources, agriculture, health and biodiversity.

- 6. Reliance on non-renewable energy.** A failure to integrate alternative or renewable energy into policy priorities and goals to replace non-renewable energy has resulted in increased consumption of fossil fuels, decreased lifespan of oil reserves, and increased rates of environmental pollution. Fossil fuel consumption activates factors that contribute to global warming and environment pollution, and their negative effects on human health, food and security.

8. NDP strategic goals

1. Lay the foundations for good governance;
2. Achieve economic reform in all its financial, monetary, banking and commercial dimensions;
3. Accomplish recovery of the communities affected by displacement and insecurity;
4. Provide the conditions for an enabling environment for all forms of investment and strengthen the role of the private sector;
5. Increase the rate of economic growth in line with the potential and requirements of the Iraqi economy;
6. Increase the real per capita income;
7. Reduce unemployment and underemployment rates;
8. Make possible security for the poorest and most vulnerable groups;
9. Boost sustainable human development indicators;
10. Lay the foundation for decentralisation to strengthen spatial development; and
11. Align the general development framework with urban structures based on the foundations of urban planning and spatial comparative advantages.



Chapter One: Development Performance

1.1. NDP 2013–2017

NDP goals included: make the developmental management of oil sector revenues responsive to sustainable development criteria; diversify the economic base; work on achieving a stable overall economic structure and sustainable development; increase the productivity of economic activities; enhance opportunities to integrate the plans pathways and procedural steps of the poverty-reductions strategy; create decent work opportunities; an equal educational environment; improve the services infrastructure; build youth capacities in terms of knowledge, skills and health; tangible progress in quality of life for vulnerable groups; and provide new housing units and rehabilitate the obsolete housing stock. The NDP also included a set of environmental goals; notably, protect and improve elements of the environment and practice sustainable exploitation of natural resources.

1.2. Fiscal and monetary policy

Nature of crisis and responsive fiscal policies

The ambitions of the Government were inspired by NDP 2013-2017 as key pillars of the announced Government agenda. Yet, while the Government took office in the second half of 2014, developments at that time necessitated that the Government prioritise its agenda, making the liberation of Iraq from terrorist groups top priority. This led to the transfer of a significant portion of resources for military use at the expense of development goals. However, relative achievement was attained of fiscal policy goals related to the budget deficit – namely, controlling expenditure, applying spending ceilings, and increasing non-oil industry revenues given the low prices of oil. Although this did not eliminate the budget deficit, it significantly reduced it.

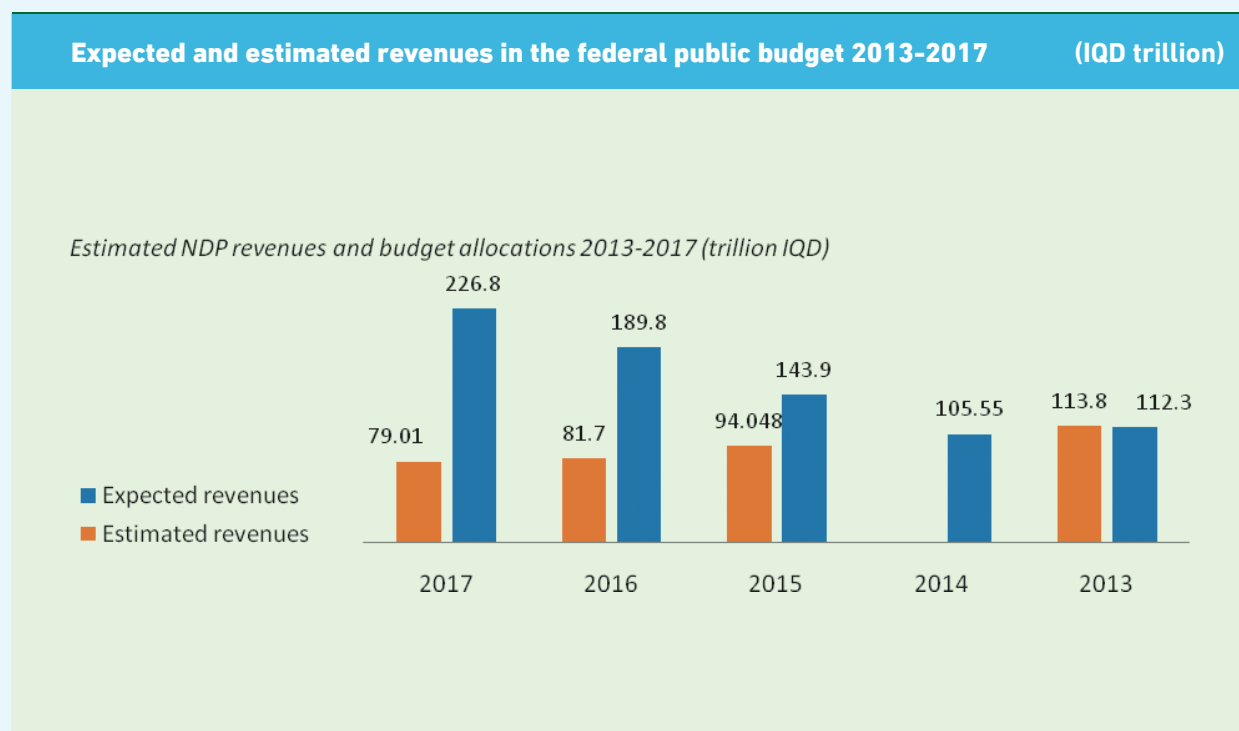
The increase in non-oil revenues was also a goal, with tax revenues increasing by 200% in 2017 compared to 2013 as a result of a broadened tax base, a relatively developed efficiency of the system, a wide reduction of exemptions, and a focus on large companies investing in the oil and telecom sectors.

The Government also begun to gradually reduce service price subsidies, boost the efficiency of collection of State dues, create outlets to increase revenues from new public services, and encourage the public sector's participation and investment. Improvement also included the customs system through activating control tools, relatively enforcing the Tariff Law, and reducing customs categories to simplify procedures and prevent corruption. This increased customs revenues by over 200% in 2017 compared to 2013.

As regards the reform of financial management, the Government entered into fundamental commitments with the World Bank and IMF in an effort to restructure financial management. Several actions were undertaken, including the automation of accounting systems and capacity-building of financial management personnel with clear steps towards decentralised financial management.

The fiscal policy can thus be said to have flexible interim ability to overcome the crisis with minimal losses and to ensure the availability of money from various internal and external resources (borrowing) to cover critical expenditures. As such, it has succeeded in realising its vision of changing the fiscal response from response to development requirements under NDP to response to pressures from the crisis, focusing on the main and sovereign expenditure.

- In financial terms, in this period world oil prices declined. The average price of Iraqi oil dropped from 102.3 dpb in 2013 to 44.7 dpb in 2015 and 36 dpb in 2016 – while NDP 2013-2017 set oil price much higher, at 85 dpb;
- NDP 2013-2017 predicted that the total public budget revenues would be in the range of IQD 812.263 trillion during the NDP years (see Figure 1).

Figure 1

The data (Figure 1) also indicate a decrease in investment allocations and expenditures compared to the NDP expectations and the estimates in the federal budgets for 2013-2017. This is a deviation from the fiscal policy goals of addressing imbalances in the structure of public expenditure, which has clearly affected development achievements at the sector level.

Monetary policy

NDP 2013-2017 established a set of monetary policy goals. Analysing the performance of monetary policy reveals the following.

- Maintaining acceptable rates of inflation is targeted by the NDP despite the continuing budget deficit. The rate of inflation fell from 1.9% in 2013 to 0.1% in 2016.
- The market exchange rate recorded an upward trend as of 2014, reaching IQD 1303 per dollar at the end of 2016, but it fell to IQD 1258 per dollar in mid-2017. Exchange rate fluctuations remained at an acceptable level and reflected a high monetary policy ability to control the exchange rate.
- Policies to maintain the inflation and exchange rates reduced the Central Bank's reserves from USD 77.4 billion in 2013 to USD 45.3 billion in 2016.
- There was a clear expansion of credit activity in 2013–2016, with monetary credit increasing from IQD 29.9 trillion in 2013 to IQD 37.16 trillion in 2016 with growth rate of 7.5%.
- The services sector accounted for the largest share of the total credit granted by banks – even though this share fell from 49.8% in 2010 to 39% in 2016 – followed by construction, trade, restaurants and hotels. Other sectors, such as industry, agriculture and others, accounted for smaller shares. The latter suggests that Iraqi banks rely heavily on granting loans for commerce and construction given the guarantees these sectors can provide compared to other sectors.

Table 1

Selected monetary policy indicators for the Iraqi economy, 2013-2017

Year	Total credit(IQD trillion)	Change (%)	Public sector share(%)	Private sector share(%)	Credit/ GDP(%)	Money supply M1(IQD trillion)	Inflation rate (2007 = 100%)	Central Bank reserves(USD billion)	Exchange rate(USD/ IQD)
2013	29.9	-	43.4	56.6	17	73.83	1.9	77.4	1232
2014	34.1	14	48	52	19.4	72.69	2.2	66.3	1214
2015	36.75	7.8	50.8	49.2	20.2	65.43	1.4	53.7	1247
2016	37.16	1.1	51.1	48.9	18.9	70.73	0.1	45.3	1275

1.3. Imbalances in GDP structure

A goal of the NDP 2013-2017 was to have a growth rate of oil GDP of 13.31% and of non-oil GDP of 7.5% at constant 2012 prices.

- The growth rate of oil GDP and non-oil GDP over 2013–2016 was only 3.45% and -6.48% respectively at 2007 prices. The channelling of economic resources towards the liberation of Iraq from terrorist groups had a significant impact on the achievement of these results. Moreover, the worsening investment climate helped neither create an enabling environment for investment, nor achieve the targeted growth rates and economic diversification as envisaged by the NDP.
- During the NDP 2013–2017, there was no structural change in the GDP structure at constant prices. The structural imbalance was in fact compounded due to increased contribution of the oil sector from 49.2% in 2013 to 55.1% in 2015 and then to 62.5% in 2016, while the contributions of other economic activities declined. For example, the contribution of the agricultural sector decreased from 4.2% in 2013 to 2.02% in 2015 and then it increased to 3% in 2016. The contribution of the industrial sector also fell from 1.5% in 2013 to 0.8% in 2016. The contributions of other sectors were almost stable during 2013–2016 (e.g. electricity and water 1.1% and ownership of houses 5.5%).
- The contribution of commodity sectors in non-oil GDP decreased from 31% in 2013 to 23.7% in 2016, while that of distributive and service activities increased from 34% and 35% respectively in 2013 to 36% and 40.3% respectively in 2016. This shows that the NDP did not achieve its goal of a greater role to non-oil commodity activities compared to distributive activities through diversifying the GDP structure and influencing the local content of commodity supply to limit the Iraqi economy's exposure to the outside world, which the NDP considered to be one of its major challenges.

1.4. Role of the private sector

An economic goal of NDP 2013-2017 was to lay the foundations of economic partnership. Analysing the facts during the NDP period shows as follows:

- Total capital formation (at constant 2007 prices) had a negative growth rate of -8.38% during 2013-2015 due to declined investment allocations in the general budget;
- The contribution of the private sector to capital formation at constant 2007 prices grew from 16.8% in 2013 to 34.69% in 2015, with an average growth rate of 30.8%;
- The private sector contribution to capital formation varied among sectors during the period 2013-2015 (see Figure 2 below). The increase in the relative contribution to fixed capital formation in the transport, communications and personal services is due to increased demand and the absence of competitive foreign products. Therefore, the risk of such activities is reduced compared to other activities;
- Figure 2 shows a declined private sector contribution to capital formation in agriculture, although most of the output of this activity belongs to the private sector. This is due to a lack of substantial incentives for farmers to invest in agriculture, despite the need of this sector for that as a result of the high dumping of low-priced imported agricultural commodities, as well as the lack of an appropriate lending policy;
- Figure 2 also shows a declined capital formation in the industrial sector for many reasons, notably a worsening investment climate, the lack of a policy to restrict industrial imports, especially for the products the private sector can produce domestically, and a weak credit provided to the private industrial sector;
- The number of private sector workers reached 4.231 million in 2007 or 61% of the total number of economically active population. Although their number increased to 4.490 million in 2012, their percentage decreased to 59%, and then to 58% in 2014.

Therefore:

- Although the private sector GDP contribution at current prices was almost stable over 2004-2015, it increased from 34.5% in 2013 to 44.6% in 2015. The private sector GDP contribution during 2013-2015 is shown in Figure 3.

Figure 2

Contribution of economic activities to private sector gross fixed capital formation in 2013 and 2015 at constant prices (2007 = 100%)

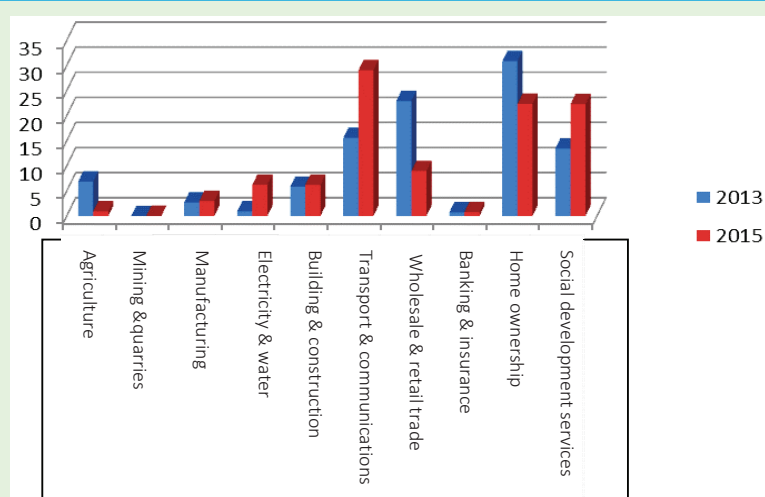
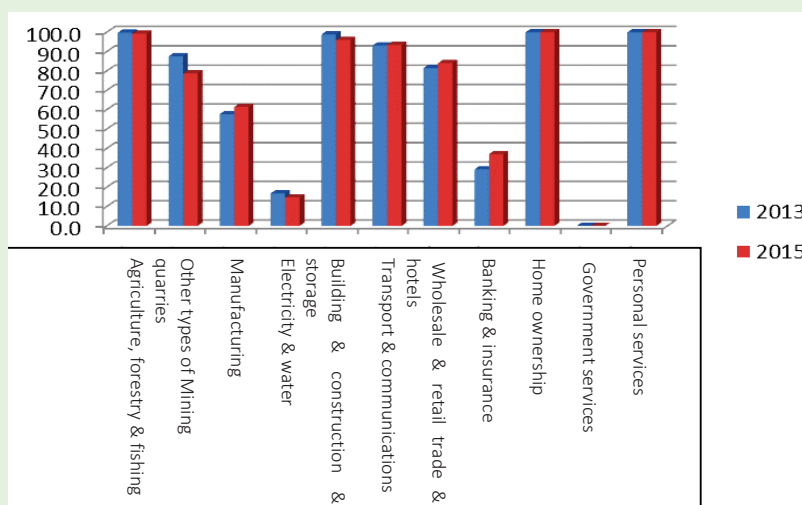


Figure 3

Private sector contribution to GDP by economic activity in 2013 and 2015 (%)



1.5. Population and workforce

Population

- NDP 2013-2017 established five main goals with regard to population, including: integrating population data in developmental plans and programmes, making a progressive impact on the population growth rate, increasing the life expectancy rate at birth to more than 70 years in 2017, benefiting from the demographic dividend and organising the population's movement in development. The NDP developed a set of means to achieve these goals, but many factors hindered their achievement, including the absence of a population policy, national family planning programmes or programmes to build the capacity of young people and enable them to participate in development and policymaking.
- The population growth rate, though falling below 2.9%, is still relatively high due to several factors. The number of young people in the age group 15-29 as well as working-age population increased, which suggests that Iraq is about to have a demographic dividend, with no indication that it would be used given the employment levels and high unemployment rates.
- The spatial disparity of population distribution remained a hallmark of policy weakness due to the lack of comprehensive strategies for rural development and the absence of policies to redistribute workforce sectorally or spatially in order to improve developmental and geographical balance of the population.
- The military operations led to the unprecedented displacement of some 5 million Iraqis.

Workforce

- Monitoring the labour market in Iraq during the NDP 2013-2017 period shows as follows:
- The NDP goal of reducing the unemployment rate was not achieved, with unemployment reaching 10.6% in 2014;
- The underemployment rate in Iraq was 28.19% in 2014 – a high percentage, reflecting the limited availability of jobs in the Iraqi market;
- The number of civil servants increased from 2.9 million in 2013 to 3.02 million in 2015, and then it

decreased to 2.88 million in 2017. The private sector remains the largest employer (as noted earlier), with private sector employees comprising 58% of the total number of employees in 2014.

- The NDP goal of raising the labour market participation rate to 50% was not achieved. This reached 42.7% nationally, in 2015, only slightly up from 42.4% in 2011.

1.6. National income and per capita income

The national income fell from IQD 164.3 trillion in 2013 to IQD 126.68 trillion in 2015 and at a growth rate of -12.2% at constant 2007 prices. The per capita income during the same period declined from IQD 4.99 million in 2013 to IQD 4.59 million in 2015 in constant 2007 prices. This decline had significant effects on economic well-being and helped spread many social issues.

1.7. Sectoral development

The NDP 2013-2017 emphasised the goal of building a prosperous and diversified economy led by industry, energy, agriculture and tourism as development sectors. A balanced development will be an entry point for changing the identity of the Iraqi economy to transform from a revenue-generating economy into a production economy. The NDP also considered the diversification of the non-oil production structure as a principle governing the mobilisation of the NDP economic resources. Accordingly, the development achievements of the various economic sectors will be analysed to determine the economic performance during the NDP period.

I. Agriculture

- The agricultural goals of the NDP 2013-2017 included: increase the agricultural sector GDP contribution, increase plant and animal agricultural production coverage for Iraq's food basket (food security), and secure Iraq's need for water resources.
- The area of arable land declined from 52.2 to 47.8 million donums in 2015, of which 6.9 million donums (or 14.4%) were planted compared to 27.9% in 2014. Only 100000 out of 2.5million donums were reclaimed during the NDP period.
- The GDP contribution of the agricultural sector decreased from 4.2% in 2013 to 3.1% in 2016.
- The volume of water storage decreased from 157 to nearly 50 billion cubic meters in 2015, and 2017 is marked by a significant deterioration in storage volume due to low rainfall in the region and the small amounts received from source countries. Furthermore, no dams were established during the NDP period to increase the volume of water storage.
- Agricultural degradation is due to a low efficiency of domestic agricultural production and the low agricultural productivity of crops and agricultural products, as well as low subsidies and a clear decline in the amount of water resources received in Iraq. All these indicators show that the goals of the NDP 2013-2017 were not achieved in this sector.

II. Energy and manufacturing

Oil and gas

The NDP 2013-2017 considered the energy sector, specifically the oil sector, to be “the main source for developmental financing and the electricity sector is a main foundational block for achieving any growth and development in the production and services sectors.” Hence appears the importance of the oil and gas sector in stimulating other sectors through its forward and backward linkages with them, not to mention its funding of them. The NDP 2013-2017 goals on oil and gas include: increase crude oil production to 9.5 million barrels per day MMbpd and boost crude oil exports to 6 MMbpd in 2017. The NDP also included other goals concerning gas production, increasing refinery capacity and boosting storage capacity.

- Crude oil production rose from 3.11 MMbpd in 2014 to 4.164 MMbpd in 2016, at a growth rate of 15.7 thanks to licensing contracts and a national effort made to drill and reclaim wells. However, the NDP goal of 9.5 MMbpd was not realised because the bar was set to high, oil production cost increased, and storage capacity decreased from 31.3 MMbpd in 2014 to 24.7 MMbpd in 2015.
- Crude oil exports from southern ports rose from 2.4 MMbpd in 2013 to 3.27 MMbpd in June 2017, with an annual growth rate of 8% following the entry into service of a number of floating platforms as well as the ongoing rehabilitation works of the ports of Basra and Khor Al Amaya.
- The available refinery capacity decreased to 423000bpd in 2016 down from 602000 bpd in 2013, at a decline rate of -16.2%. The capacity is not expected to reach its planned level of 950000 bpd in 2017 because most of the northern refineries, mainly the Beiji Refinery, have been out of service since June 2014. This includes all oil derivatives while demand increases. The demand for liquid gas however was met in 2015.
- Despite the increase in gas production from 1810.2 million standard cubic feet per day MMscfd in 2013 to 2828.22 MMscfd in 2016, this capacity is not expected to reach its planned level of 5500 MMscfd in 2017.

Electricity

The NDP 2013-2017 focused on the electrical energy sector and set a group of relevant goals, notably: increasing the electricity system's production capacity to 25000 MW to exceed the anticipated demand for 2017 by approximately 5000MW, increasing the Iraqi per capita share of electrical power from the current rate of around 1800 kWh to 3700 kWh in 2017, improving the performance efficiency of the electricity system and keeping it from deteriorating, improving service quality for consumers, proper management of power consumption, and improving environmental performance for electrical activity. Analysing the economic indicators of the electricity sector reveals the following:

- The actual production of electricity increased from 8062 MW in 2013 to 9239 MW in 2015 and then to 15000 MW in 2017. However, production remained below what is planned since it did not meet the full demand. The NDP goal of increasing the Iraqi per capita share of electrical power from the current rate of around 1800 to 3700 kWh in 2017 was not achieved because of the significant difference between design and available capacities. A number of stations with a design capacity of 7094 MW also became out of service due to insecurity in a number of provinces.
- Energy imports increased in 2015 to 1496 MW up from 1393 MW in 2013 and then declined to 1100 MW due to the entry into service of gas-operated service investment stations, so the increase in energy purchases transformed into an increase in the purchase of fuel (gas).
- The NDP did not achieve its goals of raising awareness to properly manage energy consumption, evidenced in the increased per capita consumption of productive energies.

- The power transmission and distribution sectors are still plagued by bottlenecks, with electricity loads exceeding the capacity of the transmission network, although many projects for the rehabilitation and implementation of substations were completed.
- There was relative progress towards the NDP goal of enabling the private sector to develop the performance of electricity both by direct investment in the construction of 7500-MW generating stations and the management of the distribution sector, i.e. collection companies.
- Relative progress was made in converting simple-cycle gas power plants to composite cycle power plants where 500 MW were added through this conversion. There was also relative progress in investment in renewable energies, where 1000 MW were announced for investment, of which 250 MW were awarded for implementation.

Manufacturing and extractive industries

The NDP developed a vision for the industrial sector which included: an Iraqi industry that effectively contributes to the diversification of the national economy in a competitive business environment and global partnership. It also set a range of relevant goals; notably, creating an attractive environment for foreign investment in the industrial sector, increasing its GDP contribution and strengthening the role of the private sector in this vital sector.

- The GDP of manufacturing declined from IQD 2.65 trillion in 2013 to IQD 1.5 trillion in 2015 and then increased to IQD 1.6 trillion in 2016 at constant prices (2007 = 100%) according to this year's quarterly data. The GDP contribution of the industrial sector decreased from 1.5% in 2013 to 0.84% in 2016 in constant 2007 prices.
- There were no substantial changes in the private sector GDP contribution of the industrial sector during the NDP period, with this contribution increasing from 57.7% in 2013 to 61.5% in 2015. This increase is not due to a pivotal role of the private industrial sector in economic activity, but to the apparent weakness of government industrial enterprises and their inability to maintain their role as set by the NDP given the financial crisis during the NDP period.

III. Transport and communications

The GDP of the transport, communications and storage sector rose from IQD 12.67 trillion in 2013 to IQD 14.3 trillion in 2015 and then declined to IQD 10.27 trillion in 2016 at constant 2007 prices. The sector's GDP contribution increased from 7.24% in 2013 to 7.85% in 2015, and then fell to 5.3% in 2016.

Transport

The NDP established a set of goals for this sector, notably: increase the sector's GDP contribution, improve the efficiency of the transport network and expand its capacity, increase the efficiency of public transport companies, develop and operationalise rail freight transport, and enhance the role of the private sector in various transport activities.

1. Ports

NDP 2013-2017 included a set of goals for ports ;most importantly, boosting current port capacity and navigational corridors, use the ports' currently untapped capacity, boost efficiency of port workers, and build primary ports that compete with the ports of neighbouring countries.

- The NDP set a goal to increase the number of port terminals from 46 with a capacity of 16.65 million

tonnes per year in 2012 to 83 terminals with a capacity of 29 million t/y. However, the financial constraints experienced by Iraq during the NDP period did not help reach this goal. The number of terminals stood at 48 in 2015 with a capacity of 17 million t/y, much lower than the NDP goal.

2. Maritime transport

NDP 2013-2017 had two main goals for this activity: boost the capability of the flag carrier to secure Iraq's import/export operations, and support the role of the private sector in maritime activity. The achievements of shipping during the NDP period are as follows:

- The number of working ships owned by the State Company for Maritime Transport increased from 3 in 2013 to 7 in 2016, while the NDP goal was 19. This failure is due to the financial crisis as well as the requirements for the liberation of Iraqi territory from terrorist groups.

3. Civil aviation

NDP 2013-2017 contained two major goals on civil aviation: strengthen the flag carrier's role in air transportation and strengthen the role of the private sector. The following development achievements were made during the NDP period:

- The NDP aimed to increase the number of flights from 32446 in 2013 to 50982 in 2017 and the number of passengers from 2.28 million in 2013 to 3.4 million in 2017. The number of passengers in internal and external flights increased from 5.26 million in 2013 to 8.280 million in 2016 with a growth rate of 16.3%, and the number of flights rose from 55262 in 2013 to 81635 in 2016 with a growth rate of 13.9%. The increase is due to a higher demand for internal and external tourist flights and the civil aviation introduction of internal tourist flights to the Kurdistan Region instead of using road transport as a result of people's improved living standards and the risk of road transport under the control of terrorist groups over a number of northern provinces.
- The amount of air freight increased from 5109 t in 2013 to 34988 t in 2016 at a growth rate of 89.9%.

4. Passenger transport

NDP 2013-2017 contained two major goals in this area: develop and support public transport and support the role of the private sector.

- The NDP goal of operating 130 lines in Baghdad with nearly 1,500 buses was not met. The number of lines in 2015 was 21 in Baghdad and 6 between Baghdad and provinces, while the number of buses stood at 611 during 2014-2015. The financial situation during the NDP duration largely hindered the achievement of the NDP goals of this activity.
- The number of passengers, travellers and delegates stood at 12.2 million in 2014. This rose to 19 million in 2015 and was much higher than the NDP goal of 8.424 million passengers. This led to an increase in transport revenues from IQD 33.9 billion in 2014 to IQD 34.2 billion in 2015.

5. Road transport of goods by trucks

NDP 2013-2017 included one goal for this activity: privatising freight transportation.

- Nearly 89% of goods were transported by private trucks, but this percentage was gradually reduced to about 69.9% in 2016, which means that 30% of the goods were transported by state-owned trucks. This reduced revenues of transport by state-owned trucks from IQD 19.3 billion in 2013 to IQD 16.9 billion in 2015 with a growth rate of -6.4%, which contradicts the NDP goal. Revenues from the transportation of goods by non-state-owned trucks also went down from IQD 9.8 billion in 2013 to IQD 2.3 billion in 2016 with a growth rate of -38.3%.

6. Railway transport

NDP 2013-2017 established four goals, including modernising and developing the rail transportation system and boosting its operating capacity, reducing travel time and guarantee safety, and strengthening the role of the private sector and foreign investment. Analysing the development performance of the railway activity shows as follows:

- The lengths of railway lines stood at 2370 km in 2013 and increased to 2893 km at the end of 2016, an increase rate of 22%, which is less than the NDP goal of 3331 km. These lengths are not expected to reach 4831 km in 2017 as foreseen by the NDP. There was also no change in the number of the 375 diesel locomotives over 2014-2016.
- Security conditions in general, and the subsequent conditions of war against terrorist groups, affected rail transport. Of the nine existing lines, only three are operational, including Baghdad-Basra (Al Makal) and Shaibah-Umm Qasr, as well as the Musayyib-Kerbala line that is only used for religious visits. This affected the implementation rates of NDP goals with the number of operating diesel locomotives dropping from 66 in 2013 to 52 in 2016.

7. Roads and bridges

NDP 2013-2017 addressed roads and bridges through developing a relevant vision, including: improving the current road network, increasing the capacity of the current network, raising the safety and security of its users, protecting it from harm, and strengthening and supporting the role of the private sector.

- NDP 2013-2017 made a modest increase in paving roads: 30- km local roads, 26- km fixed corridors, and 70- km rural roads (marsh resuscitation).

Communications

The NDP 2013-2017 contained four goals on communications: implementing e-government services, reducing urban-rural disparities in cell phone service provision, improving quality of communication and Internet services, and strengthening the role of the private sector in the communications field. The communications and Internet sectors witnessed significant developments:

- The number of mobile phone lines increased from 29.76 million in 2012 to 35.95 million in 2016, with an annual growth rate of 4.8%. The mobile phone penetration rate rose from 87 per 100 persons in 2012 to 92.3 in 2016 with a growth rate of 1.49%.
- The number of wireless telephone lines increased from 511,560 in 2012 to 1.14 million in 2015, with a growth rate of 30.6%.

- The number of postal offices decreased from 299 in 2013 to 295 in 2016, and the NDP goal intended to increase the number to 388 in 2017.
- There were significant developments in Internet activity, with the optical cable network covering most of Iraq's territory (approximately 8,500 km), through which the Internet services are provided, in addition to the mobile phone companies that are the backbone of the e-government project. The network was connected to submarine cables (GBI, FALCON), with the number of mobile Internet lines by operators in Iraq in 2015 amounting to 5.7 million, compared to 226,100 wireless Internet lines by operators in Iraq. The number of Internet subscribers increased from 130,200 in 2013 to 2.209 million in 2016, with an annual growth rate of 157% due to the fact that the Internet is a modern and necessary means of communication on the one hand and the relatively low monthly subscription rate on the other.

IV. Storage sector

Storage is an infrastructure activity that is closely linked to food security, especially for cereals. This includes silos and storages for wheat, barley and Iraqi rice. The NDP only set one goal for this activity: secure a strategic reserve of wheat and rice sufficient for at least six months. Analysing the storage sector during the NDP period shows the following:

- The storage capacity of locally produced cereals declined, with the number of silos and grain storages in Iraqi provinces amounting to 87 silos, including 32 silos for wheat and Iraqi rice with a total capacity of 1 684 000 tonnes. The number of decommissioned silos is 15 with a total capacity of 694 000 tonnes.
- The capacity deficit in strategic reserve for six months was 33% and during the 2017 marketing season it rose to 48%.

V. Housing and basic services

Housing

The NDP set four goals on housing: provide 1 million housing units throughout the duration of the NDP and reduce the level of overcrowding and occupancy rates; reduce the spatial disparity in the shortage of housing units among provinces and meet the demand for housing in rural areas; stop the expansion of informal housing and develop programmes to minimise this problem as part of the solution for the problem of poverty in Iraq, which is concentrated in these areas and in rural areas; increase housing production efficiency and reduce its cost; and pay attention to quality standards in terms of building environment-friendly housing units through proper management of electricity.

Analysing the housing indicators during the NDP period shows as follows:

- The gap in the number of housing units throughout Iraq (excluding KRI) rose to 1 961 036 in 2016, up from 1 379 594 in 2013;.
- The number of construction licenses granted to new housing units decreased from 22 122 in 2013 to 16 859 in 2016, with annual drop rate of 8.66%. Under insufficient control over construction activities, informal housing units were built on agricultural land, distorting the basic design of urban cities and increasing the imbalance and the concentration in cities, which hinders an integrated urban system that achieves a balanced concentration in cities.
- The number of building permits for residential buildings increased from 17 in 2013 to 19 in 2016.
- The number of housing units completed by the National Investment Commission (Bismayah Residential Project) was 3 120 in 2015 and the number rose to 10 000 in 2016.

The NDP 2013-2017 focused on water and sanitation provision as a guarantor of societal health. The performance of these two activities will be addressed here separately.

Water supply

The NDP had five related goals: increasing water coverage and reducing waste, reducing the difference in the level of services provided between provinces on one hand and between rural and urban areas on the other, providing high quality water at a rate of 350 l/capita/d, promoting the private sector's contribution to water services, and rationalising water use. Analysing the achievements during the NDP period reveals the following:

- During the NDP 2013-2017, in the Baghdad Province, 3 ground tanks were built in 2013, the second Eastern Tigris Water Expansion Project was completed in 2014, two ground tanks were built in 2015, and the Rusafa Water Project was completed in 2016. The number of active projects stood at 12. In the remaining provinces, 17 water projects were completed during 2013–2016, a total of 227 wells water production plants were established in 2015 with a design capacity of 229,000 m³/d, and 409 solar-powered water production plants were created in 2015 with a design capacity of 16,300 m³/d.
- The amount of potable water produced for the Baghdad Province increased from 3.1 million m³/day in 2013 to 3.4 million m³/day in 2016. The per capita potable water use dropped from 466.9 l/d in 2014 to 372.4 l/d in 2015.
- The amount of drinking water produced in the remaining provinces decreased from 12 million m³/day in 2013 to 8.6 million m³/d in 2016.
- There is a marked disparity among the provinces in terms of meeting their need for potable water. Najaf Province met its demand entirely with a 34% surplus, while the Kirkuk Province suffers from a 42% shortage, followed by the outskirts of Baghdad with a 35% shortfall and then the Thi-Qar Province with a 34% shortage. The total shortage was 18%, which is due to a shortfall or obsolescence of water projects and the old networks that require replacement with a waste of water in networks and pipelines of a ratio of 29% in Baghdad and 20-40% in the provinces.

Sanitation

Two relevant goals were identified :increase the proportion of people with access to the sewer system to 35% for provincial population in 2017, and only let treated water conforming to standard specifications flow into rivers. Analysing the NDP performance indicators for this activity shows the following:

- A number of projects were implemented in Baghdad, notably establishing two wastewater treatment plants with a capacity of 100,000 m³/day (completed in 2013), implementing the main lines linking Rabi and Tunis districts, implementing one pumping station in 2013, improving and expanding sewage and rainwater networks in the old city of Baghdad, renovating old networks and their pumping stations in several sectors in Baghdad, implementing the main lines to be connected along the north-eastern line with one main pumping station in 2014, and implementing the main line for the Quds Street with one vertical pumping station. During the same period, a project to implement the main sewage line supplementary to the Quds Street from the 83rd intersection to the Oil Club intersection started. The implementation rate was 75% with a capacity of 3.14 m³/s.
- By the end of 2016, the proportion of people with access to sewer systems in the Baghdad Province (Mayorality of Baghdad and the province) was 75.9%, while 24.1% did not have access, including many non-residential and farm lands.

- Three provincial sewage projects were completed and eight projects started in the various provinces during the NDP period. There is still a gap in the proportion of people with access to sewage systems in the provinces except Baghdad, with the proportion of the total population with access to sewage networks amounting only to 28.4%. The proportion of those with access to a rainwater system is 32.9%. Diyala is the province with the lowest access to sewage networks (only 1.8% of the population) and only 12% of its population has access to rainwater networks, while Missan is the province with the most access to sewage and rainwater networks (89% and 72.5% respectively). The province with the lowest access to rainwater networks is Babil (only 2.9%).

Analysing the achievement indicators of this activity shows that the proportion of those with access to wastewater and rainwater systems remains low, and large amounts of wastewater are still thrown in rivers and streams used by rural people who do not have access to potable water systems, causing the spread of many dangerous diseases. The poor achievement of this activity is due to the significant expansion of the population; the ageing of sewage systems; a lack of major lines, which put pressure on old lines; poor sustainability of lines, affecting performance efficiency; leaks; and a failure to develop water and sewage systems given the limited allocations for this purpose during the NDP period and the low productivity of public expenditure.

VI. Culture, tourism and antiquities

The NDP 2013-2017 took an interest in this vital activity and regarded tourism as an important development source for the diversification of the Iraqi economy. Major indicators of the development performance of this activity are:

- The number of religious tourists to Iraq rose from 904700 in 2014 to 1.052 million in 2016 with annual growth rate of 7.8% given the great interest in religious tourism in Iraq.
- The number of cultural tourists increased from 27000 in 2014 to 78000 in 2016 with an annual growth rate of 70%, resulting in a rise in cultural tourism from IQD 218.4 million in 2014 to IQD 286.6 million in 2015 at an increase rate of 31.2%
- The commercial revenue of tourism activities increased from IQD 10.4 million in 2014 to IQD 17.047 million in 2016.
- There was little change in tourist facilities and destinations (islands and tourist cities) as their number remain 12 in 2014 and 2015.

VII. Human and social development

- This is an essential NDP pillar because human development means to develop people's capacities to the fullest extent possible through education and empowerment ,while providing an adequate level of health services and fully employing them in all activities.

Education

NDP 2013-2017 included educational goals, including: education opportunities for all that meet the requirements of the labour market and the knowledge economy and that promote the values of citizenship. The NDP also developed a set of quantitative goals for increasing enrolment rates at different levels of education, and increasing the number of private schools and universities. It also set qualitative goals to advance education, reduce dropout, develop new curricula to foster creativity and innovation, promote universities in line with the requirements of the knowledge economy, etc. Analysing the development performance during the NDP period shows the following:

- The number of buildings damaged up till 2016 as a result of terrorist operations is 1392, including 1160 totally damaged buildings (over 40%) and 232 partially damaged buildings according to MoE statistics. The shortage of school buildings, excluding buildings under construction and considering the damaged buildings, amounts to 8160, deepening the gap in the number of needed school buildings;
- The net enrolment rate in kindergartens over the NDP period was 12-13%, while the NDP goal was 15%;
- The dropout rate in primary education rose from 1.8% in 2013 to 2.3% in 2016;
- The number of primary education teachers increased from 223310 in 2014 to 247919 in 2015, with an increase rate of 11%. The number of high school teachers increased from 128667 in 2014 to 141 300 in 2015, with an increase rate of 9.8%.

Health

NDP 2013-2017 established a set of goals on health, including: widening the coverage and improving the quality of health services, keeping pace with global developments in the health and medical field, prevention first, improving reproductive health services, and promoting the private sector's role.

- Health services deteriorated owing to insecurity in some provinces and the fact that hospitals were out of service. The number of community hospitals however increased significantly from 111 in 2014 to 121 in 2016.
- The physician/population ratio dropped from 0.74 per 1000 inhabitants in 2013 to 0.72 in 2015, while the planned was 0.76 in 2015. The dentist/population ratio rose from 0.2 per 1000 inhabitants in 2013 to 0.22 in 2015, slightly higher than the planned of 0.2 in 2015. The pharmacist/population rate increased from 0.23 per 1,000 inhabitants in 2013 to 0.26 in 2015, which is higher than the planned target of 0.23.
- The rate of health professionals per 1000 people rose from 1.9 in 2013 to 2 in 2015, which is higher than the planned 1.9, while the rate of nurses/doctors stood at 2.2 in 2013 and 2015, which is lower than the planned 2.8.
- The number of hospitals in rural areas is small (12 in 2014 and 2015), and the number of health centres in these areas decreased from 1,403 in 2014 to 1,350 in 2015.
- The infant mortality rate per 1000 live births rose from 13.2 in 2013 to 14.4 in 2016 (excluding the Kurdistan Region and Anbar), which is below the target of 19.
- The under-five mortality rate per 1000 live births increased from 22.5 in 2013 to 22.7 in 2016, which is below the target of 25.
- The maternal mortality rate per 100000 live births rose from 30.1 in 2014 to 32 in 2015.

Women

The NDP 2013-2017 contained the following goals on gender: Integrating gender in development, women's empowerment, and increasing the opportunities for women's political and economic participation.

- The rate of births attended by health personnel increased from 87.7% in 2013 to 93.9% in 2016.
- The rate of early mortality for women aged less than 70 from major non-communicable diseases out of total deaths for all causes and ages fell from 48.4 per 100,000 inhabitants in 2013 to 41 in 2015.
- A low enrolment rate for females at all grade levels, as well as an increase in the dropout rate for females compared to males during the NDP period.

- The university enrolment rate for males and females rose, with males' rate being higher (from 15.5 in 2011 to 20.2 in 2015).
- The share of women in senior roles in 2015 compared to men was 9.69% of directors general and 2.56% of undersecretaries. The share of women in ministerial positions declined from 6 Ministers in 2004 to 2 Ministers in 2016.
- The share of women working in the private sector out of total working women declined from 32% in 2012 to 29% in 2014. The share of women working in the public sector out of the economically active women rose from 41% in 2012 to 46% in 2014. This shows that women tend to work in the public sector.
- The share of female heads of households increased from 10.2% in 2013 to 10.5% in 2016.
- In the period 2013–2016, the number of marriages decreased by 2%, and divorces increased by 0.6%.

Youth

The NDP 2013-2017 established a set of goals for the youth population: empowering the youth, achieve a real decrease in youth unemployment, develop the values of citizenship and belonging, and sports for everyone. With regard to education, the following was achieved:

- The enrolment rate for the age group 15-17 rose from 24% in the academic year 2012-2013 to 29% in the school year 2015-2016;
- The dropout rate in middle school rose from 2.2% among females and 3.7% among males in the school year 2012-2013 to 8.1% and 4.9% respectively in the school year 2015-2016;
- Male dropout rate in high school increased from 1.5% during the 2012-2013 school year to 1.9% during the 2015-2016 school year, while female dropout rate fell from 2.6% to 1.9%;
- Enrolment in vocational education decreased from 58689 in the academic year 2012-2013 to 51138 in the school year 2015-2016, with a growth rate of -3.4% annually;
- The number of students enrolled in community colleges decreased from 20042 in the academic year 2012-2013 to 13631 in the school year 2015-2016;
- The proportion of young workers to those economically active in urban areas increased from 78.5% in 2012 to 80.7% in 2014, while in rural areas it decreased in the same period from 87.6% to 86.7% as a result of a limited scope of work in the countryside;
- The ratio of young workers to those economically active in the private sector rose from 55.3% in 2012 to 57.3% in 2014, while the ratio of young workers to those economically active in the public sector fell from 21.8% in 2012 to 21.7% in 2014;
- The number of youth forums rose from 132 in 2013 to 190 in 2016;
- The index of expansion in the construction and rehabilitation of recreational and sports centres, including youth infrastructure and five-room halls as well as cultural halls, went up with the number of these centres increasing from 1434 in 2013 to 1447 in 2016. The number of participants in sports programmes increased from 53000 in 2012 to 87430 in 2016. The number of participants in art and cultural programmes increased from 31000 in 2012 to 76504 in 2016.

Vulnerable groups

The NDP 2013-2017 included social development goals, including: a steadfast and effective welfare society, reinforce opportunities for justice and fairness through an efficient and effective protection network, empower the disabled and integrate them in society, reinforce the role of humanitarian and charitable organisations in providing social services, and follow-up on the affairs of migration and those forcibly evicted. The achieved goals were as follows:

- The number of welfare units of various kinds (State centres for juveniles and girls, and elderly and disabled homes) increased from 96 in 2013 to 98 in 2016 because the number of elderly homes increased from 10 to 12, which is lower than the NDP goal of 15 in 2017, and the number of disabled homes increased from 62 to 63. The number of residents in these units decreased from 4647 to 4313 over the same period;
- The number of welfare beneficiaries increased from 878507 in 2013 to 905773 in 2016, while the amounts disbursed to the social welfare network decreased from IQD 2.6 billion in 2013 to IQD 1.1 billion in 2016;
- The rate of paid beneficiaries/protected workshops and cooperative associations rose from 20.6 in 2014 to 22.4 in 2015.

VIII. Environmental sustainability

- NDP 2013-2017 envisioned a set of relevant goals – above all: protecting and improving air quality, protecting and improving water quality, limiting land deterioration and fighting desertification, developing and improving a system for waste management, and limiting radiation pollution.
- Between 2014 and 2015, greenhouse gases – due to increased methane emission – increased from 1.621 P.P.M to 1.758 P.P.M. In the same period, the concentration of contaminants in air increased as well, with the dust concentration increasing from 18 to 19.6 g/m²/month. Particulate matter in air also remained above the proposed national standard of 350 µg/m³.
- Iraq continues to suffer from poor water quality as a result of leakage of sewage (obsolete and inefficient treatment plants and poor capacity) and untreated wastewater, as well as the water of factories that flows into rivers without treatment.
- Solid waste management methods are still very old, and solid waste collection in Iraq only covers urban population since municipal institutions, pursuant to Municipal Administration Act No. 165 of 1964, are not responsible for providing the service to rural areas beyond the basic borders of the municipality.
- Iraq continues to suffer from accumulated hazardous residues, with their quantities collected by municipal institutions from health, industrial, agricultural and other institutions in 2010 amounting to 42591 kg/d. In 2015, it reached 56498 kg/d without considering the Nineveh and Anbar provinces due to deteriorating security conditions.

IX. Good governance

Development performance in this framework can be accessed through the following main indicators.

Public sector modernisation

- A 2015 COSIT survey assessing the e-readiness of State institutions shows that the use of an e-form in institutional work amounted to 21%, while paperwork still accounts for the largest proportion of work (77%). 66% of surveyed entities has IT units and the proportion of functional electronic systems in these units was 67%, which is good, while it was 92% at non-ministry entities. The effectiveness of data networks at the macro level is 42%.
- The number of e-services is still very limited in comparison with manual services provided by State institutions. While some institutions were successful in providing e-services, these services are still substandard, including: the National Unified ID Project, vehicle registration and driving licenses, e-government, and filing complaints and processing applications electronically.

Integrity, transparency, accountability and reducing corruption

- Since 2003, governments have supported capacity-building of the Commission of Integrity (Col), Board of Supreme Audit (BSA), Inspector General Offices (IGOs), Office of the Prime Minister's Coordinator for Oversight Affairs, and Joint Anti-Corruption Council. Iraq has become a candidate member with the Extractive Industries Transparency Initiative. In this context, the government broadened the scope of public disclosure, with the Council of Representatives and government integrity commissions performing general reviews of the Executive, in addition to the role of the BSA and IGOs. However, Iraq suffers from the lack of a national standard for determining the corruption index on the basis of which the status quo is assessed.
- Despite the launch of the National Anti-Corruption Strategy (NACS) 2010-2014, the NACS 2016-2020 has yet to be approved.
- With regard to financial disclosure, Col does not have the total number of people supposed to submit financial disclosure statements. It only has the number of those who submitted such statements (21072 in 2015). As a result, the percentage of those submitting these statements cannot be known.
- During the NDP period, Iraq did not achieve a breakthrough in the fight against corruption from an international perspective. According to the TI Corruption Perceptions Index, Iraq was in the 16th level during 2013-2015 and then in the 17th level in 2016, ranking 166th out of 167 countries. This means that Iraq is still at the bottom of the list.

Rule of law, human rights and access to justice

- High rates of violations against children, notably recruitment of children, violations of children by terrorist groups, orphaned children, children's health and nutritional status, dropout, street children, and children in conflict with law. The number of children recruited by terrorist groups was 1,500 in the Nineveh Province alone.
- The proportion of child labourers aged 6-14 was 3.5% of the total number of children in this age group. There are 1 million orphan children (5.4%) whose harsh conditions force them to work. The report shows that 70% of displaced children already missed a full school year. The number of displaced children was 1.6 million or 50% of the total number of displaced persons (3.2 million) in 2014.

X. Spatial development

NDP 2013-2017 contained a number of relevant goals, mainly: reducing spatial disparities among governorates, reducing the urban disparity between urban and rural regions, integrated transportation systems, strengthening participation and decentralisation in the management of development, solving the informal settlements problem, and activating urban management and urban planning.

- Income inequality persists among provinces with Baghdad having the highest monthly per capita income of IQD 426,800 in 2014, and the main source of income being wages and salaries (49.2%), while the lowest source is transfers (5.4%). The Muthanna Province had the lowest average monthly per capita income (IQD 170,100) with the main source of income coming from wages and salaries (59.3%) and the lowest source from welfare (6.5%).
- The percentage of housing units with access to the public water network was 89.8%, i.e. 10.2% of families had no access, down from 13.8% in 2012. The highest rates of families with no access were in the provinces of Thi-Qar (29.2%) and Muthanna (21.2%). In contrast, Najaf and Kirkuk had the lowest rates of families with no access (3.5% and 2.5% respectively) and they are below the national level.
- 2015 statistics indicate that the proportion of the population with access to sewage services (excluding the Anbar and Nineveh provinces) is 83.7%. The highest proportion of the population with access to the sewage system is in the provinces of Baghdad (Mayorality of Baghdad), Missan and Najaf.
- There is a gap in terms of annual per capita electricity consumption by province in 2015, with the highest being in the Basra Province (2.75 MWh) and the lowest being in Salah al-Din (0.15 MWh). The other provinces have varying close proportions. A family is considered to be with no access if they do not get electricity from the public network. The 2014 Socio-Economic Survey shows a decline of 0.57% in the proportion of families without access to the national electricity grid compared to the 2012 Survey. There was relatively little variation among provinces in connection with the percentages of families with no access to the national electricity grid in 2014, with Baghdad ranking first with 0.5% of the total number of families in the province, while the percentage in Missan, Wassit and Kerbala was almost 0. The percentage was 0.7% in rural areas and 0.2% in urban areas.
- The 2014 Survey also suggests a decline of 6.9% in the access to waste collection services compared to 2012 at the level of Iraq, with a disparity among provinces. Najaf and Diyala had the highest rates of no access (59.1% and 58.8% respectively), and there was a significant disparity between rural areas (83.6%) and urban areas (22.7%).
- Analysing the allocation distribution of the Investment Provincial Development Programme (provincial developmental projects) in 2013 reveals that the Basra Province ranked first with around 23% of the total allocations to the Programme, followed by Baghdad (18%) and Nineveh (14%) provinces. In 2014, Basra also ranked first (25%), followed by Baghdad (20) and Nineveh (9%). In 2015, Basra also ranked first (24%) followed by Baghdad (18.6%). This shows that the allocations of the Programme are distributed in accordance with the population ratios of provinces and the petro-dollar allocations. This is why Basra ranked first over 2013-2015.
- The 2016 Food Security Survey shows an urban-rural disparity in terms of unemployment rate (11.5% and 8.8% respectively). At the provincial level, the highest unemployment rate in urban areas was in Missan (20.2%), while the highest unemployment rate in rural areas was in Muthanna (19%). There was also a spatial urban-rural variation among provinces, which requires job creation in urban and rural areas to strike a spatial development balance.
- There was an urban- development rural disparity in terms of services and infrastructure. Services and infrastructure are deteriorating in rural areas owing to the large number and dispersion of villages and the small number of inhabitants in some of them, which makes development projects infeasible in these villages. For example, the proportion of the population with access to the drinking water

network in 2015 was 86.8% in Iraq (91.4% in urban areas and 75% in rural areas). At the provincial level, the highest rate in urban areas was in Diyala, Wassit and the Municipality of Baghdad (100%), while the lowest rate was in the outskirts of Baghdad (44%). The highest proportion of rural people with access to water was in Thi-Qar (93%), while the lowest was in Salah al-Din (55%).

- The number of industrial facilities was highest in Baghdad province (4062) and lowest in Kirkuk province (62). The number of workers was highest in Baghdad province (69239) and lowest in Diwaniyah (5459). The share of industrial output was also highest in Baghdad province (29.94%) and lowest in Diwaniyah (2.02%).
- Thus, the NDP goal of reducing spatial variation among provinces was not achieved.



Chapter Two: Population and Workforce

2.1. Population

2.1.1. Situation analysis

Established under MoP, the National Supreme Council of Population and the National Committee for Population Policies developed the first national population policy document for Iraq. These bodies played an important role in realising relevant NDP 2013-2017 objectives. However, success in certain objectives and respective targets was set back due to the June 2014 events, which caused nationwide disturbances in the demographic situation.

- In this context, and in view of the future assumptions, the population landscape is expected to be as follows:
- Steady population increase, expected to reach 42 million people in 2022 at 2.5% annual growth rate;
- Poor implementation of population policies;
- Limited service provision capacity and coverage due to population growth;
- Steady increase in unemployment rates due to poor administration and inefficient use of resources;
- Continued population movements due to the impact of violence and terrorism.

NDP 2018-2022 has to implement a targeted and coherent population policy in line with the sustainable development trends 2015-2030 with focus on the humanitarian priorities highlighted in NDP 2013-2017, which called for expanding the people's choices, satisfy their needs and provide all basic services to enhance the quality of life in Iraq, especially the returnees to the cities liberated from terrorist organisations.

Population by age

- The population under 15 years increased from 13.9 million in 2013 to 14.6 million in 2016 (respectively, 39.5% and 40.5% of the total population).
- The working age population (15-64 years) increased from 20.2 million in 2013 to 20.4 million in 2016.
- In 2016, the youth population was 7.2 million in the age group 15-24 (as defined internationally) and 9.9 million in the age group 15-29 (as defined in the third National Human Development Report).
- In 2016, the elderly population (65 years and above) was 1.2 million – 2.9% of total population for the same year.

Population by gender

- Statistics show a gender balance in the population in 2013 (50.9% males and 49.1% females).
- In 2016, the share of women was 48.5% of the population in the age group 0-15 years, ca. 50% in the age group 15-64, and 53% in the age group 65 and above.
- Life expectancy is 75 years for females and 71 for males.

Population, spatially and environmentally

- The Iraqi population are unevenly distributed. Around half (49.1%) live in five provinces (Baghdad, Nineveh, Basra, Suleimaniah and Thi-Qar), which account for 20.9% of Iraq's territory. The other half live in the remaining areas with less population-attractive characteristics. The top three provinces host the highest population number: Baghdad alone had population of 7.7 million in 2016, way above the second largest city of Basra.
- The urban-rural distribution is not better. Of the total population, 69.8% live in urban areas and 30.2% in rural areas. Rural-urban migration – triggered by the low level in basic activities and poor public services – is the main factor behind the high density of urban population, in addition to the administrative criteria that requires changes in the rural-urban categorisation based on the number of population.
- Also, the urbanisation level significantly differs from one province and another. The highest level is in Baghdad (84.7%), followed by Suleimaniah, Erbil and Basra. The lowest urbanisation levels are in Babil, Muthanna and Salah al-Din (84.3%, 45.4% and 45.1% respectively).

Population movement (displacement and migration)

Iraq has witnessed unprecedented waves of displacement resulting from the terrorist operations and their repercussions. While the entire Iraqi society has been affected by the war on terror, women and girls, especially those vulnerable to abuse, remain the primary target of attacks including serious violations of human rights. Reports on kidnappings, killings, human trafficking, forced marriage and sexual violence are of concern and call for intervention and support to ease the suffering and help re-integrate the victims. About 1.9 million women have been displaced in the conflict zones (51% of total people displaced recently), and they are still facing harsh conditions. Iraq is expected to face challenges that might inhibit the expected positive relationship between population and development.

2.1.2. Challenges

1. High population growth rates due to high fertility.
2. Unstable population movement in a number of provinces following mass displacement due to the unstable security situations.
3. Continued economic and social disparities between the provinces, which has deepened spatial disparities despite related development efforts.
4. "Ruralisation" of cities, including the transfer of rural culture to cities. Rural inhabitants constitute 7% of the urban population and this percentage may increase due to the continued migration. One evidence is the increase in urban population in Baghdad to 87% in 2016.
5. Failure to conduct Census.

2.2.3. Objectives

Objective 1: Parents have the right to choose the number and frequency of births

Means of achievement:

1. Policy measures promoting family planning programmes;
2. Public awareness programmes on the need to organise the number and frequency of births;

3. Effective measures to limit illicit marriages.

Objective 2: Return 100% of IDPs to their homes voluntarily

Means of achievement:

1. Activate the framework of the Reconstruction Plan 2018-2022;
2. Introduce job-creation programmes and projects that contribute to stabilisation, reconstruction and development;
3. Rehabilitate the infrastructure and ensure basic service provision to returnees;
4. Facilitate voluntary returns.

Objective 3: Achieve population stability in rural areas and under-developed cities

Means of achievement:

1. Activate and complement the National Urban Development Strategy 2014-2018 and Rural Development Strategy and support them with the required regulations;
2. Develop administrative categorisation criteria (e.g. transferring villages into nahias) in light of the current economic crisis in the country, and provide various services therein;
3. Ensure access to services in rural areas;
4. Leverage the development potential of less developed cities and rural areas.

2.2. Workforce

2.2.1. Situation analysis

- The population of Iraq was 35.2 million in 2015. The number of the workforce was 9 million (25.9% of total population). Males accounts for 86% of total workforce against 14% for females.
- The unemployment rate was 10.8% in 2016 up from 10.6% in 2014. In the same year, the underemployment rate in Iraq was as high as 28.19% and the poverty rate was 22.5% (and 41% in the provinces occupied by ISIS up from 19% at the end of 2013).

Nevertheless, the following positive aspects can be noticed:

1. Approve Labour Law No. 37 of 2015 which meets the latest international labour standards and the first of its kind in the region to recognise the basic rights of workers.
2. The draft social security law submitted to the Cabinet of Ministers and Parliament and is still under consideration.
3. The number of beneficiaries of the Support to small income-generating enterprises fund, established in 2013, increased to 168000.

To use a realistic approach addressing problems and seizing opportunities, there should be a clear operational policy, legal regulations and administrative procedures that respond to the realities of the Iraqi economy and labour market.

Economically active population

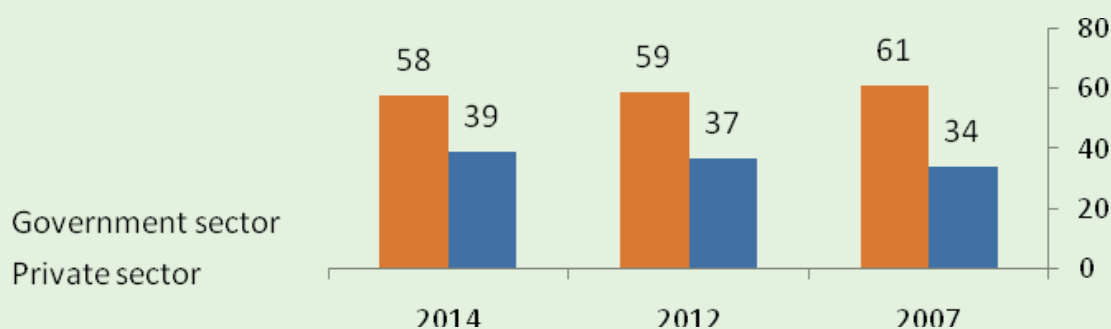
- Economic contribution of the economically active population decreased to 25.9% in 2014 down from 29% in 2008. Muthanna province recorded the lowest level (20%) while the highest levels were recorded in Erbil, Suleimaniah, Baghdad and Kirkuk (30.8%, 30%, 29.7% and 29.2%, respectively).
- The national economic activity rate was 42.7% according to the Iraq Household Socio-Economic Survey 2014. Provinces recorded different rates with the highest being Erbil, Kirkuk, Suleimaniah and Diwaniyah⁽¹⁾ [Qadessiyah](49.1%, 46%, 45.7% and 45.6% respectively) and the lowest being Diyala, Thi-Qar, Basra and Nineveh (39.7%, 39.3%, 39.3% and 39.2% respectively). The double-faced crisis was a major reason of low economic contribution rates.
- The provincial distribution of economically active population shows high concentrating in Baghdad (21.95% of total economically active population), followed by Nineveh and Basra (8.49% and 6.81% respectively), while the lowest rate was in Muthanna (1.69%). This corresponds to the provincial population distribution rates given the fact that the number of economically active people relates to the population size.
- Women's economic participation levels were as low as 16% of the economically active population (against 84% for men). Economic participation in rural areas was also low (25% against 75% in urban areas) reflecting an established fact that the "labour force is masculine and economic activity is urban".
- The 15-64 age group accounted for 50.1% of total population in 1987. This increased to 51.6% in 1997, 56.1% in 2009 and 56.77% in 2014 and is still rising. This means that Iraq may have a critical demographic window under the current circumstances, which, if addressed properly, would help reduce the unemployment and dependency rates and increase investment and savings at both individual and community levels and this, in turn, helps accelerate development. Failing to do so, would have highly negative impact on unemployment and poverty, especially among the youth.
- Tracking this age group at the provincial level shows significant variation. Baghdad and Suleimaniah recorded 61.43% and 60.34% respectively in 2014, meaning that they entered the stage of demographic window. Kirkuk also has already entered this stage and Erbil and Kerbala are approaching. These percentages are changing constantly according to the demographic change and internal migration. However, the overall trend shows constant increase hence reflecting increased percentage of economically active population.

Employment

In spite of the planning aim to link employment trends to development objectives (which are mainly determined by the allocations of federal budgets to operational and investment expenditure), the public sector continues to suffer from over employment and low productivity. The private sector is not creating safe and sustainable jobs; it is even contributing to the raising underemployment due to the expanding informal economy. Statistics confirm this fact. The number of public sector employees was 3.199 million in 2014 (39% of total economically active population) up from 2.846 million employees in 2012 (37% of total workforce) and 2.339 million in 2007 (34% of total workforce). This lays a burden on the federal budget expenditures in light of the country's financial crisis and decreasing oil prices globally.

Iraq lacks accurate indicators about the private sector workforce and there are no data about the informal sector. The private sector workers dropped to 59% of total economically active population in 2012 and to 58% in 2014. This undesired change was the result of the economic crisis hitting the country's economy and also of the increasing number of labour market entrants (and consequently unemployed people). This has increased the number of government workers at the expense of private sector.

(1) Translation note: Diwaniyah is the former Qadessiyah province (official name as of 2016). The original NDP text uses both names interchangeably; the English version of Iraq NDP 2018-2022 uses Diwaniyah consistently.

Figure 4**Number of workers in the public and private sectors (2007-2014)****Unemployment**

- The unemployment rate in Iraq hit a record of 10.8% in 2016, up from 10.6% in 2014.
- By gender, unemployment in 2014 was 8.4% among men and 21.9% among women.
- By age group, unemployment was highest in the age group 15-19 (24.5%), and lowest in the age group 60-64 (2.9%), in 2014.
- Geographically, unemployment was 11.5% in urban areas and 8.1% in rural areas in 2014.
- By province, unemployment was highest in Anbar (19.6%), followed by Thi-Qar and Missan (17.4% and 16.5% respectively), and lowest in Kirkuk, Suleimaniah and Kerbala (2.9%, 5.7% and 6.7% respectively), in 2014.
- The underemployment situation is not much different. Underemployment rates increased to 28.19% in 2014 due to the same reasons as unemployment and the provincial rates are similar were Babil, Kirkuk, Salah al-Din and Qadessiyah exceeded the 40% threshold (43.08%, 42.05% and 40.91% respectively) while the lowest rates were in Nineveh (16.31%), Basra (16.95%) and Kerbala (17.84). Such differences among provinces reflect the varying nature of business activities and the retreating economic performance nationwide.
- The government has adopted many job-creation policies and programmes that targeted vulnerable groups. Four programmes provide decent work for the unemployed and all groups. (1) The Community Rehabilitation Programme 1997-2004, in cooperation with the ILO, has implemented 868 projects. The Programme stopped and then resumed work as a national project from 2007 until 2016, during which period 383 projects were implemented. (2) In the course of the Microfinance Programme 2007-2009, 73323 enterprises benefited from USD 328 million. (3) The National Strategy for Poverty Reduction programme has been ongoing since 2016 in cooperation with MoP; projects have focused on the poorest provinces and granted 10896 loans worth of IQD 86 billion. (4) The Small Income-generating Enterprises Fund has targeted all provinces (except KRI) depending on the population weight; in the period 2013–2016, it has granted 49907 loans worth of more than IQD 212 billion IQD.

2.2.2. Challenges

1. The fluctuation of oil revenues has caused remarkable budget deficits, affecting the expenditure (especially investment expenditure) which has become significantly deflationary, in turn increasing recession and weakening job creation;
2. Limited private sector participation in economic activities due to the lack of attractive business environment;
3. Large informal sector;
4. Lack of central employment authority in Iraq;
5. The diminishing GDP contribution of the agricultural and industrial sectors is expected to deepen the imbalance of labour force distribution and increase the unemployment and underemployment rates;
6. Structural imbalance in the labour force distribution with regard to jobs, occupation and education due to continued development disparities and the negative consequences of displacement.

2.2.3. Objectives

Objective 1: Reduce unemployment

Means of achievement:

1. Introduce an economic policy that creates jobs and promotes the private sector;
2. Link education outputs to labour market requirements;
3. Implement vocational training and education programmes to encourage work in the private sector;
4. Direct economic resources toward labour-intensive activities.

Objective 2: Develop an HR planning framework covering more than five years

Means of achievement:

1. Introduce a labour force planning system under a single authority (Public Authority for Manpower), which is to address unemployment, provide national expertise for labour force research, implement occupational health and safety standards and ensure compliance with relevant international labour standards and agreements;
2. Develop an applicable electronic system for strategic workforce planning in all ministries and federal entities. The related HR departments will be responsible for implementing this system with support from the Federal Authority for Government Human Resources.

Objective 3: Utilise the demographic window (by province)

Means of achievement:

1. Develop an investment prioritisation approach giving priority to provinces reaching the demographic window stage;
2. Ensure coordination and integration between provincial and national spatial development policies to optimise the use of human resources.



Chapter Three: Macroeconomic Framework

3.1. Estimated NDP revenues

Oil revenues

Most estimates agree that the average international oil prices will not exceed USD 60 per barrel and will not fall below USD 40 per barrel over the next five years. The Iraqi Ministry of Oil has its own production and export plans for the coming years as shown in Table 2 below.

Assuming that the exchange rate at the Central Bank of Iraq remains at IQD 1182 per US dollar, the annual estimated oil revenues are will be in the range IQD 74–103.5 trillion. This brings the total expected oil revenues for the period 2018–2022 to IQD 370 trillion – according to the Budget Strategy Committee; IQD 381.9 trillion – according to IMF estimates; and IQD 425.6 trillion – according to the optimistic forecasts of the Iraqi Ministry of Oil (see Table 3).

Table2

Expected oil production and export volume, 2018-2022

Indicator	2018	2019	2020	2021	2022
Oil production (million bpd)	4.7	4.7	4.7	4.9	4.9
Oil export (million bpd)	3.9	3.9	3.9	4.0	4.0

Table3

Expected oil revenues, 2018-2022

(IQD billion)

Forecast source	2018	2019	2020	2021	2022	Total
IMF	75045	74537	76050	77232	79076	381940
Ministry of Oil	75715.9	75715.9	75715.9	94914.6	103543.2	425605.5
Budget Strategy Committee	74033.4	74033.4	74033.4	74033.4	74033.4	370167

Non-oil revenues

Non-oil revenues in Iraq are not expected to increase significantly given the current financial crisis, declining business activity and the breakdown of many development projects in the public and private sectors. However, Government corrective measures to strengthen the budget and identify new sources of revenues have contributed to maintaining the available fiscal margins; these are expected to have the same impact in the coming years.

- **Direct taxes.** These include many types of taxes levied on private sector companies and oil companies, on the salaries of public and private employees, the real estate taxes and others. This type of tax is expected to significantly increase money collection.
- **Indirect taxes.** These include taxes on trade in goods and services, including the customs tax on the private and mixed sectors, as well as taxes on mobile phone/internet service, hotels and restaurants. All indirect taxes have remarkably been increasing in response to the recommendations by international institutions to adjust the related Iraqi fiscal and monetary policies.
- Other important budgetary revenues include corporate taxes and fees of travel tickets, services, etc.

Table4

Expected non-oil revenues, 2018-2022			(IQD billion)		
Non-oil revenues by source	2018	2019	2020	2021	2022
Direct taxes	4996.2	5146.1	5303.4	5466.5	5639.8
Indirect taxes	2213.7	2313.1	2390.7	2471.6	2555.8
Other income	5799.8	6038.4	6262.4	6492.3	6728.3
Total	13009.7	13497.6	13956.5	14430.4	14923.9

Total estimated revenues

Building on the above, the total expected revenues during the NDP period 2018-2022 will be as follows.

Table5

Total expected revenues in the period 2018-2022		
Expected revenues (2018-2022) by source	Total (IQD trillion)	% of the total
Oil revenues	370.2	84.1
Non-oil revenues	69.8	15.9
Total expected revenues	440.0	100

3.2. Economic growth

The NDP 2018-2022 aims to achieve economic growth rates consistent with those recorded in the past periods based on the country's physical and human resources, especially by sustaining oil production and exports that guarantee the sustainability of fiscal revenues necessary for other production and service sectors. However, this growth depends on the ability to ensure acceptable levels of employment and job-creation especially for new labour market entrants, and translate this growth into adequate standards of living for all groups while maintaining equity in income distribution, controlling inequality of living standards and fighting administrative and financial corruption as a major barrier to development.

In spite of all recent economic difficulties, particularly in 2014 and 2015 and the subsequent liberation of the territories occupied by ISIS in addition to the reconstruction of affected areas, the Iraqi economy was able to achieve an acceptable average economic growth rate of 6.6% during the period 2010-2015 driven mainly by the continued oil production and export. The growth rate was 6.3% in 2015 and 2016 according to preliminary data.

Based on these data, the target growth rate for the period 2018-2022 was set at about 7% (7.5% for the oil sector and 6.1% for all other non-oil activities: commodity, distribution and services). The Iraqi economy does have stronger growth potential but these rates have been estimated considering the fluctuations of oil prices and the continued terrorist threats and security instability among other factors that may affect the development process in the coming years.

3.2.1. GDP

Table 6 below shows the estimated GDP growth rates in the period 2018-2022 based on the NDP model.

Table 6

Targeted GDP growth at fixed prices, 2018-2022			(IQD billion)				
Sector	2015 Base year	Target growth rate (%)	2018	2019	2020	2021	2022
Agriculture	3707.5	8.4	4722.5	5119.2	5549.2	6015.3	6520.6
Oil	100929.2	7.5	125384.0	134787.5	144896.9	155764.2	167446.5
Mining	330.0	1.0	340.0	343.4	346.8	350.3	353.8
Manufacturing industry	1535.1	10.5	2071.2	2288.7	2529.0	2794.5	3088.0
Electricity and water	2130.7	6.0	2537.7	2690.0	2851.4	3022.4	3203.8
Building and construction	13768.4	6.8	16772.5	17913.0	19131.1	20432.0	21821.4
Transport and communications	14313.9	7.0	17535.1	18762.6	20076.0	21481.3	22985.0
Trade	14872.9	8.3	18892.1	20460.2	22158.4	23997.5	25989.3
Finance and insurance	11815.1	2.6	12760.8	13092.6	13433.0	13782.3	14140.6
Services	19777.8	4.5	22569.8	23585.4	24646.7	25755.8	26914.9
Non-oil activities	81402.0	6.1	98201.8	104255.3	110721.6	117631.5	125017.3
Total (IQD billion)	182331.2	7.0	223585.8 189.2	239042.8 202.2	255618.5 216.3	273395.7 231.3	292463.8 247.4

Thus, the NDP aims to increase the GDP at fixed prices to IQD 292.5 trillion in 2022, up from IQD 182.3 trillion in 2015 (with an increase of IQD 110.2 trillion total and growth rate of 7%). The main target sectors are the manufacturing (10.5%) and agriculture (8.4%) (these rates will depend on the availability of the required investments from both public and private sectors), as well as infrastructure including transport, electricity, water and building and construction. However, the oil sector must maintain its growth rates because it is the main source of income and foreign currency. This model is set to address as much as possible the country's structural economic imbalances including the low GDP contribution of commodity and production sectors compared to oil, as the latter is not expected to be adjusted in the short term. Table 7 shows the sector structure of GDP with 2015 as baseline years and 2022 as target year.

Table 7

GDP sector structure against the baseline year			(%)
Sector	Base year 2015	2018	2022
Agriculture	2.0	2.1	2.2
Oil	55.4	56.1	57.3
Mining	0.2	0.2	0.1
Manufacturing industry	0.8	0.9	1.1
Electricity and water	1.2	1.1	1.1
Building and construction	7.6	7.5	7.5
Transport and communications	7.8	7.8	7.9
Trade	8.2	8.4	8.9
Finance and insurance	6.4	5.7	4.8
Services	10.7	10.1	9.2
Total	100	100	100

The distortion of the sector structure of the Iraqi economy as a result of years of siege, wars and crises requires many years of planned and systematic efforts to remove this distortion. The NDP seeks correction through reviving the production and commodity sectors, infrastructure and services and gradually increasing their GDP contribution, which is a mutual responsibility of the public and private sectors. The estimated GDP contribution of non-oil activities throughout the NDP period is shown in Table 8.

Table 8

GDP contribution of non-oil activities, 2018-2022									(IQD billion)	
Activities	2018		2019		2020		2021		2022	
	GDP	%	GDP	%	GDP	%	GDP	%	GDP	%
Non-oil commodities	26443.9	11.8	28354.3	11.9	30407.5	11.9	32614.5	11.9	34987.6	11.9
Distribution	38056.1	17.0	40924.8	17.1	43980.7	17.2	47270.5	17.3	50812.6	17.4
Services	33960.4	15.2	34976.0	14.6	36333.4	14.2	37746.4	13.8	39217.2	13.4
Total GDP	223585.8	44.0	239042.8	43.6	255618.5	43.3	273395.7	43.0	292463.8	42.7

3.2.2. Investment and growth

The estimated (public and private) investments required to achieve the target growth rate of 7% amount to 220.6 trillion dinars (USD 186.7 billion) throughout the NDP years, of which 132 trillion dinars are expected to be provided by the state budget as government investment and the balance (88.6 trillion dinars) reflects private investments of different forms, as shown below:

Table 9

Estimated NDP revenues and investments, 2018-2022		(IQD trillion)
Total expected revenues 2018-2022		440.0
Total expected investments		220.6
Estimated investments in the public budget		132.0
Expected private investments		88.6

Government investment

The estimated government investment during the NDP years amount to 132 trillion dinars (USD 111.7 billion) and constitute about 60% of the total investment required (220.6 trillion dinars), as shown in the above table.

Non-government (private) investment

The private sector is expected to contribute 88.6 trillion dinars (USD 75 billion) during the NDP years. These represent all private investment activities in Iraq, which constitutes 40% of the total investments required to achieve the target NDP growth rate.

Sector distribution of required investments

In order to achieve targeted sector growth rates, we list below the estimated investments required annually for each economic sector. The oil sector obviously continues to assume a high percentage of investments (about 38.4% and 84.7 trillion dinars for the period 2018-2022). This reflects the large investments needed by this capital-intensive sector which also needs advanced technology to meet the obligations of international oil companies. The infrastructure sectors (electricity, water, construction, transport and communications) together account for 49.5% of the NDP investments. The electricity and water sector needs 20.2 trillion dinars; the building and reconstruction needs 39.6 trillion dinars to meet the needs in the affected areas in addition to the declining performance of the infrastructure nationwide, with the private sector being the main contributor (about 90% of total investments). The service sector also needs large investments during the NDP years (37.2 trillion dinars or 17% of total estimated investments) to enable it to respond to the citizens' daily needs. Production and commodity sectors (agriculture and manufacturing) together need only 5.6% due to low capacity, poor technologies, unfair competition from imported goods and poor implementation of relevant measures and decisions.

Table 10

Estimated investments to achieve the sector targeted growth rates, 2018-2022						(IQD billion)
Sector	Target growth rate (%)	2018	2019	2020	2021	2022
Agriculture	8.4	1280.8	1388.4	1505.0	1631.5	1768.5
Oil	7.5	14579.5	15673.0	16848.5	18112.1	19470.5
Mining	1.0	5.6	5.7	5.7	5.8	5.8
Manufacturing industry	10.5	787.2	869.9	961.2	1062.2	1173.7
Electricity and water	6.0	3591.1	3806.5	4034.9	4277.0	4533.7
Building and construction	6.8	2135.8	2281.1	2436.2	2601.8	2778.8
Transport and communications	7.0	6883.0	7362.8	7880.3	8431.9	9022.1
Trade	8.3	1479.9	1568.0	1698.2	1839.1	1991.8
Finance and insurance	2.6	1077.9	1105.9	1134.7	1164.2	1194.5
Services	4.5	6803.3	7109.5	7429.4	7763.7	8113.1
Total(IQD billion)	7.0	38592.2	41172.8	43934.2	46889.4	50052.5
Total(USD billion)		32.6	34.8	37.2	39.7	42.3

Table 11

Sector distribution of required investments 2018-2022		
Sector	Investment (IQD billion)	% of required investments
Agriculture	7574.2	3.4
Oil	84683.7	38.4
Mining	28.6	0.01
Manufacturing industry	4854.3	2.2
Electricity and water	20243.3	9.2
Building and construction	12233.6	5.5
Transport and communications	39582.1	17.9
Trade	8545.1	3.9
Finance and insurance	5677.2	2.6
Services	37219.0	16.9
Total	220640.0	100

3.2.3. Average share per capita

The NDP aims to achieve a real GDP growth rate of 7% with a population growth rate of 2.5%. The average real per capita income is expected to grow by 4.5%. The average per capita GDP (at 2007 fixed prices) was about 4.9 million dinars in 2015 and about 5.1 million in 2016, and is expected to reach about 6.9 million in 2022.

Table 12

Average per capita share during the NDP years			
Year	Total targeted (IQD billion)	Estimated population (thousands)	Average per capita share (thousand IQD)
2018	223585.8	38124.2	5864.7
2019	239042.8	39127.9	6109.3
2020	255618.5	40150.2	6366.6
2021	273395.7	41190.7	6637.3
2022	292463.8	42248.9	6922.4

The NDP aims to significantly improve the citizens' living standards by promoting suitable employment opportunities and controlling inflation through financial and monetary policies that maintain the stability of prices and exchange rates sustain support as much as possible to low-income groups through social security networks and the ration card.

3.2.4. Capital formation of the public and private sectors

The available baseline data of 2015 show that the private sector contribution to capital formation was 34.7% against 65.3% by the public sector. Within the relevant economic policies, the NDP 2018-2022 aims to enhance the private sector participation in the development process by creating suitable opportunities to do so, especially given the declining role of the state and breakdown of many government projects due to the financial crisis and lack of revenues. The NDP aims to increase private sector contribution in investment to 38.3% in 2022 against 61.7% for the public sector as shown in the following table:

Table 13

Contribution of the public and private sectors to capital formation in fixed prices (%)				
Sector	Base year 2015		Target year 2022	
	Public sector	Private sector	Public sector	Private sector
Agriculture	67.6	32.4	60.0	40.0
Oil	100.0	00	95.0	5.0
Mining	66.4	33.6	66.0	34.0
Manufacturing industry	39.5	60.5	30.0	70.0
Electricity and water	80.8	19.2	75.0	25.0
Building and construction	43.1	56.9	40.0	60.0
Transport and communications	9.9	90.1	5.0	95.0
Trade	13.1	86.9	13.0	87.0
Finance and insurance	4.1	95.9	4.0	96.0
Services	81.8	18.2	70.0	30.0
Total share of contribution (%)	65.3	34.7	61.7	38.3

3.3. Objectives and trends of the macroeconomic policy

The most important challenges to the NDP (2013-2017) were the low efficiency of institutional performance, over-staffed administration, low labour productivity and prevalent administrative and financial corruption in addition to economic problems and challenges including steady deterioration of investment climate due to various political, economic, legal and regulatory factors, which affected the FDI flows and the ability to attract them not to mention the structural deficiencies of production, balance of trade and public budget. Other, equally important challenges included the rising (internal and external) public debt, lagging banking system, expanding informal sector and limited and poor private sector participation in economic development.

The Iraqi economy has, for many years, relied heavily on oil revenues, which constituted the main driver of economic growth and sustained the momentum of massive imports and large-scale spending. However, the decline and fluctuation in these revenues, as during the 2008-2009 crises and until 2014 showed that these policies failed to support growth and increase employment, which highlights an important outcome: the public sector-driven economic activities are no longer able to address for the decline in oil revenues, improve economic growth or employ new entrants.

The above clearly underlines the need to shift to other growth policies based on economic diversification. This requires policy changes and reforms, such as:

- Shift from reliance on oil to other economic activities.
- Encourage private sector market-oriented investments.
- Gradual opening up to foreign markets.

- Restore the natural growth components of production sectors.
- Fully harmonise fiscal and monetary policies to ensure optimal domestic use of capital accumulation and limit its outflows.

Realizing these transformations will be through economic reform policies and expansion of private investments, including FDI, which in turn requires the expansion and liberalisation of basic services such as electricity, transport, communications, banking, tourism and infrastructure, which are essential for expanding trade. It also requires a conducive environment to encourage private investment in the national economy as well as institutional changes and restructuring, which are key to future modernisation and revitalisation of economic capabilities in addition to business automation and support to technological development. The new development orientations include income/revenue diversification in the Iraqi economy, expanding the production base, boosting the value added, achieving high GDP growth and establishing a stable macroeconomic environment while increasing investments in selected development sectors.

Below are the most important **recommendations and proposals** that are key to Iraq's economic policy:

1. Prioritise investments according to economic and social needs while continuing the transition to market economy and transformation and integration with the outside world.
2. Give the Iraqi infrastructure sector top priority because it is key to subsequent development and provide the requirements of all economic activities and events as well as the essential services to citizens.
3. Identify the means, tasks, measures and procedures required to activate and develop the (domestic and foreign) private sector by providing an opportunity to re-establish it as an active partner. Private sector has critical role in economic growth and economic, social and technological development.
4. Focus on economic diversity and ease reliance on a single source of income to increase the GDP contribution of other sectors and economic and service activities and finance the public (current and investment) budget.
5. Strengthen the financial and banking system to support economic development.
6. Enhance the role of government institutions and improve their effectiveness through establishing and implementing an appropriate framework for business regulation and rule of law.

3.3.1. Financial policy

Challenges

- Continued imbalance in the structure of public expenditure favouring current rather than investment spending, which increases in the levels of total effective demand in the economy.
- Low flexibility of the production system and poor response to spending increases, which leads many bottlenecks in the Iraqi economy and increases its exposure.
- Oil revenues are still the main source of financing the public budget, which makes the economy vulnerable to fluctuations of international oil prices.
- Lack of modern budgeting methods and strategic planning.
- The fluctuations of global crude oil prices have caused macroeconomic instability and increased investment risks in the non-oil sectors.
- The weak contribution of other sources of fiscal revenues, especially taxes and duties, had kept the low ratio of non-oil revenues to total public revenues.
- Weak private sector with poor contribution to economic activity.

Objectives

Objective 1: Adjust the structure of public spending

Means of achievement:

1. Increase the ratio of investment spending to total public expenditure.
2. Reduce the current expenditures to match the average population growth rate (3%) and the overall increases in prices.
3. Reduce the budget deficit.

Objective 2: Diversify the structure of public revenues and increase the non-oil revenues

Means of achievement:

1. Expand and diversify the tax base by introducing new taxes and controlling tax evasion.
2. Continue to reduce the scope of tax exemptions.
3. Introduce new measures to increase the collection of fees and fines as well as state dues.
4. Improve the efficiency of the tax system.
5. Phase out the subsidies to basic services in the economy.
6. Widen the tax base.

Objective 3: Address the real deficit in the state budget

Means of achievement:

1. Use oil revenues to implement economic and social development projects, which would provide a sustainable and more stable source of fiscal revenues.
2. Increase the non-oil budget resources.
3. Stick to the policy of controlling public spending and apply the ceiling criteria in public expenditure.
4. Encourage the existing banks to expand investment financing.

Objective 4: Improve the management of public finance

Means of achievement:

1. Gradually shift to programme- and performance-based budgets, which allows better follow-up and evaluation of public expenditure.
2. Introduce a scientific and leadership approach in monitoring and follow-up through clear identification of responsibilities and transparent and fair implementation of related policies.
3. Improve the accounting and auditing systems.

Objective 5: Increase the levels of private savings

Means of achievement:

- Create new channels to attract small savings and use them in profitable investments.

3.3.2. Monetary policy

Challenges

1. Poor harmony and coordination between the financial and monetary policies in Iraq.
2. Steady increase in money supply as a result of the continued expansionary spending policy, which exacerbates inflationary pressures.
3. Continuing the open import policy may negatively affect the IQD exchange rates.
4. Limited role of banks in financing private development investments, which contradicts the policy calling for a major role of the private sector in development activities.
5. Low impact of interest rates on the volume of credit granted by private banks, which weaken private sector investments in the national economy.
6. Low interest rates on savings vis-a-vis high interest rates on bank credit.

Objectives

Objective 1: Keep inflation within the one-digit levels

Means of achievement:

1. Manage the money supply in favour of deposits;
2. Apply interest rates that encourage savings.

Objective 2: Maintain the stability of IQD exchange rates

Means of achievement:

1. Adapt the public spending trends to the requirements of economic growth;
2. Continue the selling of foreign currency according to market needs.

Objective 3: Enhance disclosure and transparency and monitoring principles and establish a governance system in the Iraqi banking sector

Means of achievement:

1. Introduce the required changes toward this end;
2. Use the comprehensive banking system.

Objective 4: Enhance financial inclusion

Means of achievement:

1. Enhance banking services by improving access to banking services for all Iraqis;
2. Disseminate the financial and banking culture;
3. Encourage the opening of branches of local and foreign banks and expand their geographic coverage.

Objective 5: Create credit activities that stimulate growth

Means of achievement:

1. Expand the national banks credits to the private sector;
2. Provide credits to SMEs and improve their access to financing;
3. Provide banking credit and financing;
4. Increase the capital of specialised banks to help achieve the economic and social development objectives.

Objective 6: Strengthen the foreign exchange reserves

Means of achievement:

1. Diversify the methods of foreign exchange reserves;
2. Diversify the sovereign portfolio;
3. Create a fund to support investment stabilisation (sovereign fund).

Objective 7: Combat money laundering

Means of achievement:

1. Banks should fully comply with Money Laundering Law No. 93 of 2004;
2. Activate and create monitoring and payment systems to upgrade the monitoring tools and systems;
3. Determine the frameworks and procedures to be implemented by the banks and financial institutions to prevent such kind of crimes.

Objective 8: Activate the role of the Central Bank of Iraq in promoting monetary and financial integration, including capital markets, banking and investment institutions and insurance companies

Means of achievement:

1. Update instructions and controls and upgrade financial and administrative systems, regulations and instructions;
2. Harmonise financial and monetary policies to ensure development, stability and economic balance.

Objective 9: Introduce IT to the work of the Central Bank of Iraq.

Means of achievement:

1. Develop and update a new banking system responding to the current and future requirements of the monetary and credit policy;
2. Ensure quality assurance in the financial services;
3. Build a bank connection system to perform retail banking transactions (ATMs, mobile phone transfers, credit/debit cards);
4. Make serious efforts to develop and upgrade the software of the Iraqi payment system.

3.3.3. Trade policy

Challenges

1. Dumping the Iraqi market with imported goods and services has discouraged potential investors because they cannot compete with the imported products.
2. Low competitiveness of local products in terms of prices and quality.
3. The poor enforcement of customs duties on imported goods has led to:
4. Discouraging local producers.
5. Increasing unemployment rates.
6. Decreasing non-oil revenues.
7. Undermining local manufacturing initiatives.

Objectives

Objective 1: Improve the competitiveness of local products

Means of achievement:

1. Improve production efficiency in private and public production and service sectors;
2. Contribute to building a conducive business environment for private and public production and service sectors;
3. Diversify the production base of the industrial sector and enhance economic efficiency.

Objective 2: Increase the public budget revenues

Means of achievement:

1. Impose customs duties on luxury products to increase the budget revenues;
2. Regulate ministry imports and set the required conditions and controls;
3. Diversify the manufactured exports.

Objective 3: Achieve balance in the balance of payments

Means of achievement:

1. Increase commodity exports to ensure positive balance of trade;
2. Reduce the unjustified commodity imports and control the whole import process;
3. Regulate the import process and reduce economic exposure.

Objective 4: Strengthen the national production

Means of achievement:

1. Improve the quality of national products and ensure their access to local markets to enhance their competitiveness against imported items;
2. Coordinate between trade policy and financial and monetary policies to reduce overall costs for local producers and improve their competitiveness;
3. Activate the law on the protection of national products against harmful international trade practices (dumping, etc.).

Objective 5: Increase commodity exports

Means of achievement:

1. Activate the export subsidy fund and support the Iraqi commodity exports;
2. Contribute to developing structural economic reforms and activate the performance of production sectors.

Objective 6: Maximise agricultural and industrial production

Means of achievement:

- This objective is integrated in the policy framework of production sectors.

Objective 7: Ensure coordination between the macro-economic policies in Iraq

Means of achievement:

- Strengthen coordination and connection among the trade policy sectors (fiscal, monetary, credit and banking).



Chapter Four: Good Governance

4.1. Situation analysis and challenges

The NDP 2018-2022 focuses on the various aspects of governance, including decentralisation, participation, integrity, transparency, accountability, corruption control, rule of law and access to justice. It also deals with reviewing civil service institutions and use of ICT for service delivery and consolidating the pillars of good governance (e-governance), in addition to private sector governance, which is considered a major partner in the development process.

4.1.1. Rule of law, human rights and access to justice

Good governance requires strengthening state capacities based on the rule of law. It is the sole viable approach for running state affairs and regulating relations among the state and society components based on equity and equal opportunities through the separation of powers to establish a sound democracy with an integrated and stable legal system.

Challenges

1. Slow legislative process, incommensurate with the needs of political transition from a totalitarian regime to democracy, in addition to the failure to enact a party law to regulate the roles of parties in the democratic process.
2. Continued interference in the judiciary by different tribal, sectarian, doctrinal and regional groups, in addition to weak citizenship and strong personal interests.
3. failure to meet international human rights standards on children, including (child recruitment, child abuse, orphaned children and homelessness), in addition to harmful gender practices (minor marriages and domestic violence) and other forms of violence that are concerned with terrorist groups (abduction and captivity), especially those against religious minorities.
4. prisons do not meet international standards, coupled with failure to resolve lawsuits in time.

4.1.2. Decentralisation and Local Government

Despite the issuance of Law of Provinces No. 21 of 2008 and its revisions, which delegated some powers and jurisdictions to provincial governments to support the decentralisation process, its implementation requires more seriousness to move away from centralised policy and ensure sound application of the transformation process and to overcome its time limitations.

Challenges

1. Slow transfer of powers in certain ministries with associated financial, administrative and technical implications.
2. Absence of power and mandatory limits between the federal government and local governments and the need to revisit federal ministries' regulations to keep pace with the decentralisation process.
3. Local authorities functioning outside their mandate and the absence of mechanisms and indicators for monitoring and performance evaluation.
4. Multiple finance sources and systems in the decentralised ministries.

4.1.3. Integrity, transparency, accountability and corruption control

Iraq lacks a national standard to identify a corruption index according to which present situation can be assessed. Nonetheless, the Commission of Integrity has prepared a national anti-corruption strategy for 2016-2020, which comprised standards and benchmarks for identifying the levels of corruption.

Challenges

1. Slow processing of most integrity and corruption cases by the judiciary, and the lack of bilateral agreements between Iraq and other nations on recovering funds and extraditing suspects.
2. Lack of a disclosure law; violators currently receive administrative punishments of by their respective ministries, thus encouraging many officials to avoid financial disclosure.
3. Lack of full disclosure of information and public documents that allows access to information by stakeholders.

4.1.4. Civil service

Given the outdated laws and legislations regulating public services, there is an urgent need to review the entire related regulations, especially those concerned with civil servants' discipline, retirement and the federal public service council. Introducing standards based on merit and efficiency to select administrative leaderships is a priority, given the current deficiencies and significant delays in the appointment of senior officials, including arbitrariness and the lack of proper planning.

Challenges

1. Failure to activate the federal public service council and enforce its Law No. 4 of 2009. Also, the civil service laws are not upgraded.
2. Overlapped powers and institutional competencies due to the absence of legislations specifying the objectives, tasks and duties of these institutions, in addition to the leaderships' tendency towards highly centralised decision-making (centralised powers).
3. Lack of performance standards and indicators, which leads to deviations from plans and inability to identify the reasons.

4.1.5. Public participation

Surveys have revealed that the citizens' participation in priority identification was as low as 13% followed by CSOs (10%) and local government (17%), while democracy requires increased political participation of the entire community.

Challenges

1. Poor participation of players (citizens, local councils, CSOs and ministry bodies) in identifying the priorities, monitoring, follow-up and accountability mechanisms and in determining correction measures.
2. Low public awareness of the role of civil organisations in strengthening participation.

4.1.6. E-Governance

The outcome of the 2015 COSIT survey on the e-readiness revealed that institutional use of e-form is only 21% while paperwork use is 77%. Around 66% of the surveyed entities have IT units and that the percentage of operational electronic systems was 67%, which is adequate at government level; entities not associated with ministries recorded the highest (92%). The effectiveness of information networks at macro-level reached 42%. However, government e-services are very limited, compared with manual services. Although some institutions succeeded to deliver e-services, they remain way below citizens' expectations.

Challenges

1. Lack of legislations regulating e-government such like e-signature, e-commerce, cybercrimes and identifications.
2. Change to e-government is still facing resistance because changing the government staff relationship with internal and external environment requires redesigning the administrative process in place.

4.2. Objectives

Theme 1: Rule of law, human rights and access to justice

Objective 1: Strengthen the rule of law and reduce human rights violations

Means of achievement:

1. Activate the accountability-related laws;
2. Reduce law violations;
3. Restructure security, military and intelligence institutions;
4. Improve the human capacities of security agencies;
5. Rehabilitate prison infrastructures;
6. Streamline lawsuit resolution procedures;
7. Develop the capacities of judicial and investigation bodies;
8. Upgrade legal procedures and judges' protection.

Objective 2: Capacity development of human rights institutions

Means of achievement:

1. Improve the performance of the institutions concerned with human rights and develop their staff capacities;
2. Upgrade the services delivered by institutions concerned with displaced population;
3. Develop the capacities of the staff working for displaced population;
4. Improve the performance of the institutions supporting vulnerable groups in the areas affected by terrorist attacks.

Theme 2: Decentralisation and Local Government

Objective: Improve the implementation of administrative decentralisation

Means of achievement:

1. Upgrade the ministry regulations delegated to provinces to suit the decentralised policy;
2. Upgrade Iraq's financial management law;
3. Develop a manual for the powers decentralised to local governments;
4. Examine the current status of local administrations following the transfer of powers and functions to the provinces;
5. Develop local government capacities and apply strict selection standards with top and medium leaderships therein;
6. Review the organisational structures of the government institutions in line with the decentralised policy;
7. Implement the law of the Federal Service Council and establish local service councils.

Theme 3: Integrity, transparency, accountability and corruption control

Objective: Enhance integrity and transparency and reduce financial and administrative corruption

Means of achievement:

1. Develop the regulators' capacities;
2. implement electronic control and investigation systems;
3. Introduce the 'one-stop' service;
4. Instil the culture of transparency in state institutions.

Theme 4: Civil service

Objective: Effective and efficient improvement of administrative units

Means of achievement:

1. Conduct comprehensive surveys to identify the weaknesses of the organisational structures of government institutions;
2. Amend the laws of restructured ministries and agencies;
3. Develop the performance and selection mechanisms of administrative leaderships to ensure effective and efficient government institutions;
4. Adopt up-to-date management systems.

Theme 5: Public participation

Objective: Ensure effective public participation in decision-making

Means of achievement:

1. Enhance local government capacities to build communication networks with decision-making actors;
2. Build effective partnerships involving stakeholders in planning and budgeting in the provinces.

Theme 6: E-Governance

Objective: Adopt e-governance to replace the current model

Means of achievement:

1. Adopt a supportive legal system for e-governance;
2. Develop integrated IT policies (interoperability);
3. Design e-governance plans and programmes, based on world experiences;
4. Upgrade the electronic readiness.



Chapter Five: Private Sector and Development of Business and Investment Environment

5.1. Situation analysis

- Given the fluctuating and instable distribution of economic activity between public and private sectors, the private sector contribution in fixed capital formation (% of GDP) has dropped since 2004, between 0.6% and 1.5% annually (average of 0.8% of GDP during 2004-2012). In 2015, the private sector contribution to fixed capital formation was 34.7%, reflecting a disabling environment and negative private investment environment.
- In 2014, private sector GDP contribution, including oil, reached 35.7% (and 73.2% without oil). These dropped to 33.2% and 72.6% respectively in 2015.
- 68 % of total workforce are engaged in informal activities. The ILO survey of micro-, small and medium-sized enterprises in 2012 revealed that most micro-businesses work in the informal sector.
- Iraq ranked among the lowest in the ten indicators used by the World Bank 2017 report on 'Doing Business 2017, Equal Opportunity for All.' Below are the most important indicators in that report:
- Iraq ranks 165 out of 190 countries, compared with Bahrain 63, Oman 66, Turkey 69, Tunisia 77, Saudi Arabia 94, Kuwait 102, Jordan 118 and Iran 120.
- Iraq ranks 181 out of 190 countries on the access to credit index, and scored 1 out of 12 points with regard to civil rights strength.
- Iraq scored 2 out of 10 on the corporate transparency index.
- Iraq ranks 115 out of 190 in property registration index.
- Iraq had low levels of investors protection, cross-border trade, contract enforcement, settlement of insolvencies, in addition to lack of clear-cut understanding how to address bankruptcy.
- Iraq's ranking in the World Bank report of 2018 on doing business and reforming to create jobs. It ranked 168 out of 190 countries, compared to Turkey 60, Bahrain 66, Morocco 69, Oman 71, Qatar 83, Tunisia 88, Saudi Arabia 92, Kuwait 96, Jordan 103, and Iran 124.
- There is a package of government policies and measures to activate private sector participation and develop its capacities in various fields. The government has already started the related approval and roll-out process. The most important of these measures are:
 - Announcement and application of the Government programme for 2014 and the associated economic reforms (2015);
 - A policy package to boost the private sector, prepared by national experts with other technical teams. These policies and measures were promulgated under CoM Decision No. 239 of 2015;
 - Creating the higher commission of the Central Bank loans (Presidential Order No. 31 of 2016.) This commission drafts detailed reports about the achievements, problems and obstacles related to the enforcement of the Central Bank initiative to improve the economic situation, activate the private sector, and develop agricultural, industrial and housing sectors. IQD 5 trillion were allocated for loans to the citizens and private sector. These loans are issued in accordance with the mechanisms developed through a number of workshops and meetings involving experts from the respective ministries and private sector, ratified by the prime minister and circulated to the concerned authorities;
 - Creating the PPP steering committee for the partnerships between public and private sectors (PPPs), and specifying its mandate in Presidential Order No. 49 of 2017. The committee is currently drafting PPP contracts enforcement instructions for centrally and locally funded entities;
 - Based on the above-mentioned Presidential Order and to facilitate the enforcement of CoM Decision No. 96 of 2016, MoP issued a manual for PPP registration, presentation, referral, contracting, and implementation;

- CoM Decision No. 29 of 2017 endorsing the recommendations by the Domestic Exports Support Committee, including a number of measures that will be mentioned later in this chapter.
- There is also a package of policies on combating all forms of corruption, announced by the Prime Minister at the end of 2017.

These measures and policies can empower Iraq to rank better on the global business environment indicators. They will also promote private sector performance, activate its role and enhance its competitiveness. Private sector development will also increase the government opportunities to find solutions addressing the immediate and long-term needs of the country's business community. While the Iraqi government is seriously bent on implementing its economic reforms and seeks to move ahead with this process, it will at the same time provide an investment-friendly environment and improve SMEs competitiveness, establish effective PPPs, help the private sector become more committed and create more new jobs.

- Iraq's human and natural resources, its rich historical and religious sites and the huge marketing opportunities manifested by the increased demand for all types of commodities and services provide tremendous potential for activating the role of the existing activities, services and production organisations. Diverse projects covering all sectors will be created, and the private sector will be enabled to rebuild itself, review its economic performance, management approaches, and its relations with the state and public sector as well as elaboration of a new working approach that overcomes the negative aspects of the past and allows it to assume effective roles to achieve acceptable economic development standards, create job opportunities and contribute to the comprehensive and sustainable development process.
- Accordingly, all policies, procedures, plans and activities stated in this NDP about private sector development will be used as flexible tools ready to interact with economic changes. They will be reviewed on regular basis to respond to priority needs, new opportunities, changing conditions, expected shocks, and alternative 'pre-emptive' plans and policies to face these challenges. These tools will rely upon the existing institutional arrangements and the achieved reforms or those still underway as well as upon the joint interests of stakeholders and relevant government regulations.

Private sector development and economic activation remain closely associated with the economic reform process announced in the Government programme (2014-2018) and its expansion in the coming years. This will require consolidated and accelerated efforts and joint commitment by all stakeholders.

These policies, procedures and programmes will activate and develop the private sector in line with the Private Sector Development Strategy 2014-2030 (PSDP) and NDP 2018-2022, which have also to be consistent with the next Government programme (2018-2022).

5.2. Challenges

- The consequences of the (negative) internal and external changes on the Iraqi economy during the period 2014-2018 (impact of collapsing oil prices, devastating effects of terrorist organisations' expansion and the destruction caused by the liberation operations and the tremendous losses and damage of private sector assets and business units).
- The current decline of Iraq's economy including the low investment allocations in the public budget for the next five years, as revealed by the accessible financial data.
- Chronic structural imbalance in Iraq's rentier economy and the resulting challenges, which requires active private sector participation and enhancement of its competitiveness to ensure its effective and accelerated contribution to the country's economic diversification. Under this diversification programme (in products, sectors, industries, financial resources, national wealth generation and exports), there will be an improved employment level and a better standards of product quality and development.

- Minimal private sector contribution to GDP, fixed capital formation, employment and investment financing. Private sector contribution to capital formation is crucial with regard to determining its role in the economic development process as a whole. This role is still modest and non-strategic and raises major challenges to the successive NDPs.
- Ensuring private sector contribution to financing 40% of the NDP 2018-2022 investments outside budget allocations (IQD 88.6 trillion = USD 75 billion.)
- Underperformance of the banking system and its inability to respond to the challenges posed by the domestic and international economic changes on the government and private sector.
- Weak formulation of government policies and delayed implementation of those approved, coupled with total absence of preventive policies and poor organisational quality, which weakened the rule of law, in addition to the lack of trust in the judiciary.
- Weak and ineffective policies and discrepancies of decisions, which causes inconsistency among the macro-policies. This situation has wasted much effort by the government and other parties including UN agencies operating in Iraq, to develop policies, strategies and programmes for activating the private sector economic participation. This has also undermined private sector confidence in the ability of the government to pursue serious, implementable and sustainable policies.
- Delayed economic reform and difficult implementation of more legislative, political, structural and institutional reforms.
- Failure to meet the obligations, responsibilities and transitional roles of the government and private sector, which have to be fulfilled during the first phase (2014-2017) of the PSDS (2014-2030) and the previous NDP (2013-2017), especially the following:
 - Difficulties and challenges facing the government attempts to consolidate security and stability in Iraq and establish the rule of law to allow organisations, companies and private enterprises to invest, develop and become more competitive;
 - Government inability to implement an inclusive and participatory approach with the private sector, which allows the latter to play a bigger and more effective role in economic decision making and market leadership;
 - Weak monitoring and evaluation of the progress of PSDS (2014-2030);
 - Low government capacity to enforce the best environmental practices;
 - Inadequate government interest in protecting intellectual property rights;
 - Private sector inability to enhance the role and effectiveness of related unions and associations, and its poor capacities to improve their professional and technical performance and promote their sustainability in addition to its failure to ensure higher business representation;
 - Lack of serious and constructive private sector contribution to the government efforts to establish dialogue channels between them;
 - Lack of seriousness by the private sector to engage in formulating sectoral policies and plans as part of the NDP. It has also poorly assisted the government in identifying and developing the needed implementation tools.
- Failure to implement the policies and measures aimed to boost the private sector, prepared by a group of national experts in cooperation with other technical teams including finance and insurance, industrial sector team, business environment improvement team and procedure streamlining team, and issued under CoM decision No. 239 of 2015 and associated trends, government policies, procedures, private sector roles, implementation periods and implementing agencies to achieve the objectives of those policies (most important details have been included in this theme).

- Private sector governance in Iraq has faced a number of challenges, most prominently:
 - Lack of a clear vision for private sector governance
 - Lack of a clear PPP regulatory framework
 - Low government readiness to effectively deal with the private sector
 - Poor private sector awareness of its social responsibilities, and reluctance to shoulder the related burdens and expenses
 - Weak culture and practices about public restructuring SOEs and prevalent fear of ‘privatisation’ among the relevant actors
 - The negative implications of the declining security and economic situations on the private sector governance.
- While the main reason behind the failure of policies, plans and strategies before 2014 lies in the lack commitment rather than funding, the problem has become complex since 2014. Even if there is commitment, the parties (stakeholders) are not able to announce this commitment. Planners and decision makers will be responsible for the failure to find realistic solutions for such problems.

5.3. Objectives

Objective 1: Increase the contribution of the private sector

- ✓ Achieve reasonable growth up to 40% of GDP and create 50% of new jobs throughout the NDP period
- ✓ Contribute to reducing employment by 0.5 points every year throughout the NDP period
- ✓ Local and foreign private sector funds 40% of the NDP investments outside budget allocations (IQD 88.6 trillion = USD 75 billion) throughout the NDP period
- ✓ Increased FDI in Iraq from USD 18.463 billion (between January 2012 and December 2016) to USD 40 billion over the period 2018-2022 (i.e. USD 8 billion of FDI every year)
- ✓ Increase private investments in major economic development sectors, and raise private sector contribution to fixed capital formation from 34.7% in 2015 to 38.3% in 2022

Means of achievement:

- This objective can be realised through other private sector development goals, which are detailed in the following along with means of achievement.

Objective 2: Improve the business and investment environment

This objective is associated with the urgent need of the private sector to operate in a coherent, supportive and predictable environment, enhanced by new financial, regulatory and legal policies.

Means of achievement:

- Set up a “Private Sector Development Council” as a channel of dialogue, interaction, consultation, coordination and integration with the government and the public sector. This council will focus on establishing dialogue and consultation principles among the concerned parties to achieve interactive participation with the private sector upon developing and proposing new plans and strategies or designing related policies, laws, regulations and instructions;
- Create a portfolio of development projects funded outside the public budget and implemented through PPPs and/or FDI. Foreign credit facilities can be sought (from the World Bank’s IFC), to support the private companies operating in Iraq. Assistance can also be sought through the Arab Investment and Export Credit Guarantee Corporation;

- Develop effective regulations and mechanisms for management of investment, trade and financial risks faced by foreign investors, and set clear rules binding to all parties including the risks of confiscation and nationalisation, war and domestic conflicts, non-repatriation of investment assets/profits and potential contract violations;
- Implement the provinces' 'investment maps' and determine the private sector role in their design and implementation;
- Amend and streamline the procedures and regulations on private sector finance by commercial and sectoral banks (soft loans, banking facilities, guarantees, etc.);
- Provide incentives and financial and tax concessions for the new investments, innovations, and improved production quality, introduce new products and regulate the informal businesses;
- Review and simplify the private sector legal and regulatory framework including the amendment and/or issuance of laws, regulations and instructions through consultations with the private sector, in addition to streamlining procedures, and removing red tape to ensure a conducive business environment. The revision, amendment and 'legislation' can take place in the framework of the priorities mentioned in Table 14;

Table 14

Action plan on priority new laws and amendments to ongoing regulations, 2018-2022						
Law/legislation	Enforcement	Achieved steps	Action needed	Proposed legislation year	Remarks	
1- PPP Law	Pending	Draft developed 2012	Legislation	2019-2018	Once promulgated, the law will require a set of regulations and/or instructions separately designed for each sector.	
2- General Imports Law	Pending	Draft developed 2007 Review 2011	Legislation	2019	-	
3- Industrial Zones Law	-	Proposed law	Draft developed	2019	-	
4- Law No. 14 of 2010 on Competitiveness and Monopoly Control	Inactive	Published in the Official Gazette on 09/03/2010	Activation	2019-2018	"Competitiveness and Monopoly Control Council" has not been created as per this Law. Besides, the Supreme Judiciary Council has not set up a competent court under this law to consider the arising disputes when applied.	
5- Commerce Law No.30 of 1984	Insufficient	Enforced	Revision	2019-2018	-	
6- Corporation Law No. 21 of 2007	Insufficient	Enforced	Revision	2019-2018	Inclusion of additional legal provisions that allow to establish a holding company for any type of companies, in order to regulate the relationship of the holding company with the affiliated companies from administrative and financial viewpoint.	

Law/legislation	Enforcement	Achieved steps	Action needed	Proposed legislation year	Remarks
7- General Companies Law No. 21 of 1997	Insufficient	Enforced	Revision	2020	Better and more accurate description needs to be included of general companies, the separation mechanisms between ownership and management, transparency with regard to policy formulation and decision-making, abolition of general manager role as board director, privatisation, etc.
8- Industrial Investment Law No. 20 of 1998	Insufficient	Enforced	Revision	2020	-
9- Labour Law No. 37 of 2015	Insufficient	Enforced	Revision	2018-2019	Review and readress various important issues needed to endorse the "Agreement on Freedom of Association and Protection of Trade Unions" which provides the basis for discussion between workers and employers, and to develop mechanisms to protect workers' and employees' rights, the role, obligations and rights of private sector, as well as discrimination and inclusiveness standards.

Law/legislation	Enforcement	Achieved steps	Action needed	Proposed legislation year	Remarks
10- Revised Investment Law No. 13 of 2006	Insufficient	Enforced	Revision	2018-2019	Needs a comprehensive and substantive review. In its present form it does not differentiate between local and foreign investments and it leaves unclear e.g. the role of the National Investment Agency (which currently acts as an executive government body responsible for landed property management and other procedures), tax exemptions, dispute settlement mechanisms, etc. Law No. 2 of 2009 – which revised Investment Law No. 13 of 2006 –also needs amendment, as it exclusively guarantees land property of local and foreign investors for housing projects only, but not for other projects. Law No. 7 of 2010 issued by CoM has regulated lease rates for the invested land in various fields.
11 - Consumer Protection Law No. 1 of 2010	Pending	Published in the Official Gazette in February 2010	Activation	2018-2019	Issues necessary of instructions for implementation of the Law, given that it still needs executive instructions by the concerned Iraqi authority.
12- Law No. 11 of 2010 and relating regulations and instructions on Protection of Iraqi Products	Pending	Enforcement of procedures of the revised law have not been completed.	Ratification by the Presidency of the Republic and publication of the proposed amendment in the Official Gazette	2018-2019	Draft Law No. 1 of 2014 which is a revision of the aforementioned law and expands the protection scope to include agricultural products, and which is approved by the Parliament on 11/01/2014 is still pending; this requires ratification by the President and publication in the Official Gazette.

Law/legislation	Enforcement	Achieved steps	Action needed	Proposed legislation year	Remarks
13- Bankruptcy Law	Pending	Proposed law	Legislation	2018-2019	The Ministry of Trade in cooperation with the USAID has drafted a law revising Trade Law No. 30 of 1984. The revised Law deals with insolvency cases and identifying the cases that apply to this situation in all economic and (financial) fields. It also identifies the principles, standards and mechanisms that regulate action and specify the means of controlling these practices as well as settle the rights and commitments arising from this situation.
14- Free Zone Law No. (3) of 1998, Free Zones Management instructions and regulation of investors' enterprises inside these zones No. (4) of 1999 issued by MoF	Insufficient	Enforced law	Revision	2019-2020	-
15- Accession to New York Convention of 1958	Iraq is not participant to this Convention	International agreement	Complete the accession requirements	2019-2021	Iraq's accession to this Convention is due given its importance to foreign investors; it will enhance their confidence in the availability of robust and impartial bases regarding the settlement of investment-related disputes. It is also due given the deep foundations of this Convention over the past 60 years and the merit it enjoys, whereby it has turned into an international law that applies to all signatories, including industrialised trading nations.

- Provide sufficient protection for local products, which can be achieved through:
 - Protect local products, especially by enforcing Law No. 11 of 2010 on Protection of Iraqi Products and issue the related amendments approved by the parliament in accordance with the Draft Law No. 1 of 2014;
 - Activate Law No. 14 of 2010 on Competition and Monopoly Control and Customs Tariffs Law No. 22 of 2010;
 - Activate Article 2.1 of Ministry of Commerce Law No. 37 of 2011, which provides for “designing internal and external trade policy in line with the country’s general economic policies.” Necessary (and binding) mechanisms and regulations to activate this Article must also be considered to maintain the quality and quantity of commodities in the local markets, control their movement, strengthen import controls by preventing unjustified increase (in quantity or quality) of imports and linking all imports to strict trade policies to prevent uncontrolled entry and consequent flooding of the local market;
 - Implement immediate and urgent arrangements to promote exports and make them part of long-term policies and strategies. This can be achieved through:
 - Follow-up of implementation of CoM Decision No. 29 of 2017 endorsing the recommendations by “Local Exports Promotion Committee” which provide for “annulment of all decisions, orders and instructions issued by the (dissolved) governing council, committee of economic affairs or any other authority which bans products outside Iraq other than those approved by the effective laws”. It also provides for “abolishing the list associated with the legislative order No. 54 of 2004 and the current restrictions on exports and instruct the concerned authorities to develop export regulations in line with public interest”;
 - Activate the Export Promotion Fund;
 - Update the export structure in accordance with the latest technologies and modern methods (warehousing, port services, modern transport and governance of import/export outlets;
- Develop and offer incentives to increase production and innovation, support private investments creating new jobs and encourage the regulation of informal enterprises;
- Support private sector unions and associations and cooperate with them to upgrade the standard of delivered services to their members efficiently and effectively;
- Enhance quality control systems with focus on quality, certification and licensing;
- Launch a sustained awareness campaigns in all provinces to ensure clear understanding of the private sector role in local development and reconstruction efforts, in addition to providing necessary technical support to empower the local authorities to apply the basic project selection standards and build their capacities to adopt an accurate prioritising approach.

Objective 3: Development of SMEs

- ✓ Expand SME (spatial and sectoral) scope of work based on needs assessment and prioritisation in each sector and province, and on the NDP strategic objectives and prioritised sectors and on the prioritisation standards (stated in the PSDS document)
- ✓ Improve SMEs productivity and build and enhance their competitiveness
- ✓ Give the private sector (through SMEs) genuine opportunities to participate in economic diversification through upgrading and boosting its potentials to exploit the relative advantage of its products in addition to improving the quality and competitiveness of these products. The quality of products (and exports) is key to economic diversification, which must always be coupled with product quality as a key requirement
- ✓ Finalise the creation of the National SME Commission responsible for the SME development fund

- ✓ Complete the construction of the two industrial cities in Basra and Thi-Qar during 2018-2019 and build industrial zones in at least three other provinces during 2020-2022

Means of achievement:

- Provide consultancy and guidance services, business planning assistance, training, and SME networking;
- Set up a fund for seed capital, concessional finance, and loan guarantees to the private sector, to expand the existing industries, create new industrial establishments, build and upgrade competitiveness and promote its innovation and entrepreneurship. This can be achieved through establishing a 'development bank' managed by the private sector and geared to supporting the production sectors;
- Develop a preferential incentive system for private banks that use their funds to increase loans to SMEs;
- Develop a special programme to enable the private sector (including large companies and SMEs) to contribute to SOEs restructuring and develop mechanisms and procedures aimed to encourage and facilitate mergers between public companies and private SMEs and increase their production efficiency and competitiveness;
- Apply governance standards regarding the management of SMEs;
- Build Science Parks where the government provides the infrastructure (land and services) and the private sector (local and foreign) provides buildings, equipment and other requirements through its large companies, in order to attract (innovative) investment opportunities and support the youth initiatives and turn them into projects, especially in such areas like IT, software and other economically viable specialties;
- Develop the existing industrial areas and establish new ones, business incubators, business development centres and similar initiatives. To achieve these initiatives the table 15 data and details can be used as guidance.

Table 15

Establishment and completion of industrial cities in Iraq, 2018-2022						(IQD million)	
Item		2018	2019	2020	2021	2022	Total
Complete the construction of	Industrial City in Basra	31,606	30,000	-	-	-	61,606
	Industrial City in Thi-Qar	84,728	84,000	82,000	-	-	250,728
	Industrial City in Anbar	100,000	100,000	100,000	100,000	38,780	438,780
	Industrial City in Nineveh	10,000	15,000	13,000	13,000	12,000	63,000
	Industrial City in Najaf (First Stage)	20,000	50,000	50,000	50,000	20,000	190,000
	Industrial Complex in Al-Nahrawan	5,313	906	-	-	-	6,219
Other allocations for identification of other sites and obtainment of approvals to build industrial cities in other provinces through investment		100	200	200	150		650
Total		253,765	282,125	247,220	165,171	72,802	1,010,983

- The main priority sectors for developing the private sector and subsectors and SME focus areas are: industry, agriculture, agro-industries, IT, building and construction (housing, especially vertical buildings and affordable housing), transport services, logistic services and tourism. Table 16 provides details about the opportunities available for these organisations (in accordance with the targeted sectors and subsectors and reference focus areas).

Table 16
Available SME opportunities by sector and subsectors based on NDP 2018-2022 priorities

Key targeted sectors	Targeted subsectors	Areas of focus for SMEs development based on evidence
Industry	<ol style="list-style-type: none"> 1. Building materials industries 2. Food industries 3. Metal industries 4. Mechanical industries 5. Pharmaceutical industries 6. Chemical and petrochemical industries 7. Mining and processing of non-oil metals 8. Electronic and electrical industries 	<ul style="list-style-type: none"> • Exploitation of natural and human resources (esp. in subsectors 1, 2, 5, 6) • Possibility of replacing imports (in all subsectors) • Production diversification (esp. 1, 2, 5, 7) • Geographic expansion/diversity (esp. in 1, 5, 6) • Upgrading the technology, improving productivity, marketing and distribution (all) • Reducing production costs (all) • Technical measurement and standards, quality control, quality assurance and certification (all) • Integrating with public companies and mixed sector (all) and participating in SOE restructuring and privatisation • Strategic partnerships • Environment and R&D
Farming and agro-industries	<ol style="list-style-type: none"> 1. Intensive farming 2. Livestock and poultry 3. Fisheries 	<ul style="list-style-type: none"> • Imports substitutes • Inter-sectoral linkages (forward and backward) • Upgrade the technology, improve productivity, marketing, and distribution (all) • Environment, R&D, recycling/resource recovery • Technical standards, quality control, quality assurance, certification (all)
Construction and housing	<ol style="list-style-type: none"> 1. Infrastructure and basic services (water, electricity, sewerage system, etc.) 2. Housing 3. Civil installations (roads, bridges, dams, specialised buildings, etc.) 	<ul style="list-style-type: none"> • Small businesses mergers • Products mix and diversification • Engineering, architecture, designing, R&D
Transport and logistical services	<ol style="list-style-type: none"> 1. Freight trucking services 2. Inter-sectoral linkages (forward and backward) 3. Small businesses merger 4. Transport cost reduction 	

Communication and IT industries	<ol style="list-style-type: none"> 1. Repair and maintenance services 2. Internet Service Providers 3. Website development and specialised software 	<ul style="list-style-type: none"> • Geographic expansion/diversity (all) • R&D • Marketing and strategic partnerships
Tourism	<ul style="list-style-type: none"> • All relevant subsectors 	<ul style="list-style-type: none"> • Human resources • Service quality and certification • Promotion and advertisement • Strategic partnerships

Objective 4: Planning for genuine private sector participation in reconstruction and development and sharing of burdens and benefits

Means of achievement:

- Build genuine and effective PPPs to reconstruct the provinces affected by terrorism, improve public services and infrastructure in the other provinces, and provide generous government incentives to achieve this goal. This can be achieved by launching a reconstruction and development plan based on the interventions proposed in “the general framework of the national reconstruction and development plan in the provinces that were affected by the terrorist operations,” drafted by MoP Committee and approved by the Cabinet in August 2017;
- Prepare realistic and applicable Action Plans aimed to urge private enterprises to focus on activities and markets and on SOEs restructuring that allow long-term engagements with thriving SOEs (listed in Table 17 below);
- Encourage strategic local and foreign partnerships and achieve balance between public and private sectors to ensure equal rights;
- Establish joint arrangements between provincial councils and federal government to enhance their partnership towards building a local industrial base and integrated industrial zones to boost the private industrial sector;
- Establish partnership for improving the management and utilisation of state-owned assets, coupled with generous government incentives to achieve this goal;
- Adopt modern partnership approaches in implementing development projects to build effective partnerships between local and foreign private sectors to establish infrastructure projects and high-cost and sophisticated industries, particularly ones related to petrochemical industry, mega-transport projects (airports, railways, ports) and multi-sources power generation stations. In this respect, the Government issues laws, instructions and controls needed to regulate these practices;
- Implement or complete the suspended investment projects qualified for PPPs and facilitate the procedures of centrally funded contracts with the private sector;
- Encourage the private sector to engage in PPP projects, which develop infrastructure and provide and promote technical and administrative knowhow;
- Develop a PPP regulatory framework;
- Implement PPP projects in accordance with the details contained in “the guiding manual for registration, presentation, referral, contracting and execution of PPP projects between the centrally funded public entities and local and/or foreign private companies, in implementation of CoM decision No. 96 of 2016”;
- Urge the steering committee formed in accordance with Presidential Order dated 31/1/2017 to carry out the tasks stated in Presidential Order dated 17/8/2017 concerning PPP proposals by the

competent authorities and include the acceptable proposals in a list for CoM approval, on a regular basis. Government authorities must also be approached regarding the endorsed contracts to sign them and commence implementation;

- Streamline project implementation procedures and mechanisms in accordance with the BOT formula;
- Provide support to at least three successful and leading industrial SOEs, allowing the private sector to establish partnerships with them (during NDP 2018-2022);
- Partnership with the private sector in the provinces is the responsibility of local governments. These must provide a suitable environment for the private sector in accordance with their affordable potentials and not to expand in areas in which they cannot meet their obligations, so as to ensure the success of such partnerships.

Table 17

Priority industrial projects for developing the manufacturing sector in Iraq – proposed by the Ministry of Industry and Mining as opportunities for private investment during NDP 2018-2022							
No.	Project name	Site	Product type	Production capacity	Cost(USDM)	Significance	Period
1	Prefab Factories	There is a need to build a number of factories in Baghdad, Anbar, Thi-Qar, Kirkuk, and Najaf provinces.	Precast walls/ precast and pre-stressed hollow roofs	Walls – 200m ² /d Roofs – 2520m ² /d	53	noticurtsnoc fo sdeen eht teeM ;rotces gnisuoh dna war fo esu eht esilanotiaR ;(tnemec/srab nori) slairetam .tcejorp yldneirf-tnemnorivnE	2018- 2022
2	Production of refined vegetable oil in different packaging	Baghdad /Rasheed Camp /Saeeda Village	Sunflower oil/soya /cotton seed oil/ vegetable ghee	50000 t/y to meet 10% of Iraq's overall need	28	deen tekram lacol fo trap teeM ;lio gnikooc rof eht htiw egaknil eveihcA .rotces larutlucirga	2018 - 2021
3	Rehabilitate sugarcane plants and factories in Missan and Nineveh	Missan/ Al-Mejar Al-Kabir Nineveh / Al-Ghuzlani	White sugar/ yeast/alcohol	100000 t/y – including 40000 t from sugarcane 60 000 t raw sugar	56	Meet part of local market need.	2018 - 2021
4	Rehabilitate production line of sprinkler irrigation systems	Babil /Iskandariya)site of the General Company for Vehicles and Equipment manufacturing)	Sprinkler irrigation systems (centre-pivot and linear irrigation)	7000 spans including: 2000 centre-pivot systems (60 donums/3 spans) 200 linear systems (5 spans)	12	Optimised use of water; Increased production per unit area; Create employment opportunities for the company's administrative and technical personnel.	2018 - 2021

Table 17

Priority industrial projects for developing the manufacturing sector in Iraq – proposed by the Ministry of Industry and Mining as opportunities for private investment during NDP 2018-2022							
No.	Project name	Site	Product type	Production capacity	Cost(USDM)	Significance	Period
5	Production of alum from kaolin	Nineveh / Mishraq (site of the Mishraq Sulphur General Company)	Alum (hydrated aluminium sulphate)	50000 t/y	30	siht fo deen s'qarl teeM ni desu si hcihw lairetam lio dna stinu notiacfiirup retaw ;stcejorp war elbaliava eht tiolpxE erup dna (yalc niloak) slairetam noticudorp eht ni desu ,ruhplus sa llew sa ,dica ciruhplus fo .stsoc noticudorp ecuder	2018 - 2021
6	Municipal Solid Waste Sorting and Treatment Factory	One of the Iraqi provinces	Sortable and recyclable materials that can be marketed (e.g. paper, glass, plastic, different types of metals, etc.)	250 t/d sortable and recyclable materials 20MW (electrical power) 25 million building bricks from environment-friendly factories	150	Cover part of local market needs; Environmental protection.	2019 - 2022
7	Production of flat glass	Anbar/ Ramadi city	Glass panes in different sizes (2-12 m/pane)	231000 t/y at 330 d/y on three shifts	188	;sdeen tekram lacol teeM war fo ytilibaliava tiolpxE .slairetam	2019 - 2022

Table 17

No.	Project name	Site	Product type	Production capacity	Cost(USDM)	Significance	Period
8	Sodium Carbonate (soda ash) Factory	One of the Iraqi provinces	Production of soda ash used in different industries such as glass, phosphate, textiles, detergents, paper pulp; activation of calcium bentonite used in oil well drilling fluids	Annual need of soda ash is 200000 t/y	200	Meet part of the large demand for soda ash in the domestic market.	
9	Ammonia/ Urea Production	Anbar/ Qa'imQadha	Urea fertilizer	Ammonia: 500 t/d Urea: 750 t/d	333	Meet the needs of the General Phosphate Company in Qa'im of ammonia product and urea fertilizer as essential elements for compound fertilizers; Reduce the transport cost for these two materials from their distant production areas in the northern and southern regions to the western region; Possibility to export the surplus production to local and foreign markets; Availability of necessary infrastructure to set up this project (e.g. water, roads, railway, industrial services) at the site of the General Phosphate Company.	2019 - 2022

Objective 5: Restructuring of SOEs

While this is the role of the government and its public sector, the private sector can directly or indirectly benefit from the resulting spill-over effects.

Bearing in mind the benefits realised by the private sector from this process, there are several challenges that can impede them, most importantly:

1. Obsolete equipment and technology gaps, redundancy, rising product costs and poor competitiveness.
2. Ministry control of the administrative and production policies in these companies, which weakens their managements and makes them subservient to government bodies, contrary to the provisions of the Public Companies Law No. 22 of 1997.
3. Lack of criteria that determine the comparative advantage of local vis-à-vis imported products that are not subject to enough tariffs to protect local production.
4. Multiple legislations that are not business friendly, overlapping, contradictory, and with many legal shortcomings, which impedes transition in assets ownership and management and does not provide a clear picture on the nature, characteristics and revenues of SOEs investments.

In line with the Industrial Strategy 2030, the SOEs restructuring process must achieving the following major goals:

- SOEs must be autonomous, i.e. able to cover their expenses.
- Privatised SOEs must be capable of realising profits.
- Privatised SOEs must meet international business standards and indicators.
- The market value of SOEs (whether privatised or still public) must be higher than their current value.

In the general SOEs restructuring framework, 'privatisation' must not be resisted or viewed as a source of concerns based on old stereotypes. It must not be made merely for the sake of privatisation but in accordance with comparative norms that improve the performance of these companies after being privatised. Privatisation does not also mean sale of all public assets, because private sector engagement at any level in the (management) alone or in (management and ownership) together is itself more or less considered 'privatisation', where SOEs may privatise part of their activities only, in accordance with contracts that vary from one company to the other.

Means of achievement:

- High-level political willingness to take serious decisions to change the current economic situation;
- Meet the essential PPP requirements, particularly those related to changing corporate governance, including mergers, trimming, and PPP establishment, to allow the private sector to contribute effectively to SOEs restructuring, in addition to studying the possibility of reaching a total and/or gradual privatisation for a limited number of SOEs;
- Develop strict, clear and binding standards for achieving this task. These standards will be developed through agreement between the government and the parliament on one hand, and the private sector, on the other. In addition, a time table must be provided for completing the restructuring plan at the lowest social and economic cost possible;
- Apply Article 2(Second) of the Ministry of Commerce Law No. 37 of 2011 which provides for "contributing to the development of private sector and ensuring a suitable environment through privatising public enterprises under the new economic liberalisation policy";
- Apply the Articles concerned with activating and supporting MoP Law No. (19) of 2009, especially

Articles 3(12), which provides for “improving quality in all areas of economy and services as well as in government authorities and private and mixed sectors”, and Article 3(14) on “supporting and sponsoring the private sector and coordinating with it to activate its role in national development;

- Start restructuring SOEs with a roadmap in the concerned ministries (Industry and Mining, Electricity, Oil, Transport, Construction and Housing, Agriculture, Commerce, Communications, Water Resources, Finance and Education) after studying such roadmaps case by case and then privatise them. Restructuring a limited number of SOEs can be based decisions made at ministerial levels. This should be carried out during the NDP period, after completing the SOEs assessment by the Ministry of Finance and incorporating them in accordance with Public Companies Law No. 22 of 1997. These SOEs are stated in Table 18.

Table 18

SOEs that can be restructured, partially/fully privatised, and/or incorporated during NDP 2018-2022	
SOE ownership	SOE name/area of work
Ministry of Electricity	<ul style="list-style-type: none"> • All electricity production companies in the different provinces • All electricity production and distribution companies in the different provinces
Ministry of Oil	<ul style="list-style-type: none"> • Iraqi Drilling Company • Oil Products Distribution Company
Ministry of Transport	<ul style="list-style-type: none"> • Marine transport • Land transport • Private transport • Transport of passengers • Iraqi Airlines
Ministry of Construction and Housing	<ul style="list-style-type: none"> • All eight construction companies (Al-Mu'tasim, Al-Mansour, Ashour, Saad, Hamourabi, Al-Farouk, Al-Rashid and Al-Fao)
Ministry of Agriculture	<ul style="list-style-type: none"> • Mesopotamia State Company for Seeds • General Company for Agricultural Supplies • Sennacherib Company for Modern Irrigation Technologies
Ministry of Commerce	<ul style="list-style-type: none"> • Cars and machinery trade • Construction materials trade • Foodstuffs trade • Cereals trade • Cereals industry
Ministry of Communications	<ul style="list-style-type: none"> • International information network services • Telecommunications and postal services • Al-Salam State Company
Ministry of Water Resources	<ul style="list-style-type: none"> • All three General Contracting Companies (Al-Fao, Al-Rafidain and Iraq Company)
Ministry of Finance	<ul style="list-style-type: none"> • Iraqi State Company for Banking Services
Central Bank	<ul style="list-style-type: none"> • Al-Nahrain Publishers
Ministry of Education	<ul style="list-style-type: none"> • General Company for Production of Educational Supplies

- Enable these companies to work under Law No. 22 of 1997 and create their boards of directors to function efficiently, and grant these boards independence from government departments concerned with their field of work.
- Establish and/or activate the role of MoF Assets Assessment Unit to support the SOEs restructuring and privatisation through documenting their assets, prepare and circulate standardised forms and manage a centralised warehousing system of the documented assets.
- Facilitate the customs procedures for machinery, equipment and raw materials imported from public companies or from foreign companies that have contracts with public companies in Iraq.
- Apply the international competitiveness indexes to evaluate the economic sustainability of these companies.
- Establish “business promotion centres” in the ministries that have SOEs. These centres will address labour redundancy and take specific measures regarding the workers’ rights and obligations on an individual basis.
- Train the ministry teams in charge of SOEs restructuring how to complete this task effectively and efficiently, given their inadequate experience and capabilities in this field.
- Provide technical, professional and organisational support to involve the private sector in the SOEs ownership and/or management through cooperation and coordination among the concerned private and public players and the UN agencies entrusted with this file.
- The most important restructuring target is: Complete the restructuring of 5 SOEs by 2020 and 10 more SOEs by 2022, in accordance with the foregoing details. (For further details, please refer to the comprehensive study “Public Company Restructuring: Reality and Vision towards Reform” (February 2015) sponsored by the Prime Minister's Advisory Board and conducted by the SOEs restructuring team.)

Objective 6: Private sector governance

Means of achievement:

- Establish a modern and sustainable institutional foundation for the private sector. This requires:
 - Complete mapping the formal and informal private sector all over Iraq and finalise and update the statistics, data and outputs available with COSIT and the other authorities concerned with the private sector, making available a private sector database with modern systems for information sharing between public and private sectors;
 - Develop modern information systems at the concerned government and private institutions in addition to evaluating the data and outputs obtained from the conducted surveys and other sources;
 - Build the capacity of the government and private entities regarding the use of available information in planning, implementation and follow-up and regarding progress reporting;
 - Provide government establishments with needed information on resource allocation, especially those designed to boost the private sector and economic development;
 - Provide the private sector with the data required for long-term investment planning;
 - Increase in the number of registered private businesses;
 - Build a network of local business registration centres;
- Introduce a clear and explicit approach to policy development, decision making and implementation. Otherwise, it would be difficult to set directions and implement sound policies towards development, effectiveness, and accurate diagnosis of problems and solutions, or to make any trusted predictions regarding related changes;

- Hold the government, public and private sector entities accountable for their actions to realise the NDP 2018-2022 objectives and for the efficient, effective and timely completion of tasks;
- Set clear executive rules for result-based management and decentralised management, and adopt a modern and clear approach for budgeting, resource allocation and wealth-sharing;
- Ensure strict implementation of the 'mandatory enforcement' rule in implementing the existing and future laws and amendments, and set the ground for the highest discipline in policy implementation. Emphasis must also be laid on the principle of coherent monetary, financial and commercial policies related to private sector development. Results count with regard to law enforcement and the rule of law over all groups, and not only through promulgation. What also counts is the effectiveness of the policies, promotion of their positive impact and their change into a viable, integrated and coherent institutional behaviour, not only through good faith;
- Finalise the Good Governance Charter for SOEs; establish the Public Sector Ownership Commission ;and proceed to action in accordance with the policies, rules, principles and directions expected to be pursued through these two projects.



Chapter Six: Post - conflict Reconstruction and Development

6.1. Situation analysis

Iraq has suffered greatly from wars. The recent crisis has seriously affected all aspects of development. Civilians continue to suffer from damage and losses related to terrorism, violence and fighting, all of which have affected adversely socio-cultural cohesion and basic living. The destruction of infrastructure, homes and businesses caused unprecedented displacement, which has put a great strain on the infrastructure, services and economic activities in the host provinces. Table 19 below provides the number of displaced and returnee families for the period 2014-2017.

Table 19

Number of displaced and returnee families and return rate by province, 2014-2017			
Province	Displaced families (n)	Returnee families (n)	Return rate (%)
Nineveh	470.070	93.487	19 %
Anbar	265.806	168.841	64 %
Salah al-Din	133.183	116.929	88 %
Diyala	62.308	31.539	51 %
Kirkuk	29.423		
Baghdad	28.326		
Babil	8.427		
Total	1.008.524	424.845	41 %

- The liberation of all cities and provinces from the grip of terrorism was officially announced in September 2017. It has been necessary to work for the return of all IDPs while seeking to restore stability through the reconstruction and development of liberated areas, in order to ensure recovery and peace and to restore life and choices for the entire population, especially returnees. As of 3/12/2017, the number of returning families registered with the security forces was 424845 in four provinces (41% of the total displaced). A total of 583679 displaced families have not returned yet, which requires serious efforts by the government to ensure their safe return.

6.1.1. Displacement crisis and efforts to address it

The Government crisis management programme has envisioned short-, medium-and long-term sustainable solutions, in view of their importance, nature and responsiveness to the different phases of the displacement crisis:

- a. Humanitarian Relief and Response – displacement phase (short term) – with focus on sheltering the displaced families, following up on their situations to resolve their difficulties and to provide key services (health and education) in the camps;
- b. Stabilisation Programmes in the liberated areas – return phase (medium term) – with focus on facilitating returns and provision of basic services;
- c. Iraq Relief and Reconstruction Fund for areas affected by terrorist operations – for different phases;
- d. Framework Document for National Plan for Reconstruction and Development 2017 – reconstruction and stabilisation phase (long term).

These solutions include a set of objectives that the Government seeks to translate into reality through:

- Strengthening the capacity of IDPs and host communities to cope with shocks and be more resilient;
- Building human resilience and promote opportunities for social integration;
- Eliminating the root causes of violence;
- Consolidating peace and preventing relapse into violence;
- Establishing firm foundations of justice and community peace from a proactive perspective;
- Promoting greater integration and coordination among the relief and stabilisation actors;
- Achieving sustainable economic growth; and
- Expanding the livelihoods opportunities for citizens.

Humanitarian relief and response

Stage one of displacement response is very delicate in terms of details and suffering. Work has faced several challenges concerning the ongoing displacement crisis, the requirements of national reconciliation and security scrutiny. The table below shows the response roles of different actors in the relief phase and the following stages.

Table 20

Relations among implementing entities at different stages of the Government crisis management programme					
Implementing entities		Emergency response	Stabilisation	Reconstruction	Development
COMSEC		Basic	Basic	Basic	Basic
MoF		Basic	Basic	Basic	Basic
MoP		Supportive	Supportive	Basic	Basic
Ministry of Migration and Displacement		Basic	Basic		
Reconstruction Fund		Supportive	Supportive	Basic	Basic
Sectoral authorities		Supportive	Supportive	Basic	Basic
Security authorities		Basic	Basic	Basic	Basic
International organisations	Relief work organisations	Basic	Basic		
	Organisations that implement and support programmes	Supportive	Basic	Basic	Supportive
Local governments		Basic	Basic	Basic	Basic

One of the biggest challenges is the poor budget allocations due to the financial crisis. The table below shows the lacking funds amounted to IQD 861 billion until 31/12/2014– 86.1% of IQD 1000 billion. The annual approved and amended allocations for the IDPs relief project between 2015-2017 by province are also poor compared to the extensive damage.

Table 21

Annual allocations for IDPs relief between 2015-2017 by province			(IQD million)
IDPs relief project	2015	2016	2017
Nineveh	124162.632	61343.356	Approved 19676.6
			Amended 29745.6
Anbar	Approved 85325	Approved 17500	Approved 14620
	Amended 85325	Amended 39500	Amended 0
Salah al-Din	46845.9	29598	Approved 19953
			Amended 0

Stabilisation Programme in liberated areas

The government adopted this programme with UN assistance and support from the international community to fulfil the stabilisation needs and to ensure safe and sustainable return of IDPs according to a set of priorities:

- Repair essential public infrastructure (water, electricity and sewage services, and recruit teams to open streets and remove rubble and mines);
- Support and operate business facilities;
- Rehabilitate schools, health centres and government buildings;
- Continue community reconciliation efforts.

The Programme is implementing projects in electricity, health, municipalities and housing, as well as activities related to community reconciliation. The figures below show the geographic and sectoral distribution of these projects.

Figure 5

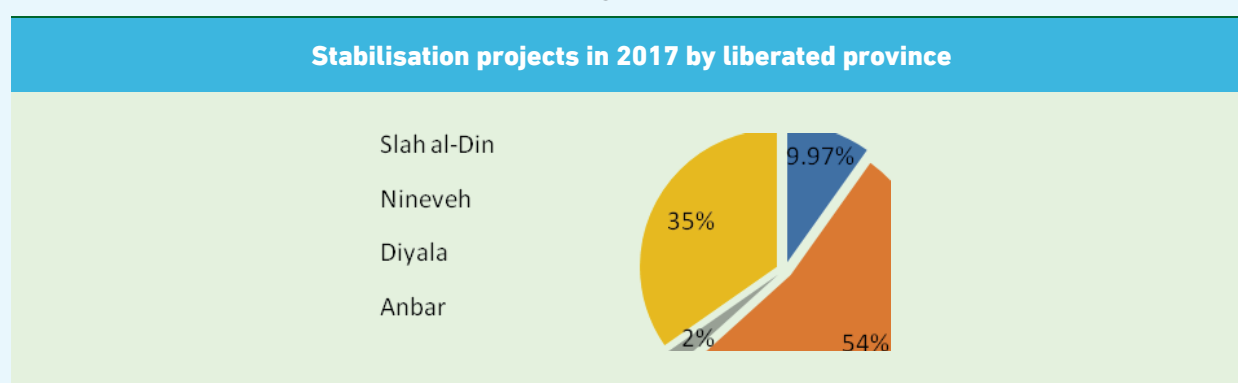
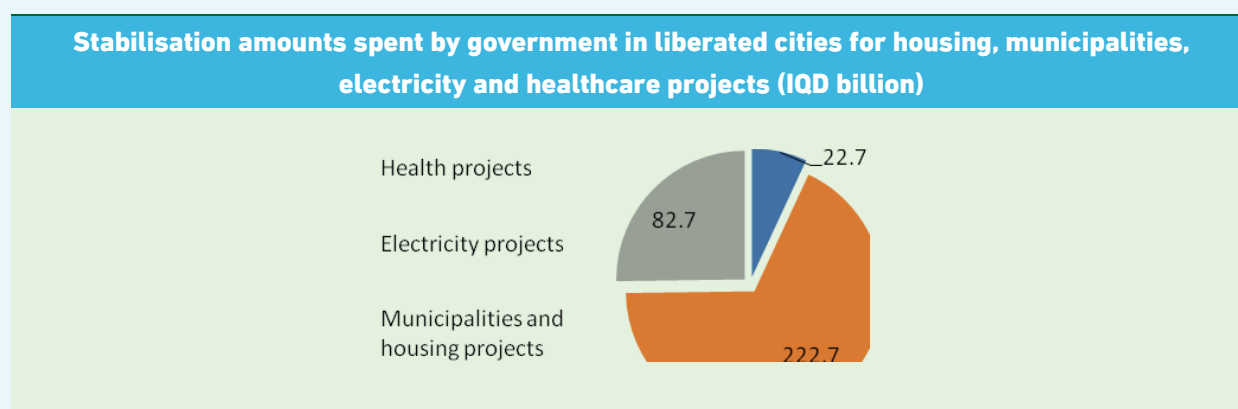


Figure 6



Relief and Reconstruction Fund

As a response to the community needs in the areas affected by terrorism, the government established the Relief and Reconstruction Fund. It is a government instrument to coordinate efforts and monitor the implementation of stabilisation projects in the affected areas. The Fund uses allocations by the federal budget and grants and loans for projects in coordination with local governments and line ministries to restore stability and reconstruct infrastructure, prioritised according to the scale of damage and population.

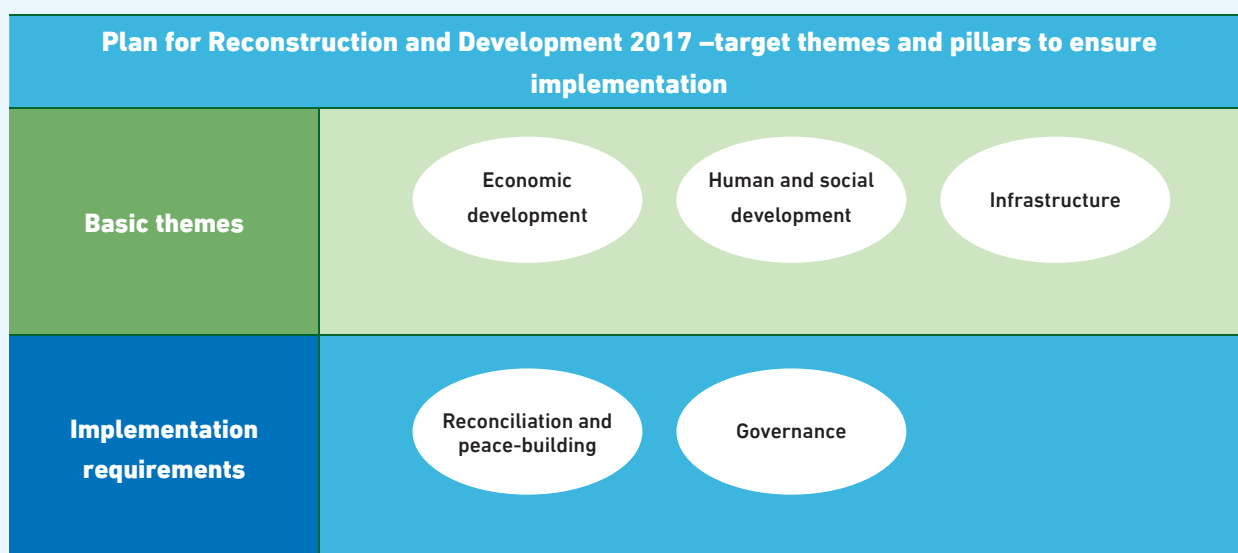
Plan for Reconstruction and Development framework (long-term vision of recovery and growth)

According to the national social and economic indicators of rights and services in the target year 2027, the recovery and development of the provinces affected by terrorist and military operations (Baghdad, Nineveh, Salah al-Din, Anbar, Kirkuk, Diyala and Babil) is a national priority to enable Iraq to live and prosper, to prevent the escalation of violence, and to promote sustainable peace in a secure and stable environment.

The Government adopted the General Framework Document for the National Plan for Reconstruction and Development (PRD) in 2017 as a general track for sectoral and spatial plans for affected areas in line with NDP 2018-2022 and Iraq Vision 2030. It represents the Government vision for recovery and growth.

- The PRD framework document adopts the following national guidelines:
 1. Recovery for citizens in the affected provinces
 2. Link the reconstruction plan to the development plans and the sustainable development agenda.
 3. Leadership is by the Iraqi government with wide participation, internally (local governments, private sector, CSOs) and externally (international agencies and organisations)
 4. Inclusion of care with focus on the most affected and vulnerable groups
 5. Ensure sustainable solutions for IDPs by adopting the right to return and integration approach.
 6. Adopt the principle of using the development opportunities during crisis to the best changes and results to promote citizenship and belonging values and establish the foundations for sustainable peace.
- The PRD implementation timeline is 10 years (2018-2027). Implementation will cover directly the seven affected provinces (Nineveh, Salah al-Din, Anbar, Baghdad, Diyala, Kirkuk, Babil) and indirectly other provinces, especially those under great pressure to host IDPs and those affected by economic losses. The PRD identifies themes and implementation requirements as follows (Figure 7).

Figure 7



6.1.2. Implementation timetable for PRD 2017 -2026

The implementation plan prepared in accordance with the Framework Document for the National Plan for Reconstruction and Development (PRD) is a long-term roadmap (ten years) and an extension of NDP 2018-2022 and NDP 2023-2027. Therefore, progress monitoring and evaluation will be an important benchmark for achieving the PRD objectives. The following Table 22 shows the RDP 2017-2026 implementation timetable.

Table 22

Timetable and implementation steps for the Plan for Reconstruction and Development 2017-2026

NO	Implementation theme	Detailed steps	Timetable									
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
1	Identify the leadership, supervision, planning, implementation and follow-up entities	NOMINATE THE LEADERSHIP, GUIDANCE AND INTERNATIONAL COORDINATION ENTITY										
		Nominate the planning, implementation and follow-up entities										
		Nominate the advisory entities and support the technical capacity building										
2	Prepare studies, statistics and initial planning	Damage and loss assessment										
		Needs assessment										
		Conduct preliminary studies										
3	Prepare programmes, projects and detailed plans	Detailed studies										
		Feasibility studies, detailed plans										
		Tender documents and contracts										
		Bidding										
4	Preparations, implementation and contracting	Human development projects										
		Infrastructure projects										
		Economic development projects										
5	Implementation follow-up and progress evaluation	Documentation and reporting										

6.1.3. Institutional and operational arrangements

Successful implementation of the priority tasks requires a dedicated and focused approach as well as coordination between the Government, international partners and other implementing actors. It also requires a special monitoring system to control the use of public funds, including international development assistance, and to allow the local and international community to understand the implementation process easily. These arrangements include (1) institutional coordination and monitoring mechanisms and (2) monitoring and accountability framework, as detailed in the following.

Institutional coordination and monitoring mechanisms

Given the huge resources needed for recovery and development in the liberated areas and the need to pay an equal attention to other provinces, good coordination and supervision during implementation will be crucial. To keep paying adequate attention to these post-conflict issues, the mission will be managed according to the structure shown in Figure 8 and as follows:

- The Higher Committee for Reconstruction and Investment chaired by the Prime Minister works nationwide to ensure the momentum and maintain sustainable reconstruction, investment and development efforts.
- The Executive Committee chaired by the Minister of Planning with the membership of COMSEC and the Relief and Reconstruction Fund, line ministries and local governments. The committee coordinates and oversees the reconstruction and development tasks in addition to its responsibilities.
- The Support and Coordination Unit: provides support to the Executive Committee and assumes the following tasks among others:
 - Support coordination between ministries, donors and provinces and ensure regular flow of information among them.
 - Manage and operate the monitoring and accountability system, track progress and performance indicators and prepare regular progress reports.
 - Provide quick and flexible solutions to problems, as needed, to ensure they are reported and addressed at the right government level.

Monitoring and accountability framework

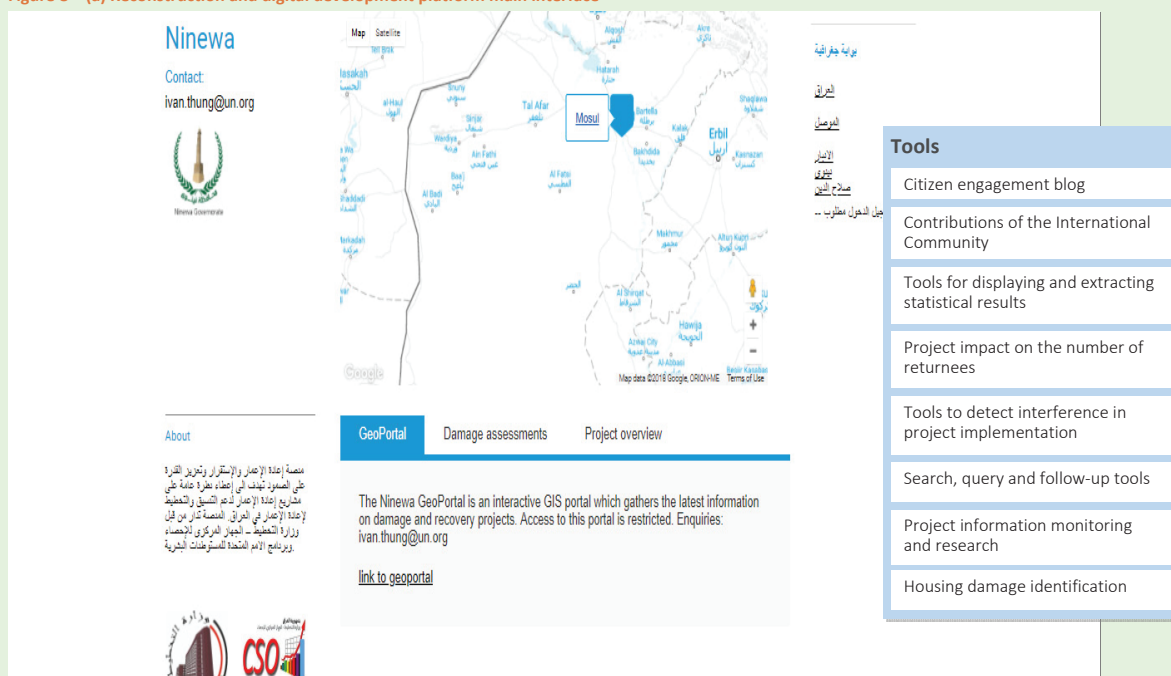
This framework will feature a transparent and open system involving stakeholders at different levels through feedback systems and track corrections, which will make the reconstruction process more transparent, discreet and flexible.

Monitoring and accountability will be reinforced using technology and effective citizen participation. Through an available digital geographic platform that can achieve the following:

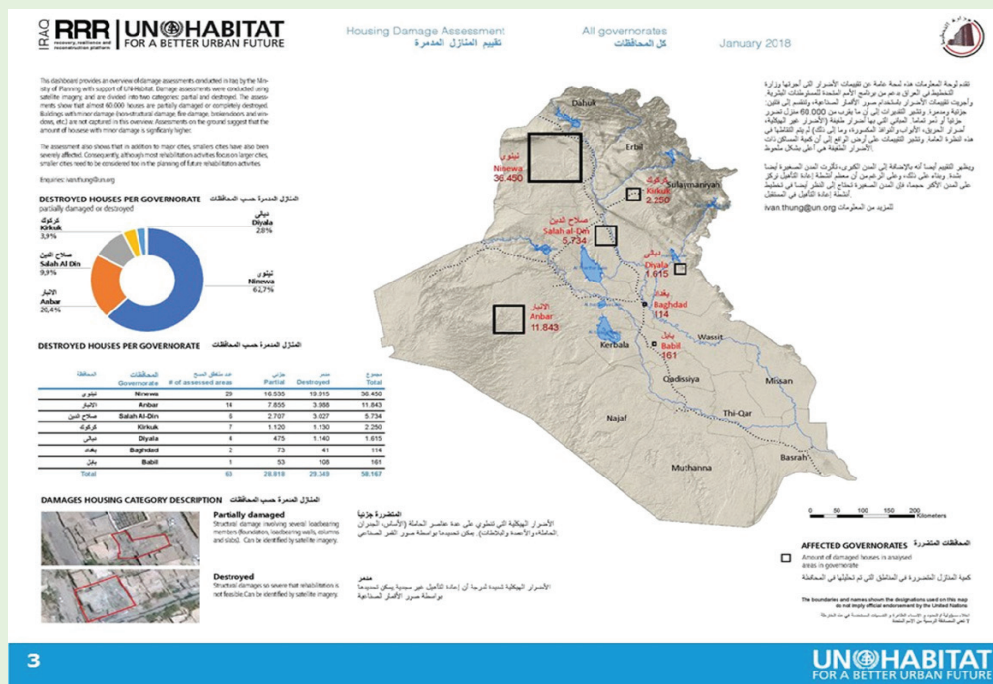
- Follow up, monitor and share progress about national and local reforms which are important to strengthen intergovernmental relations.
- Provide information on specific activities and programmes (in areas affected directly and indirectly by military operations).
- Enable people to engage in dialogs and give feedback on reforms and implementation to assess performance efficiency from a community perspective.
- Develop accountability for results by gathering data and information needed to determine whether the activities are promoting reconciliation and trust in government institutions and maintaining peace. There are already several digital platforms that can be expanded for this purpose. Figure 8a below shows the electronic interface of the National Data Platform for Monitoring and Following up Reconstruction, Stabilisation and Development Projects. Figure 8b shows the Interactive Geographical Interface that provides tools to monitor project execution and statistics extracting.

Figure 8

(a) Reconstruction and digital development platform main interface



(b) Interactive geographical interface



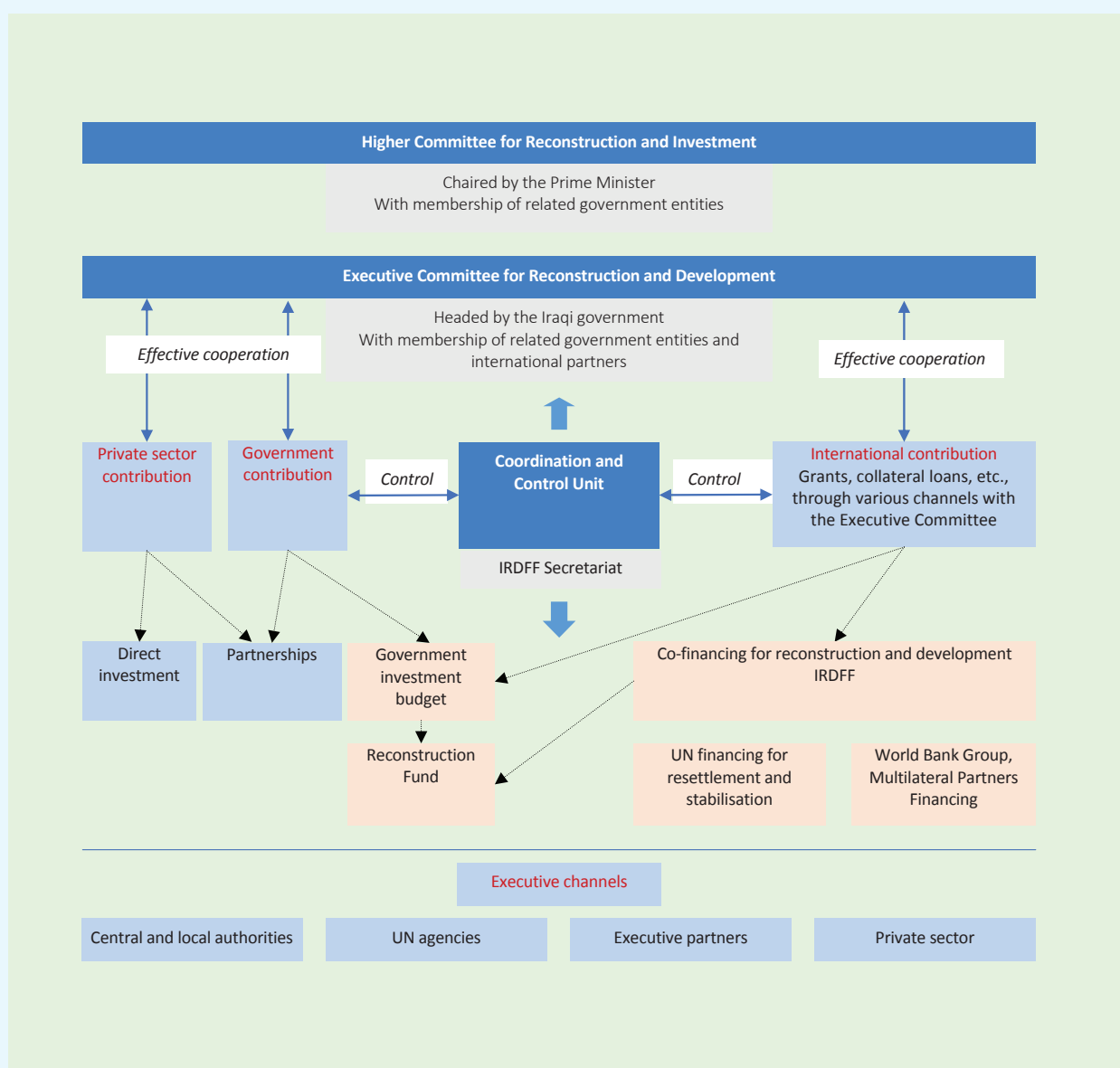
6.1.4. Funding strategy

The current economic and financial resources cannot cover the reconstruction and development requirements with the modest contributions from external parties and private sector. Accordingly, the Government has developed a funding strategy with funding for the next stage which sets the main principles of the funding approach. Figure 9 below shows the funding sources not only for the affected areas but also for all other provinces, including:

1. Guiding investments in the indirectly affected provinces.
2. Reconstruct infrastructure in the directly affected provinces.

Figure 9 shows also the structure of funding and Iraqi government coordination with international partners for the reconstruction and development plan.

Figure 9



6.1.5. Damage, losses and needs

Damage and losses

The assessment surveys conducted in the affected provinces in the first stage provided statistics on the physical damage to the public and private sectors using classification criteria approved in coordination with the World Bank:

- Partial damage (less than 40%)
- Full damage (40%)

Tracking the losses that reflect the impact of physical and non-physical damage requires a series of detailed surveys and studies, with the assistance of long-term international expertise. Therefore, the presented losses are those directly documented on the ground.

Damage in the public sector

- The number of business units affected was 8373 of different types. The largest number (2142 units = 25.5%) was in the government buildings followed by the transportation sector (2041 units = 24.3%), education (1679 units = 20%).
- The number of totally damaged units (less than 40%) was 6429 (76.7% of total damaged units), while that of partially damaged (more than 40%) was 1944 (23.2%).
- The damage to the seven worst-hit provinces (at 2014 prices) is 55.461 trillion IQD (USD 46.9 billion). Note that this estimate does not include damage to residential buildings (private sector) amounting to IQD 18.7 trillion. Thus, the total is IQD 75 306 trillion.

Figure 10

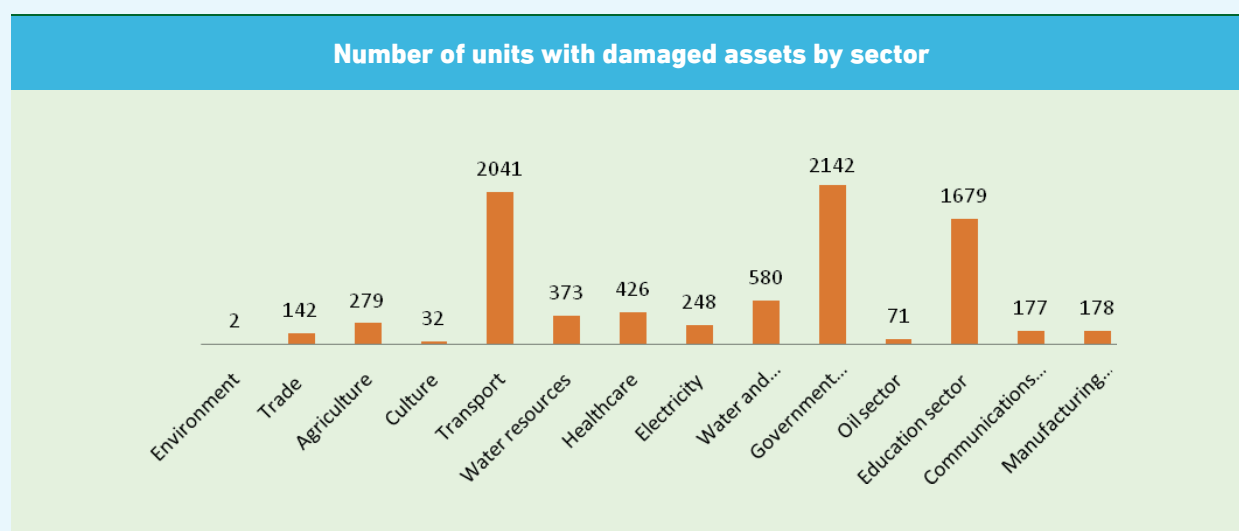


Figure 11**Proportion of business units with total/partial damage**

- The electricity sector is the worst affected (IQD 9.586 trillion), followed by the oil and gas sector (IQD 6.145 trillion) and the manufacturing sector (IQD 5.477 trillion), because they are large in terms of capital and services to many provinces (see Figure 12).
- The damage to business units in Salah al-Din was the highest among the seven provinces (IQD 13.821 trillion), followed by Nineveh (IQD 10057 trillion), and Anbar (IQD 9.529 trillion). Damage is highest in Salah al-Din because of its refineries and power station. The damage to the electricity sector in Salah al-Din stands at IQD 5879 trillion. The damage to the oil and gas sector is IQD 5779 trillion as shown in Figure 13.

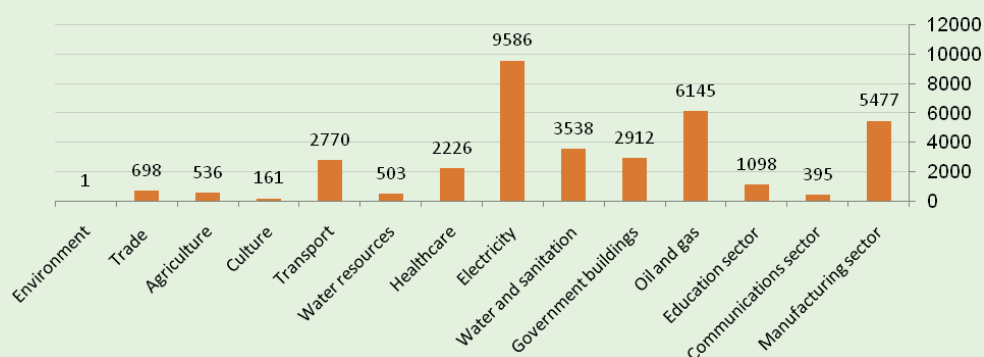
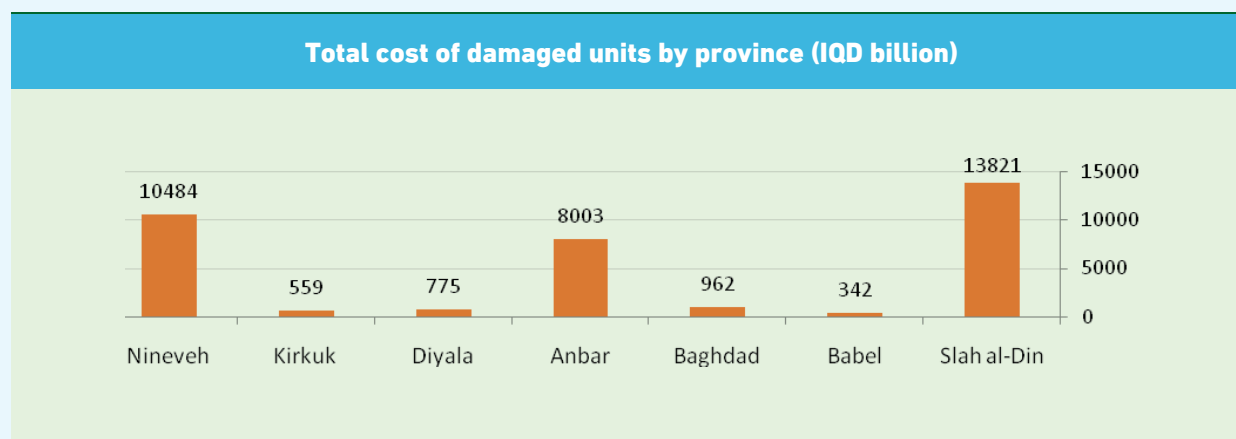
Figure 12**Total cost of damaged business units by sector****(IQD billion)**

Figure 13


- The industrial sector in Anbar is the most affected with IQD 4.579 trillion due to the operations of the General Company for Phosphates, whose damage reached IQD 3.750 trillion. The least affected sector was the environment (IQD 840 million).
- Electricity in Baghdad is the most affected sector with IQD 367 billion, followed by water and sanitation (IQD 181 billion).
- Babil is the least affected, with a total damage of IQD 342 billion. Electricity was the most affected (IQD 146 billion), followed by water and sanitation (IQD 52 billion).
- In Salah al-Din, the electricity was also the most affected, the amount of damage reached 5.878 trillion. Second, the oil and gas sector 5.779 trillion. Then, the government buildings 789 billion. The least affected was the culture sector 290 million.

Damage in the private sector (residential buildings)

An assessment of the damage to private residential buildings has revealed the following:

- The total estimated damage in the seven provinces amounts to IQD 19 trillion (USD 16 billion). The damage is IQD 10 trillion (53.4%) in urban areas and IQD 8.7 trillion (46.6%) in rural areas (see Figure 14);
- Residential buildings are the worst hit in Nineveh, with a total of estimated damage worth IQD 8 trillion (42.7% of the total damage in the seven provinces). Salah al-Din comes second (IQD 3.8 trillion, 20.2% of the total), followed by Anbar (IQD 3.6 trillion, 19.2%), and then Diyala, Kirkuk, Baghdad and Babil;
- The highest damage to residential buildings in urban areas is in Nineveh (IQD 5.8 trillion, 57.8% of the total damage in urban area), followed by Anbar (IQD 2.3 trillion and 22.7%) and Salah al-Din (IQD 1.4 trillion and 13.6%) (see Figure 15);
- The damage to residential buildings in Salah al-Din rural areas reached IQD 2.4 trillion (27.7% of total damage in rural areas), followed by Nineveh (IQD 2.2 trillion, 25.3%) and Anbar (IQD 1.3 trillion, 15.1%);

شكل (14)

Total damage to residential buildings (in % of cost) by urban/rural



Figure 15

Share of damage to residential buildings by province and urban/rural area

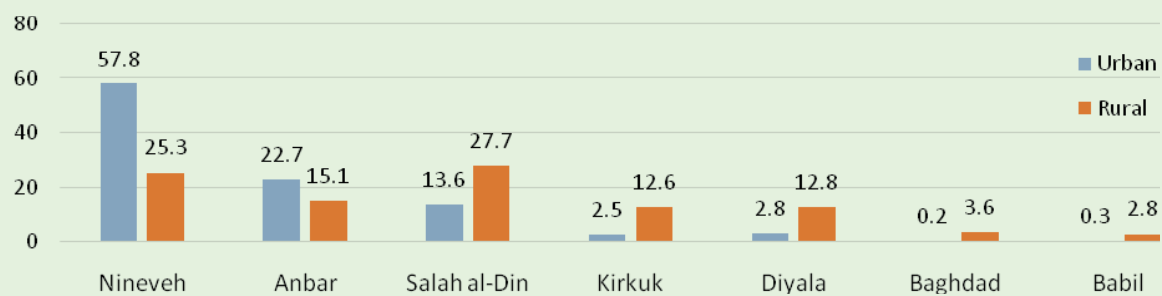
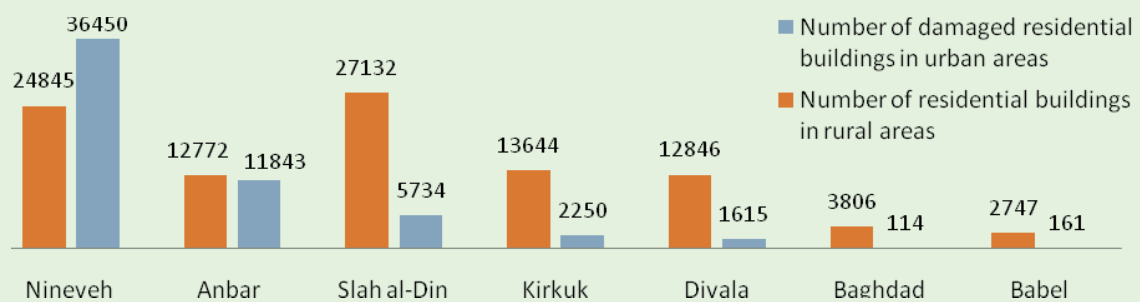


Figure 16

Number of damaged residential building by province and urban/rural area



- The number of damaged buildings is 97792 in rural areas (62.7% of the total damage to residential buildings), and lower in urban areas (58167 buildings, 37.3% of the total) (see Figure 16);
- The number of damaged residential buildings in urban areas is highest in Nineveh (36450 buildings, 62.7% of the total), followed by Anbar (11843 buildings, 20.4% of the total);
- The number of damaged residential buildings in rural areas is highest in Salah al-Din (27132 buildings, 27.7% of the total), followed by Nineveh (24845 buildings, 25.4% of the total);
- The surface area of all affected buildings in the seven provinces reached 76.2 million m², 54.1% of which is in urban areas. The surface area of affected buildings is the highest in Nineveh (26.9 million m², 64.2% of the total), followed by Anbar (8.3 million m² and 20.3% of the total).

Losses

The major losses caused by terrorist expansion since June 2014 until liberation can be explained as follows:

1. Investment projects were suspended due to low disbursement reflecting major development gaps in the previous plans. The economic burden of military spending has a negative impact on the completion of investment and service projects. This is evidenced by the high number of suspended projects and the low rates of disbursement in all provinces during the period 2013–2016.
2. Diminishing opportunities for proper education
 - The conflict areas suffered the greatest losses due to the deliberate campaign to spread extremism. Through indoctrination and brainwashing, terrorists tried to build a generation that believes in extremism taking advantage of the low education levels. This will have far-reaching effects and will require exceptional efforts to contain and address. An entire generation has lost several years of education and needs innovative mechanisms to bring them back to the level of their peers. Enrolment rates for different levels of education among IDPs and quality of education has also declined.
 - Other provinces also had great pressures on their educational facilities, enrolment rates and quality of education.

6.1.6. Unemployment, poverty and food shortage

Unemployment

- The losses related to unemployment, poverty and lack of food reached IQD 5.3 trillion annually during the conflict. The impact on livelihoods was high in the affected provinces, where unemployment increased from 12.6% in 2014 to 17.7% in 2017.
- The Strategy for the Reduction of Poverty in Iraq 2018-2022 showed that 800,000 jobs were lost due to displacement in 2014. Workers were pushed by the crisis from high productivity and incomes to lower productivity and incomes in intermittent jobs and services. This increased levels unemployment-related poverty, which in turn increased the households with unemployed dependents. 30% of the poor households' dependents are unemployed in the IDPs areas.
- IDPs in the seven provinces were severely affected by food shortages. The percentage of those affected is 40% among the IDPs and nearly 20% among the non-displaced. The fourth survey of Comprehensive Vulnerability and Food Security Analysis 2016 shows that 2.5% of Iraqi people are food-insecure. This percentage increases to 5.6% among the IDPs. Most of the food-insecure people are in rural areas (5.1% of total rural population) compared to 1.7% in urban areas. Thus, food insecurity among IDPs increased to 65.5%, while at the national level it is 54%.

Poverty

- The number of new poor people was around 2.8 million of the estimated 8 million in 2014. The IDPs constituted half million (17.8%) of the total number of new poor in Iraq. One out of every four IDPs is currently poor. This represents those displaced outside their provinces, who are lacking 70% of basic assets. The property damage is a leading cause of deepening poverty due to homelessness and lack of basic services including water and sanitation, which will make society suffer from diseases and poor health.

Women and children: the most vulnerable groups

- Women, whether displaced or under the terrorists' rule, have suffered extreme cruelty and deprivation. This includes abduction, rape, captivity, forced marriage, lack of education and isolation from society. Moreover, they were forced to work and be influenced by extremist ideologies. Whether in affected cities or displacement camps, economic and service pressures were significant, which doubled vulnerability and difficulties. All the above will require a serious review of response mechanisms to address and overcome the crisis effects.
- The percentage of child workers (6-14 years' old) in the camps increased to 3.4% in 2016.
- The proportion of disabled persons under 15 years comprise 27.7% of total disabled in Iraq. The largest proportion (14.9%) was children between 5 and 9 years' old in 2017. This means that displaced children in these provinces suffer complex vulnerability; displacement and disability. This requires special measures and interventions that consider the nature of this vulnerability and respond to rights of children to life, equality and dignity.
- The reduction of basic health services provided to displaced children was accompanied by undernourishment among children aged 0-59 months in the camps. This increased the rates of emaciation, stunting and vulnerability.
- Other provinces were not shielded from the impact of the above situation. This is shown in the human development indicators (Chapter 9) and poverty reduction (Chapter 7).

6.2. Challenges

Damage and loss in affected provinces

1. Losses and damages were enormous including breakdown of infrastructure, service systems and production sectors (agriculture, electricity, industry, social sector, education, health, housing, social protection and livelihoods/poverty). These are estimated at IQD 53.318 billion (USD 45.727 million).
2. High budget constraints including investment pressures to fund the reconstruction and development projects. The initial budget estimates for these projects amounted to USD 88.2 billion (IQD 104.2 trillion) distributed to USD 22.9 billion over the short term and USD 65.3 billion over the medium term.
3. The poverty rate in affected provinces reached 41.2%, with an increasing need for cash aids to the poor. The estimated need in the short term is IQD 1939.4 billion, in the medium term IQD 5593 billion and over five years IQD 7532.4 billion.
4. The persisting financial and administrative corruption, weak rule of law and poor access to justice constitute obstacles to recovery and reconstruction efforts causing deficiencies in the reconstruction and development process.
5. The continuous division and fragmentation in the society threaten the foundations for sustainable peace.

Other provinces

1. Continuous deterioration of the infrastructure coupled with halts and delays in projects due to the double crisis and its impact on the sustainability of development and quality of life.
2. Many host provinces are burdened with IDPs waves, which put human and physical pressures on services, housing, and economic and social conditions.
3. Huge human and material sacrifices were made by central and southern provinces while combating terrorism and during the liberation process. as a result, vulnerable groups expanded in these provinces (widows, disabled, orphans, etc.).
4. The state security institutions were preoccupied with the file of terrorism which led to an increase in the power of sub-loyalties and tribal, regional and other interventions. They had a negative impact on institutional performance, the rule of law, and social problems. (see chapter on human and social development).

6.3. Objectives

Objective 1: Adopt an efficient administrative and financial system that responds to the recovery needs, and requirements of local stabilisation and sustainable peace building

Means of achievement:

1. Flexible institutions with effective coordination and a non-stereotyped funding approach.
2. Effective partnership with local governments and communities, private sector and CSOs;
3. Cooperation and coordination with the international community to provide support for different reconstruction and development areas.
4. Achieve national reconciliation based on inter-communal relations and a cohesive social fabric (during the NDP years).
5. Awareness programmes to address the conflict and sectarianism dynamics (during the NDP years).
6. Strengthen transparency, combat corruption, reform the security and judiciary sectors and finally proceed with disarmament.

Objective 2: Rehabilitate infrastructure to ensure comprehensive coverage

Means of achievement:

1. Conduct accurate statistical surveys to determine the scale of damage and loss and adopt respective goals;
2. Prioritise the infrastructure projects based on the basic population needs and return criteria, as well as on the sustainability criterion based on the funding capability;
3. Provide project design and implementation requirements, such as drawings, feasibility studies, bills of quantity, etc.

Objective 3: Revive sectoral economic activities and seize available development opportunities

Means of achievement:

1. Provide an attractive and motivating business environment for private investments.
2. Link politics to economy when making investment decisions to be an effective framework for reconstruction peace building policies.
3. Financial support to SMEs.
4. Rehabilitate sectoral economic projects by different means.

Objective 4: Strengthen human immunity against relapse

Means of achievement:

1. Greater effectiveness and coverage of social protection systems in the affected and non-affected provinces to support social security.
2. Engage women and youth into the labour market through income-generating activities.
3. Implement the programmes of the Poverty Reduction Strategy 2018-2022 to protect the poor and reduce new poverty.
4. Restore the normal role of state security and service institutions to reduce sub-loyalties and interventions which affect the performance of institutions and social security.
5. Strengthen resilience by supporting survivors and returnees and combating extremist ideologies.
6. Support the resilience and capabilities of the host communities and enhance social cohesion.
7. Design awareness programmes to address the reasons of conflict and strife.
8. Provide special care programmes for the families of martyrs and disabled to recognise their sacrifices in combating terrorism.



Chapter Seven: Poverty Alleviation



7.1. Situation analysis

Over the past four decades, Iraq has witnessed serious developments including wars, international sanctions, foreign military occupation and international terrorism. These have cast dark shadows on the country's political, economic and social developments and they were a real concern for the Government and the Supreme Committee of the Strategy for the Reduction of Poverty during throughout the years of the first National Strategy for Poverty Alleviation 2010-2014. The poverty rate dropped from 19% in 2012 to 15% in the first half of 2014, but estimates show that it will rise to 22.5% in the second half of 2014 due to financial crisis and terrorism attacks. Except for the provinces with displacement, the poverty rate has not risen above 19% since 2012.

After 2003, successive governments adopted two national poverty reduction strategies. The first strategy 2010-2014 focused on four key challenges: Ensure security and stability; good governance; equitable distribution and diversified sources of income in a market economy; and mitigating the negative impact of reforms.

For the second poverty reduction strategy 2018-2022, these challenges are still present and they require continued government commitment to address them through appropriate policies and procedures to achieve the desired objectives, although these challenges have taken on more profound and influential dimensions in the economy and society alike.

Despite the destruction and forced displacement in affected areas, the proportion of multi-dimensional poverty – and according to a recent MoP survey (excluding Kurdistan), dropped from 28% in 2012 to 18% in 2014 and to 14% in 2017, while it was about 29% among the displaced population.

7.1.1. Poverty in the provinces

There is a greater geographic concentration of poverty. In 2007, 40% of poor Iraqis lived in five provinces: Baghdad, Basra, Nineveh, Babil and Thi-Qar. However, the situation changed in 2012. While Baghdad's share of poor population has not changed from 19%, Nineveh has almost doubled its share to 15.7%. Three southern provinces (Thi-Qar, Qadissiya and Missan) have 10.0%, 7.0% and 6.7% respectively, hence assuming about one-quarter of the country's poor. Thus, about 58% of the poor lived in these five provinces in 2012.

Poverty has also worsened in six provinces. In two of them, it increased by more than 10% (Missan and Nineveh), by about 9% in Qadessiyah and Thi-Qar, about 6.4% in Muthanna (although it is still the poorest province) and about 0.4% in Erbil. Poverty has decreased less than 1% in both Baghdad and Suleimaniah. The biggest poverty reduction gains were in Salah al-Din, Kerbala and Babil, and the situation there has changed compared to other provinces.

On the other hand, poverty in rural areas decreased by 8.6% compared to 2.6% in urban areas. There is little improvement in Baghdad and Kurdistan, and poverty rates have dropped significantly in the remaining 14 provinces. Yet 70% of the poorest 40% of population live in these provinces, and Baghdad has the remaining 20%.

The rates of extreme poverty (people living at below 1.25 \$ per day according to purchasing power parity 2005) continued close to 4%, but the distribution by region has changed significantly. In 2012, Nineveh alone had 18% of the people living in extreme poverty, and half of those live in Qadessiyah, Thi-Qar, Muthanna and Missan together. We can safely conclude that the poverty rise in Nineveh and the four southern provinces (Basra, Thi-Qar, Missan and Muthanna) was accompanied with higher concentration of extreme poverty.

Table 23

Trends in poverty rate by province, 2007-2012				
	Province	2007 %	2012 %	Change in 2007- 2012 (number of points)
Provinces where poverty increased	Missan	25.3	42.3	17.0
	Nineveh	23.0	34.5	11.5
	Qadessiyah	35.0	44.1	9.1
	Thi-Qar	32.0	40.9	8.9
	Muthanna	48.8	52.5	3.7
	Erbil	3.4	3.6	0.2
Provinces where poverty decreased	Kirkuk	9.8	9.1	-0.7
	Baghdad	12.8	12.0	-0.8
	Suleimaniah	3.3	2.0	-1.3
	Dohuk	9.3	5.8	-3.5
	Anbar	20.9	15.4	-5.5
	Wassit	34.8	26.1	-8.7
	Diyala	33.1	20.5	-12.6
	Najaf	24.4	10.8	-13.6
	Basra	32.1	14.9	-17.2
	Salah al-Din	39.9	16.6	-23.3
	Kerbala	36.9	12.4	-24.5
	Babil	41.2	14.5	-26.7
Total		22.4	18.9	-4.0

The fourth survey of the Comprehensive Vulnerability and Food Security Analysis 2016 shows that 2.5% of Iraqi people are food-insecure (2.1% in Kurdistan, 1.1% in Baghdad and 3.5% in other provinces). This rate rises to 5.6% among IDPs. Most food-insecure people live in rural areas (5.1%), compared to 1.7% in urban areas

WFP (2016), Iraq: Comprehensive Vulnerability and Food Security Analysis (data collected in – April-May 2016), p. 15

7.1.2. Growth and disparity in consumer spending

Spending distribution among the five income categories in 2007, 2012 and 2014 shows a trend of inequality. The value of Gini coefficient increased from 0.338 in 2007, to 0.366 in 2012 and to 0.380 in 2014. Further disparity can be expected due to the reduction in aids to poor groups (especially the ration cards), and to the consumption structure among the five categories. There is a disparity between areas in consumer spending during the period 2007-2007. Consumption for the top five quintiles grew by 2.0% compared to 0.7% for the poorest 20%. Consumption in Iraq, except Baghdad and Kurdistan, grew rapidly by 2.24% per year, compared to 0.08% in Kurdistan and 1.83% in Baghdad.

7.1.3. Pockets of poverty

The results of Poverty Mapping and aternal ortaloty survey in 2013 show wide disparity in poverty levels in Iraq, ranging from less than 1% to 77%. This reveals a geographic disparity and the existence of poverty pockets in certain areas:

- The poorest areas in Iraq, with a poverty rate 70-77% are Ghammas in Qadessyiah, Bani Hashim in Missan, Al-Hilal, Najmi, Al-Warka and Sawir in Muthanna. 222,000 people live there.
- The least poor areas with less than 1% poverty rate are Halabja in Suleimaniah, Palestine in Baghdad, Byara and Suleimaniah centre, Ankawa in Erbil and Darbandikhan district in Suleimaniah.
- There are 40 nahias that make up 10% of total Iraq's nahias, but with more than half of the country's poor population (about three million).
- Nineveh has the largest number of poor people (126,000), with half of them living in Mosul and Tal Afar qadha centres.
- Baghdad has the second largest number of poor population (78,000), with one-third of them living in Fahama, New Baghdad and al-Wihdah.
- Poverty rates vary significantly within each province. For example, in Baghdad, they are between 1% and 49% and in Missan between 21% and 73%.
- The number of poor people in Thi-Qar is 70,000, and 36% of them live in the centres of Nassiriya, Shatrah and Gharraf qadhas.
- The areas with high economic activity have lower poverty rates (less than 10%), such as Um Qasr and Al-Faw, the main ports of Basra.

7.1.4. Poverty characteristics in Iraq

Analysis of poverty characteristics between 2007 and 2012 revealed a set of root causes that explain the poverty size as well as demographic and geographic distribution as follows:

Poverty and low income

Poor households are concentrated in three sectors: agriculture, construction and transport and storage. They account for 50% of total poor working households. 24% of the poor work in agriculture and construction sectors where people get low wages and in agriculture sector women work even with no pay.

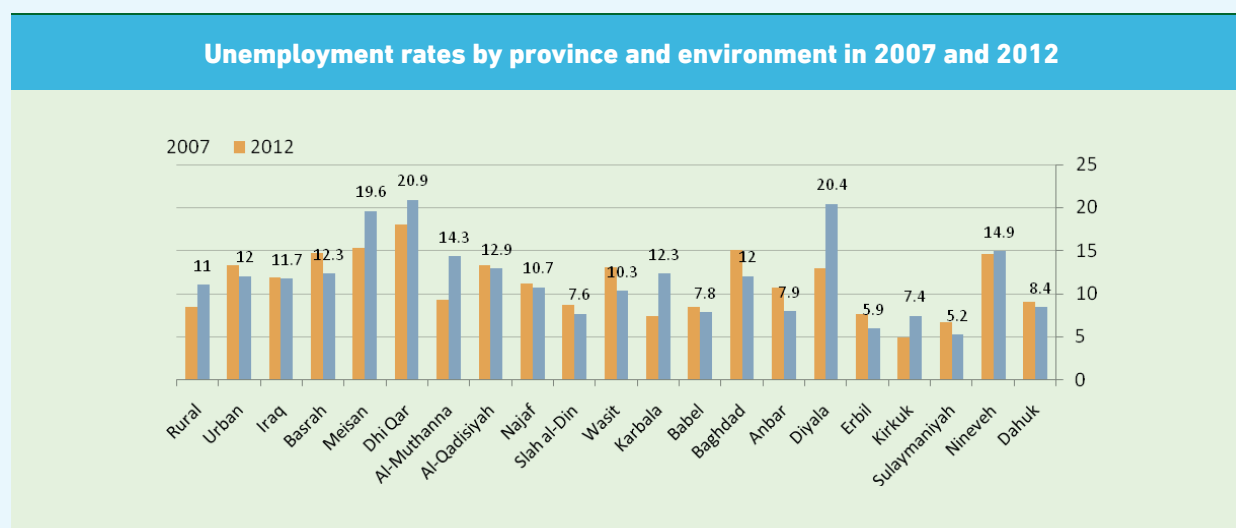
Poverty and education

Poverty rates increase with the low level of education. More than half of poor breadwinners (51%) have less than primary education, and about one third (32%) have completed primary education. Survey results suggest that families relying on agriculture are poorer because they are less educated, and that improvements in living standard are to some extent related to receiving higher education.

Poverty and unemployment

Poverty increases in families with unemployed family heads. 32% of these are actually unemployed. A working breadwinner does not mean his/her family is not poor and also unemployed breadwinners does not necessarily mean that the family is poor. This raises the issue of the high underemployment rate (28%) compared with the unemployment rate of 10.2%.

Figure 17



Poverty in rural areas

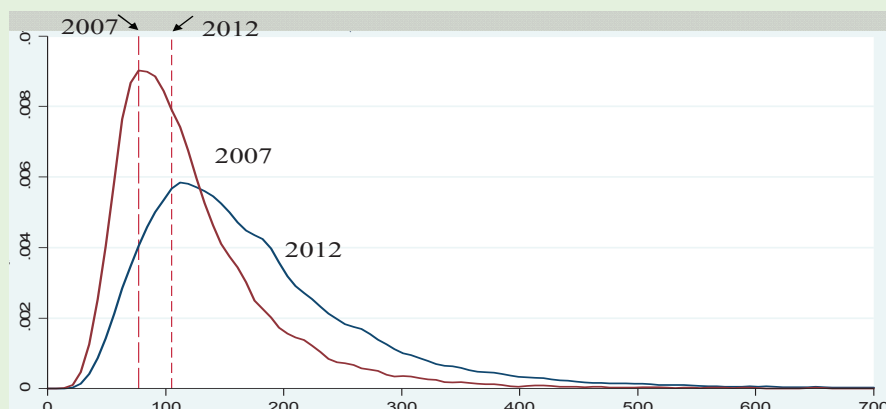
Indicators show that the poverty rate in rural areas is more than double that in urban areas. Ranking by environment, the poorest are the rural areas in Missan 73%, Muthanna 64%, Thi-Qar 61% and Qadisiya 60%, due to the low productivity of agricultural labour.

Poverty and the number of family members

Poverty increases with a high number of family members. The average poor family had 12 members in 2012. 75% of the poor families have 8 members or more, and nearly one third have 11 members. Less than 1% of the poor families are small (4 members or less). Dependency ratio also matters; poverty decreases with increased number of working family members and vice versa.

Poverty line

Most of the poor population in Iraq are close to the poverty line (see Figure 18), which means that any change in their spending would improve/worsens their living conditions. For example, a 5% rise in poverty line means a 16% increase in poverty. On the other hand, many non-poor individuals are close to poverty line which has increased their vulnerability to poverty after the double crisis of 2014.

Figure 18**Poor population by expenditure, weighed by inflation, 2007-2012**

There is no doubt that poverty in Iraq is linked to a range of cultural, social, political and environmental factors. Many non-poor people are close to poverty line and vulnerable to poverty due to crises and emergency situations. This requires development methods and policies that can enhance resilience and poor conditions and prevent poverty deepening among future generations. This requires adopting economic and social policies to reduce poverty and that's exactly what the NDP 2018-2022 is about.

7.2. Challenges

1. Persistent security challenges and the development of stabilisation strategy.
2. Good governance indicators are overall deteriorating. Iraq ranks 179 out of 182 countries in terms of institutions quality. Financial and administrative corruption still prevalent and constitutes a major challenge to the development process in general and to poverty reduction efforts in particular.
3. The federal budget is exposed and affected by rapid external shocks and vulnerable to instability.
4. Limited budget allocations and government funding for poverty reduction, and failure to prioritise poverty projects to respond to the needs of the poor.
5. Delay in launching the poverty maps until 2015.
6. Security and defence priorities continue to compete with development and reconstruction priorities, and affect development and social spending in general.
7. Although millions have returned to the liberated areas, displacement and its consequences on the security of individuals, families and society is still present.
8. Many negative social phenomena aggravated and affected implementing development policies, including the abuse of law, tribal conflicts, drugs and many others.
9. Urban informal settlement increased, trespassing on public property and construction. In 2016, there were 3687 informal settlements, with 522,000 houses. 12.9% of the population have informal housing and 16.5% of the units are informal, hence constituting sustainable poverty pockets.
10. Weak economic sectors, weak governmental and institutional role, poor participation and low investment appetite of the local private sector.
11. Lack of accountability for delayed implementation and poor monitoring and follow-up.

Displacement and poverty

Challenges of displacement threaten most people in the terrorism-hit provinces. The highest numbers of IDPs came from Anbar (42%), Nineveh (35%), as well as from Kirkuk and Diyala. However, their consumption is differently affected including by loss of assets and durable goods and loss of jobs and income. The IDPs per capita consumption is approximately 22% due to both terrorism and financial crisis. Their incomes declined by 61.6% due to the decrease in labour income by 62.5% after the rise of job-losses and unemployment to 27%, three times higher than the remaining population. Figures show that the poverty rate has risen from 23% to 38%, twice as much as the remaining population, meaning that four out of each ten IDPS have become poor. The poverty gap has also increased by 5%.

Although focus is often on the displacement tragedy, host communities are also beginning to face serious problems because of displacement. These include deterioration in public services, undesirable competition for housing and loss of employment because of competing IDPS. Displacement therefore negatively affects all households.

Large displacement has increased the poverty rate in Kurdistan to 12.5% (higher than under normal growth assumptions). In the provinces hit by terrorism, the poverty rate doubled to 41.2% (assuming crisis scenario indicators). While the impact was limited in the rest of Iraq, the overall poverty rates increased in all provinces, especially in the southern provinces, where they remained higher than 30% due to the increasing impact of the financial crisis in general.

While inequality nationwide remained close to average rates, there is a clear increase in Kurdistan, Baghdad and the affected provinces. The liberated areas still suffer from mines, unexploded ordnance and explosive devices used by terrorist organisations.

Table 24

Poverty scenario 2012–2014 under more stable conditions (%)								
	Poverty rate				Poverty gap			
	2012	2014		Impact	2012	2014		Impact
		Stable situation	Situation with the two crises			Stable situation	Situation with the two crises	
Iraq total	18.9	15.0	22.5	7.5	4.1	3.9	6.6	2.7
Iraq, excluding provinces hit by terrorism	18.9	15.0	18.6	3.6	4.1	3.9	5.0	1.4
Kurdistan	3.5	3.5	12.5	9.0	0.6	0.6	3.7	3.1
Baghdad	12.0	8.5	12.8	4.4	2.0	2.3	3.4	1.0
Rest of the North	14.9	12.1	17.7	5.6	2.8	2.9	4.4	1.6
Centre	15.8	12.7	18.6	5.8	3.1	2.9	4.6	1.7
South	33.6	26.1	31.5	5.5	8.6	6.8	8.9	2.1
Areas hit by terrorism	25.0	20.5	41.2	20.6	5.6	5.3	14.2	8.9

7.3. Objectives

The Iraq National Strategy for Poverty Reduction 2018-2022 seeks to improve the situations of poor population through increasing their incomes or improving access to quality services. The Strategy aims to reduce the country's poverty levels by 25% until 2022 as a medium-term target, then by 50% in line with the Sustainable Development Agenda 2030.

The Strategy outcomes adopt both objectives from Agenda 2030 and those developed against evidence-based analysis of poverty. It will be implemented through annual programmes to achieve its long-term goals.

The Strategy adopted a programme to improve living standards and conditions and prevent risks. It also enables the poor to work and stop waiting for care and charity. This vision helps identify the key elements of the Strategy, which are cornerstones in Vision 2030.

The Strategy for Poverty Reduction has three main components:

- Create opportunities for sustainable income
- Empower and build human capital
- Establish an effective social safety net.

Objective 1: Higher and sustainable incomes for the poor

Means of achievement:

1. Encourage graduates of agricultural and veterinary institutes and colleges to establish agricultural projects to create jobs in the countryside under Law No. 24 of 2013.
2. Establish local or cooperative associations to provide small farmers with services such as marketing, financing, water, maintenance, mechanisation, storage, cooling and transport.
3. Provide poor farmers with training on agriculture and irrigation methods responsive to climate change.
4. Establish projects with integrated activities (production and services) to provide jobs for poor rural women.
5. Provide jobs for urban slum dwellers (men and women) through community centre programmes.
6. Support the Business Incubators Programme to provide training, financing and services to support small enterprises of poor people, especially women according to the comparative advantage of the urban area.
7. Cover more poor people by the lending programme to create small income-generating businesses.

Objective 2: Enhance the health situation

Means of achievement:

1. Establish, rehabilitate and equip health centres, clinics or mobile clinics in poor areas.
2. Train midwives in poor areas.
3. Provide safe drinking water in poor and remote areas.
4. Conduct comprehensive health awareness campaigns in poor and remote areas.

Objective 3: Improve education of the poor

Means of achievement:

1. Build, rehabilitate and maintain 9-classroom schools in poor areas;
2. Prioritise teacher training in rural areas;
3. Implement literacy programmes in poor urban and rural areas;
4. Implement school feeding programmes in poor areas;
5. Develop and equip community centres for literacy and teaching social and life skills;
6. Re-open technical sections and workshops in schools and rehabilitate existing ones (focus on girls' schools).

Objective 4: Adequate housing and responsive environment

Means of achievement:

1. Conduct a survey on informal settlement;
2. Relocate and rehabilitate informal settlements in selected areas;
3. Use solar energy in poor areas;
4. Promote eco-tourism in and around reserves;
5. Implement projects to build affordable housing units.

Objective 5: Effective social protection for the poor

Means of achievement:

1. Reform the ration card system and link it to the database of social protection beneficiaries;
2. Develop a mechanism to provide social protection beneficiaries with small credits on the condition that they stop getting benefits from the system;
3. Build a joint database between the Social Protection Authority and related ministries and entities to evaluate the social protection applicants;
4. Partner with CSOs in raising the poor awareness and reviewing and evaluating the social protection system.
5. Support poor returnees in liberated areas psychologically and socially.
6. Establish a sustainable way (fund) to finance the coverage of those affected by natural disasters and emergencies with social support.

Objective 6: Enable and promote the social, economic and political integration of IDPs and returnees in liberated areas

Means of achievement:

1. Implement labour-intensive programmes to provide immediate jobs to IDPs, returnees and victims of terrorism and rehabilitate and train them (including small grants) to ensure their social integration.
2. Provide health services to poor IDPs.
3. Ensure basic education for IDPs children.
4. Implement projects to build low-cost housing focusing on poor returnees, with small grants for restoration.



Chapter Eight: Sectoral and Spatial Development



8.1. Agriculture and water resources sector

8.1.1. Situation analysis

- The agricultural sector faces a number of problems and challenges. Successive years of drought, fluctuation in rainfall, environmental changes, and various risks, in addition to the loss of key cycles in agricultural marketing. This has led to losses in agricultural production from harvesting to consumers and the lack of agricultural insurance companies and associations specialised in agricultural mechanisation, marketing, and transport, etc.

Sector GDP contribution

- The GDP contribution of the agricultural sector was 2.02% including oil in 2015 at constant prices (planned target was 3.4%). However, it contributed 4.5% excluding oil sector compared to 5.6% of planned contribution.

Natural resources (water and land)

- The area of Iraq covers 174.8 million donums, of which about 28 million donums (16.1%) are arable land. Cultivated lands amount to 14.562 million donums (52% of arable land), and there are large agricultural areas (about 4-5 million donums) affected by dunes. Of the latter, 600,000 donums have been reclaimed.
- There is a clear decline in incoming water resources whether from Tigris and Euphrates rivers outside Iraqi borders, or from feeding rivers inside Iraq, whose water resources, in turn, have declined due to drought conditions. These conditions have negatively affected the tributaries, groundwater, storage levels in dams and reservoirs. In addition, many vital facilities, such as Ramadi and Fallujah Barrages, Warwar and Taqsim regulatory dams, and some other important secondary facilities, were destroyed or damaged.

8.1.2. Challenges

Agricultural development challenges

1. Decline of agricultural production efficiency, productivity and agricultural products, which caused a deficit in meeting the demand for food and food security requirements.
2. Poor investment environment, limited private capital investments, and poor allocations and funding in the agricultural sector that is out of proportion to required financial needs for this sector's growth and development.
3. Poor control and monitoring of border outlets that led to increased illegal competition of imported agricultural crops and products with local ones.
4. Overreliance on imports, water scarcity and salinity and poor support to fertilizers and pesticides increased the costs of production inputs that negatively affected the agricultural operations management.
5. Failure to optimally exploit arable land due to terrorist operations in Nineveh, Salah Al-Din, Kirkuk and Diyala; infrastructure sabotage, youth migration, and seeking non-agricultural jobs for higher income, especially in security and defence.
6. Fragmentation of agricultural land as a result to inheritance factors, small-sized agricultural units and property that affected crops structure and hindered the use of mechanisation and modern agricultural technologies, and urban sprawl on agricultural land without legal sanctions.
7. Poor governance because unclear coordination mechanisms among relevant entities in managing agricultural and marketing process hindered plans implementation and follow-up, and addressing problems and obstacles (such as delays in paying farmers' dues for wheat crop in spite of marketing

the crop). In addition, an institutional entity that governs the relationship between the private and public institutions, especially in marketing operations, is urgently required.

8. Poor agricultural-industrial integration (agro-industries, and processing and food industries).
9. Deterioration of natural pastures productivity, and spread of desertification, sand dunes encroachment, and dust storms.
10. Domestic agricultural production exposure to the challenges of epidemics, and endemics diseases.
11. Destruction of many infrastructures in agricultural sector such as regulatory dams, irrigation and drainage channels, as well as silos and agricultural machinery and equipment, especially in the provinces affected by terrorism.
12. Concentration of multidimensional poverty indicators in rural areas, which also suffered from poor education, health, and infrastructure services.
13. Weakness of agricultural database that is key for development planning.
14. Absence of agricultural insurance companies, and lack of specialised associations in agricultural activities such as mechanisation, marketing, etc.

Water resources challenges

Water resources in Iraq suffered various environmental problems that have exacerbated in the present time. At the same time, these problems also represent the environmental obstacles and challenges that hinder integrated water resources management. In brief, Iraq faces two main challenges in securing its water needs:

1. External challenges

a. Decline in water flows. Iraq location as a downstream country of the Tigris and the Euphrates created a critical situation and made it vulnerable to actions by upstream states (Turkey and Syria). Turkish and Syrian plans to use the Tigris and Euphrates waters, especially Turkey's East Anatolia Project, which includes building 22 dams to meet the irrigation needs, have negatively affected Iraq. Iranian projects, as well as diverting the stream of some rivers inside Iran and discharging the drainage water towards Iraqi rivers, have also affected the Iraqi joint rivers with Iran. Therefore, the projects of these three states would create two main challenges by 2035, as the following:

- Decline of Iraqi water resources by 1 billion m³ annually will lower water resources at the borders from 43.7 billion m³ in 2015 to 28.5 billion m³ by 2035, in addition to water losses that lower irrigation efficiency to less than 50%.
- Increase in saline concentrations from 320 PPM to 500 PPM in Tigris River, and from 540 PPM to 930 PPM in Euphrates River.
- Political and security instability in riparian countries (Syria), and failing to reach agreements that ensure fair water rights to Iraq.

b. Climate and Geological changes. Climate change would affect water resources situation in Iraq negatively. This will lead to severe variations in incoming water from Tigris and Euphrates Rivers, causing floods or drought. Furthermore, rainfall in Iraq has decreased compared to past decades, which expanded desertification. Additionally, Iraqi geography has entered in seismic repercussions that may affect existing dams and barrages.

3. Internal challenges.

The following are the most important:

- a. High waste ratio in irrigation water of more than 50% because of on-farm losses, and low irrigation and transport efficiency as a result to using old and traditional methods in water management.
- b. Weak institutional and legislative system that became unable to address the serious water resources challenges.

- c. Low investments in water resources projects.
- d. High contamination level due to insufficient drains and sewage treatment plants.
- e. Difficulties in controlling water reservoir and drainage through regulatory dams.
- f. Iraq became inside the earthquake fault line that will affect regulatory and main dams.
- g. Loss of huge quantities of available reservoir because of military operations against terrorism that negatively affected the environment, agriculture, services and humans.
- h. Increase of groundwater extraction rate of about 5.243 billion m³ (8.8% of freshwater sources), representing freshwater extraction of 1.472 billion m³ annually through groundwater systems.

8.1.3. Objectives

Objective 1: Increase the GDP contribution of the agricultural sector (for non-oil activities) from 4.5% in 2015 to 5.2% in 2022, and achieve a sector growth rate of 8.4% in the target year

Means of achievement:

1. Increase agricultural land and promote production and productivity by focusing on the following:
 - Expand cultivation of on-farm crops, used directly in human food, and industrial crops, used as raw materials in many industries;
 - Manufacture machinery and agricultural equipment to meet the growing domestic demand associated with the expansion of agricultural production as shown in the following table;

Indicator (unit)	2015	2018	2022
Arable land area (million donums)	28	28	28
New reclaimed land (thousand donums)	47.5	100.44	246.13
Wheat production (tonnes, t)	2645061	4436000	4617000
Barley (t)	329713	1334000	1411000
Rice (t)	109209	220000	220000
Maize (t)	182340	296000	307000
Potatoes (t)	162915	727000	816000
Tomatoes (t)	388674	769000	868000
Onion (t)	21238	75000	85000
Dates (t)	602348	778000	878000
Red meat (t)	169283	166000	187000
Chicken meat (t)	86360	154000	180000
Milk (t)	310507	317000	464000
Eggs (million eggs)	564546	641	938
Fish (t)	46246	84000	98000

- Establish a factory for agricultural supplies (such as plastic covers to cover plantings, and supplies of modern irrigation such as sprinkling and drip irrigation);
- Integrated reclamation of agricultural land.

2. Combat desertification;

Indicator (unit)	2015	2018	2022
Irrigation-developed land (%)	42.7	42.74	61.82
Irrigation projects rehabilitation (thousand donums)		2094	5292

3. Perpetuate developmental and research programmes and agricultural extension;
4. Support domestic private sector and foreign investment;
5. Develop the infrastructure of agricultural sector;
6. Use modern technologies in irrigation and agriculture methods;
7. Control and monitor border outlets to prevent entry of agricultural products when local production is available.

Objective 2: Achieve sustainable food security

Means of achievement:

1. Develop a food security developmental strategy that aims to sustainable agricultural development through optimum use of natural, human, and financial resources to increase productivity, achieve better food security at the household level, and reduce poverty and unemployment;
2. Support agricultural producers, protect local products through imposing duties on imported agricultural products, and deposit a share of duties in a dedicated fund to support agricultural producers;
3. Adopt establishing of modern and integrated agro-industrial clusters;
4. Develop the infrastructure of agricultural sector;
5. Establish agricultural insurance companies and specialised associations to support various agricultural activities such as mechanisation, marketing, etc.

Objective 3: Secure the annual demand for sustainable water uses in (agricultural, industrial, municipal) fields and achieve water balance with the possibility to reduce annual demand by 500 million m³

Means of achievement:

1. Competent management of water resources;
2. Improve on-farm irrigation efficiency through integrated water resource management;
3. Reduce waste and losses in water uses;
4. Increase water reservoir volume.

Objective 4: Provide sustainable water resources

Means of achievement:

1. Reach an agreement with upstream and riparian states to ensure fair distribution and sustainable water rights;
2. Recover and develop marshes;
3. Invest renewable groundwater;
4. Rehabilitate and reconstruct water resources infrastructure damaged by the military operations

(Haditha Dam, Adhaim Dam, Fallujah Barrage, Unified Canal Regulator, Ramadi Barrage, and Warrar Regulator).

Indicator (unit)	2015	2018	2022
Total irrigation efficiency (%)	35	60	60
On-farm irrigation efficiency (%)	-	70	70
Water transport and distribution efficiency (%)	-	(90.95)	(90.95)

8.2. Energy and manufacturing industries sector

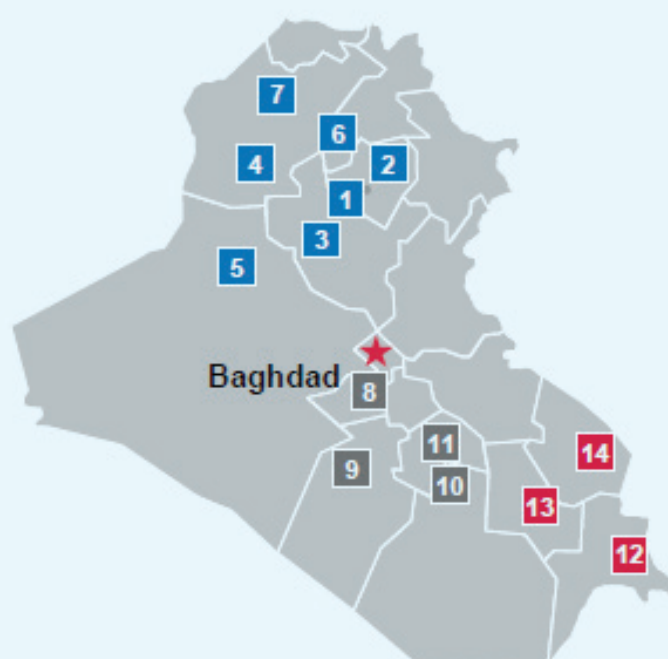
8.2.1. Oil and gas sector

Situation analysis

- Iraq has one of the largest crude oil reserves in the world estimated at around 153 billion barrels up to 2016.
- In 2016, crude oil production reached 4.164 million bpd, and daily exports 3.302 million bpd for an improvement of 39% for production and 27.6% for export. This increase was associated with development of oil fields, and increased export capacity of Southern ports especially those specialised in crude oil transport, to account for the increased activity of oil fields included in the contracts of licensing rounds.
- Available storage capacities are 24.7 million barrels. However, they will not be sufficient in the future due to the increase in targeted export capacities.
- Confirmed gas reserves are 126.7 trillion cubic feet, placing Iraq in tenth place internationally, despite the lack of interest in gas production and wasting huge quantities of it.
- Security conditions and military operations in the northern region led to interruption of production in many producing oil and gas fields. Hamreen, Ain Zalah, Najma, and Olas fields were out of government control in 2014-2015, and production from northern fields decreased by 20%, while Kurdistan Regional Government operated the fields of Kirkuk province from 2014 to 2017.
- Decline in locally refined oil. Refined oil quantity was 423000 barrels in 2016 after reaching 602000 barrels in 2013, which caused a huge deficit in meeting increased local consumption needs on gasoline, kerosene, and gas oil. This also required resorting to import oil derivatives from neighbouring countries to fill the gap.
- Refineries suffered the hardest damage by military operations against terrorism. Six refineries, including Beiji refineries compound, got out of service, hence reducing total design capacity by 51%. The following table illustrates design and available capacities for all Iraqi refineries.

n	Refinery	Design capacity (Mbbl/d)	
		Pre-crisis	Post-crisis
1	Beiji	310	0
2	Chinese	30	0
3	Kirkuk	30	28
4	Al-Jazera	20	0
5	Haditha	16	0
6	Qaiyarah	14	0
7	Kisik	10	0
8	Daura	165	120
9	Najaf	30	25
10	Al-Samawah	30	25
11	Diwaniah	20	18
12	Basra	210	200
13	Al-Nassiriya	30	25
14	Missan	30	24
Total		945	465

Map of the refineries



Challenges

- Reduction in net oil revenues due to prices fluctuation while production costs remained constant.
- Limited data about wells and seismic conditions that caused a state of uncertainty in attainable production levels.
- Reduction in storage capacity and weak infrastructure of crude oil export facilities to meet the increasing crude oil production capacity.
- Flaring of large quantities of gas due to failure to implement required processing and gathering infrastructure, which limited the separation of gas to high value components.
- Large deficit in crude oil refining capacity. Consequently, the gap between oil products and the nature of demand widened, and the quality of local gasoline and oil gas deteriorated due to obsolescence of oil refineries and their limited number. In addition, many of them, especially Beiji refining compound, became out of service because of terrorist operations.
- Obsolescence of crude oil pipeline network with no connection between the north and the south.
- Approve important investment laws and regulations in oil and gas sector.

Objectives

Objective 1: Increase the production capacity of crude oil to 6.5 million bpd

Means of achievement:

1. Continue to develop oil fields through executing the projects of service contracts of the first, second, and third licensing rounds, in addition to national extraction efforts;
2. Invest the fields of North Oil Company;
3. Drill and reclaim development wells, and establish required production facilities;
4. Build the infrastructure for injecting water to supply and direct water to producing fields;
5. Develop crude oil transport infrastructure starting from wellheads to the main pipelines.

Objective 2: Increase the export capacity of crude oil to 5.25 million bpd

Means of achievement:

1. Upgrade existing ports and build new ones that meet all safety and environmental requirements.
2. Establish and develop crude oil transport pipelines, and develop transport maritime fleet.
3. Construct pipelines for crude oil export through the ports of neighbouring countries.
4. Raise the storage capacity of crude oil in export depots.

Objective 3: Raise the natural gas production to 3500 MMscf/d

Means of achievement:

1. Increase investment in associated and free gas;
2. Construct and upgrade required infrastructure for gathering and processing gas in the fields.

Objective 4: Enhance confirmed gas reserves

Means of achievement:

- Develop exploration capacities, and provision of related data.

Objective 5: Achieve self-sufficiency and derivatives export by increasing refining capacity to 900000 bpd

Means of achievement:

1. Rehabilitate damaged refineries by terrorist acts;
2. Modernise existing refineries and add new refining capacities;
3. Develop required regulations and mechanisms to rationalise oil products consumption;
4. Encourage the private sector to participate in the management and operation of oil facilities or some of its accessories, especially in activities of refining, distribution of oil products, and in construction and maintenance works based on a special investment law in this regard.

Objective 6: Enhance storage capacity of petroleum products to secure storage of 2267 m3

Means of achievement:

1. Complete the construction of depots for existing oil derivatives;
2. Expand oil derivatives pipelines and improve measurement systems.

Objective 7: Protect the environment from contamination, address environmental problems resulting from existing oil and gas facilities, and reduce CO2 emissions

Means of achievement:

1. Comply with HSE international standards through internationally accredited systems, including environment-friendly technologies;
2. Raise environmental awareness, develop a database for the impacts of oil pollutants, establish an integrated system for environmental monitoring and follow-up, and address all environmental impacts that remain unaddressed.

Key performance indicators			
Objective/means	Measure	Base value	Target value
Crude oil production	MMbbl/d	4.164	6.5
Export capacities	MMbbl/d	3.302	5.25
Crude oil storage capacities	MMbbl	24.7	80.4
Natural gas production (free + associated)	MMscf/d	2828.22	3500
Increase refining capacities	Mbbl	423	900
Secure long-term supplies of free gas	MMscf	160	650
Enhance storage capacity of oil derivatives	m ³	1942	2267
Private sector contribution in refineries sector investments	%	0	25%

8.2.2. Electricity sector

8.2.2.1. Situation analysis

Production sector

- Total produced energy (including imported energy) was 10502 MW in 2016, with 1366 MW of imported energy.
- Natural gas is the primary fuel in power plants. The productivity of these plants decreases to 41.9% of design capacities when using secondary liquid fuel due to lack of natural gas.
- Decrease of gross design capacities of power generation in the provinces affected by the terrorist operations.

Energy transmission sector

- The current transmission lines suffer from many bottlenecks. The electric loads outweigh the capacity of the transmission grid. Therefore, it is necessary to extend additional lines, and establish transformer stations to upgrade this system and increase its ability to deliver electricity in a better way. Accordingly, many projects in this sector have been completed, including secondary stations (400 and 132) KV and transmission lines (400 and 132) KV and 132 KV cables.

Energy distribution sector

- This sector suffers from high loads (7%) due to the random divisions of housing units, bulldozing of agricultural lands for housing purposes, illegal encroachments on the electricity grid, and the lack of regular maintenance.
- As for the system of tariffs and methods of collection, the total amount of energy sold to the consumers in 2016 was IQD 1742.3 billion, and IQD 486.8 billion were recovered through collection without recovering the remaining amounts with an outstanding debt of IQD 3965.5 billion.

Private investment in electricity sector

- **Private investment in generation sector.** The Ministry of Electricity resorted to investment in this sector since its investment budget is not sufficient to cover the entire demand, especially after oil prices collapse and lack of adequate investment budgets while continuing to subsidise energy unit price. Many projects were assigned to Independent Power Producer method with a total design capacity of 8355 MW, and 1500 MW of them will be in operation during 2017.
- An investment map has been developed for the new generation plants, including the conversion of simple cycle gas plants to combined cycle to increase their capacity and fuel consumption efficiency with an added capacity of 4584 MW.
- **Investment in renewable energy.** In 2017, 695 MW were assigned to this field in Muthanna, Anbar and Babil. In addition, there is a proposed renewable energy investment plans in Baghdad, Najaf, Diwaniyah, Thi-Qar, Missan, Kerbala, Wassit and Diyala with a capacity of 2380 MW up to 2020.
- **Private investment in distribution sector.** The Ministry of Electricity has signed service and collection contracts for some works in the distribution sector, whereby the investor is committed to perform the following:
 - Install intelligent electricity meters.
 - Improve electricity tariff and collection.
 - Decentralise electrical energy distribution sector within the governmental program.
- The Ministry has signed a number of service and collection contracts for 244921 subscribers in Baghdad and other provinces until the end of 2016.

8.2.2.2.Challenges

1. High production deficit after many plants were out of service.
2. High load growth and increased demand for electricity at a rate of 7% annually due to the dividing of housing units.
3. Reduction in existing plants efficiency due to poor provision of adequate fuel.
4. Decreased water levels and their negative impact on the operation of steam plants.
5. Inability of public investments to finance project implementation.
6. Weak investment regulations in the electricity sector.
7. Weak community culture about consumption rationalisation, and absence of belief that the citizen is responsible for covering the costs of provided services as national obligations.
8. Poor sector governance due to unclear division of responsibilities between the ministry and local governments regarding projects in the provinces.
9. Failure to collect electrical energy costs and failure to apply the legal procedures for obligating consumers to pay the charges.
10. Weak implementation of law provisions of prosecuting the transgressors on the electricity grid.
11. Poor coordination in implementing plants and transmission lines, which prevents operation of completed plant because related transmission lines have not been ready yet.
12. Obsolescence of the electricity system equipment over time, and the urgent need for maintenance and rehabilitation programmes for keeping them in operation.
13. Inability of transmission and distribution grids to accommodate added energy.

8.2.2.3.Objectives

Objective 1: Increase the total electricity production capacity to 20869 MW

Means of achievement:

1. Complete the work in production units (gas and steam plants) under implementation to reach total design production capacity of 53147 MW in 2022.
2. Rehabilitate and maintain existing plants.
3. Convert simple-cycle gas plants to combined cycle as this would add 4584 MW of capacity.

Objective 2: Increase the per capita electricity consumption to (4041) KWh

Means of achievement:

- Accommodate added generation capacities through rehabilitation and upgrading of transmission and distribution grids.

Objective 3: Improve the electricity system efficiency

Means of achievement:

1. Reduce internal consumption and losses in electricity systems in distribution sector to 30% of available power.
2. Improve the system efficiency (systems of power factor improvement, plants cooling systems, and change fuel type).

3. Expand and upgrade transmission and distribution grids.

Objective 4: Improve quality of consumer services (household, government, industrial, agricultural, and commercial)

Means of achievement:

- Increase daily provision of electrical power to 20 hours a day.

Objective 5: Rationalise electricity consumption in different uses and reduce it by 7% annually

Means of achievement:

1. Link power costs with consumption, and consider subsidising the limited-income groups.
2. Rationalise electricity consumption in the public sector through adequate measures.

Objective 6: Improve the environmental impact of electricity activity by reducing CO2 emissions

Means of achievement:

1. Use good quality fuel (gas) instead of the various types of liquid fuel in gas plants to contribute to CO2 emissions reduction by 19433000 t/y.
2. Convert simple-cycle gas plants to combined-cycle plants to contribute to reducing CO2 emissions by 8150000 t/y.
3. Open investment opportunities in renewable energy especially solar energy to provide 4.2% of total energy generated in the electricity system.

Objective 7: Enhance the private sector role in managing the energy production and distribution sectors

Means of achievement:

1. Increase the number of subscribers in service and collection contracts to include all provinces and subscribers by 2022.
2. Open the works of construction, rehabilitation, and maintenance of generation plants to investment.

Objective 8: Enhance the governance of electricity sector and institutions

Means of achievement:

1. Upgrade the capacities of operation, maintenance, project management, organisation planning, environmental management, and training to support new plants management.
2. Ensure that power plants receive full fuel quotas in a timely manner through coordination between the Ministries of Electricity and Oil.
3. Establish modern mechanisms to manage demand for electricity systematically, and then develop measures to slow demand growth through the application of long-term rationalisation opportunities.

8.2.2.5. Key performance indicators

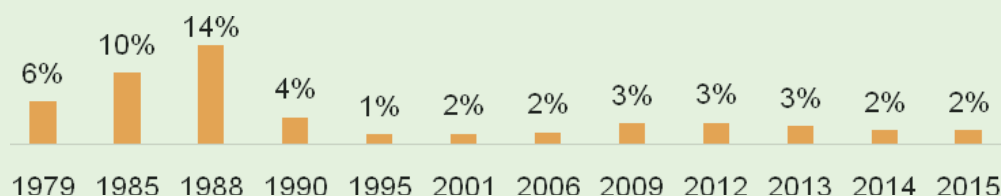
Objective/means	Measure	Base value	Target value
Increase actual production capacity (production rate)	MW	11326	20869
Increase design production capacities	MW	28719	53147
Increase energy delivered to consumers per capita	KWh	2399	4041
Increase the capacities of transmission grids	MVA	34976	61486.4
Improve system efficiency	Loss rate in distribution sector (%)	52 %	30 %
Improve quality of services	Provision rate (h/d)	17.6	19
Rationalise energy consumption	MWh	3353766	6206435
Improve environmental performance (reduce emissions) through fuel conversion	CO2 thousand t/y	11344	19433,211
Improve environmental performance (reduce emissions) through conversion to combined cycle	CO2 thousand t/y	0	8150
Diversify energy production sources using solar energy	MW	0	2380
Private sector role in the distribution sector	Subscribers (n)	2232085	All

8.3. Manufacturing and (non-oil) extractive industries sector

8.3.1. Situation analysis

The growth and prosperity of the manufacturing industries sector depends heavily on the country's security and economic stability. Figures 19 and 20 indicate the fluctuation of this sector's contribution to GDP. This sector was affected during various periods that can be broken down as the following:

- From the seventies to 1990: The sector witnessed great prosperity through the implementation of many factories.
- The blockade period from 1990 to 2003: Despite the economic blockade, the sector's companies managed to provide the products in the local markets. However, the lack of spare parts, and the difficulty of modernising production lines affected the products quality and the lifespan of production lines.
- From 2003 onwards: Many companies were qualified, however, local market openness to the global markets, production high costs, and other problems have led to limit the role of these companies in the labour market.

Figure 19**GDP contribution of the manufacturing industries sector at current prices, 1979–2015 (%)****Figure 20****Relative importance of the of manufacturing industries sector at fixed prices, 2012–2016**

Many important factories – including ones for phosphates, sulphur, cement, and pharmaceuticals, etc. – have been destroyed or have been unable to operate due to the security situation in Nineveh, Salah Al-Din, Anbar, Diyala, Kirkuk and parts of Baghdad and Babil.

8.3.2. Challenges

1. Commitment to SOEs restructuring in accordance with the related studies prepared by the Council of Ministers and relevant entities.
2. Volatility of the security situation has led to weak demand for investment in this sector, especially for large industries.
3. Difficulties in competing with imported products due to high production costs, and weak ability to match foreign products diversity and prices, and inability to keep abreast with developments in production methods.
4. Limited private sector capabilities with little opportunities to expand and develop.
5. Weak provision of infrastructure services to this sector (electricity, fuel, raw materials, etc.).
6. Provide the necessary funding to reconstruct destroyed companies and factories in the liberated areas, establish modern industries that are able to invest resources such as mineral and human resources, and fostering a peaceful society.
7. Create sectoral interrelation to complete the economic cycle through using agricultural resources and livestock in the operations of many industries and vice versa. These industries include, for example, mechanical industries, food, textile, leather, petrochemicals, fertilizers and others.

8.3.3. Objectives

Objective 1: Increase the GDP contribution of non-oil manufacturing and extraction industries by 40% from the baseline year

Means of achievement:

1. Localise modern technology to reduce losses and save time and money, which will reduce production costs and promote the competitiveness of local products;
2. Operate production lines through openness to investment in many ways (partnership, full investment, management, franchising, etc.), and according to the mechanisms provided for in Chapter Four of SOE Law No. 22 of 1997 and other relevant mechanisms.

Objective 2: Find alternative sources to finance public projects, in order to use the investment budget funds for strategic projects only

Means of achievement:

1. Incorporate SOEs according to Article 35 of Law No. 22 of 1997 to give the workforce the opportunity to activate these companies and provide capital;
2. Complete the SOEs projects funded by the investment budget, using their own revenues in accordance with the MoP mechanism (Circular No. 2/5/2303 dated 1/2/2017).

Objective 3: Activate the sector-related strategies and upgrade them in line with strategic industrial developments in Iraq until 2030 and with implementation mechanisms

Means of achievement:

1. Implement the CoM Resolution No. 67 of 2015 endorsing a study to classify companies, and establish the Business Development Centre to eliminate surplus labour through redistribution or encourage contracting, as per Iraq Industrial Strategy 2030.

Objective 4: Support strategic industries, especially in the liberated areas that have minerals and natural gas as key component for these industries

- ✓ Support petrochemical and fertilizer industries and industries using mineral ores, and leverage the abundance of raw materials
- ✓ Establish specialised industrial clusters

Means of achievement:

1. Propose investment opportunities in exploiting the country's gas and mineral resources;
2. Convert the industrial clusters project to investment opportunity to complete the project;
3. Finalise and approve Industrial Cities Act to ensure proper operation of these cities.

Objective 5: Establish interrelations between manufacturing and other sectors and involve the private sector to benefit from its potential

Means of achievement:

1. Encourage cultivation of industrial crops and expansion of livestock raising to provide the raw materials for food, textile and leather industries;
2. Prioritise the local private sector in providing raw materials and marketing of products.

Objective 6: Advance geological surveys to develop an integrated map of Iraq's mineral resources to render them into investment opportunities

Means of achievement:

1. Prepare a mechanism to finance geological surveys from the revenues of quarries, etc.;
2. Propose mineral resources for investment in coordination with Iraq Geological Survey.

8.3.4. Key performance indicators

N	Objective/means	Measure	Base value	Target value
1	Increase the contribution of non-oil manufacturing and extraction industries to GDP	%	0.8	1.1
2	Find other funding sources for public projects, and use budget allocations for strategic projects only	Ratio of external financing (loans, self-financing, etc.) to budget financing		
3	Activate the sector strategies and update them according to the latest developments	Implementation (%)		
4	Increase by 15% the share of local products in the market goods supply	Share of local products (%)		
5	Support important strategic industries, especially in the liberated areas that have minerals and natural gas, which is a key component to these industries	Amount of allocations from different sources		
6	Build interrelations between manufacturing and other sectors and involve the private sector to benefit from its potential	Total value of trade between sectors		
7	Conduct geological surveys to develop an integrated map of the country's mineral resources to render them into investment opportunities	Amount of reserves and utilised ratios		

8.4. Transport, communications and storage sector

Gross production of transport and communications sector reached 5.3% of GDP (with oil production) in 2016. Transport and communications sector consists of transport sector, communications sector, and grain storage activity of the storage sector.

8.4.1. Transport sector

The transport sector consists of six activities: ports, maritime transport, air transport, railway, passenger transport, land transport, and roads and bridges.

I. Ports

Situation analysis

- Iraq possesses four commercial ports (Umm Qasr, Khor Al-Zubair, Abu Falous, and Al-Maqal), two ports for exporting oil, and four rotary platforms to export oil.
- Iraq possesses 4 commercial ports and 48 docks with design capacity of 17.5 million tons.
- Imported and exported cargo from ports increased in 2015 to 17.0013 million tons annually from 15.205 million tons annually in 2013.

Challenges

- Ships reluctance to come to Iraqi ports that are not capable of competing with neighboring countries ports in terms of prices and services.
- Delay in implementing the giant ports project (Big Faw Port) and delay in its infrastructure projects.
- Poor management systems in Iraqi ports due to poor utilisation of modern and electronic systems in management and operation, multiplicity of authorities affecting the mechanisms of work, poor qualification of public staff, and surplus labour.
- Shortage of marine units, specialised port equipment, and cargo handling equipment and obsolescence of existing equipment.
- Limited current depths of the navigational channels and dock facades sidewalks, with the presence of sunken objects in the navigational channel leading to the ports.
- Weak efficiency and insufficient number of laboratories to examine goods, especially food, in Basra, and failure to activate available laboratories at the Ministry of Health and Ministry of Trade.
- Unclear import and export plans for relevant ministries to organise port work and develop annual plans.
- Failure to pass the Maritime Authority Law.

Objectives

Objective 1: Raise the capacity of existing ports and shipping routes to 23 million tons per year

Means of achievement:

1. Secure the necessary financing to improve and develop port, and provide them with maritime services for exporting oil and gas.
2. Leverage international expertise to increase competitiveness and improve the quality of the operations of companies working in this activity, and develop skills and efficiency of ports' staff.
3. Continue to sweep the depths of the navigation routes that lead to the ports with improving maintenance services and towing.
4. Complete the implementation of the projects listed in the investment plan, implement new projects through partnership, investment, credit facilities and loans.

Objective 2: Complete the initial and immediate structures through constructing the Al Faw Grand Port

Means of achievement:

1. Refer it to private investment in a staged manner.
2. Support primary infrastructure projects.

Objective 3: Promote private sector contribution to the implementation and operation of port services

Means of achievement:

- Propose the areas listed below as participation opportunities and encourage the private sector to invest in them:
 - Infrastructure construction, and operation and provision of port services such as dockage and anchorage.
 - Construct additional multi-purpose anchors at Umm Qasr port with a design capacity of 3.75 million tons per year.
 - Construct additional berths for containers in Umm Qasr port with a design capacity of 2 million containers per year.
 - Construct additional multi-purpose berths in Khor Al-Zubair with a design capacity of 4.25 million tons per year.
 - Manage, operate, and improve the performance of the Al-Maqal and Abu Flous ports.

II. Maritime transport

Situation Analysis

Iraq has seven ships: five for external shipments and two for internal fuel and water, as well as an internal boat for transport. The number of permanent staff in the General Company for Maritime Transport is 1661. Foreign public and private companies perform most of the activities.

Challenges

1. High costs required to establish and develop a maritime fleet.
2. Weak infrastructure underlying the company's activity.
3. Iraq has not joined regional maritime memorandums of understanding such as Riyadh MoU and Indian Ocean MoU.
4. Failure to activate the National Carrier Act, and failure to finalise Iraqi Maritime Authority Act.

Objectives

Objective 1: Strengthen the role of the national maritime carrier in Iraqi trade

Means of achievement:

1. Secure required investments to increase the number of vessels operating in maritime transport for transporting goods and passengers.
2. Improve and upgrade the skills and capacities of the national carrier staff.
3. Involve local and foreign private sectors in joint operations in maritime transport.

Objective 2: Support private sector participation in maritime transport

Means of achievement:

1. Join regional maritime MoUs.
2. Provide the private carrier with required services and facilities in the national waters.

III. Air transport

Situation analysis

Currently, there are five international airports in Iraq. Civil aviation consists of the activity of the Iraqi Civil Aviation Authority (central financing) for Baghdad and Basra airports, the regional civil aviation of Erbil and Suleimaniah airports, and Najaf International Airport. All of them operate under the authority of the Federal Civil Aviation Authority. The General Company of Iraqi Airways and two local private airlines with limited capabilities, along with a large group of foreign carriers to various destinations, lead transport activities.

Challenges

1. Weak physical and financial capacities of the national institutions, and a lean administrative and technical staff that lacks required expertise and capabilities to manage and operate this activity at the international standards.
2. Failure to meet ICAO requirements in terms of installing aviation communications systems that will be mandatory in 2018, and lack of financial means to procure them.
3. Delay in completing most of the civil aviation projects listed in the federal budget for technical, contractual and financial reasons. This led projects to exceed proposed periods for implementation.
4. Failure to activate the joint operating system and partnership with the private sector to manage and operate civil aviation activities.

Objectives

Objective 1: Improve the performance of the national carrier through partnership with a renown global operator

Means of achievement:

1. Improve the performance efficiency of the national carrier to comply with international standards through building alliances with solemn international companies operating in civil aviation.
2. Air transport governance and compliance with international safety and security standards, and air traffic management.
3. Upgrade national training institutions to meet international standards.

Objective 2: Support private sector participation in maritime transport

Means of achievement:

1. Adopt sound economic feasibility studies to construct new airports, and rehabilitate and upgrade existing ones through adopting PPP.
2. Involve the private sector in operating airport service facilities on investment basis.

IV. Passenger transport

Situation analysis

- Public passenger transport has significantly declined after 2003, both within cities and between them, leaving this activity to the private sector, which has prevailed.
- The number of passengers, travellers and groups reached 16 million passengers, and transport services revenues reached IQD 25.9 billion in 2016.

Challenges

1. A private sector that does not keep pace with modern technologies, management methods, and public safety and environmental requirements.
2. Lagging, slow and inefficient performance of the government administrative and operational departments in charge of transport.
3. Weak governance of the sector's activities and interrelation of public and private sector orientations.
4. Some transport projects are stalled or suspended (garages, service stations, and parking).
5. Weak national expertise in investment and joint operation of related projects.

Objectives

Objective 1: Improve the efficiency of passenger transport

Means of achievement:

1. Develop private sector participation in the transport sector.
2. Ensure safety and comfort and meet environmental safety requirements.

Objective 2: Develop private sector participation in the transport sector

Means of achievement:

- Encourage the private sector to establish stock and private companies for transport between and within cities on a competitive basis with the public sector.

Objective 3: Strengthen public transport through management and operational partnerships with renown operators

Means of achievement:

1. Modernise and activate the comprehensive transport plan in Iraq.
2. Operate 100 new transport lines in Baghdad city in two batches, and provide buses to work on the new lines.
3. Modernise the fleet of buses that transport passengers within cities and between them, by modern, comfortable buses that meet the environmental determinants to meet the ambitions of target groups.

V. Land transport of goods by trucks

Situation analysis

- The State Company for Land Transport owns 679 trucks. The amount of goods transported by trucks owned by mentioned company was 354,000 tons in 2015, and the number of employees was 3161 in 2017.
- The private sector performs most of land transport activities.

Challenges

1. Old road networks and absence of regular maintenance; hence large amounts of money are required for maintenance.
2. Failure to join the international transport agreements and activate the agreements with neighbouring countries.
3. Lack of governance mechanisms, with no accurate data on this subsector.
4. Aging of a large number of the fleet trucks of State Company for Land Transport, and backwardness and leanness of the administrative and operational organ.

Objectives

Objective 1: Strengthen private sector participation in implementing the comprehensive long-term and short-term transport plan and activating partnership with the public sector

Means of achievement:

1. Enable the private sector to adopt a new governance mechanism to manage and coordinate the activity.
2. Develop a mechanism and define a specific period for partnerships with the public sector.
3. Encourage establishing private or stock companies for goods transport, and evaluate the existing stock companies.

Objective 2: Join the international transport agreements and activate the agreements with neighbouring countries

VI. Railway transport

Situation analysis

The public sector is the only player in the railway sub-sector. The following tables provide relevant details.

Table 25

Lengths of operating and decommissioned railways in 2015			
N	Line name	Line length (km)	Notes
1	Baghdad–Basra (Maqal)	552	In operation
2	Shaibah–Umm Qasr	56	In operation
3	Musayyib–Holy Kerbala	25	Used in religious visits
4	Baghdad–Al-Mousl	408	Decommissioned due to the security situation
5	Mousl–Rabia	112	
6	Baghdad–Al-Qa'im (Haseeba)	376	
7	Al-Qa'im–Akkashat	144	
8	Heet–Kabisa	33	
8	Baiji–Kirkuk	106	Decommissioned due to destruction of the outlet bridge and the security situation.
9	Baiji–Haqlaniyah	146	Decommissioned due to the security situation

Table 26

Total length of main and secondary railway lines in 2015

Main lines (km)	1960
Secondary lines (km)	415
Total main and secondary lines (km)	2375

Challenges

1. Security threats that hinder the company's work and the damage they make to railway lines, maintenance workshops, facilities, important properties, factories, signals and communications. In addition, security threats make the works of fixing and repairing more difficult.
2. Inability to rehabilitate the main railway lines and complete the double line. The railway tracks for both Baghdad-Mosul and Baghdad-Basra lines are old and depreciated. This caused them to be unsuitable for running the trains with minimum acceptable speeds and loads.
3. Weak administrative, technical, and technological organ, with a large staffing surplus, that lacks central command tools and control.
4. Violations and irregular crossings on the railway lines and their intersections with the main roads within the cities, and negligence in removing them.
5. Reluctance to use rail transport because of poor services, old mobile units (carriages, locomotives, and trucks), and lack of required spare parts for maintenance. Therefore, the company has established two parallel alternative lines hoping to complete them in the next two years.

Objectives**Objective 1: Upgrade and develop railways and increase their operational capacity****Means of achievement:**

1. Complete the duplication of individual lines, including completion of the southern line and implementation of new hubs with excellent specifications.
2. Equip the railway network with modern trains, new carriages and trucks, and rehabilitate the existing ones.
3. Modernise communication and signalling systems in existing railway network, including the satellite communications system that is currently under implementation.
4. Develop and expand engineering and technical staff in railway activity, and modernise the Railway Institute.

Objective 2: Improve the level of service delivery**Means of achievement:**

1. Increase the speed of passenger trains to 100 km/h in the first stage and to 120 km/h in the second stage.
2. Provide specialised competent units.
3. Eliminate all railway intersections with land roads.

Objective 3: Enhance Iraq's location as a hub between East and West

Means of achievement:

- Strengthen rail links with neighbouring countries (dry canal project).

Objective 4: Enhance private sector participation and foreign investment

Means of achievement:

1. Offer strategic railway projects for local and foreign private investment through BOT contracts.
2. Build effective PPPs to implement, manage and operate the joint railways with neighbouring countries as means to build a dry canal for the transit trade and transport of passengers between East Asia and Europe.
3. Authorise the private sector to open rail transport agencies to attract railway transport requests.

VII. Roads and bridges

Situation analysis

- The length of roads was 42643 km in 2015, with a slight increase of 75 km compared to 2013.
- The total number of bridges was 698, including 296 bridges on the highways.
- Destruction of many roads and bridges in the areas of military operations in Baghdad, Diyala, Salah Al-Din, Nineveh, Anbar and Kirkuk. The number of destroyed bridges reached 125.
- Reconstruction of seventeen destroyed bridges and nine roads as part of the World Bank's loan for the reconstruction of liberated areas.

Challenges

1. Exigency for large amounts of money to rehabilitate destroyed roads and bridges in the areas of military operations in Baghdad, Diyala, Salah Al-Din, Nineveh, Anbar and Kirkuk.
2. Absence of regular maintenance of roads and bridges network for a long time, which led to disappearance of most network joints.
3. Many interferences with other services (electricity and telecommunications cables, lighting poles, and water and sewage pipes), which will increase the costs of transport network implementation. In addition, there have been many acquisitions and violations along the railway tracks because of changes in land uses over the years.
4. Absence of traffic control and weight stations encouraged transport vehicles owners to exceed permissible standard axle loads, which caused damage to network installations and tiling layers.

Objectives

Objective 1: Increase the length of the road network in all its details and branches

Means of achievement:

1. Diversify funding sources through partnerships with local and foreign private sector.
2. Enforce the legal frameworks against those who infringe on public property, take strict measures against them, and protect roads and bridges installations.

Indicator (unit)	Base value/ 2015	Target value/ 2022
Roads (km)	42643	44000
Bridges (number)	698	715

Objective 2: Build a modern maintenance system for the entire road network

Means of achievement:

1. Provide detailed information to help develop an integrated maintenance plan in this activity.
2. Secure required funds for implementation, consider using multiple funding sources, and think of alternative plans away from government funding.
3. Implement the system of toll roads and bridges in the provinces and cities, and use the revenues in maintenance of road network.
4. Strictly apply the system that requires those responsible for traffic accidents to compensate for material losses in road and bridge installations, especially protective fences and traffic signs.
5. Use of weight stations, complete the remaining ones to prevent exceeding of standard weights that would destroy and damage the tiling layers, and use its revenues in improving roads network.

Indicator (unit)	Base value/ 2015	Target value/ 2022
Work with weight stations	18	50

Objective 3: Implement traffic control system in an integrated and precise manner

Means of achievement:

1. Implement the network's supplements such as traffic signals, surveillance systems, and modern cameras and radars, as well as modern, large multi-story parking.
2. Increase the advertising campaigns, directives, users awareness and education programmes, organised by General Directorate of Traffic, to comply with traffic laws and guidelines, implement public traffic safety, and install signage and warning signs.

8.4.2. Communications sector

Situation analysis

• Communications

- The contribution of the communications sector to GDP was 1.4% in 2015.
- Project work has started on optical access networks in Baghdad and the provinces, international access gateways, and management of communications network. In addition, new pricing strategies were developed, better traffic was achieved, and diverting started of international telephone traffic by global space-based communication systems through earth stations.
- In 2015, the number of mobile telephone lines for companies operating in Iraq (including the KRI), was 33.5 million, with mobile telephone density of 90.6 per 100 people. The number of wireless telephone lines for companies operating in Iraq (excluding the KRI) was 1.14 million.

• Post .In 2015:

- The number of telephone exchanges in Iraq was 199 – 58 in Baghdad and 141 covering the other provinces; these are currently used commercially under the Ministry of Communications;
- The number of international packages was 18119;
- The number of post offices was 299; and
- The number of users of safety deposit box services was 179000.

• Internet services have witnessed remarkable development:

- Private companies and mobile communications companies provide internet services using a ca. 8500 km-long optical cable network which covers most of Iraq's territory. In 2015, there were 5.7 million mobile internet service lines across operating companies in Iraq, and 226 100 lines for wireless Internet service. This optical cable network has also been the backbone of the e-government project.
- The network has been linked to submarine cable system (terrestrial link is established through a landing station in Al-Faw) including: (1) Submarine cable FALCON using STM-4 fibre optic network transmission standard, with transmission capacity of 444 STM-1 internationally and 320 STM-1 to Al-Faw station; and (2) Submarine cable GBI using STM-1 standard, with transmission capacity of 144 STM-1 to Al-Faw station and 128 STM-1 internationally).

Challenges

1. Unclear roles and responsibilities of the entities involved in sector management and monitoring, failure to pass related regulations, multiple decision makers, and unclear work policy.
2. Damage to many communications centres and post offices in Nineveh, Anbar and Diyala in the course of military and terrorist operations.
3. The Government is unable to control communications and internet services completely through international access gateways – due to concerns about information security and to ensure protection of the security and sovereignty of the country. The final objective will be to pass 100% of the telephone traffic and internet data through government control systems.
4. Violation of communication projects linked to weak coordination among government agencies – e.g. the Municipal Departments, Baghdad Municipality, Ministry of Electricity, and Ministry of Interior.
5. Lack of access to alternative sources of funding from outside the investment budget to implement infrastructure works due to weak incentives for this activity.

Objectives

Objective 1: Increase the GDP contribution of the telecom sector

Means of achievement:

1. Increase investment in communications sector, improve and increase its revenues.
2. Increase the number of Internet service providers.

Objective 2: Meet the demand on services with competitive prices and qualities

Means of achievement:

1. Support the private sector, and provide an appropriate, competitive and attractive environment to achieve the best results.
2. Collect indicators for periodic review of prices and quality of services.

3. Apply e-government services.
4. Increase tele-density.
5. Create high-speed Internet systems.
6. Promote the infrastructure, especially in areas that have suffered from the recent military operations, through:
 - International loans and grants for reconstruction of affected areas through reconstruction funds.
 - ITPC operational budget according to availability of liquidity and projects priority.
7. Develop an early coordination mechanism between government agencies and the Ministry of Communications before launching sector projects.
8. Deploy broadband services, improve and expand communications packages of global connectivity gateways.
9. Modernise the basic infrastructure of postal activity, and improve postal services to the best international standards.
10. Optimise frequencies, and control passing of international mobile phone calls and Internet service through international access gateways.

Objective 3: Keep pace with the rapid development of telecommunications and informatics

Means of achievement:

1. Arrange to make Iraq a regional ICT hub.
2. Create production lines, establish and rehabilitate specialised laboratories through investment.
3. Strengthen the infrastructure through PPPs to:
4. Leverage Iraq's geographical location to increase Transit capacities.
5. Control capacities, and distribute services and IP Addresses to enhance security aspects.
6. Create Internet access gates at border outlets.
7. Develop security systems in communications and electronic protection field (cyber security).

Objective 4: Access for all

Means of achievement:

1. Cover out of coverage geographical areas, and reach all society segments, including those with limited income.
2. Narrow the gaps between what service providers provide on a commercial basis only and the requirements of developing the country, and keep pace with the development in the sector.
3. ICT literacy.

Objective 5: Make the communication environment safe and informative

Means of achievement:

1. Reduce the effects of electromagnetic radiation.
2. Consider the implementation of early warning systems.
3. Safe use of ICT.
4. Accelerate passing of important laws related to this sector.

8.4.3. Storage

Situation Analysis

- Iraq has 73 silos and storage facilities of grain: 46 silos to store grain (wheat and rice), and 27 storage facility. Total storage capacity is 1684000 tons; 15 silos are out of service; Average deficit in strategic storage for six months is 33%, and it increased by 48% during the marketing season in 2017.
- Food security in Iraq faced many threats as grain silos in some provinces were attacked by terrorists who destroyed the infrastructure and detonated the silos.
- Capacity deficit in the provinces (i.e. existing and under construction capacities, including in areas outside government control compared to the total capacities required to ensure 3-month strategic storage), is 15%.

Challenges

1. Deficit in storage capacity, and failure to meet the strategic storage requirements (see Table 27).
2. The silos have become very old, which negatively affected the storage capacity of strategic crops, leading to improper storage.
3. Poor technical skills of staff, and backwardness of administrative methods in silos implementation and operation.
4. Weak government focus on the storage sector, which lowered the storage system capacity to secure strategic storage for at least six months.
5. Limited private sector role in strategic storage of crops and in silo investment projects, and lack of conducive regulations.
6. Damage of 11 silos in Nineveh, Diyala, Anbar, Baghdad and Salah Al-Din due to military and terrorist operation. (see Table 28).

Table 27

Storage capacities of silos (tonnes)					
Province	Current silo storage capacity	Strategic storage needs for 6 months	Strategic storage deficit	Deficit during marketing season	Storage capacity of proposed silos
Baghdad	740000	564816	0	0	
Nineveh	614000	144576		0	
Other provinces	1819880	1292496	302	293	220000
Total	3173880	2001888	302	293	220000

Table 28

Silos' lost capacities due to terrorist operations			
NO	Silo	Province	Lost capacity (thousand tonnes)
1	Sinjar	Nineveh	140
2	Al Waeliah	Nineveh	288
3	Mousl	Nineveh	240
4	Ba'aj	Nineveh	80
5	Telafar	Nineveh	75
6	Ramadi	Anbar	10
7	Shirqat	Salah al-Din	45
8	Tikrit	Salah al-Din	10
Total			888

Objectives**Objective 1: Secure a strategic storage of basic crops****Means of achievement:**

1. Rehabilitate most of obsolete silos, introduce modern ways to keep abreast with other countries, and reconstruct the silos destroyed by military operations.
2. Construct new storage silos, and keep abreast of international developments in terms of storage techniques in line with Iraq geographical nature, which will reduce the capacity gap of storing strategic crops along with produced and imported quantities of wheat.
3. Develop the technical capabilities of staff, and improve the administrative methods in the implementation and operation of silos.

Objective 2: Enhance private sector contribution to the management, maintenance and operation of silos**Means of achievement:**

1. Encourage the private sector to invest in silo projects, and pass related regulations.
2. Build PPPs to complete stalled projects, or those under implementation or behind schedule.

8.5. Housing and basic services sector

8.5.1. Housing sector

Situation analysis

- The housing sector situation analysis in the “Iraq National Housing Policy” provides the following main facts:
- Continued housing deficit by 2.5 million units at the end of 2016 (50% in Baghdad and Nineveh).
- Constant increase in occupancy rate within units and rooms.
- Persistent gaps in housing provision among provinces and between rural and urban areas.
- Rapid population growth and the need to meet the requirements of society’s different segments in terms of housing types, affordability and funding.
- Rapid growth of informal settlements inside cities and around it. Data indicates that informal settlements in Iraq (except Kurdistan and affected provinces) reached 3687 and the number of informal units reached 521947 (16.5% of housing units in Iraq) with 3292606 inhabitants in 2017. Baghdad has the largest number of informal units followed by Basra (see Table 29).

Table 29

Informal settlements by province (estimates for 2017)				
Province	Informal settlements		Informal housing units	
	Number	Share by province (%)	Number **	Share by province (%)
Baghdad	1022	27.7	136689	26.2
Basra	677	18.4	62602	12
Thi-Qar	333	9	37927	7.3
Kirkuk	279	7.6	60935	11.7
Missan	243	6.6	19234	3.7
Diwaniyah	229	6.2	17571	3.4
Babil	225	6.1	25156	4.8
Wassit	210	5.7	42874	8.2
Diyala	172	4.7	21402	4.1
Muthanna	120	3.3	21432	4.1
Najaf	89	2.4	53810	10.3
Kerbala	88	2.4	22135	4.3
Total	3687	100	52197	100

Challenges

• Planning:

- Poor management and distribution systems of lands for housing construction that fall within the basic design of cities.
- Dividing units into small spaces which violates housing standards and increases pressure on infrastructures services.
- Multiple government agencies involved in land and housing sector, which makes it difficult to develop housing policies.
- Great majority in Iraq does not accept vertical building, which is the government's desired solution to the acute shortage of residential land.
- The military operations resulted in mass displacement and significant destruction of urban facilities. Therefore, housing conditions deteriorated, especially in Nineveh, Salah al-Din, Anbar and Diyala. A lot of units are uninhabitable which adds a new burden to the housing deficit in Iraq (as outlined in the reconstruction pillar of the plan).

• Implementation:

- Limited financing to housing projects, whether from the federal budget or commercial banks specialised in housing projects because of the complicated procedures and requirements in financing the housing sector.
- Slow implementation of the national housing policy.
- Inefficient coordination between ministries in infrastructure and social services projects. Services in residential areas are limited or non-existent and that hinders the completion of housing projects in most locations.
- Poor efficiency of construction companies in public and private sectors owing to the small number of specialised and experienced personnels and the weak staff working in the housing projects.
- The local construction materials are limited and some imported materials are non-conforming with Iraqi specifications of ambitious housing projects.
- Lack of modern technologies and depending on traditional building.
- Poor implementation and management capacities in housing project, starting from preparing feasibility studies, designs and bills of quantity up to contracting stages and implementation follow-up in addition to weak housing-related consulting firm.

Objectives

Objective 1: Complete the ongoing and suspended residential projects (including the investment plan projects), estimated at 700000 housing units in all provinces except Kurdistan

Means of achievement:

1. Issue new laws and modify existing ones, as they contribute to accelerating building units and removing bottlenecks in existing housing and neighbourhoods;
2. Encourage non-governmental banks to finance suspended projects directly and through activating the lending policy for beneficiaries of housing whether under construction or suspended.

Objective 2: Build 100000 housing units using modern construction techniques in order to contribute to bridge part of the housing gap in all provinces, including the affected by terrorist and military operations

Means of achievement:

1. Provide direct support to investment companies from the private sector to contribute to the production of housing units;
2. Enable the poor and low-income people to build their housing units by increasing the amount of loans granted to the beneficiaries of the Housing Fund and the Real Estate Bank.

Objective 3: Build 100000 housing units fulfilling the requirements of secure return of those displaced due to terrorist attacks, military operations, informal settlements and transgressors and in accordance with the framework document of the National Plan for Reconstruction and Development of affected provinces 2017

Means of achievement:

1. Activate laws and legislations to address abuses and irregularities;
2. Urge provinces to fund part of the housing projects under construction or suspended from their financial allocations to the regional development programmes;
3. Encourage large private companies operating in the country to fund and build low-cost residential developments instead of informal settlements as part of community service.

Objective 4: Raise 50% of real estate financing from private sector investments to bridge the housing gap based on feasibility studies supported by Building Information Modelling designs

Means of achievement:

1. Facilitate government guarantees for private sector investment in real estate development;
2. Submit feasibility studies with BIM for economical, efficient and encouraging projects to provide funding. This depends on improving the technical capabilities of the staff preparing the studies related to this technology and following up the implementation of the projects. Feasibility studies should also be enhanced by analytical studies of energy expenditure for projects.

8.5.2. Water supply and wastewater management

8.5.2.1. Drinking water supply

Situation analysis

• **In Baghdad:**

- The percentage of population served with pure drinking water was 100% for all areas.
- Per capita share in Baghdad is 345 l/d.
- Water losses estimated by Baghdad municipality is 29%.
- Water produced is 2842400 m³/d.
- Number of liquidation projects operating 13 projects
- Number of water complexes installed to provide areas away from liquidation projects is 57.37 in al-Rusafa and 20 in Karkh, and the quantity of water produced 205020 m³/d.
- Water transport network for Baghdad is approximately 7750 km and 100–2300 mm in diameter.
- Number of raw water stations 5, design capacity 2700000 m³;

• **In the provinces (except Kurdistan and Nineveh):**

- In 2016, people served with drinking water networks was 78%, 86% urban 66% rural.
- Water produced from water projects is 3986235 m³/d
- Water produced from water complexes is 3057504 m³/d
- Water produced from water projects and complexes is 7043739 m³/d
- Per capita drinking water is between 110 and 460 l/d.
- Pure water transport network is 49352 km.

Table 30**Actual water production, demand and deficit in 2016 by province**

Province	Total drinking water production(m ³ /d)	Total drinking water demand(m ³ /day)	Deficit in demand coverage(%)
Kirkuk	223720	390627	42%
Salah al-Din	540610	645338	16%
Anbar	596493	668748	11%
Diyala	651404	793991	18%
Baghdad outskirts	648333	1001797	35%
Babil	677661	843032	20%
Wassit	543350	675708	19%
Kerbala	392093	459298	14%
Najaf	741980	551694	% 34 +
Diwaniah	468531	499717	6%
Muthanna	224530	275086	18%
Thi-Qar	534956	821010	34%
Missan	359016	414223	13%
Basra	700812	951434	26%
Total	8425715	10243361	18%

Challenges

1. Increased losses of water because of breaking and bypassing networks and intersect with other services. Old networks and unavailable maintenance of networks and stations in addition to the waste caused by misuse.
2. The damage caused by the terrorist attacks affected also the number of served citizens. The percentage fell to 76% in 2016 from 84% in 2014 due to the lower number of staff (in Salah al-Din from 87% to 50% and in Anbar from 73% to 68%).
3. Lack of an integrated system to manage and organise production, maintenance, filtration, distribution and fee processes to ensure the best performance and improve efficiency of employees to keep up with modern water projects implementation technology.
4. lack of legislations of laws that deter bypassing in various situations (on water networks, on land, etc.) and not amending and activating the existing ones.
5. Delay in acquisitions and lack of financial allocations, especially when establishing strategic projects and laying carrier lines.
6. Electricity fluctuation and interruption, although most of the projects, stations and complexes are excluded from programmed power-cut.
7. Contamination of the Tigris with dumped waste and not cleaning it from the sediments as well as the loss of water level. As a result, pollutants increased which made drawing water to purification projects sockets even harder.
8. Inadequate private sector involvement and weak experience of local companies in the implementation of water projects.

Objectives

Objective 1: Provide drinking water according to international standards reach per capita consumption commensurate with population growth (at least 250 l/d in Baghdad and provincial centres and 200 l/d in qadhas and nahias

Means of achievement:

1. Adopt an integrated system for managing and organising production, maintenance, filtration, distribution and fee processes to ensure the best performance of systems and improve the efficiency of employees to keep up with modern water projects management and implementation.
2. Prepare plans and studies for pure water needed up to 2030 and qualify and develop current projects to increase and improve production and to increase the capacity of the liquidation projects conducting to population growth.
3. lay water networks to uninhabited areas, renew clean water networks and improve distribution.

Objective 2: Improve the quality of potable water

Means of achievement:

1. Improve water quality through annual rehabilitation of the production facilities.
2. Ensure appropriate quantities of water purification materials (both quantity and quality).
3. Improve and develop laboratories in projects and all production and distribution sites to increase the number and types of tests according to Iraqi and international specifications.

Objective 3: Minimise water loss by at least 10% of the baseline year**Means of achievement:**

1. Provide modern standards for all participants to control waste and reduce the losses of pure water and ensure the optimal use of water through special awareness programmes.
2. Expand the production and distribution of raw water to all districts of Baghdad and provincial centres to replace the clean water in watering gardens.
3. Enforce provisions, laws and legislation on those who violate public networks.
4. Use modern technologies (photovoltaic cells and others) in water structures and others to reduce losses of pure water.

Key performance indicators			
Objective/means	Measure	Base value	Target value
Objective 1 – Develop productive capacities	l/d	—	200-250
Objective 2 – Water quality	Number of tests	550	650
Objective 3 – Reduce losses	%	29 %	19 %

8.5.2.2. Wastewater management**Situation analysis****In Baghdad**

- The sewer system in Baghdad is old and it has exceeded its design life. It suffers from many problems especially in rain periods. It is unable to absorb the daily water quantities, especially given unprecedented rainfalls linked to climate change, which exceed design and emergency calculations.
- As of end-2016, the share of the population served by sewer networks is 90%. The remaining 10% include many non-residential and agricultural areas.
- The sewer network consists of:

1. Sewer network and pumping stations:

- Sewer pipelines: 6161293 km total, including 1048 km heavy, 502147 km rainwater, and 4611146 km combined sewers;
- Subsidiary pumping stations across municipal departments: 344 of both line shaft and submersible type;
- Lift stations on both sides of Rusafa and Karkh: 66;

2. Three main carrier lines:

- Main water line/Karkh side (WT): length 22 km, diameter 1400-3000 mm, pump capacity 8.7 m³/s;
- Main water line for the east of the canal (Zeppelin line)/ Rusafa side: length 25 km, diameter 1800-3000 mm, pump capacity 8.3 m³/s;
- Main water line/Baghdad ET-LINE/Rusafa side: length 20 km, diameter 750-2300 mm, pump capacity 6.6 m³/s;

3. Wastewater treatment projects:

- Al-Karkh: The deficit is 220000 m³/d, noting that future projects will be implemented such as Karkh project, which was completed on Japanese loan and has capacity of 351000 m³/d;
- Al-Rusafa: The deficit is 246000 m³/d, noting that 1000 m³/d will be added by installing treatment units for al-Rustamiyah project/third expansion.

In the provinces (except KRI and Nineveh)

- The share of the population serviced by sewer networks is 37% for sewage and 48% for rainwater collection.
- The sewer network length is 8246 km for sewage and 8246 km for rainwater collection.
- The number of wastewater treatment plants is 30, with combined design capacity of 776400 m³/d and actual capacity of 464717 m³/d. Nine of these plants are non-operational.
- The amount of untreated wastewater is 203550 m³/d.

Challenges

1. Main and subsidiary stations and sewer network became obsolete and unsustainable, which lowered efficiency, increased leakage and affected water networks.
2. Reluctant or delayed projects' implementation.
3. Lack of experience in local advisory offices in this domain.
4. Serious environmental pollution caused by untreated water drains in water resources, especially sewage getting mixed with drinking water networks.
5. cities horizontal expansion.
6. Citizens trespassing on drainage networks increased pollution.
7. Lack of processing units in some districts and towns.
8. Lack of operational machinery, such as equipment, pipes and fuel.

Objectives

Objective 1: Maximise service coverage to 97% in Baghdad and 72.66% in other provinces

Means of achievement:

- Complete ongoing projects and implement new projects.

Objective 2: Discharge treated water into rivers according to standard specifications

Means of achievement:

1. Improve the performance of the main and subsidiary stations and provide operational requirements.
2. Conduct laboratory tests on treated water drained in rivers. Enhance the potential of the central laboratories in Baghdad and other provinces.
3. Oblige laboratories and hospitals to set up their own treatment units and not to drain their waste in sewage and rain networks without treatment.
4. Stop bypassing on rainwater networks.

8.6. Culture, Tourism and Antiquities

8.6.1. Culture

Situation analysis

- Number of cultural houses was 88 until 31/12/2016.
- Number of children's cultural centres was 12 until 31/12/2016.
- Projects of Ministry of Culture for 2016 was 45 at a cost of IQD 441141 million.

Challenges

1. Cultural activities have been affected by security and political conditions.
2. Intellectual property and copyright infringement.
3. Weak technical and administrative competencies in rare and important disciplines and not following up developments of cultural business.
4. Poor utilisation of modern technology in promoting cultural activities and events.
5. Weak experience of local companies in implementing art and culture projects which resulted in delayed projects and weak infrastructure, especially in provinces.
6. Weak private sector participation in the financing and implementing cultural projects.
7. Insufficient attention paid to institutes and colleges young graduates who have talents in all areas of art. Furthermore, many of them have fled the country because of security and political conditions.

Objectives

Objective 1: Complete the ongoing or expected infrastructure projects

Means of achievement:

1. Issue laws to deal with legal matters and enable project completion;
2. Develop the performance of staff engineers supervising the implementation of projects;
3. Enable the private sector to finance suspended investment projects.

Objective 2: Promote Iraqi culture among the social groups

Means of achievement:

1. Raise awareness using modern methods to attract young gifted people and revive the deep-rooted heritage of Iraq;
2. Rehabilitate facilities and assets to revive the heritage and promote the cultural activities through investment leading to a profitable economic revenue;
3. Revive and manage folklore and heritage industries through an investment way that preserves an accessible cultural heritage and insures its sustainability.

Objective 3: Enhance investment in cultural activities

Means of achievement:

1. Issue new laws to facilitate investment procedures in cultural activities;
2. Increase the private sector contribution to cultural projects establishment and financing by providing related incentives;

3. Use modern technologies and communication in managing cultural activities and link them to Arab and global environment.

8.6.2. Tourism and antiquities

Situation analysis

Tourism

Tourist activity can be noted in the following aspects:

- The Property of Iraq Tourism Board consists of 49 buildings and lands, some of which were used to maximise financial resources and encourage the private sector to invest in those properties. Number of investment contracts concluded between the Tourism Board and investors between 2003 and 2012 was 6 projects (Nineveh International Hotel, Mosul Hotel, al-Yousifiyah stores, Najaf hotel, Jadiriyah lake, al-Rasheed hotel). While number of investment contracts 2013–2016 was 4 projects (Baghdad tourist island, Federal Board of Supreme Audit building, Rasheed bank building, the land of Kerbala Hotel).
- Contribution of Iraq Tourism Board in mixed companies (managed by boards and investing companies): Tourism Board, other public departments and private companies have shares in the hotels and these can be divided into two parts:
 - Companies of mixed tourism sector managed by investment companies;
 - Companies of mixed tourism sector managed by boards of directors;

• Antiquities

- The estimated number of archaeological sites in Iraq is between 50000 and 200000, of which only 12000 are surveyed.

Challenges

• Tourism:

- Unstable security and political situation;
- Weak infrastructure like routs and services in tourist and antiquity areas;
- Limited foreign investment and lack of a special investment law in tourism sector;
- Citizens trespassing on the property of Iraq Tourism Board;
- Weak human capabilities working in tourist activity to cope with the rapid technological developments of hotels and tourism;
- Weak marketing and promotion in tourism sector;
- Complicated procedures in granting entry visas for tourist and foreign investment companies willing to invest in tourism sector;

• Antiquities:

- Some cities and archaeological sites are almost destroyed, such as the city of Nimrod and many other monuments in Nineveh;
- Lack of expertise of archaeological and art sector with design computer programmes to restore destroyed facades and ceilings as they were in the past;

- Most archaeologists with higher degrees or experience in the maintenance and restoration, has either travelled or retired without qualifying and training the new staff of archaeologists;
- Difficulty to obtain the full archives of documents, photos and reports of exploration and maintenance of those sites, especially in Nineveh because they have been destroyed by the terrorist organisations in Department of Antiquities and Heritage Nineveh and the Library of Mosul University.

Objectives

Objective 1: Increase the GDP contribution of tourism

Means of achievement:

1. Increase the number of visitors to religious, antiquity and natural sites;
2. Increase tourist supply (prepare tourist facilities);
3. Improve tourist services.

Objective 2: Preserve the historical-cultural heritage and revive historical landmarks

Means of achievement:

1. Rehabilitate antiquity sites, maintenance and reform;
2. Serious follow-up to sites to prevent transgressing;
3. Issue laws to help preserve antiquity.

Objective 3: Improve private sector participation in tourism investment

Means of achievement:

1. Encourage private investment in tourism;
2. Facilitate financial incentives to private investment in tourism and archaeology activities;
3. Improve infrastructure of sites and monuments.

8.7. Spatial development

8.7.1. Situation analysis

Indicators of the economic situation, social, and environmental service in Iraq show development disparities between provinces, which requires filling this gap and achieving balance in the country.

8.7.1.1. Spatial disparity in economic indicators among provinces

• Average monthly per capita and household income

- The average monthly per capita income at market level is IQD 330300, according to semi-annual socio-economic survey 2014, up from 237400 IQD in the 2012 survey.
- Income levels vary among provinces. Erbil had the highest per capita monthly income (IQD 599200) in 2014, while Muthanna had the lowest (205 500).
- As for household incomes, Erbil had the highest average in 2014 because of the high number of family members compared to other provinces. The average monthly household income reached IQD 2753800. The lowest household income was in Diyala (IQD 1301000).

• **Average monthly per capita and household expenditure**

- Erbil had the lowest highest monthly per capita expenditure (IQD 597100), while Muthanna had the lowest (IQD 162800).
- Erbil also was the highest average monthly household expenditure (IQD 3271000) while Diyala had the lowest (IQD 1144400) as shown in Table 31.

Table 31

Monthly per capita and household income and expenditure by province at market prices (thousand IQD)				
Province	Per capita income	Household income	Per capita expenditure	Household expenditure
Dohuk	402.1	2405.1	435.7	3067.7
Nineveh	218.8	1578.1	192.4	1467.0
Suleimaniah	408.8	1848.5	471.7	2378.1
Kirkuk	372.7	1985.1	259.3	1601.5
Erbil	599.2	2753.8	597.1	3271.0
Diyala	265.8	1301.0	199.6	1144.4
Anbar	224.9	1511.2	218.5	1586.7
Baghdad	426.8	2165.4	410.7	2459.7
Babil	266.2	1549.7	221.7	1542.2
Kerbala	309.0	1839.5	276.7	1851.9
Wassit	285.6	1852.5	242.0	1821.4
Salah al-Din	269.5	1644.4	268.0	1852.9
Najaf	287.9	1946.3	233.4	1696.9
Qadessiyah	227.0	1399.9	185.6	1354.6
Muthanna	205.5	1466.8	162.8	1364.2
Thi-Qar	282.9	1703.9	190.9	1329.4
Missan	285.7	1930.6	246.4	2030.0
Basra	251.4	1770.4	201.6	1532.4
Total	330.3	1875.4	296.1	1960.7

8.7.1.2. Spatial disparity in social indicators among provinces

Education indicators

• Net enrolment in primary, secondary, preparatory and high schools

- Social and educational statistics for the academic year 2016/2017 indicate that the highest rates of net enrolment in primary schools (6-11 years) (governmental, private and Waqf) were in Muthanna 97.5, Thi-Qar 97.1, Baghdad 97, Basra 96.5 (96.5), Kerbala 96 and Najaf 95.1. Anbar recorded the lowest net enrolment rate for this year 72.1.
- As for enrolment in intermediate schools (12-14 years), the rates declined and diverged in general. Baghdad had the highest net enrolment rates (67.7), while the lowest rates were in Anbar (29.3), Kirkuk (41.3) and Missan (41.7). Enrolment in preparatory schools (15-17 years) was generally lower in all provinces. The highest rate was in Baghdad (34.6) and the lowest was in Anbar (17.3) as shown in the figure below.

Figure 21

Net enrolment rates (government, private and waqf) in primary, intermediate, secondary and high schools by province (2016-2017)

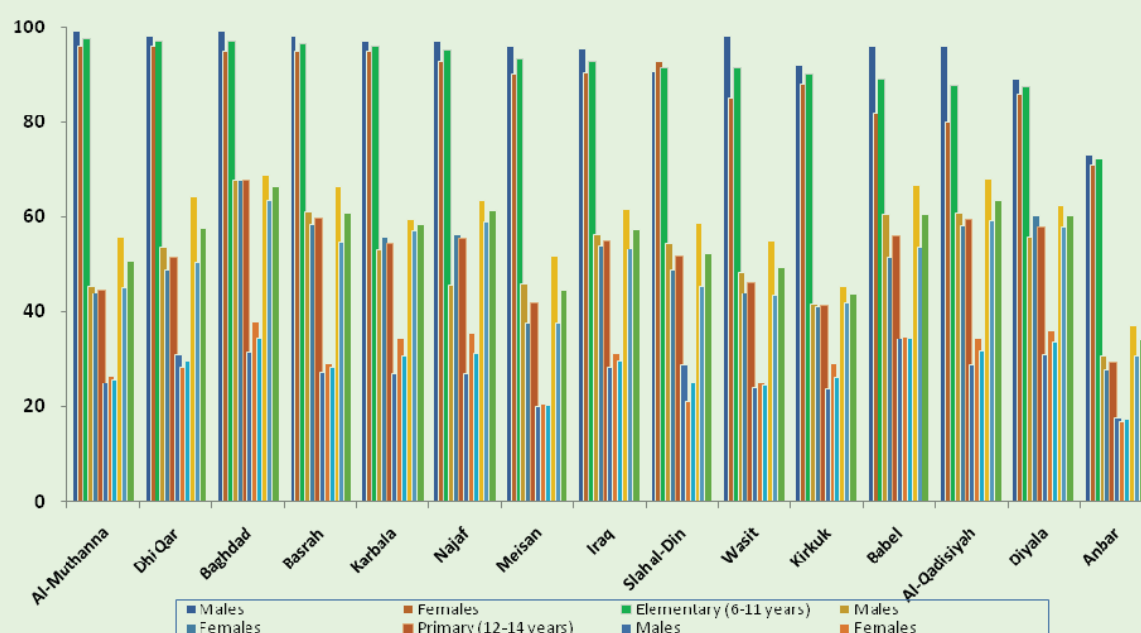


Table 32

Net enrolment rates (public, private, waqf) by province, gender and school level, 2016/17 academic year												
Province	Elementary school (6-11 years old)			Secondary school (12-14 years old)			Preparatory school (15-17 years old)			High school (12-17 years old)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Nineveh	-	-	-	-	-	-	-	-	-	-	-	-
Salah al-Din	91	93	91.6	55	49	51.7	29	21	25	59	45	52.2
Kirkuk	92	88	90	42	41	41.3	24	29	26.3	45	42	43.7
Diyala	89	86	87.5	56	60	57.8	31	36	33.4	62	58	60.2
Baghdad	99	95	97	68	68	67.7	31	38	34.6	69	64	66.3
Anbar	73	71	72.1	31	28	29.3	18	17	17.3	37	31	34
Babil	96	82	88.9	60	52	56.1	34	35	34.5	67	54	60.4
Kerbala	97	95	96	53	56	54.5	27	34	30.6	59	57	58.3
Najaf	97	93	95.1	46	56	55.5	27	36	31.2	64	59	61.3
Qadessiyah	96	80	87.8	61	58	59.4	29	35	31.6	68	59	63.6
Muthanna	99	96	97.5	46	44	44.7	25	26	25.7	56	45	50.6
Wassit	98	85	91.5	48	44	46.2	24	25	24.5	55	43	49.2
Thi-Qar	98	96	97.1	54	49	51.3	31	28	29.6	64	50	57.5
Missan	96	90	93.3	46	38	41.7	20	21	20.2	52	38	44.6
Basra	98	95	96.5	61	59	59.8	27	29	28.2	67	55	60.8
Iraq	95	90	92.9	56	54	55.1	28	31	29.6	61	53	57.4

• Educational buildings for kindergartens, primary, middle and high schools

- The highest number of kindergartens was recorded in Baghdad 330, Basra 136, and the lowest number is in Anbar 16 and Muthanna 24. As for primary school buildings, the highest number was recorded in Baghdad 524, while Kirkuk has the lowest number of primary schools 64.
- Statistics on secondary and preparatory school buildings indicate that Baghdad has the highest number (1334 middle and high schools), while Muthanna has the lowest number (152) as shown in Table 33 below.
- Figure 22 below shows the gap in the number of buildings needed to reach the standard number according to resident criteria in kindergarten and primary, intermediate and secondary schools. 2908 buildings are needed for kindergarten, 2849 elementary schools, 353 middle and high schools in Baghdad. The province recorded the fewest number of buildings in these stages, while others

recorded a high number in middle and secondary buildings according to the standard number of the population in six provinces as shown in the figure.

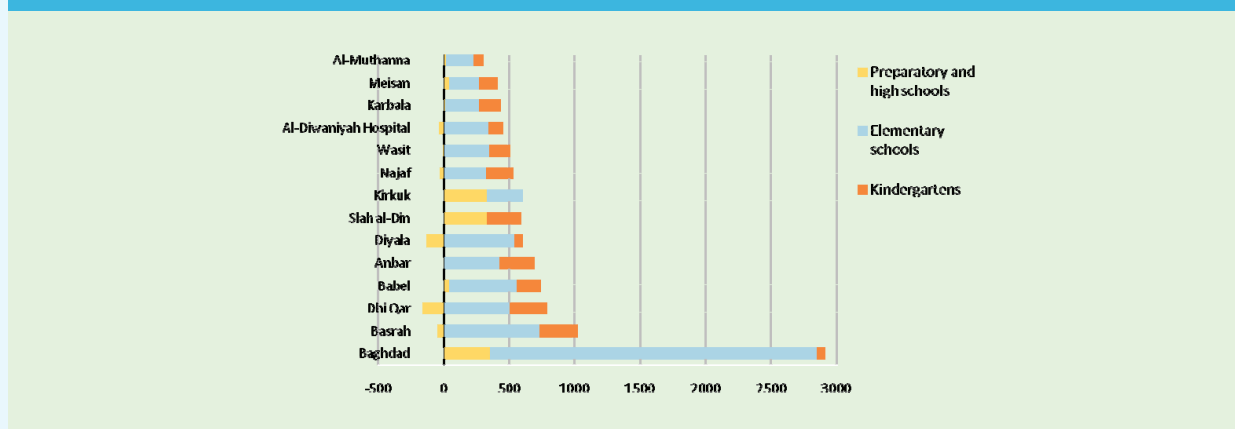
Table 33

Gaps in the number of building of kindergartens, primary, middle and high schools by province, 2016

Province	Kindergarten buildings (n)			Elementary school buildings (n)			Middle & high school buildings (n)		
	Standard	Actual	Gap	Standard	Actual	Gap	Standard	Actual	Gap
Nineveh	1481	-	-	1543	-	-	771	-	-
Kirkuk	635	94	541	662	64	598	331		331
Diyala	649	50	599	676	136	540	338	475	-137
Anbar	702	16	686	731	304	427	366		
Baghdad	3238	330	2908	3373	524	2849	1687	1334	353
Babil	818	77	741	852	294	558	426	386	40
Kerbala	484	53	431	504	238	266	252	241	11
Wassit	547	48	499	570	218	352	285	290	-5
Salah al-Din	632	44	588	658	356	302	329		329
Najaf	585	53	532	609	284	325	305	337	-32
Diwaniah	512	66	446	534	191	343	267	303	-36
Muthanna	323	24	299	336	111	225	168	152	16
Thi-Qar	832	47	785	867	366	501	433	594	-161
Missan	442	33	409	461	196	265	230	191	39
Basra	1158	136	1022	1206	472	734	603	650	-47
Total	13039	1071	11968	13583	3754	9829	6791	4953	1838

Figure 22

Gaps in the number of building of kindergartens, primary, middle and high schools by province, 2016



Health Indicators

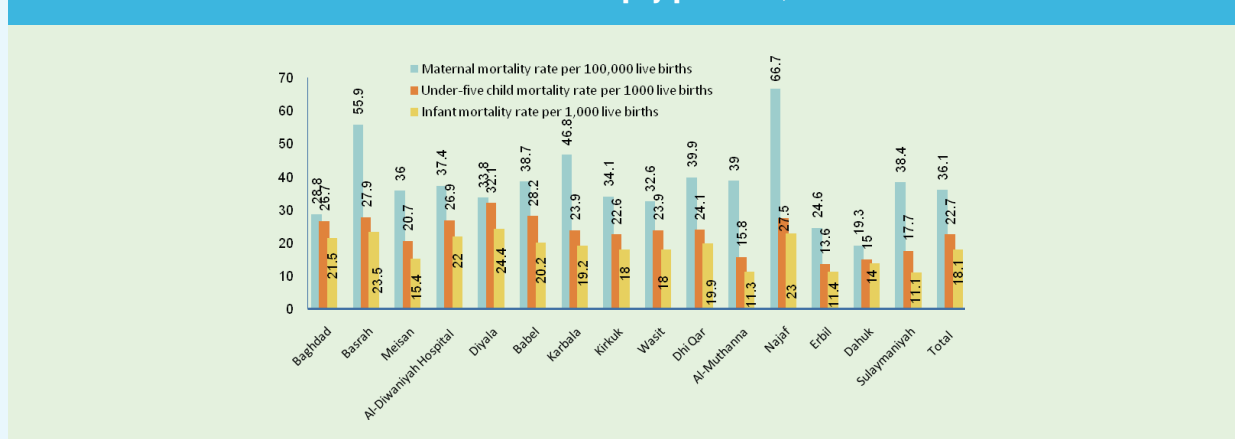
The Iraqi Constitution pledges to provide healthcare to all Iraqis. This requires the provision of basic healthcare services to reduce mortality rates and minimise the number of patients. Following are major health sector indicators, reflecting standard of health services in the provinces:

• Infant/child mortality rates per 1000 live births, and maternal mortality rate per 100 000 live births

- Data and statistics for 2016 point to a discrepancy in child mortality for children under one year/ per annum for each 1000 births by province. The highest rate was in Diyala (24.4) per 1000 live births in 2016, (23.5) births in Basra, and (23) births in Najaf. The lowest rate was registered in Suleimaniah in Kurdistan Region, with (114) per 1000 live births.
- The highest mortality rate in children under 5 years and above was registered in Diyala (32.1) per 1000 live births, followed by Babil (28.2). The lowest rate was registered in Erbil (13.6), and Dohuk (15) in the Kurdistan Region.
- As shown in the figure below, the highest maternal mortality rate was in Najaf and Basra, (66.7 and 55.9 per 100,000 live births respectively), followed by Kerbala (46.8). Dohuk has the lowest rate (19.3).

Figure 23

Death rates in Iraq by province, 2016



• Number of patient clinics at public hospitals and primary health care centres

- The 2016 health indicators show that Baghdad, Suleimaniah and Erbil have the highest number of government hospitals, with a total of (32, 48, 25) respectively (see Table 34). Muthanna has the lowest number of government hospitals, totalling (4) hospitals only. Primary healthcare centres (PHCs) in the above provinces were the highest, with (439) centres in Suleimaniah, (276) in Erbil, and (250) in Baghdad. Kerbala and Muthanna have 69 and 62 PHCs respectively.
- The highest number of new government hospitals and PHCs needed to reach the population-based target is in Baghdad, Nineveh and Basra, and the lowest number of new hospitals is in Suleimaniah, Erbil and Muthanna, and of new PHCs is in Muthanna and Missan (see Figure 25 below).

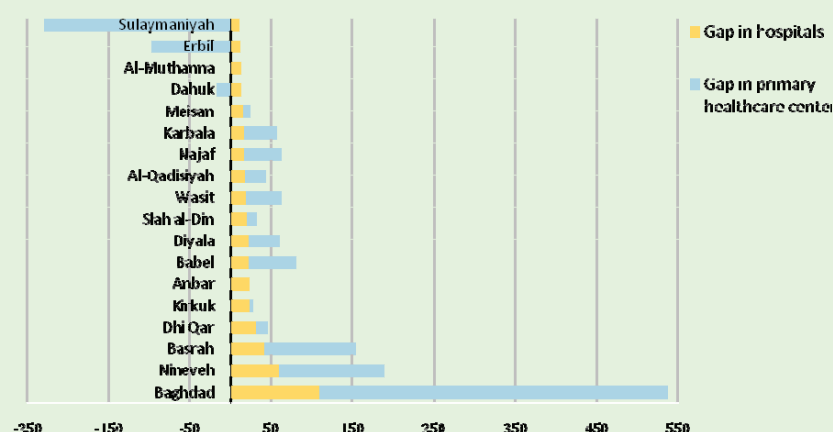
Table 34

Gaps in the number of government hospitals and PHCs by province, 2016

Province	Government Hospitals (n)			PHCs (n)		
	Standard	Actual	Deficit/ Gap	Standard	Actual	Deficit/Gap
Nineveh	74	15	59	370	181	189
Kirkuk	31	7	24	155	128	27
Diyala	32	9	23	158	98	60
Anbar	35	12	23	176	176	0
Baghdad	158	48	110	788	250	538
Babil	40	17	23	200	120	80
Kerbala	24	8	16	118	62	56
Wassit	27	8	19	134	72	62
Salah al-Din	31	11	20	154	122	32
Najaf	29	13	16	143	81	62
Qadessiyah	25	8	17	125	82	43
Muthanna	16	4	12	79	69	10
Thi-Qar	41	9	32	203	158	45
Missan	22	7	15	108	84	24
Basra	56	14	42	282	128	154
Dohuk	25	13	12	125	141	-16
Suleimaniah	42	32	10	210	439	-229
Erbil	36	25	11	180	276	-96
Total	744	260	484	3708	2667	1041

Figure 24

Gaps in government hospitals and PHCs by province, 2016



8.7.1.3. Spatial disparity in infrastructure and services indicators among provinces

Drinking water access

The 2016 statistics show that the percentage of households connected to drinking water network reached (89.8%, i.e. (10.2%) of the households in Iraq as a whole are deprived of this indicator, reflecting a positive progress compared with 2012, where the percentage of deprived families reached 13.8%.

At province level, the highest percentage of households using water from the public network was in Kirkuk, Najaf, Basra, Erbil, Baghdad and Diwaniyah respectively. The percentage covered more than 90% of the households, while Thi-Qar and Muthanna recorded the lowest household use of public water network (70.8% and 78.8% respectively). For other water sources, Thi-Qar (22%) and Missan (18.4) have the highest percentage of population using rivers, streams, canals or creeks as a source of drinking water.

As regards per capita share of drinking water, according to the applied standards, Diyala, Muthanna, and Babil have a per capita share of drinking water of (1 l/d), which is way below the regular share of 450 l, while the per capita share of drinking water in Erbil is higher than the prescribed standard (see Table 35).

Table 35**Household access to water network and per capita drinking water supply gap at province level, 2016**

Province	Per capita drinking water(l/d)	Gap by per capita (from 450 l/d)	Share of households by type of drinking water supply (%)						
			Public network	Public tap	Tank	Open/ covered well	River/canal/ stream/creek	Other	Total
Dohuk	377	73	82.8	15.5	.6	.9	.2	0.1	100.0
Suleimaniah	353	97	88.9	.7	.3	8.3	1.3	0.5	100.0
Kirkuk	354	96	97.5	1.4	0.0	.3	.0	0.8	100.0
Erbil	586	-136	95.9	.9	.4	1.3	.9	0.6	100.0
Nineveh	-	-	-	-	-	-	-	-	-
Diyala	284	166	81.2	.5	4.2	9.1	4.1	0.9	100.0
Anbar	-	-	-	-	-	-	-	-	-
Baghdad	390	60	95.4	.2	0.0	.7	1.7	2.0	100.0
Babil	296	154	82.8	.8	2.2	1.9	8.5	3.7	100.0
Kerbala	392	58	89.8	.4	.1	.2	7.3	2.2	100.0
Wassit	386	64	80.7	.1	.4	2.3	3.9	12.6	100.0
Salah al-Din	421	29	84.9	4.6	.7	.9	8.2	0.7	100.0
Najaf	384	66	96.5	2.1	.6	.1	.1	0.5	100.0
Diwaniyah	388	62	91.6	0.0	0.0	2.9	4.7	0.8	100.0
Muthanna	289	161	78.8	4.2	6.2	2.8	6.2	1.8	100.0
Thi-Qar	410	40	70.8	3.0	.1	3.4	22.0	0.7	100.0
Missan	423	27	80.8	.1	0.0	.0	18.4	0.7	100.0
Basra	450	0	96.0	2.2	0.0	.0	1.0	0.9	100.0
Iraq	397	53	89.8	1.6	.6	2.1	4.2	1.7	100.0

Electricity access

There were different per capita electricity consumption levels among the provinces in 2015. The highest was in Basra (2.75 MWh/year), and the lowest was in Salah al-Din (0.15 MWh/year), while in the remaining provinces, the rates remain inconsistent.

The 2014 socio-economic survey shows slight decline (0.57%) in the percentage of households with no access to public electricity, compared with the 2012 survey. 99.4% of the households are connected to public electricity network up from 99.3% in 2012. There were relatively small differences among provinces, where Diwaniyah had the lowest household connection to public network (5.9% of household have no access) followed by Thi-Qar (2.8%). Kirkuk, Wassit, Kerbala, Basra and Missan do not have household with no access to public electricity.

Table 36

Per capita electricity consumption by province, 2015			
Province	Per capita share of sold electricity (MWh/y)	Households connected to public electricity network (%)	Amount of supplied electricity (MWh)
Data available for year	2015	2014	2016
Nineveh	-	100	-
Kirkuk	1.16	100	-
Diyala	1.12	99.3	585
Anbar	-	99.5	-
Baghdad	1.73	99.2	1559
Babil	1.26	99.8	518
Kerbala	1.63	100	620
Wassit	1.65	100	760
Salah al-Din	0.15	1000	4.8
Najaf	1.5	99.6	769
Diwaniyah	1.39	94.1	418.7
Muthanna	1.76	99.5	430
Thi-Qar	1.47	97.2	900
Missan	1.84	100	550
Basra	2.75	100	1758
Dohuk	-	100	-
Erbil	-	100	-
Suleimaniah	-	100	-
Iraq	1.32	99.4	

Sanitation access

A household is described as being deprived of this facility if its residence is connected to a soakage pit or the main public sanitation network. Statistics from 2016 indicate that the highest percentage of population with houses connected to the sewage disposal public network for drainage of wastewater is in Suleimaniah (90.7), Baghdad (79.7), Missan (66.9) and Najaf (57), highest than the standard rate in Iraq, as shown in the table below. Dohuk, Kirkuk, Diyala and Muthanna were the least served with sanitation system, where less than 10% of the population in these provinces are linked to the public sanitary network.

More than half the population of 12 provinces use septic tank for wastewater disposal. Nearly one quarter of Muthanna households use covered sanitary sewers (24%), while 20% of Missan households still use exposed (uncovered) sewers.

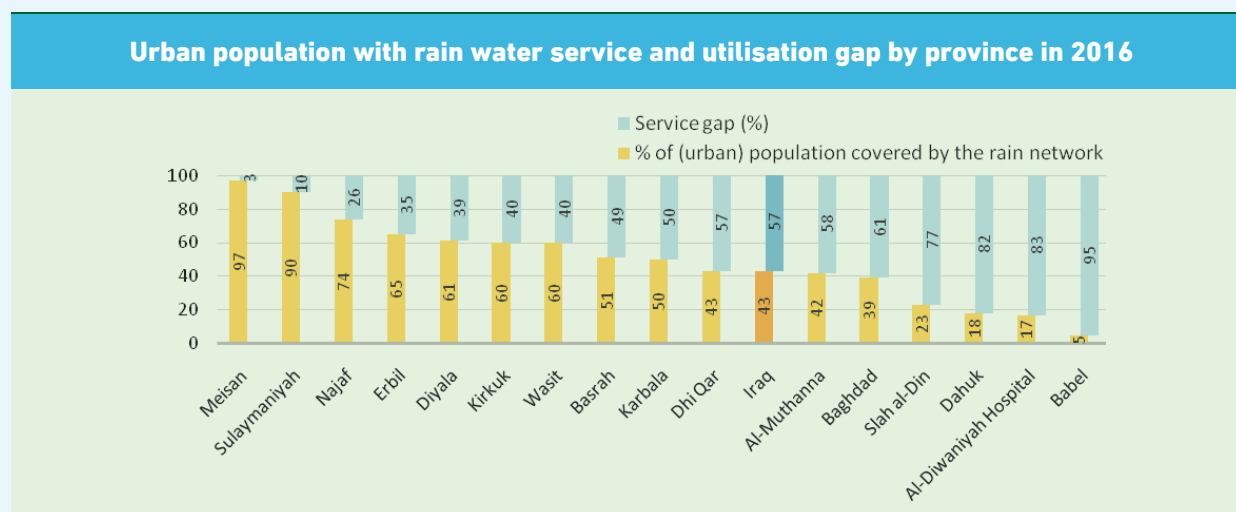
Table 37

Household use of sanitation methods in 2016 (%)						
Province	Public network	Septic tank	Covered canal	Exposed canal	Other	Total
Dohuk	3.7	96.1	0.0	0.2	0.0	100.0
Suleimaniah	90.7	3.6	4.1	1.0	0.5	100.0
Kirkuk	4.8	95.1	0.1	0.0	0.0	100.0
Erbil	14.2	84.3	0.9	.6	0.0	100.0
Nineveh	-	-	-	-	-	-
Diyala	8.3	79.5	1.1	10.7	0.5	100.0
Anbar	-	-	-	-	-	-
Baghdad	79.7	18.1	1.6	0.6	0.0	100.0
Babil	14.4	77.7	5.0	2.9	0.0	100.0
Kerbala	37.1	55.1	2.3	2.4	3.2	100.0
Wassit	17.9	60.9	13.6	7.0	0.6	100.0
Salah al-Din	18.5	66.6	10.2	0.5	4.1	100.0
Najaf	57.0	35.0	4.5	3.6	0.0	100.0
Diwaniyah	16.8	65.0	8.0	6.9	3.3	100.0
Muthanna	9.7	60.0	24.0	6.1	0.2	100.0
Thi-Qar	22.6	62.7	12.4	2.2	0.0	100.0
Missan	66.9	7.4	3.6	20.4	1.7	100.0
Basra	33.0	59.6	4.0	2.9	0.5	100.0
Iraq	45.4	47.0	4.2	2.8	0.6	100.0

Rainwater networks

57% of the urban population in Iraq in 2016 are not connected to rain water network service. Provinces vary in regard to this indicator, and the most deprived provinces in terms of having no access to this service in the urban areas are Bebel (95%), Diwaniah (83%), and Dohuk (82%). The least deprived province is Missan, where 3% only of the population in this province do not have access to this service, followed by Suleimaniah at 10%, as shown in the figure below.

Figure 25

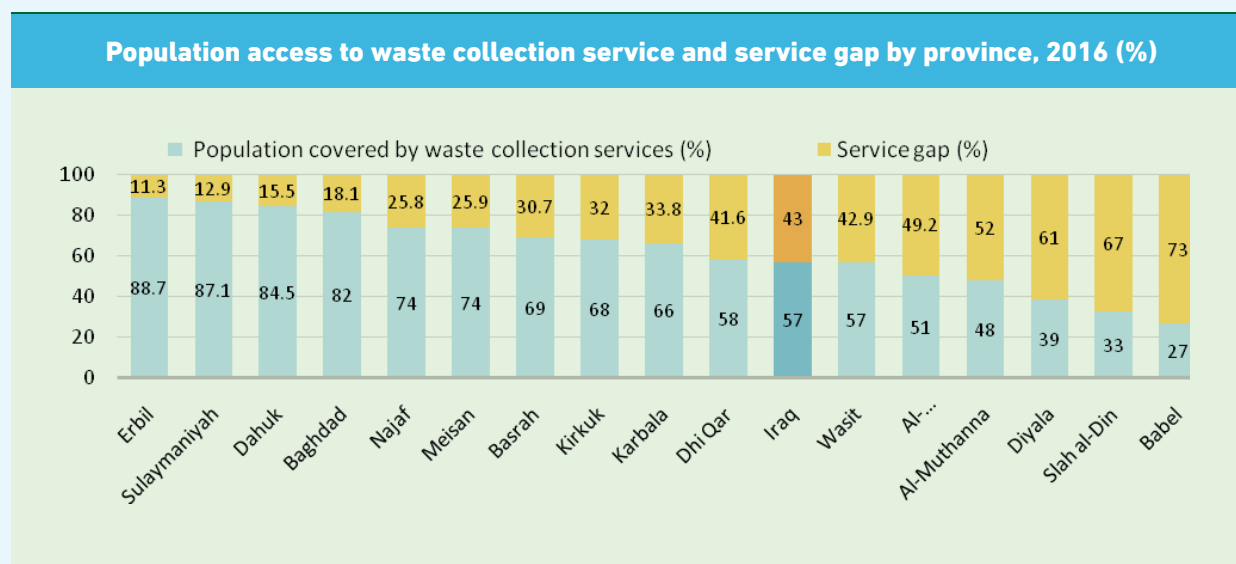


Waste removal access

Environment statistical figures for 2016 have revealed that 43% of Iraq's population do not have garbage collection service and that there is large inconsistency between urban and rural regions. 22.3% of the urban population are deprived of this service, while the rate is much higher in the rural region reaching 90.5% of the population.

A comparison among the provinces shows that more than 80% of the population of Kurdistan Region and Baghdad has access to this service (see Figure 26). More than half the population of Babil, Salah al-Din, Diyala and Muthanna are deprived of the garbage collection service, with the percentage ranging between 53 % and 73 % of the population of these provinces.

Figure 26



8.7.1.4. Spatial disparity in industrial sector attractiveness indicators

The industrial sector is key in promoting economic development and realising sustainable growth, and incorporating local, regional and global changes, causing the economic situation less fragile and more reliable to address these challenges.

Spatial analysis of Comparative Advantage Index of the industrial sector

- The application of the spatial factor for 2015, which used the last industrial classification comprising 24 industrial activities, revealed that Baghdad hosts most of the industrial projects because it has distinctive spatial features that attract various types of industry other than paper and mining.
- The provinces of Najaf, Babil, Basra, Kerbala, Wassit, Diwaniyah and Muthanna attracted various kinds of industrial enterprises with some inconsistencies among these provinces for the different branches of industry. Diyala, Kirkuk, Thi-Qar, and Missan attracted 7-11 industrial activities.
- Food, garment, coke, coal, furniture, and construction industries are existent in all provinces due to availability of raw materials and increasing demand for their products.
- Industries like beverages, textiles, wood, metal are existent in most provinces. The largest number of factories is in Kirkuk (6.32) for beverages, Wassit (4.58) for textiles, Babil (3.3) for wood, Kerbala (1.60) for metal. Tobacco and paper industries are located in Baghdad and Kirkuk only. The remaining industries are located in several provinces.

8.7.1.5. Activation of urban management and planning in the provinces

Iraqi cities in general suffer from poor urban management and failure to introduce modern urban management approaches, especially modern technologies, master plans and other alternatives. Choice of cities for future urban development depends on availability of transport, development potential and comparative advantages with respect to the agricultural, industrial and tourist provinces on the basis of which the urban development clusters and centres in each province are determined. Their relationship with neighbouring provinces must also be identified to achieve regional and national urban development within different categories, each of which is comprised of neighbouring or provinces with similar characteristics. The maps below explain the urban development alternatives and targets.

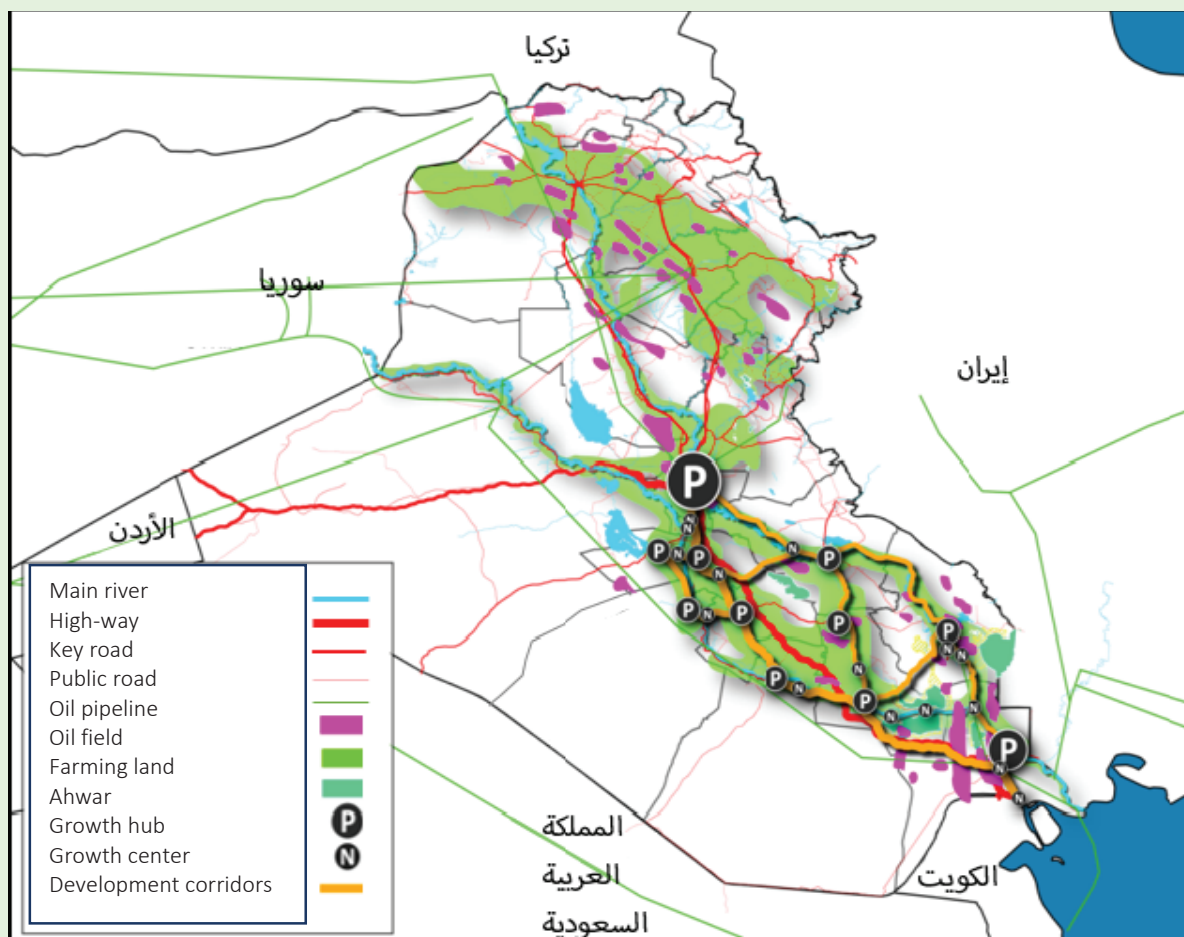
Implementation of urban master plans

The implementation of urban master plans is still below expectation owing to fast and uncontrolled urban expansion and development of some cities, especially in relation to unregulated land distribution policies, which adversely impact the efficient allocation of land and cause inconsistency with other uses, particularly landscaping.

Infrastructure problems are still prevailing in most Iraqi cities, where land is distributed without necessary infrastructural services, which exasperate urban management failures due to the inability to provide such services associated with land allocations for housing purposes. Consequently, many residential areas continually lack minimum basic services like electricity, water supply, sanitation etc., in addition to the shortage or absence of financial allocations and inability to implement the planned utilisation (public services like schools, health centres, hospital, etc.

Figure 27

(Map 1) Urban development elements in Iraq



Importance of establishing new urban centres

New civil centres can be recommended to minimise the heavy pressure on certain development areas in the city of Baghdad, including the central business district in the middle of Iraq.

The site is located between East Baghdad Railway Station and Palestine Street, and consists of the security zone of the Ministries of Interior and Defence, and a number of departments belonging to the ministries of Justice, Youth, Transport, Water resources and Human Rights. This centre lies in a prime location in Baghdad downtown, where land prices are very high and the project can therefore be implemented through investment, like other global civil centres such as the Boulevard in Amman-Jordan, Solidere in Beirut and Shanghai in China. Transport network and Metro service can be established to connect various activities in this centre, which is funded by the investment returns.

Figure 28

(Map 2) Location of the proposed Civil Centre in Ramadi



Reluctant implementation of urban master planning

The implementation of urban master plans is still below expectation, owing to the fast and uncontrolled urban expansion, particularly with regard to land distribution which is not controlled by planning standards. This affects the efficiency of land allocation and inconsistency with other aspects especially landscaping.

Most Iraqi cities suffer from declining basic infrastructure. Lands are allocated without road and network services, which exasperate the urban management failures due to the inability to provide the needed services with the lands allocated for residential purposes.

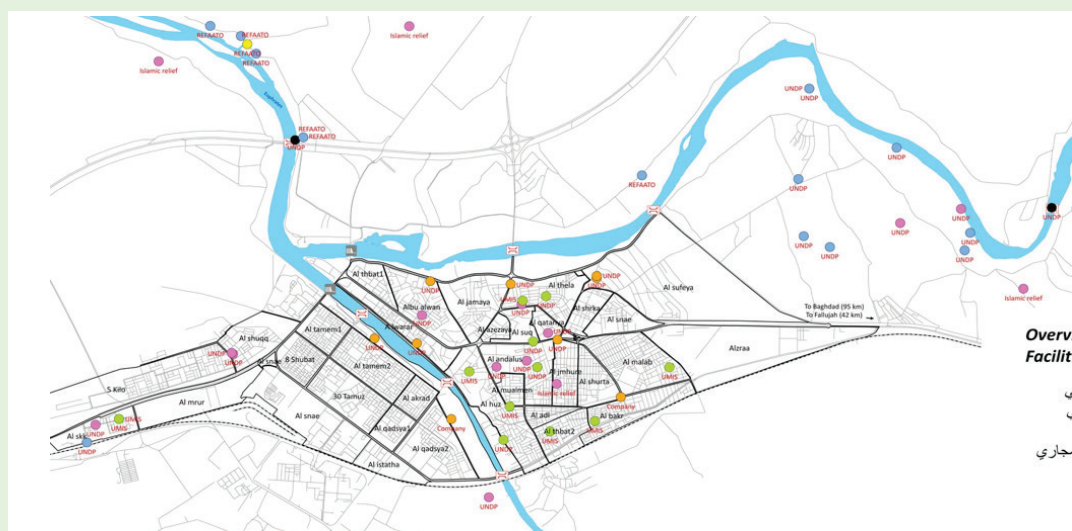
Inadequate land utilisation in liberated cities

Recent statistics show that 96 towns in seven provinces suffer from the consequences of destruction and war and from unregulated expansion. Destruction has affected houses, roads, public utilities and economic facilities, leading to unregulated land utilisation, which requires an update of master plans prior to reconstruction.

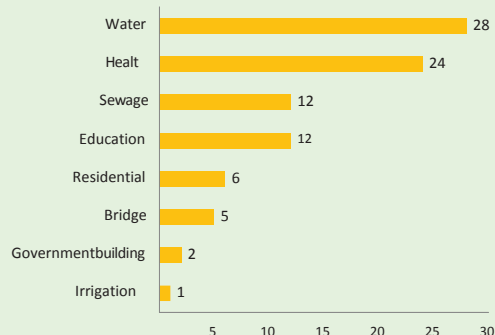
As a model for such towns, a basic updated design was developed for Ramadi city, which sustained damage of 80%. Work has been underway in cooperation with UN-Habitat in the framework of the EU-funded Local Area Development Programme. Ramadi was chosen as one of the cities most affected by fighting and it stands as a model for how to approach similar cities in the future. The project also advances a joint planning approach to urban rehabilitation, city development and meeting priority needs – through joint consultation to assist local authorities in implementing effective strategies for optimal reconstruction results.

Figure 29

(Map 3) Public services projects in Ramadi city in 2018



Rehabilitation projects (n)



Overview of Rehabilitation Projects of public Facilities Implemented in Ramadi

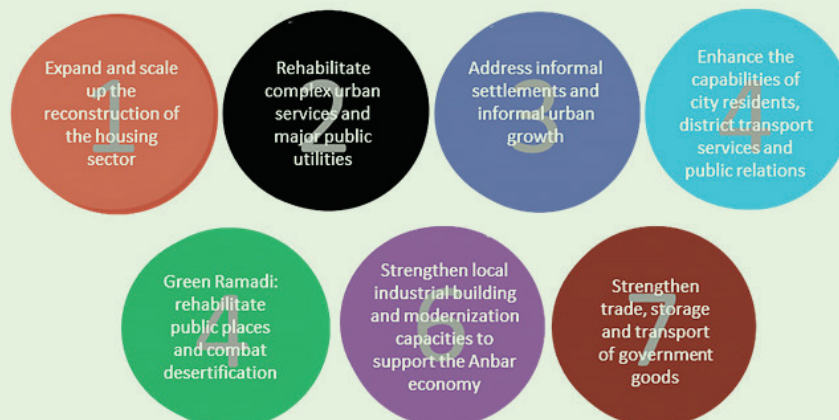


The boundaries and names shown the designations used on this map do not imply official endorsement by the United Nations
 الأسماء والمسارات والحدود و الأسماء الظاهرة و التسميات المستخدمة في هذه الخريطة لا تعني المساهمة الرسمية من الأمم المتحدة
 Roads : OpenStreetMap contributors
 © UN-Habitat / January 2018



Figure 30

Proposed urban rehabilitation and development programmes for Ramadi city



8.7.2. Challenges and development priorities

8.7.2.1. Challenges

Provinces would be ranked, according to their circumstances and development priorities, into two categories. The first includes provinces with security problems (Kirkuk, Salah al-Din, Anbar, Nineveh and Diyala), and the second covers the remaining provinces.

The table below shows the challenges facing the different provinces.

Provinces	Challenges
(1) Kirkuk Salah al-Din Anbar Nineveh Diyala (affected by ISIL)	<ul style="list-style-type: none"> • The main challenge is to alter the economic identity of these provinces. • The objective and the means to achieve it should be formulated to address this particular challenge. For example: Salah al-Din's industrial infrastructure was completely destroyed, this invites to transfer the province into agriculture economy, and so forth with the other governorates which have same challenge. • IDPs, who have not yet returned home because their areas were devastated by terrorism and military operations, live under difficult conditions. They need basic services great care until they return. • collapsed infrastructure, suspension of projects and weak economic situation are the results of circumstances mentioned above. • Social disintegration and tribal and political conflicts. • The deterioration of agricultural, livestock and industrial production in the province and high unemployment and poverty levels.
(2) The remaining provinces	<ul style="list-style-type: none"> • Restricted administrative and financial powers granted to local administrations is reflected in limited decision-making. • Legislation deficiency concerning the organisation of economic activities in addition to a deterioration of the investment situation, and poor private sector contribution. • Insufficient water supplies for few southern provinces negatively affects the needs of the population, the agricultural sector and other current usage of water.
(1) and (2)	<ul style="list-style-type: none"> • The lack of masterplans for rural settlements is reflected in the indiscriminate use of what is often agricultural land. • The increasing phenomenon of pollution of all kinds especially in Basra, Wassit, Kirkuk and Salah al-Din due to the existence of oil projects and war remnants, as well as the heavy use of generators in shops and residential neighbourhoods. • Inefficient use of agricultural land, over 70% of arable land hasn't been exploited, along with lack of interest in palm growing in Basra, which held Iraq's first place and significantly fell to fourth place. • The phenomenon of continued reverse migration from cities to countryside because of the lack of adequate housing plots, which led to bulldozing agricultural lands to turn it into illegal residential plots. There is also migration of rural residents from the neighbouring provinces seeking jobs in the Basra and causing demographic imbalance in the city. • Rural areas suffer from low income, lack of services, higher poverty rates, economic difficulties and lack of access to education and health services especially in communities with less than 200-300 people. • Limited transverse /longitudinal information to link with road transport networks and border crossing points.

8.7.2.2. Development priorities

Development priorities are based on needs and requirements of narrowing the sectoral gaps down to the smallest administrative units. Here are the most important development priorities and means of realisation.

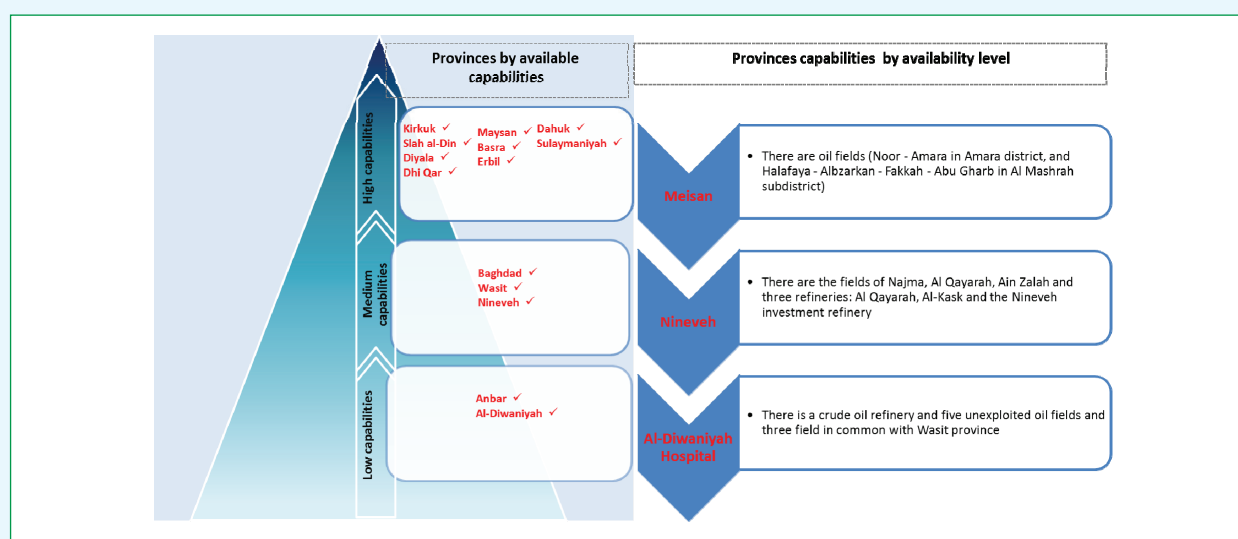
Provinces	Development priorities
Not affected by terrorism	<ol style="list-style-type: none"> 1. Perceive urgent infrastructure and social services needs of each province and give it priority. 2. Rehabilitate and develop road and transport networks within and between provinces. 3. Create a stimulating business environment by introducing specific policies to encourage the private sector to invest in underdeveloped regions. 4. Support the provinces' economy by implementing public benefit projects to be shared with other provinces. 5. Rationalise water by using modern irrigation methods (sprinkler irrigation, drip irrigation, lined and suspended irrigation channels) and regularly maintain the old irrigation and drainage systems. 6. Activate tourist activities and investments using available resources in the provinces by: Invest in heritage and historical areas by establishing protected tourist villages, casinos and restaurants to be used on holidays, trips and social events. Use the marshlands (Ahwaz) natural reserve, being listed as world heritage, to create a sophisticated tourist attraction promoted to local and foreign tourists 7. As a first stage, direct investments where development potential is available, depending on the comparative advantage of each province, for example: Establish food processing industries in rural areas where human resources, material and sufficient spaces producing plant and animal products are available in addition to the presence of labour and markets. Start developing and rehabilitating existing industries that are idle or suspended from work (such as the textile factory in Hilla, the chemical products factory in Al Sadda, the cement factory in Al Sadda, the Manufacturers of cars, machinery and equipment in Alexandria) Completion of a petrochemical products plant in Jorf Al-Nasr area Establish a factory for agricultural supplies such as plastic covers for plantations and modern irrigation and sprinkling equipment. 8. Focus on cultivating strategic crops that make main components of human food such as wheat, barley, rice and corn in addition to industrial crops, considered as raw materials of many industries. 9. Manufacture machinery, instruments and agricultural equipment to meet a growing domestic demand accompanied by the expansion in agricultural production. 10. Address the problems of desertification, low vegetation cover and water bodies' increased salinity. Lead investments towards various activities including those suitable for the desert environment. 11. Introduce legislations and amend existing laws to allow revenues coming from department sectors to be utilised in the local development process.

Provinces	Development priorities
Affected by terrorism	<ol style="list-style-type: none"> 1. Reconstruct liberated areas whose infrastructure suffered damage caused by terrorist operations. 2. Return IDPs and refugees to their home areas. 3. Address social problems and promote community peace. 4. Participate with the private sector in accomplishing stalled projects. 5. Rehabilitate both industrial and services projects: Kirkuk refinery, Khassa dam in their respective provinces. 6. Restore the demographic balance by turning the Anbar pilgrimage road into a main development axis penetrating the province desert with 5 km width of rural complexes on both sides. Deploy planned agriculture and desert development facilities to encourage cultivation of grains and agricultural crops and raising livestock. 7. Activate the western desert irrigation project starting from Al-Mohammadi city towards the Rutba (Al-Waleed) district, make it another development hub in the western desert by increasing its capacity and investing in the cemented land, close to the international strategic roads connecting Iraq to the neighbouring countries. 8. Exploitat the Haditha Dam Lake for irrigation projects in the western desrt region with the intention of expanding agricultural areas and to introduce different crops (wheat-barley) in an effort to establish self-sufficiency and potentially export grains. This could create small development axes towards the desert. 9. Adopt the Okkaz project as a development pole to elaborate oil and civil industries where specialised industries complement technical education and become operative in the Akashat phosphate project.

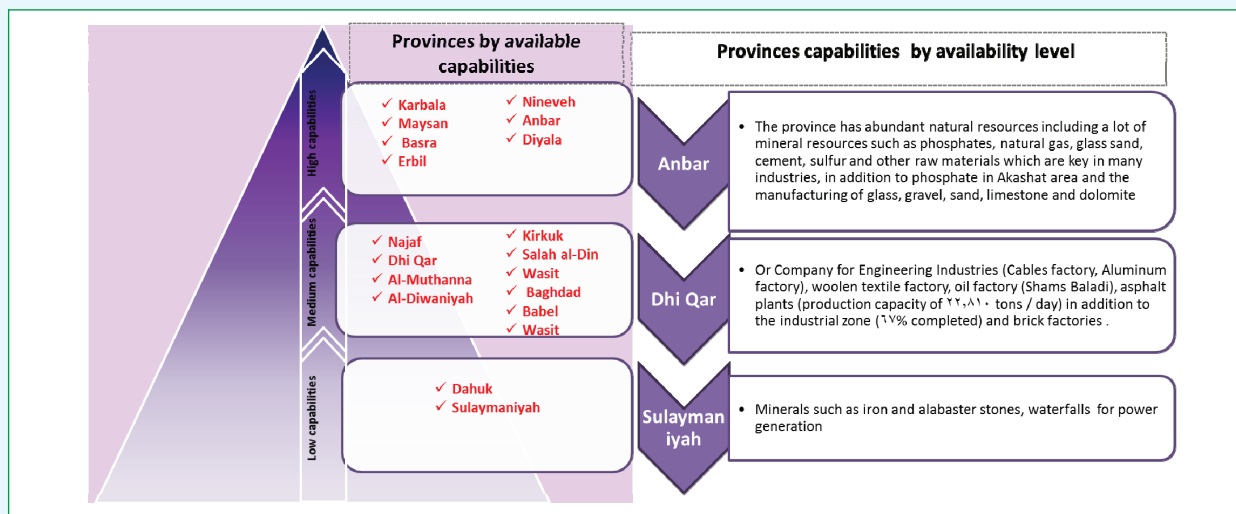
8.7.4. Comparative advantages and development potential of provinces

The following five graphs illustrate the potential and the comparative advantage of provinces infive prominent economic sectors, in relation to the geographical distinction of each province.

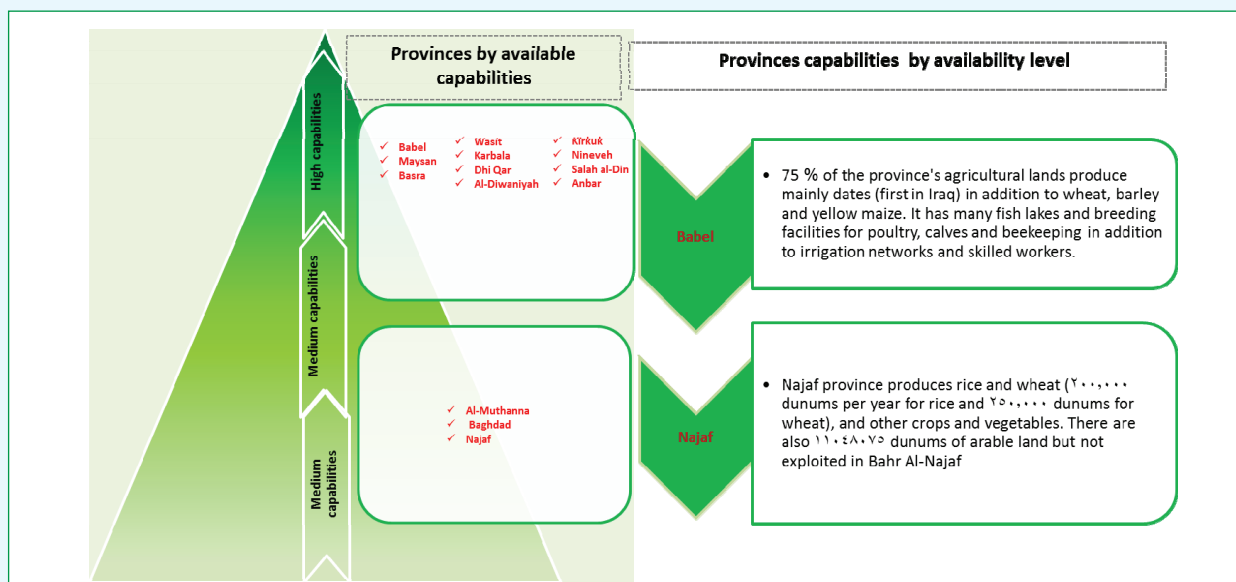
1- Comparative advantages and development potential of provinces in oil industries



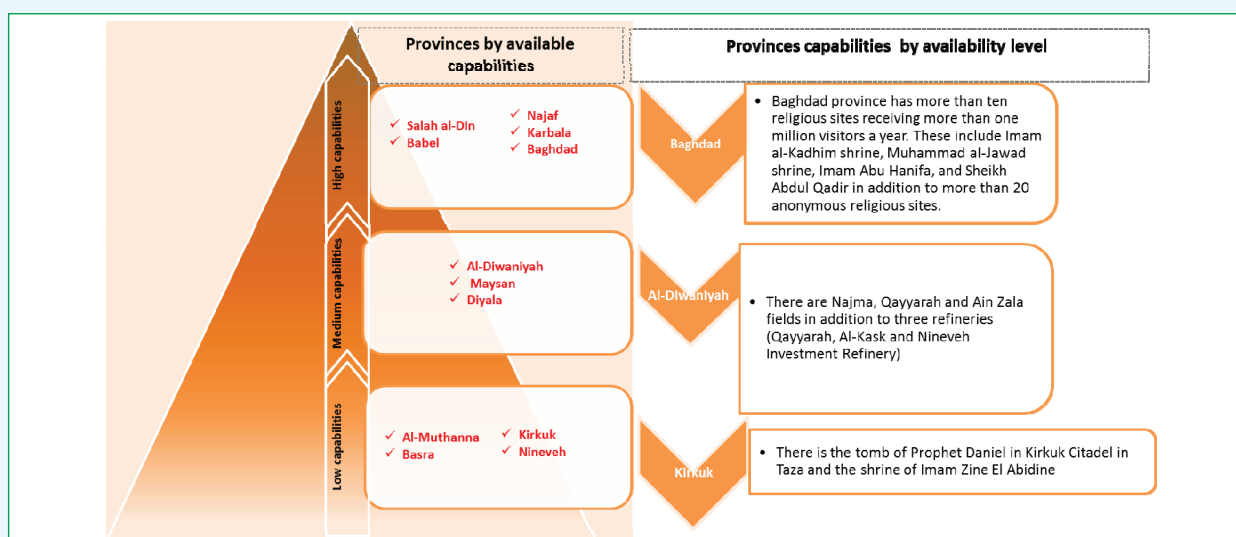
2- Comparative advantages and development potential of provinces in non-oil industries



3- Comparative advantages and development potential of provinces in agriculture



4- Comparative advantages and development potential of provinces in religious tourism



5- Comparative advantages and development potential of provinces in nature and heritage tourism

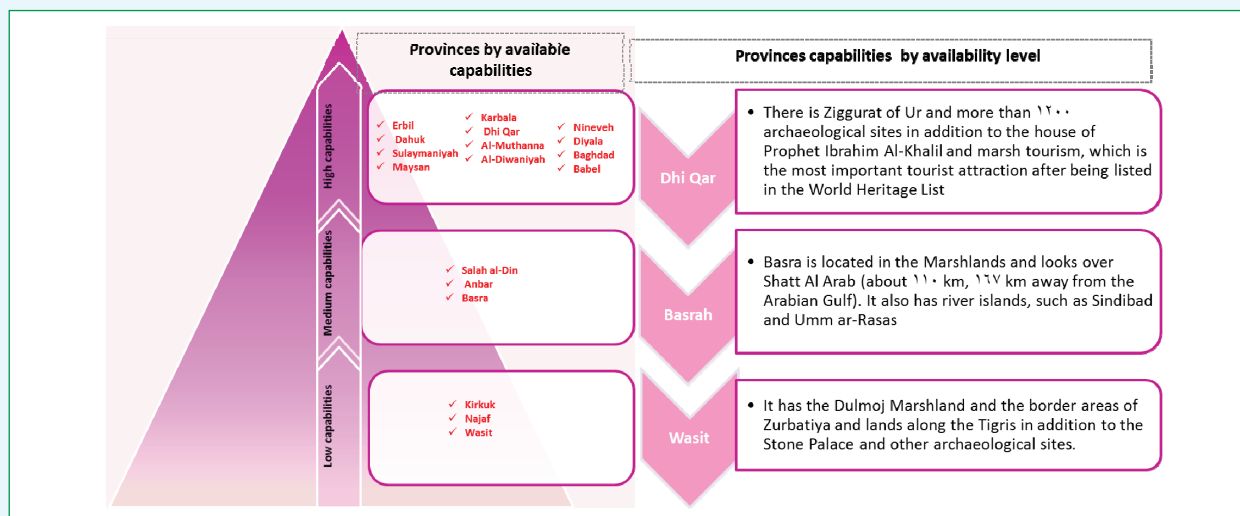
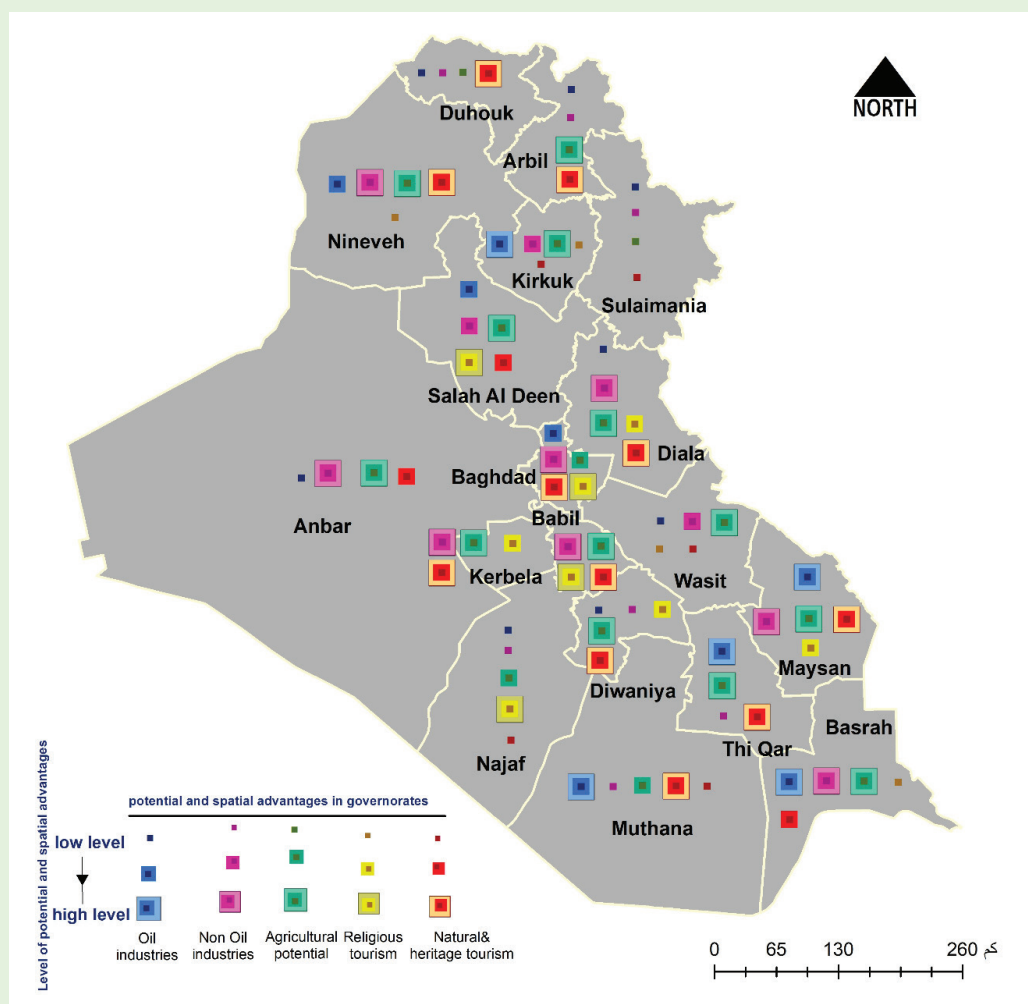


Figure 31

(Map 4) Comparative advantages and development potential of provinces in the five key sectors (oil industries, non-oil industries, agriculture, religious tourism, and nature and heritage tourism)



8.7.5. Objectives

Objective 1: Reduce development disparities among provinces

Means of achievement:

1. Complete database to identify and assess damages and reconstruction needs in areas affected by terrorism;
2. In accordance with data and planning standards, use available financial resources to determine priority needs for development, services and infrastructure provision in the provinces;
3. Stimulate the private sector through a tariff/tax exemptions policy for underdeveloped regions;
4. Reduce the investment appetite for dominant cities in the province by creating investment opportunities for less-developed regions;
5. Encourage local and foreign investments in all provinces and steer these to available opportunities and advantages;
6. Invest in the promising desert resources in the western provinces of Iraq.

Objective 2: Develop rural structures

Means of achievement:

1. Complete studies on rural settlements and prepare strategies for rural development in line with the economic situation of the country and based on a selection of candidate villages;
2. Provide basic services in rural areas and give priority to the villages nominated for development to attain viable projects achievements;
3. Invest in natural and human resources in rural areas.

Objective 3: Improve the hierarchy of urban systems and activate renewal of urban centres

Means of achievement:

1. Prepare urban development strategies to identify and select development alternatives;
2. Given the expansion of new cities and towns, exploit the comparative advantages of small and medium-sized cities to steer investments and infrastructure development;
3. Identify neighbourhoods with cultural heritage and neighbourhoods ready for urban renewal in Iraqi cities and activate investments in them while preserving the historical and architectural heritage of buildings;
4. Address the problem of illegal settlements in urban areas by limiting their expansion and identifying and improving their situations (see Chapter 8.5.1 in this document);
5. Transform a number of busy secondary commercial streets into pedestrian streets complete with urban furniture.

Objective 4: Activate urban management and organise cities

Means of achievement:

1. Follow-up on obtaining approvals for draft laws, e.g. the Urban Planning Law and Municipal Administration Law;
2. Prepare a national federal structural plan that defines land usage and the needs and future directions for national spatial development;
3. Prepare regional plan for Baghdad in coordination with local and ministry authorities and other concerned parties;

4. Avoid overruling the master plans of cities and municipalities when activating city planning laws, and limit the major role to competent technical and executive bodies.

Objective 5: Integrate different transport systems (improve the inter-province transport system and develop urban transport)

Means of achievement:

1. Complete the highways between provinces and link them to the nearby urban centres;
2. Improve existing rail lines and implement double rail tracks according to modern specifications;
3. Link provinces and small and medium-sized cities;
4. Improve city public transport and initiate first-stage implementation of suspension railway and subway projects in major cities;
5. Design and implement alternative traffic network (pedestrian and bicycle lanes for main streets in city centres);
6. Rehabilitate and develop ring road networks around major cities and expand road networks linking the centres of the provinces with affiliated areas.

Objective 6: Reinforce decentralisation and power delegation and participate in managing development among provinces

Means of achievement:

1. Complete transfer of powers and provide institutional and financial support to local organisational entities;
2. Activate the role of the Planning and Development Councils and strengthen the cooperation between Local Authorities, CSOs and the private sector;
3. Implement public benefit projects involving more than one province to support local economies;
4. Ensure basic services and infrastructure provision by providing the legal framework to optimise and diversify local financial resources and developing the necessary management capacities.



Chapter Nine: Human and Social Development

9.1. Education and higher education

9.1.1. Situation analysis

- The consecutive crises which hit Iraq imposed a heavy burden on the social situation, and the cost of war on terrorism has been a major obstacle to the realisation of development plans and programmes. War priorities competed with development, reconstruction and social expenditure in general. E.g., the Federal Budget Law for 2017 allocated USD 5 billion for military expenditure and USD 19 billion for security and defence – a total of 22.6% of public spending, compared to 9.3% for education and 3.8% for health. The impact on education and high education indicators has been evident in e.g. the Human Development Report 2016: Iraq scored 0.649 on the Human Development Index (middle human development country) and ranked 121st from 180 countries; the mean years of schooling in Iraq were 6.6, compared to 10.1 in Jordan, 8.8 in Iran, 8.6 in Lebanon and 7.3 in Kuwait.
- NDP 2018-2022 seeks to implement policies and programmes that develop human and social capital equipped with the knowledge, attitudes and skills necessary to ensure social stability and prosperity in a globalised economy and a world changing at an unprecedented pace.
- The NDP focuses on key education areas including: improving the education system efficiency to generate decent work, accelerating economic growth, ensuring balance between education outputs and labour market requirements by focusing on vocational education and training, developing lifelong learning opportunities, improving education quality by focusing on institutional performance efficiency, teacher training, modernising curricula, and establishing an efficient health system nationwide without undermining the rights of the vulnerable and marginalised groups.
- Most areas of Iraq still suffer from multi-dimensional poverty particularly in education. In addition to the high illiteracy rates, unemployment and economic underdevelopment, gender disparity is noticeably high in all social, political and economic sectors. Despite the achievements over the past decades and the positive development efforts made by the Government and NGOs, much still needs to be done to improve the education system.

9.1.1.1. Pre-university education

Infrastructure

According to data on public schools for 2015/2016 school year (except vocational schools and institutes):

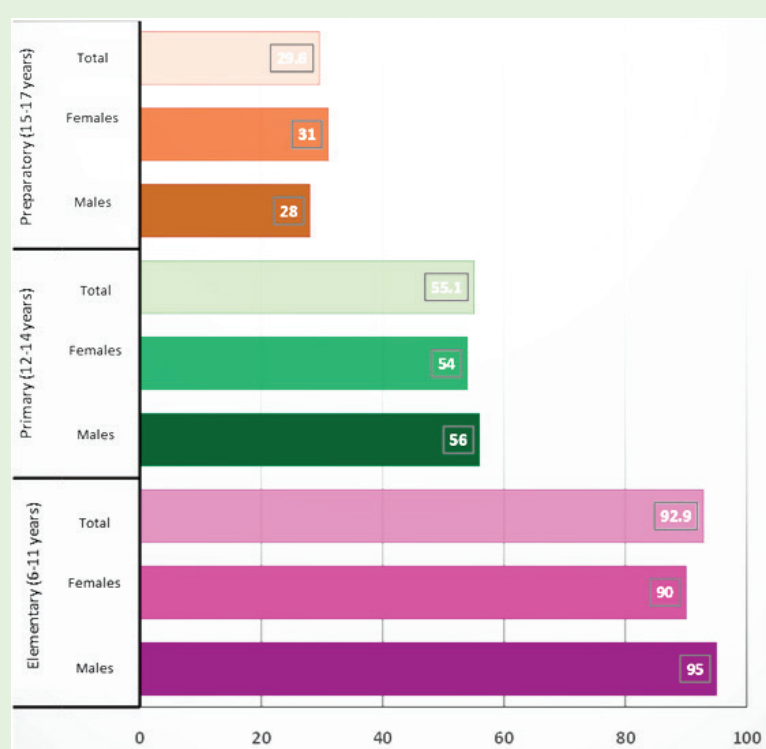
- The number of school buildings under construction (by MoE and Governorates, based on regional development plans) is 2339 with different completion rates; most of construction stopped due to the financial crisis. The number of buildings affected by terrorist acts is 1380: 674 totally damaged and 706 partially damaged;
- The deficit in school buildings excluding those under construction or damaged is 6484. The deficit in school buildings excluding those under construction is 8147;
- This deficit is being addressed through a double-shift system applied in 6337 schools, while 961 schools are operate at three shifts;
- Most of schools suffer from crowdedness:
 - 37 students per classroom in primary education;
 - 41 students per classroom in intermediate education;
 - 37 students per classroom in secondary education;
- There are 1675 private schools at all levels, including kindergartens ,with 250416 students.

Enrolment rates

- Despite the relative interest in providing education to all children of school age, increasing enrolment opportunities and expanding formal and private education, the challenges facing education are still enormous – particularly so after the 2014 conflict and the consequent tragedies, which resulted in vast numbers of IDPs and placed a heavy burden on all sectors, including education.
- The education indicators in Iraq are still far from achieving gender quality at all education levels, particularly among the provinces and between urban and rural areas.
- In the 2016/2017 school year, the enrolment rate was 92.9% in primary (6-11 years), 55.1% in intermediate (12-14 years) and 29.6% in secondary education (15-17 years);
- Enrolment rates in intermediate and secondary levels were low given the number of failed students and dropouts due to the security, economic and social situations, which affected enrolment and the availability of other attractive alternatives (nursing, education in Sunni/Shiite waqf schools, railways, defence, security and manufacturing).

Figure 32

Net enrolment rates (public, private, waqf schools) by gender and school level, 2016/2017 school year



Expenditure on pre-university education

Education allocations in the 2010 state budget reached 6.3% and rose to 7.4% in 2016. However, this percentage growth does not meet the growth in education needs and enrolment rates in the same period. Operational allocations got 90% of the total education budget, leaving only 10% to investment allocations in the said period. This shows that investment allocations are insufficient to implement school buildings projects, and education institutions have to bridge the gap between school supply and demand.

Table38**Education allocations in the 2010 and 2016 state budgets**

Education allocations in the state budget	2010	2016
Expenditure on Ministry of Education (IQD billion)	5.298	7.783
State expenditure (IQD billion)	84.657	105.896
% of MoE expenditure to total state expenditure	%6.26	% 7.35

State education**• Kindergartens**

- There is a proportionate increase in the number of kindergartens, enrolled children and teaching staff between 2009/2010 and 2015/2016 school years. The percentages are close and positive. The annual growth rate of kindergartens and enrolled children reached 2.9%. and 7.7% for teaching staff and the number of classrooms increased by 4%. Despite the increases in indicators for this level, classrooms are still crowded with 63 in each classroom – a high rate which requires more attention from the relevant authorities.

• Primary education

- Although the education effort achieved some tangible progress in raising net enrolment rates in primary education (6-11 years) between 2009/2010 and 2015/2016 (from 91% to 95%), primary education still has gaps and big problems. A significant percentage of children are still out of school and there is a gap in enrolment rates between the primary and intermediate levels in addition to a huge numbers of failed students and dropouts who often leave to enter the labour market.
- As for the primary education indicators by provinces, there is a noticeable increase in the number of schools and enrolled students. The highest increase was in Kerbala.
- However, there was no similar increase in the number of teaching staff and classrooms. This was evident in Baghdad/Rusafa II. In 2015, there were 50 students per classroom with a variance of 14 students per classroom. The students/teacher ratio was 32 with a variance of 11 which exceeds the global ratio of 20 students per teacher.

• Public secondary education

- Despite the rising enrolment rates in intermediate education (56%) and secondary education (29%), there is still a huge gap in this regard due to the availability of other attractive alternatives for intermediate school graduates, not to mention the labour market. This gap wastes educational opportunities, it puts pressure on the education budget and it wastes financial allocations which can be used to generate other educational opportunities.
- Annual growth rate sat this level witnessed a significant increase. Particularly the annual growth rate in the number of students reached 7.6% between the 2009/2010 and 2015/2016 school years. This was accompanied by an annual increase in the number of secondary schools (4.4%), teaching staff (2.3%) and classrooms.
- In 2009, the number of students per classroom was 34 ; in 2015 this reached 39 with a variation of 5 students, which far exceeds the global rate of 30 students per classrooms. This is due to a significant increase in the number of students registered in secondary education.

• Vocational education

- The annual growth in the number of vocational education students and teaching staff does not match the number of schools and classrooms. Between 2009/2010 and 2015/2016, the number of students fell by 0.2% and the number of teaching staff by 0%, while the number of schools increased by 0.8% and this of classrooms by 0.6%.

• Private education

- The private sector contribution to education services also increased. Between 2009/2010 and 2015/2016 school years, the number of private schools rose from 289 to 1603, with annual growth rate of 76%.
- There was a proportionate increase in the ratio of private to state education at all levels. The number of students at all levels rose from 1.5% in the 2009/2010 to 7.1% in 2015/2016.
- The number of students in private schools increased from 38089 in 2009/2010 to 232970 in 2015/2016 with annual increase of 85%. The ratio of private school students to public school students rose to 2.7 in the 2015/2016 school year.
- Adult education centres (literacy centres)
- In 2015, there were 896 literacy centres operating in all provinces (excluding Nineveh, Salah al-Din, Anbar and Kirkuk due to the lack of accurate data). The highest share of these was in Diyala (13%) followed by Babil (2%); the lowest share was in Wassit (2%).
- In 2015, there were 50090 adult literacy students (78% male, 22% females). Again the highest share was in Diyala (24%), followed by Babil and Thi-Qar (11%); and the lowest share was in Baghdad/Rusafah III, Kerbala, Wassit and Missan (2%).

9.1.1.2.Tertiary education

- There are 35 state and 382 private universities operating in all provinces. The number of private colleges in the 2016/2017 academic year was 51 (12% of total number of colleges in Iraq).
- In 2016–2017, 282 projects were implemented at universities including deanship, scientific departments, halls, dormitories, teaching staff residence, service and general facilities. Some of them were completed, others were suspended due to the financial crisis.
- Occupied internal university areas include 215 buildings and compounds, which accommodate 43173 students. There is an actual need for 429 buildings and compounds to accommodate 60345 students.
- There are 7781 occupied laboratories and classrooms in all universities with a total capacity of 363 115 students. There is an actual need for 3688 classrooms to accommodate 163075 students.
- In 2009–2015, the number of university students in Iraq increased significantly. However, the teaching staff numbers did not witness a similar increase. There is a huge disparity between the two indicators. Increases in teaching staff numbers do not match the growing number of students. This is evident when comparing data for 2009/2010 and 2014/2015 academic years.
- The growth rates of state universities graduates vary among provinces. Muthanna comes first with an increase of 400% between 2009/2010 and 2014/2015, followed by Kerbala (112%). However, in some provinces, the number of graduates dropped – e.g. by 24% in Qadessiyah in the same period.

Technical education

- There are four technical universities and 15 colleges in Iraq. The growth rates in the number of students and teaching staff vary.
- Between 2009/2010 and 2014/2015, enrolment in technical education fell from 5% to 4%.
- In the same period, the number of students decreased from 19% to 14%. This can be ascribed to establishing many state and private colleges in non-technical specialisations, while establishing no new technical colleges. In result, the ratio of technical-to-total education decreased.

Private tertiary education

- In the 2016/2017 academic year, there were 51 private universities and colleges including 266 scientific departments (260 in day shifts and 199 in night shifts) in all provinces.
- The number of universities, colleges and departments varies considerably among provinces. The highest number is in Baghdad (48% of universities/colleges and 53% of departments), followed by Kerbala (10% of universities/colleges and 8% of departments); and the lowest percentage is in Anbar, Nineveh, Salah al-Din and Wassit(1%). Some provinces (Qadessiyah, Muthanna and Missan) do not have any private universities/colleges. Thus, some private universities/colleges should be established there to achieve balance among provinces.
- As for the specialisations covered by private universities/colleges, there is a wide disparity. Humanities specialisations come first (26% of private universities/colleges), followed by engineering (24%), while education specialisations receive the least cover (2%).

9.1.2. Challenges

Pre-university education

1. Enrolment rates are still low and far from the Sustainable Development Objectives, especially at the intermediate and secondary levels.
2. Serious infrastructure problems, including huge deficit in school buildings and low efficiency of health facilities.
3. Persistent education gap between urban and rural areas in quality and quantity, and disparity among provinces.
4. High illiteracy rates particularly in rural and remote areas, and even higher rates in the areas affected by terrorist acts.
5. Limited use of modern teaching methods in the training of teaching staff.
6. Lack of a system for managing education information.
7. Exposure of students to the psychological and social effects of crises, violence and terrorism.
8. Chronic shortage of the education technologies needed to modernise curricula.
9. Lagging behind modern trends in education which limits access to education outputs required by the knowledge-based economy.
10. Weak development role of vocational education; not meeting the labour market requirements; poor capacities and use of outdated technologies in workshops and factories.
11. Poor administrative governance due to weak partnership between education institutions in the private and public sectors.
12. Poor delegation of powers to provinces and poor application of administrative decentralisation at the central and local levels.
13. Wide knowledge gaps due to the collapsed infrastructure of schools and universities and the subsequent high rates of dropping out, illiteracy and involuntary suspended studies in the areas affected by terrorism.
14. All these challenges have led to the prevalence of quantity over quality outputs.

Tertiary education

1. Low international ranking of Iraqi universities, weak academic achievements and competitive capacities.
2. Poor infrastructure, supplies, laboratories and modern education equipment; high number of students; lack of modern methods.
3. Inability to apply the local, regional and international design standards of university buildings due to the growing numbers of students and the suspension of projects that meet university requirements.
4. Weak partnership among education institutions in the public and private sectors.
5. Huge losses in the universities' infrastructure in the liberated provinces which impacts the whole education process.
6. The available programmes and specialisations do not match fast-paced developments in jobs and work quality standards; lack of focus on skills and multi-specialisation study systems.
7. Weak academic relations with foreign universities; shortages of foreign teaching staff and foreign students at Iraqi universities.
8. Shortage of studies published in international magazines, poor knowledge of publication methods and poor training in scientific research skills and methods.
9. Limited monitoring and evaluation mechanisms; poor administrative, electronic governance and e-library services.

9.1.3. Objectives

Pre-university education

Objective 1: Increase enrolment rates

- ✓ Increase the net enrolment rate in kindergartens to 30% in the target year
- ✓ Increase the net enrolment rate in primary education to 99%
- ✓ Increase the net enrolment rate in intermediate education to 70%
- ✓ Increase the net enrolment rate in secondary education to 45%
- ✓ Increase the enrolment rate in vocational education to 7%
- ✓ Increase the contribution of the private sector to providing education and higher education opportunities by no less than 20%

Objective 2: Provide the buildings and supplies needed to accommodate the target number of students during the Plan period

Means of achievement:

1. Provide sufficient number of buildings to accommodate the target number of students in the 2018–2022 period and provide the regulative climate and safe and healthy education environment in all education institutions:
 - Build 3000 schools during the Plan period to end the double-shift system, handle the growing numbers of students, and reduce classroom crowdedness – including:
 - Issue legislation needed to buy and allocate land for education projects without paying sums of money;
 - Instruct provinces to increase the education projects allocations from the financial allocations received from the various regional development programmes;
 - Encourage the private sector to establish private schools and vocational institutes in order to meet

- the local labour market needs in accordance with legal and education requirements;
- Advise waqf offices to co-finance the implementation of school building projects;
- Renovate 5500 kindergartens and schools;
- 2. Develop training in vocational education by establishing 50 workshops and equipping 515 workshops in different specialisations;
- 3. Provide more equipment, tools and technologies to support education outputs;
- 4. Utilise diverse, new and foreign education materials and tools;
- 5. Develop the buildings of laboratories and research centres based on international standards.

Objective 3: Improve the education system efficiency

Means of achievement:

1. Build the capacities of teaching staff including their knowledge and skills;
2. Provide education and technical infrastructure in schools and universities, and increase the use of new tools to keep up to date with the latest field developments;
3. Provide continues capacity building of education administrators and teaching staff;
4. Improve the quality of graduate programmes and stimulate research for innovation;
5. improve education governance and financial sustainability to achieve competitiveness and institutional excellence;
6. Improve education opportunities to increase the level of job skills and competences.

Objective 4: Provide education services and requirements to create an attractive school environment

Means of achievement:

1. Reduce classroom crowdedness;
2. Provide health and environmental services;
3. Activate the role of parents' councils and CSOs in providing the financing needed to rehabilitate and expand the current school buildings;
4. Carry out early identification of gifted students and ones with special needs and attract them to appropriate schools to provide them with corresponding education environment.

Objective 5: Adopt education technologies to modernise curricula

Means of achievement:

1. Develop the use of new education technologies;
2. Develop the relevant capacities of curricula authors and designers;
3. Adopt modern approaches to curricula evaluation.

Objective 6: Strengthen the development role of vocational education

Means of achievement:

1. Modernise curricula to meet the labour market requirements;
2. Develop the technological capacity of workshops and factories;
3. Increase the admission of vocational education graduates to technical education;
4. Build the capacity of teaching staff in vocational education.

Objective 7: Develop the role of administrative governance at schools

Means of achievement:

1. Improve partnerships among education institutions in the public and private sectors;
2. Advance the delegation of powers to the provinces;
3. Improve the application of administrative decentralisation at the central and local levels;
4. Improve the monitoring and evaluation mechanisms;
5. Enhance partnerships among education institutions in the public and private sectors;
6. Encourage government contractors to participate in the rehabilitation, expansion and development of school buildings.

Objective 8: Develop educational and social guidance and healthcare at schools

Means of achievement:

1. Develop the roles of educational and social guides and researchers;
2. Improve healthcare and nutrition;
3. Improve the coordination mechanisms between school administrations and students' parents;
4. Promote job opportunities for educational and social guides and researchers at schools.

Objective 9: Modernise examination and evaluation

Means of achievement:

1. Develop the capacities of teaching staff in dealing with examination and evaluation techniques;
2. Adopt modern examination and evaluation methods to keep up with developing curricula;
3. Participate in international examinations.

Objective 10: Support literacy projects

Means of achievement:

1. Extend compulsory education to the intermediate level;
2. Organise adult literacy courses and tackle the causes of high illiteracy rates in some provinces;
3. Enhance the capacities of the Ministry of Education, the highest literacy authorities, to face this challenge.

Objective 11: Revive the education institutions affected by terrorism

Means of achievement:

1. Reconstruct and rehabilitate damaged and destroyed schools and increase enrolment rates at all education levels;
2. Close learning gaps caused by displacement;
3. Carry out training programmes for students and teaching staff to enhance the performance levels;
4. Implement programmes aimed to train and empower students who were exploited by terrorist groups;
5. Design cultural and awareness-raising programmes for students and enhance sound education principles to counteract dynamics that promote violence and terrorism.

Objective 12: Enhance cohesion and positive values in education

Means of achievement:

1. Integrate positive ethical values into the school curricula and activities;
2. Enhance social responsibility and citizenship values in society in line with the shared cultural principles;
3. Develop curricula and teaching programmes to build a productive and proactive society, characterised by strong ethical values, sense of responsibility to others, and a culture of dialogue, tolerance and citizenship;
4. Highlight the achievements of the Iraqi civilization in secondary schools and higher education institutions.

Tertiary education

Objective 13: Improve the international ranking of Iraqi universities

Means of achievement:

1. Develop knowledge horizons and increase the number of research papers presented by teaching staff in international publications and at conferences;
2. Develop cultural cooperation with universities and study centres to attract qualified international teaching staff;
3. Improve the use of international languages in building all education aspects;
4. Enhance the efficiency of higher education, expand academic evaluation and recognition, and develop the quality assurance apparatus as a mechanism for advancement in the short run and for recognition in the long run;
5. Benefit from the Iraqi expertise and qualifications inside and outside Iraq to develop the educational and technical programmes.

Objective 14: Develop academic quality at Iraqi universities

Means of achievement:

1. Improve training in scientific research methodologies and skills;
2. Improve curricula and teaching methodologies to promote research, exploration and innovation;
3. Activate and develop the role of research universities and enhance their capacities to meet society's future needs;
4. Universities to provide their Institutions with autonomy and regulative and operational flexibility;
5. Continue delegating students to reputable international universities in the specialisations and fields

required by development plans to meet the labour market needs;

6. Benefit from the advanced forms of continuous learning systems to make it possible to combine learning with work and to continue professional growth, while maintaining quality standards;
7. Prioritise technical and applied education and capacity-building programmes at all levels;
8. Develop entrepreneurship and innovation programmes and business incubators that enable young people to engage in suitable projects;
9. Develop professional guidance programmes and increase recruitment activities and fairs in cooperation with employers;
10. Develop university marketing of programmes to employers' R&D units and forge partnerships to finance joint projects which benefit production sectors;
11. Develop education programmes and specialisations which meet the needs of jobs development and work quality and focus on multi-specialisation study systems.

Objective 15: Enhance partnerships with the private sector

Means of achievement:

1. Sponsor and finance students at universities and research centres to carry out applied or scientific research to support production development projects or to resolve problems in economic sectors;
2. Sponsor business incubators in higher education institutions and support start-ups to succeed;
3. Sponsor and finance education and rehabilitation programmes in the specialisations required by the labour market.

Objective 16: Reconstruct and rehabilitate universities in the liberated areas

Means of achievement:

1. Provide the required infrastructure and laboratories to universities in the liberated areas;
2. Improve social integration in the liberated areas' schools;
3. Provide psychological rehabilitation and awareness units in the liberated areas;
4. Increase university studies and research papers on society rehabilitation and stabilisation;
5. Enhance opportunities that university entry may serve society at the local and national levels.

9.2. Healthcare

Health is a key indicator of development and sustainability. Societies which achieve good health indicators are more capable of learning, productivity and development. International legislations stress that every human being has the right to enjoy high health levels regardless of ethnicity, religion, beliefs and economic and social status. Therefore, the NDP goal is to enhance health and prevention of diseases as a future investment to reduce the social and economic burden of diseases and continue the efforts to develop primary, secondary and tertiary healthcare services to keep up with the latest international developments and achieve full health coverage.

9.2.1. Situation analysis

Infrastructure

Primary healthcare

- Primary healthcare consists of comprehensive primary services provided in prevention and treatment areas through PHCs, and other health facilities that aim to improve the health of individuals and community– especially this of mothers and children.
- The number of PHCs is 1813.
- The number of main PHCs is 998.
- The number of branch PHCs is 815.
- There is a PHC for every 15938 people.

Secondary and tertiary health care

- The number of governmental hospitals is 190 (excluding KRI).
- The number of private hospitals is 80 (excluding KRI).
- Total number of beds in public hospitals is 37024 (excluding Anbar and KRI).
- The number of ready beds in public hospitals (excluding emergency beds) is 29228 (excluding Anbar and KRI).
- The bed occupancy rate is 52.6%.
- There are 1.2 beds available per 1000 people.

Human resources in health sector

The indicator of human resources developed in the medical field in the period 2013–2016 and some indicators reached the planned targets:

- **Doctors per 1000 people.** For 2013, 2014, 2015 and 2016, the indicator reached respective values of 0.79, 0.80, 0.85 and 0.84. The gradual growth is due to the central authority appointing more doctors;
- **Dentists per 1000 people.** Between 2013, 2014, 2015 and 2016, the indicator increased gradually (with respective values of 0.2, 0.21, 0.24 and 0.23) – by 5% between 2013 and 2014 and by 4.8% in between 2014 and 2015;
- **Pharmacists per 1000 people.** Between 2013, 2014, 2015 and 2016, the indicator increased gradually (with respective values of 0.023, 0.24, 0.26 and 0.27) – by 4.3% between 2013 and 2014 and by 8.3% between 2014 and 2015;
- **Health professionals per 1000 people.** The indicator rose gradually during the years 2013, 2014, 2015 and 2016 to 1.9, 1.92, 2.0 and 1.98 for every 1000 people. It increased by 1.1% between 2013 and 2014 and by 4.2% between 2014 and 2015;
- **Nurses per doctor.** The number of nurses witnessed a slight increase in 2014 but fell again in 2015. It increased in the years 2013, 2014, 2015 and 2016 to 2.2, 2.3, 2.2 and 2.5;

- **Bed occupancy rate.** This indicator rose gradually in the period 2013–2015: by 0.86 percentage points between 2013 and 2014, and by 2.7 percentage points between 2014 and 2015. In 2016 it fell to 52.6% – 12.3 percentage points lower than in 2015. Thus, despite the 2013–2015 increase, the bed occupancy rate in public and private hospitals does not meet the target levels of the plan period.
- **Beds per 1000 people.** There are 1.2 beds per 1000 people. The indicator remained unchanged in the period 2013–2014. It also does not meet the set target.

Child-friendly hospitals

The number of child-friendly hospitals increased slightly – from 41 in 2013–2014 to 42 in 2015 (2.4% increase). Although this indicator is extremely significant for children, it is not developing as planned.

Infant mortality rate

- **Neo-natal mortality rate** (deaths per 1000 live births). In 2014–2015, the mortality rate of new born babies rose by 4%. According to reports by the Ministry of Health, the main three diseases which caused the death of new-born babies in 2015 were respiratory and heart disorders, bacterial diseases and disorders related to pregnancy and embryo growth.
- **Infant mortality rate** (deaths per 1000 live births). The infant mortality rate fell to 18.1/1000 in 2016.
- **Under-five child mortality rate** (deaths per 1000 live births). The indicator fell from 37/1000 in 2014 to 22.7/1000 in 2016.
- **Maternal mortality rate** (deaths per 100 000 live births). According to MoH data, the maternal mortality rate rose from 32.46/100000 in 2014 to 36.2/100000 in 2015 due to improved maternal mortality monitoring system.
- **Life expectancy at birth.** Data by the Ministry of Health indicate that life expectancy at birth increased from 71.1 years in 2013 to 72.69 years in 2015.
- **Percentage of underweight children under five.** This was 6% in 2013, 8% in 2014, and 5% in 2015. The indicator does not meet the target.

Reproductive health

The indicators point to poor reproductive health services particularly in the prevention coverage of women. The rate of pregnant women who paid five visits to PHCs increased from 34% in 2013 to 35% in 2014. It appears that in 2015 it fell again to 24% but value excludes the provinces affected by terrorism.

- **Percentage of births assisted by a health professional.** This indicator rose gradually in the years 2013, 2014 and 2015 to 87.7%, 91.5% and 95.5% respectively. Thus, the planned target was achieved. This indicator is important for the evaluation of the level of reproductive health services.

Communicable diseases

- **Tuberculosis cases per 100 000 people.** The number of tuberculosis cases per 100 000 people for the years 2013, 2014 and 2015 reached 25, 24 and 23 respectively.
- **Deaths caused by tuberculosis per 100 000 people.** The number of deaths caused by tuberculosis per 100 000 people fell from 1.33 in 2013 to 1.31 in 2014 and 1.28 in 2015, thanks to an effective anti-tuberculosis programme.

Non-communicable diseases

- **Share of early deaths caused by non-communicable diseases among people under 70 years in total deaths** (all causes, all ages). The four covered non-communicable diseases are cardiovascular diseases, cancer, diabetes and chronic respiratory diseases. They share the same risk factors, social limitations and possibilities for prevention and control. The indicator rose gradually in the period 2016–2013. The share of deaths caused by non-communicable diseases (chronic diseases) rose from

39.5% in 2013 to 53.2% in 2016 due to negative lifestyle changes and lack of recent statistics in the provinces affected by terrorist acts.

9.2.2. Challenges

1. Limited efficiency of the health system and dilapidated infrastructure of healthcare facilities.
2. Weak modernisation of PHCs.
3. Poor education outputs of medical and health staff.
4. The management systems of medicines, medical technologies and health information are not updated on a regular basis.
5. Low efficiency of service delivery mechanisms, as medical and health staff work in the public and private sectors simultaneously.
6. Poor community awareness regarding general health concepts and psychological health in particular.
7. Limited specialised healthcare services.
8. Weak participation of relevant ministries and government institutions in preserving the health of individuals and society.
9. Limited use of administrative governance, weak updating of health quality standards.
10. High rate of communicable and non-communicable diseases due to limited prevention and obsolete water and sanitation infrastructure, aggravated by displacement and population instability.
11. Negative climate change impacts, growing environmental issues and pollution levels (soil, water, air).
12. Weak coverage of family regulation programmes and low levels of awareness of reproductive health.
13. Huge human losses due to the fragile health situation in the areas affected by terrorism.
14. Persistent security challenges and problems related to internal displacement.
15. Immigration of qualified medical and health staff.
16. Limited provision of medicines, medical supplies and equipment to health institutions.

9.2.3. Objectives

Objective 1: Improve and modernise the health system

Means of achievement:

1. Develop the health institutions infrastructure;
2. Develop and modernise PHCs;
3. Improve the mechanism of health services provision;
4. Improve the level of education outputs of medical and health staff;
5. Increase health sector financing and financial allocations and develop financial management;
6. Improve and update the medicines and medical technologies system;
7. Reduce the cost of modern medical technologies;
8. Increase the investment in pharmaceutical industries.

Objective 2: Improve the health prevention system

Means of achievement:

1. Control disease transmitters;
2. Implement epidemic challenge programmes upon a Bilharzias is outbreak to reduce the infection rate and spread of parasites and test samples of health centre visitors;
3. Establish comprehensive laboratories in the centres of border provinces to test the imported materials and provide laboratories with the needed equipment and devices;
4. Develop interventions which enhance nutrition and encourage breastfeeding.

Objective 3: Develop health information management

Means of achievement:

1. Modernise the monitoring and evaluation mechanism in the health statistics field;
2. Improve electronic preparedness;
3. Improve methods of electronic service delivery (Electronic Health Card Project).

Objective 4: Improve the mechanisms for health services delivery

Means of achievement:

1. Improve diagnostic health services;
2. Encourage medical and health staff to work in the public and private sectors simultaneously;
3. Increase the application of work manuals and comply with the job descriptions of health and administrative staff.

Objective 5: Apply administrative governance in the health sector

Means of achievement:

1. Update the administrative decentralisation application systems;
2. Activate partnerships between the public and private sectors;
3. Modify and activate the administrative and legal legislations related to the health sector;
4. Update health quality standards according to the international standards;
5. Update and activate monitoring and evaluation systems.

Objective 6: Reduce communicable and non-communicable diseases

Means of achievement:

1. Develop, modernise and rehabilitate the infrastructure of water and sanitation services;
2. Improve the prevention system;
3. Raise awareness of people about unhealthy lifestyles and practices;
4. Enhance the population stabilisation opportunities;
5. Reduce the impact the social limitations, practices and constraints on the health situation;
6. Reduce the leaks of industrial water into rivers;

7. Coordinate with the relevant ministries to implement the tasks related to these ministries under the strategy of combating communicable and non-communicable diseases;
8. Improve the prevention of hepatitis B and malaria.

Objective 7: Reconstruct and rehabilitate the health institutions in the areas affected by terrorism

Means of achievement:

1. Reform the infrastructure of hospitals, health centres and administrative buildings;
2. Provide life-saving medical equipment;
3. Enhance prevention and treatment programmes with focusing on the most vulnerable groups;
4. Provide primary and secondary healthcare to the displaced in camps and areas of returnees;
5. Design health policies and programmes to rehabilitate families affected by traumas and mitigate their impacts on the long term;
6. Adopt programmes and interventions which are sensitive to the children's health issues (dwarfing, emaciation, underweight, etc.) and comply with the rights of the child.

Objective 8: Maximise financial resources and develop health economics

Means of achievement:

1. Create attractive investment climate in the health sector;
2. Create instruments to maximise financial resources;
3. Develop the health economics concepts and the national health account;
4. Apply appropriate mechanisms to sustain financial liquidity to implement health programmes and services.

9.2.4. Key performance indicators

Table 39

Targeted indicators in the health sector till 2022								
n	Indicator	Base values		Target values				
		2016	2017	2018	2019	2020	2021	2022
1	Doctors per 1000 people	0.84	0.86	0.89	0.92	0.96	0.98	1
2	Dentists per 1000 people	0.24	0.26	0.28	0.30	0.33	0.35	0.4
3	Health professionals per 1000 people	2	2.2	2.3	2.4	2.4	2.4	2.5
4	Bed occupancy rate (%)	52.6	65	68	70	72	74	76
5	Infant mortality rate per 1000 live births	18.1	17	17	17	16	15	14
6	Under-five mortality rate per 1000 live births	22.7	25	25	25	25	25	24
7	Underweight children under five (%)	6.3	6	5.8	5.5	5.3	5	4.8
8	Maternal mortality per 100 000 live births	34	33	33	32	32	32	32
9	Births assisted by a health professional (%)	93.9	95	96	97	98	98	98
10	Tuberculosis cases per 100 000 people	22.08	21.16	20.24	19.32	18.4	17.25	16.1
11	Deaths caused by road accidents	18.5	18	17.5	17	16.5	16	15.5
12	Beds per 1000 people	1.2	1.3	1.4	1.5	1.6	1.7	1.8
13	Coverage of DIP3 vaccination against diphtheria, tetanus and whooping cough (%)	75 %	80 %	82 %	85 %	87 %	89 %	90 %

9.3. Women

9.3.1. Situation analysis

Education of women

• Enrolment rates

- The enrolment rate of males remains higher than for females at the primary, intermediate and secondary levels. However, in kindergartens, the enrolment rate of females is higher.
- The female enrolment rate in primary education started to rise gradually in 2012 but it is still lower than this for males. The highest female enrolment rate was in the 2014/2015 school year (107 females versus 112 males). The enrolment rate in the intermediate stage in the 2015-2016 school year was 97% for males and 70% for females. The enrolment rate in the secondary stage in the 2015-2016 was 51% for males and 44% for females.
- In the tertiary education, the enrolment rates of males are higher than females. However, the females' enrolment rates rose from 13.4% in 2011 to 18.5% in 2015 where as the males' enrolment rate rose from 15.5% in 2011 to 20.2% in 2015.

• Dropout rates at all education levels

- The dropping out rate of females is higher than males and increases with the development of education stages. It witnessed a marked increase in the primary education compared with males and the difference rose in the intermediate stage. The dropping out rate of females in the intermediate stage in the 2015-2016 school year reached 4.7% compared with 3.6% for males.

• Enrolment rate sat all education levels

- An overview of the general tendency of enrolment in all education stages shows that families are not very keen on providing education to their female children. However, in preschool, the number of females is higher than males but falls with the development of education stages.
- The enrolment rates of males in the vocational education are noticeably higher than females. The highest ratio of females to males reached 25.9% in the 2012/2013 school year and the lowest was 23.6% in the 2015/2016 school year. This does not apply to the Iraqi institutes. The school years 2009/2010, 2010/2011, 2011/2012 and 2012/2013 showed that
- the enrolment rate of females are higher than males. However, it started to fall in the following years and reached its lowest in the 2013/2014 school year (41.7%).

Economic participation of women

- According to the 2014 Family Social and Economic Survey, the ratio of working women to economically active women was 78% – slightly higher than the 2012 rate (77%).
- The ratio of working women in the private sector to economically active women reached 29% in 2014 – compared to 32% in 2012. The ratio of working women in the governmental and public sector to the economically actives women reached 46% in 2014 – compared to 41% in 2012. This clearly shows that women prefer to work in the public sector.

Women's health

- **Births conducted by specialised health professionals.** This indicator rose gradually in 2013, 2014, 2015 to 87.7%, 91.5% and 95.5% respectively, which means that the planned target was achieved. This indicator is key to evaluate the level of reproductive health services.
- **Early deaths of women caused by non-communicable diseases per 100000 people.** The rates of early women deaths caused by key non-communicable diseases compared to deaths caused by all reasons

and age groups for the 2009-2015 period were similar. In 2010, there were 58.9 deaths/100,000 women but in 2015, this number fell to 41/100,000 women.

- **Breast cancer.** A key health indicator which has risen over the last few years due to environmental limitations and the impacts of terrorist acts on the general health situation and cancers in particular. The Ministry of Health's data show high breast cancer rate. It rose from 19% in 2009 to 30.6% in 2015, a marked increase which requires well-designed health programmes to reduce the risks of this disease.

Social protection

- The number of women covered by the social protection network in 2010-2015 were higher than males. In 2013, there were 471,318 female beneficiaries compared with 407,189 male ones.

Social situation

- According to the 2016 Comprehensive Food Security and Vulnerability Analysis in Iraq, the rate of women who lead families on the national level reached 10%. The highest rate was registered in Baghdad (13.6%) followed by Suleimaniah (12.3%). In comparison with previous years,
- The number of married women aged 12 and above on the national level reached 53.9%. The highest rate was in Muthanna (56.9%). According to the 2016 Food Security and Vulnerability Analysis in Iraq, the average age of the females' first marriage reached 20.8 years old.
- There were 246430 marriage cases in 2009, the highest number recorded on the national level. In the period 2009-2016, the number of marriages decreased to its lowest levels in 2014, which negatively impacted the society's dynamics, movement and stability. They fell to 190026 marriages. However, they started to rise again but did not reach their previous levels.
- The falling marriage levels were met by rising divorce cases. According to the Supreme Judicial Council's data, there were 59515 divorce cases in 2011. The year of 2016 witnessed a noticeable increase with 56594 cases compared with 52,028 cases in 2014.
- The Iraqi society witnessed an increasing number of domestic violence cases, reaching 8,552 cases in 2016 based the documented and registered cases in the family and child protection departments in Iraq.
- The Ministry of Interior community police registered 10710 abuse cases against women in 2016 including physical, verbal and psychological violence.
- Terrorist acts and displacement impacted women and resulted in a huge number of widows and divorced women who became the sole breadwinners of their families. The number of women who fell victim to abduction, rape and trafficking reached 4,000 according to the statistics of the Organisation of Women's Freedom in Iraq in 2015.

Women in sectoral strategies

- **Relevant strategies:**
 - National Anti-Violence Against Women Strategy in Iraq (2013-2017)
 - National Strategy for Improving Iraqi Women Status (2014-2018)
 - Rural Women Strategy.
- **The above-mentioned strategies were not implemented properly due to the country's circumstances during the period of their development.**

9.3.2. Challenges

1. Cultural and social factors remain key obstacles to the development roles of women and men and weak activation of the women empowerment laws.
2. Cancelling the ministries of women affairs and human rights. The former focused on upholding the rights of women and implemented programmes to achieve objectives 15 and 16 of the sustainable development objectives in partnership with the relevant entities.
3. Although the personal status law specifies the marriage age, the rate of early and underage marriages is high which increases the maternal mortality rate. In the last two years, the Iraqi women were also victims of violence and human trafficking particularly in the areas hit by terrorism and security issues and no effective treatment and psychological rehabilitation programmes were implemented.
4. Weak labour market participation of women: 14.5% total, 12% in rural areas, 14% in urban areas;
5. The state budget is unresponsive and insensitive to gender issues.
6. Faulty distribution of social and economic roles between men and women, clear discrimination against women and high levels of gender-based violence.
7. Growing number of widows and orphans and high rates of divorce and poverty.
8. CSOs play weak development role in reproductive health and family planning programmes.
9. Despite the narrowing gap in enrolment rates between men and women in all education stages, it is still wide.
10. Weak economic empowerment of women:
 - Weak participation in the labour market due to societal culture based on gender discrimination
 - Weak women's participation in the private sector due to dominant traditions and social customs, poor application of labour laws and limited number of loans provided to women.
11. Women's poor knowledge and skills:
 - Dominant patriarchal culture that supports gender-based discrimination in the education sector
 - High rate of female dropouts
 - Early marriages due to societal culture and high poverty levels
 - Difficult access to schools due to long distances in rural areas
 - Lack of gender-sensitive policies.
12. Fragility of women's health situation:
 - Shortage of health services provided to women due to the limited number of reproductive health and family planning centres
 - Shortage of medical female staff particularly in the rural areas
 - Weak awareness of the importance of early detection of women diseases such as breast and cervical cancers.

9.3.3. Objectives

Objective 1: Empower women educationally

Means of achievement:

1. Reduce the dropping out rates of girls through:
 - Adopt the policies, programmes and activities set out in the Poverty Reduction Strategy (mentioned in a previous chapter);
 - Increase the number of secondary specialised schools for girls in the rural areas;
2. Increase the enrolment rates of girls in primary education particularly in the rural areas:
 - Activate the Compulsory Education Law;
 - Link social protection with enrolling girls in schools;
 - Take legal measures towards the families which do not send their children to school in the required age.

Objective 2: Empower women economically

Means of achievement:

1. Improve women's participation in the labour market:
 - Increase the training opportunities which target women;
 - Provide women with borrowing facilitations;
2. Increase the participation of women in the private sector:
 - Activate the Iraqi Labour Law No. 37 of 2015 through focusing on the tenth chapter (Protection of Working Women) to support the participation of women in the labour market;
 - Create suitable and guaranteed job opportunities in the private sector;
 - Increase the number of small loans provided to women.

Objective 3: Empower women in the health sector

Means of achievement:

1. Improve health services targeting women:
 - Increase the number of reproductive health and family planning centres particularly in the rural areas;
 - Recruit specialised medical female staff in these centres in the rural areas;
 - Train skilful midwives in the remote areas;
 - Train medical female staff in the rural and poor areas;
2. Raise awareness of the importance of early detection of women diseases such as breast and cervical cancers.

Objective 4: Empower women in the areas affected by terrorist acts

Means of achievement:

1. Enhance the role of women in the building and development process to apply the equal opportunities principle;
2. Conduct training courses to implement Law 1325 on training women during peace;
3. Raise awareness of displaced women of their rights and how to demand them;

4. Adopt a women-friendly soft loans policy which is linked to their productivity to facilitate the access of displaced, poor and bread winning women to financial resources;
5. Promote traditional crafts as rewarding job opportunities for women and provide them with incentives and financial, skill and marketing support;
6. Adopt a policy to encourage the education and literacy of females through providing them with financial and other incentives to encourage them to join literacy centres and prevent them from dropping out;
7. Link all policies which provide women with incentives with their health certificates based on documents proving their regular prevention and treatment record to enhance their participation in development and reconstruction processes.

Objective 5: Expand the participation of women in the private sector

Means of achievement:

1. Establish business incubators which help create an empowering environment for women in the private sector;
2. Adopt social security mechanisms for women's work in the private sector.

9.4. Youth

9.4.1. Situation analysis

Youth education

- The enrolment rate for the age group 15–17 rose steadily in the period 2009–2016, from 16% to 29%. This reflects the growing community awareness of the importance of education for youth empowerment. The data also show growing enrolment rates for females in the same age group.

Economic activity of youth

- According to data from the 2014 Family Social and Economic Survey, the ratio of working people to the economically active ones in the age group 15–29 is 82% (59.7% for females). This is compared to 81.4% (61.5% for females) in 2012.
- The ratio of working young men to the economically active ones is 85%, but 59% for young women. This shows a clear gender gap.
- The highest ratio of working young people to the economically active ones is given in Kirkuk (94.8%) and the lowest– in Anbar (66.7%).
- The ratio of working young people to the economically active ones was 78.5% in urban and 87.6% in rural areas in 2012 – compared to, respectively, 80.7% and 86.7% in 2014.
- Between 2012 and 2014, the ratio of working young people to the economically active ones increased from 55.3% to 57.3% in the private sector, and it decreased from 21.8% to 21.7% in the public sector.

9.4.2. Challenges

1. Rampant unemployment and lack of jobs provided to young people and not implementing the relevant national policies, plans and strategies.
2. Poorly standardised and inefficient labour market, widening gap between education system outputs and labour market requirements, and difficult access to credit.

3. Deteriorating stability and security and weak rule of law which deepen societal division, reduce social cohesion and lead to dominance of parallel laws (tribal laws, customs, etc.);
4. High school dropout rates particularly at the intermediate and secondary levels;
5. High emigration rates as young people have no future prospects inside their country;
6. High rates of addiction to drugs and alcohol among young people;
7. Weak feelings of responsibility, commitment, perseverance, faithfulness and citizenship.

9.4.3. Objectives

Objective 1: Implement national youth policies, plans and strategies

Means of achievement:

Support the implementation of youth employment plans and programmes;

While Iraq is witnessing a demographic boom, accommodate the growing number of young people to secure their positive role in development and to strengthen their national feelings;

Actively follow up on plans, programmes, policies and strategies and identify the barriers to their implementation.

Objective 2: Create an enabling environment for youth

✓ Empower young people economically

Means of achievement:

1. Encourage stakeholders to implement plans, programmes and policies to empower youth economically;
2. Develop educational programmes and specialisations whose outputs meet the labour market requirements;
3. Increase the loans provided to young people to establish small income-generating projects, particularly in rural and informal settlement areas;
4. Activate the role of the private sector and establish business incubators in the provinces and qadhas to host the young people's projects, and prepare the requirements for the construction and development of such incubators to reduce unemployment and poverty.

✓ Empower young people culturally and socially

Means of achievement:

1. Using media and communications, spread the culture of tolerance, dialogue and community cohesion to improve awareness of the importance of these values for increasing tolerance and acceptance of others in communities;
2. Establish more sport and entertainment centres for young people.

✓ Empower young people in the areas affected by terrorist acts

Means of achievement:

1. Conduct training courses to enhance young people's job skills;
2. Build productive young leaders to enhance young people's role in public life;
3. Integrate the highest number of displaced young people to protect them from radicalisation and resorting to violence;

4. Implement specialised psychological programmes which target young people who are in conflict with law and ones affected by terrorist acts;
5. Provide the needed support and care to young people who were exploited and abused to enhance their welfare and facilitate their integrating in society.

9.5. Social development

The need for social programmes and activities in Iraq has increased in the past few years due to aggravated social problems linked to terrorism, violence and displacement. Correspondingly, there is need to articulate and implement various social programmes– to alleviate poverty, to provide social protection, to fight unemployment, to provide training and develop human resources, to provide social care to the most needy families, and to provide care for and educate disabled children – integrated as best as possible in the development programmes and plans.

9.5.1. Situation analysis per vulnerable group

1. Children

- The age group 0-17 is the largest in Iraq – 45.8% of the total population (43.6% in urban and 51.4% in rural areas).

2. Orphans

- There are 22 State orphanages in Baghdad and the provinces; the number remains unchanged in the period 2012–2016.
- The ratio of orphans per social worker increased sharply in 2013–2015 due to the security situation. The indicator did not reach the set targets (9.2 for 2015 and 8.8 for 2016 and 2017).
- The number of orphans in State orphanages fell to 365 in 2016 due to the security situation and the success of the family planning programmes. In addition, the delay in building and furnishing orphanages obstructed the implementation of the planned programmes.

3. Elderly people

- Although the population of Iraq is young, life expectancy has been on the rise (currently this is 70 years), increasing the share of elderly people. The number of people aged 65 and above was about 1.141 million in 2015; this is expected to increase to 2.242 million in 2030.
- In 2013–2015, there were 660 elderly people distributed to 12 social care homes. In 2016, social care homes were 13 – an increase of 8.3%.

4. People with disabilities

- According to a COSIT survey, the number of people with disabilities in Iraq reached 1200000 in 2016. There were 49 institutes for people with disabilities in 2013–2015, and 51 in 2016 (4.1% increase).

5. Nurseries

- In 2013–2015, there were 42 nurseries; in 2016 the number of nurseries fell to 41.
- As for the children-per-nursery indicator, for 2013–2017 the previous NDP planned to keep this at 2012 value – 59. Due to economic challenges and the deteriorating security situation in some areas, the indicator value decreased in 2013–2015 but it increased by 2.8% in 2015-2016.

6. Juveniles in conflict with the law

- In 2013-2014, there were eight schools and care homes hosting sentenced, detained and homeless adolescents. In the following two years (2015-2016), this number fell to seven homes 0 while the aim was to increase them to 12 homes.

- In 2015, there were 671 sentenced adolescents (627 male and 44 female).

7. Beneficiaries of the social protection network

- In 2013, the total number of social protection beneficiaries was 878507 (including 53.6% women). In 2014, this increased slightly to 884294 (by 0.66%). The share of female remained higher than the share of male beneficiaries – which may be linked to the high rate of widows acting as head of household.
- In 2015, the total number of social protection beneficiaries decreased to 819176 (by 7.4%) due to the country's financial crisis. However, in 2016, it increased again – to 905773 (10.6%); and the share of female beneficiaries fell to 45.7% – as heads of household, including men and women, were allowed to apply for social aid online and the majority of applicants were male.
- In 2015-2016, the number of social researchers employed in the social protection network reached 1280 – a nearly 21-fold increase compared to 2013 and over 15-fold increase compared to 2014. This indicator exceeded the NDP 2017 target. A total of 1250 social researchers were appointed in Baghdad and the provinces to evaluate and improve the coverage of the social protection network and to limit benefits access for people who do not it.

9.5.1. Challenges

1. High share of people with disabilities and special needs (1200000 in number according to the 2017 Iraq Disability Survey).
2. Poor logistical services provided to people with disabilities and special needs.
3. Weak awareness of the importance of educating, rehabilitating and integrating people with disabilities and special needs.
4. Disrupted development role of the social institutions due to terrorist acts.
5. Increase in multi-dimensional poverty rates particularly in the provinces affected by terrorist acts.
6. High rate of child labour and violence against children and women.
7. High rate of early marriages of underage females and consequent high divorce rates.
8. Deepening of social problems linked to rise of radical behaviours that undermine security and stability; spread of social risks such as addiction to drugs, alcohol and smoking; weak social monitoring.
9. Weak counselling and psychological guidance systems.
10. Weak family ties and low levels of social cohesion.

9.5.3. Objectives

Objective 1: Reduce the number of people with disabilities and special needs

Means of achievement:

1. Improve primary healthcare (prevention and treatment) and reproductive health services;
2. Reduce poverty rates;
3. Reduce road accidents;
4. Empower and integrate persons with disabilities in society through loans provision to start income-generating projects;
5. Implement a strategy aimed to improve reproductive, maternal and children's health and to improve occupational health and safety procedures;
6. Develop family planning programmes including birth control, marriage tests and comprehensive care

programmes for children under five.

7. Build accurate databases on people with disabilities and special needs and carry out specialised surveys.

Objective 2: Improve institutional services to empower persons with disabilities and special needs

Means of achievement:

1. Develop educational materials for people with disabilities and special needs;
2. Improve the early diagnosis of persons with disabilities in health facilities;
3. Increase the number of specialised centres and appoint specialised doctors and technicians;
4. Expand studies in the field of disabilities and special needs at the faculties of medicine and develop scientific research in this field.

Objective 3: Improve community awareness of people with disabilities and special needs and their participation in education at primary and secondary levels

Means of achievement:

1. Update legislation to support the educational integration of persons with disabilities and special needs;
2. Spread the culture of educational integration in the school environment to facilitate participation in educational integration among society;
3. Create school and classroom environment which enables educational integration;
4. Develop and adapt curricula and teaching methodology and evaluation and examination methods and prepare teacher guides and tables to enhance the behaviour of disabled children to facilitate education and educational integration.
5. Develop plans to support and empower staff involved in educational integration. Specifically:
 - Provide job openings for teachers to meet the needs of schools regarding integration;
 - Prepare programmes to train specialised teaching staff in the private education sector;
 - Provide financial and moral incentives to encourage work in this field;
6. Expand the educational integration of people with disabilities and special needs to cover all education levels;
7. Adopt a unified mechanism to diagnose disabilities based on social patterns.

Objective 4: Reduce the child labour rate

Means of achievement:

1. Reduce school dropout rates;
2. Reduce poverty rates;
3. Adopt official controls to reduce homelessness and beggary and to enhance a societal attitude against these phenomena;
4. Develop analytical surveys on dropping out of primary and secondary schools, particularly in the poorest provinces and informal settlements;
5. Ensure the provision of primary education in poor areas;
6. Implement programmes to reduce family poverty in poor and informal areas, including soft loans programmes;

7. Implement business incubation programmes for poor women, drawing on the comparative advantages of each locality.

Objective 5: Reduce violence cases against children

Means of achievement:

1. Reduce the rate of domestic and school violence against children and reduce all forms of child recruitment;
2. Develop the educational and social monitoring methods and improve family attitudes regarding violence against children;
3. Improve monitoring of school violence against children and adopt mechanisms to allow children to report abuses;
4. Build the capacity of social and psychological guidance professionals at schools.

Objective 6: Reduce the number of juvenile offenders

Means of achievement:

1. Enhance institutional and informal monitoring methods;
2. Develop community integration programmes for adolescents;
3. Implement laws and legislations;
4. Reduce the spread of small and light weapons;
5. Develop studies on community integration of juvenile offenders, benefiting from the successful international experiences in this domain;
6. Rehabilitate juvenile offenders by integrating them in training courses on daily life topics and in professional fields.

Objective 7: Reduce the levels of addiction to drugs, alcohol and smoking

Means of achievement:

1. Improve institutional and informal monitoring methods;
2. Increase opportunities to enforce legislation addressing drugs, alcohol and smoking;
3. Improve control of border crossings and improve internal monitoring in cafes and shops;
4. Improve educational monitoring and psychological guidance at schools;
5. Increase the rule of law and law-enforcement;
6. Activate the internal monitoring role of the Ministry of Interior, Ministry of Health, Provincial Councils, and the other monitoring institutions (including religious and tribal institutions);
7. Implement special programmes to treat, care after and rehabilitate addicts.

Objective 8: Reduce the early marriage rate for women

Means of achievement:

1. Reduce female dropout rates in primary and secondary education;
2. Improve community attitudes towards increasing the marriage age of females;
3. Apply compulsory education of girls;

4. Apply the basic education programme;
5. Organise literacy courses particularly in rural and remote areas.

Objective 9: Rehabilitate infrastructure and integrate vulnerable groups in areas affected by terrorism

Means of achievement:

1. Facilitate safe living together for families returning to their home areas and support their rights and human dignity;
2. Support vulnerable groups (women, children, people with special needs, etc.) and enhance the conditions for normal childhood development;
3. Implement national training programmes for individuals, families and local communities in the liberated areas;
4. Run remedial courses for children affected by displacement, poverty and illiteracy;
5. Implement national strategy programmes to reduce poverty and to ensure that social protection systems cover the entire population.

Objective 10: Improve the quality of life

Means of achievement:

1. Develop the efficiency of social services according to international standards and facilitate access to social services;
2. Secure subsidies and aid to eligible people;
3. Improve social services provided to people with special needs and facilitate their participation in the different activities;
4. Promote voluntary work ethics and develop social solidarity and fraternity programmes;
5. Strengthen family ties and preserve family cohesion, interaction and values;
6. Develop systems and legislations which secure the rights of citizens and their families in case of disability and aging;
7. Promote research and studies on demographic changes and social phenomena;
8. Fully exploit demographic advantages to achieve development objectives;
9. Improve the services provided in reform schools according to international standards.

9.5.4. Key performance indicators

Table 40

Performance indicators 2018-2022– social development

N	Objective/means (n)		Base values			Target values				
			2015	2016	2017	2018	2019	2020	2021	2022
1	People with disabilities (PwDs)	Institutes for PwDs	51	51	53	54	54	55	55	56
2		PwDs/ teacher	—	—	6	7	8	8	8	8
3		PwDs/ researcher	—	—	18	19	19	20	21	21
4	Visually impaired and disabled people supported by the Ministries of labour and education to complete secondary education		15/14	16/15	17/16	18/17	19/18	20/19	21/20	22/21
			—	—	30	35	37	40	42	45
5	Full-time aid appointed from MoL staff		—	1797	4671	2000	2500	3000	3500	4000
6	Full-time aid from outside MoL staff		—	24594	39252	58822	63822	73822	88822	108822
7	Autism rehabilitation centres established in Baghdad and the provinces		—	1	1	1	1	2	3	4



Chapter Ten: Environmental Sustainability

10.1 Situation analysis

10.1.1. Climate phenomena

Iraq is exposed to many climate phenomena, especially as related to climate change and global warming. The latter have started to exert noticeable impact on Iraq and the entire region, linked to decreasing water resources including rainfall and increase in temperatures, humidity, evaporation and sandstorms. Iraq Monitoring of these changes in Iraq has started with establishment of observatories; 50% of these observatories have recorded above-average rainfall quantities in the 2016-2017 wet season.

Loss of rainfall water in Iraq is due to groundwater infiltration (5%), surface water runoff (20%), and – notably – evaporation from rising temperatures (75%). Preserving these large water quantities lost to evaporation requires a number of measures to collect and utilise rainwater.

Ecological footprint

The ecological footprint concept concerns the relationship of organisms with their environment. Larger physical environment entails higher pollution. Iraq suffers from an environmental deficit; the biological capacity of the entire land footprint is lower than the international rates. Therefore, the ecological footprint – i.e. human demand on nature – in Iraq is increasing. Therefore, the following steps should be taken:

- Launch continuous awareness-raising campaigns to help understand the environmental footprint concept and its calculation methods and the data it requires;
- Identify, use and maintain renewable and clean energy sources, particularly solar energy, in order to reduce demand on oil and gas sources, to reduce carbon emissions, to raise environmental awareness, and thereby limit resource depletion;
- Reduce the random growth of informal settlements and trespassing on agricultural lands;
- Protect the marine environment and ensure sustainable management of fishing areas which form part of the biological capacities;
- Promote the optimal use of water resources and adopt modern irrigation methods to increase cultivated areas; ensure sustainable management of resources in agriculture; and support agricultural production to reduce imports.

Water footprint

Water footprint refers to the amount of water consumed by human activity; it includes the water needed to produce agricultural or industrial products, as well as the direct and indirect use of water by consumers and producers. It is measured in litre or square meter per capita per year. It is divided into: internal water footprint – all the water used inside the country divided by the population number; and external water footprint – the total of all water footprints for all imported goods divided by the population number. The water footprint of a given country depends on two main factors: the water consumption per capita and the efficiency of the water resource management systems in that country.

More narrowly, with respect only to water use to produce products, the concept of 'virtual water' footprint applies – i.e. the water in every product. A country's saved virtual water is calculated by subtracting the virtual water saved from exported products from the virtual water saved from imported products. The result is the water saved from foreign trade. This might change the import and export concept for all goods and raw materials – as budgets of water quantities are prepared. E.g. a budget of water quantities used in growing given crops can inform decision to stop growing crops which deplete water resources in order to achieve water security. I.e. it is possible to improve water security by calculating the water quantities needed to produce exported and imported food products and developing a water budget accordingly.

- Iraq suffers from water shortage and it will remain below the water poverty line for the next 15 years. Therefore, water resources management systems in Iraq should be improved and water loss should

be reduced through use of the “virtual water” footprint.

- Iraq is an agricultural country. It has freshwater resources and fertile lands in its central and southern regions, and some of its northern regions (8 million ha, 13% of the country’s area). The total availability of fresh surface water in the basin of the Tigris, Euphrates and their tributaries is 156.8 billion m³.
- Most recharge (about 70%) occurs between March and June, when snow melts in the northern region. The climate is hot and dry for about six months each year ;the winters (wet period) are short; the annual rainfall is scarce – Iraq’s annual rainfall rate is 220 mm in the best climate conditions. Therefore, all of Iraq’s available fresh water is blue with very little green water.(1).
- Iraq's water footprint situation with relevance to agriculture can be summarised as follows:
 - Iraq has scarce freshwater resources due to climate change and factors in the neighbouring countries. Thus, the situation of blue water in Iraq is critical;
 - Green water in Iraq is really scarce due to the hot and dry climate and limited rainfall;
 - Grey water is abundant in Iraq, due to weak environmental legislations and protection of rivers from daily pollution;
 - The water footprint cannot be calculated accurately due to the many factors affecting its value. However, approximate values can be reached so that decision makers, companies and institutions engaged in reducing water consumption and improving water efficiency identify the best measures to be taken to reduce water waste and provide safe and healthy fresh water.


10.1.2. Environmental situation in Iraq by main environmental element

Air pollution

Air quality in Iraq is deteriorating with negative impacts on the environmental and health situation. Chronic respiratory diseases and allergies are on the rise. The deterioration of air quality can be ascribed to:

- Significant increase in the number of vehicles in general, including a large proportion of old ones which use fuel that does not meet environmental requirements;
- Burning of waste by citizens, as the garbage collection process is weak;
- Cutting of trees and forests, especially palm trees, to be used for heating which reduces green areas;
- Piling of waste and exposed sewage which emit air-polluting gases;
- Polluting industries and their impact on the environment;
- Air pollution linked to oil:
 - Sabotaging of oil pipelines and conflagrations, which increase air pollution;
 - Burning of associated gas and not meeting of international standards in the production and use of oil by-products;
 - Sub-standard specifications of most fuel supplied to stations and fuel shortage;
 - Development efforts by the Government to produce unleaded gasoline in the country’s central and southern refineries and LPG stations;
- Air pollution caused in the process of electricity supply, due to old stations and use of household, small and large power generators, which emit pollutants. The country’s electricity system consists of the main three stages: production, transfer and distribution. Due to internal consumption and loss of electrical power within production stations and along the three stages before reaching consumers,

(1) Translation note: “Blue,” “green” and “grey” water are classifications based on where the water resources are found in nature and the level of contamination. Blue water is the freshwater – surface and groundwater. Green water is the soil moisture from precipitation, used by plants via transpiration. Grey water is polluted water which was not in contact with faecal matter; it is the product water of domestic activities, industry, or water polluted from use of pesticides and fertilizers in agriculture; it can be recycled and reused for irrigation.



produced quantities of power fall short of consumer demand. Also, power stations lack air treatment systems and air purification systems are stopped due to inefficiency.

Water pollution

- a. Water.** Most existing wastewater treatment stations are old and inefficient and receive quantities higher than their design capacities. Also, rainwater networks are transferred through informal links, while liquid waste disposed of by hospitals and industrial water disposed of by some companies and factories are also linked to these networks.
- b. Solid waste .**Only the population of urban areas are covered by waste collection services; municipal institutions are not responsible for waste collection in rural areas as they are outside the municipal borders.
- c. Hazardous waste .**This includes poisonous materials, high concentrations of flammable materials, explosives, and substances which can interact, corrode and impact the health of human beings, animals, plants and the environment, whether alone or when combined with other materials. The quantity of hazardous solid industrial waste in Iraq reached 119425.4 t/y in 2012. The quantity of dangerous medical waste disposed of by health facilities in Iraq reached 6432.4 t/y in 2015.

Soil degradation

Desert lands form 31% of Iraq's area. Table 41 provides details on desert areas by type and province. Particularly, the fact that 4095377 donums are in danger of desertification represents a wakeup call.

Table 41

Deserts and lands at risk of desertification by province (except KRI) in 2015 (donums)						
Province	Desert lands	Areas exposed to desertification	Sand dunes	Areas affected by salinisation	Areas affected by soil erosion and desertification	Areas affected by flooding
Nineveh	0	1.385.843	0	0	0	0
Kirkuk	13.059	0	0	41.095	0	0
Diyala	130.000	447.859	57.415	270.994	0	0
Anbar	53.000.000	0	0	0	0	0
Baghdad	47.902	53.402	0	73.227	0	0
Babil	110.523	56.992	3.710	373.948	300	3.800
Kerbala	5.500	0	0	46.267	0	0
Wassit	1.202.750	0	0	2.489.901	0	0
Salah al-Din	739.080	520.000	2.320	49.576	739.080	265.000
Najaf	205.000	210.000	0	4.350	27.500	0
Qadessiyah	122.852	39.250	18.600	670.000	5.600	81.275
Muthanna	19.183.758	275.000	0	41.752	0	0
Thi-Qar	73.000	812.667	13.000	1.206.200	670.800	2.000
Missan	232.800	294.364	52.000	2.115.203	642.046	2.100.000
Basra	10.521.3	0	0	655.472	0	29.000
Total (donums)	75.076.745	4.095.377	147.045	8.037.985	2.085.326	2.481.057

Biological diversity

- Iraq's National Biodiversity Strategy and Action Plan 2015-2020 was adopted, including a set of programmes and projects. Nine international objectives were chosen to be realised at the national level.
- There is need to adopt a national programme to protect biodiversity – specifically to:
 - a. Develop programmes and projects to be implemented in cooperation with the relevant entities and ministries under the National Biodiversity Strategy and Action Plan (2015-2020) and the Fourth and Fifth National Reports to the Convention on Biological Diversity (of 2010 and 2014 respectively) which

build on field surveys of key biodiversity areas:

- In this regard, it is planned to carry out a comprehensive survey of biological species to show how the natural habitats are biologically diverse, to announce reserves, to identify fragile habitats, and to measure the costs of the environmental degradation of species;
- b. Establish a national gene bank:
 - A national committee was formed of relevant ministries and entities to develop the specifications to be used in order to admitting genetically modified animals and plants and to develop a database of genetically modified food products;
- c. Highlight biodiversity in all curricula:
 - Biodiversity was highlighted in the curricula for primary education, including reserves and biological species; the Ministry of Education was provided with a booklet on local bird species adapted for children at this stage.

Radioactive pollution

- According to the developed database of radioactive sources in Iraq, there are:
 - 2787 specialised x-ray equipment units used in public healthcare facilities,
 - 695 specialised x-ray equipment units used in private healthcare facilities, and
 - 101 ionising radiation devices used in research, industry and the oil sector.
- There is need to evaluate and monitor sites affected by radioactive pollution.
- There are no disposal sites for radioactive waste in Iraq; there are temporary storages. A disposal site is being licensed.
- There is need to activate and follow up on the issue and modification of regulation on radioactive waste management, including:
 - Instruction No.1 of 2014 on the Liquidation of Nuclear Installations (Official Gazette, Issue 4332, 18/08/2014);
 - Instruction No. 2 of 2015 on the Safe Transport of Radioactive Material (Official Gazette, Issue 438, 30/11/2015);
 - Instruction No. 1 of 2010 on the Use of Ionising Radiation (Official Gazette, Issue 4189, 25/04/2011);
- There is need to issue licenses to control radioactive sources;
- There is need to adopt national environmental radiation controls based on the international ones: i.e. to adopt apply the instructions of IAEA based on Law on Prevention of Ionising Radiation No. 99 of 1980.

Table 42

Sites affected by radioactive pollution by province (n)						
Province	Basra	Missan	Thi-Qar	Anbar	Baghdad	Salah al-Din
Sites affected by radioactive pollution(n)	12	2	6	1	6	1

10.2. Challenges

1. The security situation in the country including military operations and disrupted work of state departments since June 2014 in many provinces.
2. The financial crisis has made it extremely challenging to tackle environmental issues, especially ones that require huge financial allocations and effort – e.g. radioactive pollution, oil pollution and oil leaks into rivers, Shatt Al-Arab and soils, chemical pollution of water and soil, and other issues which require costly treatment and precautionary measures.
3. Dangerous environmental issues due to the collapse of basic infrastructure – especially drinking water and sanitation service infrastructure – and wide spread of debris and explosives.
4. Air pollution through soil, micro-pollutants and gas emissions due to the movement of vehicles, generators, some industries, power generation stations and other sources of CO₂ emissions.
5. Deterioration of water quality due to pollution caused by mismanagement of liquid waste treatment systems, lack of wastewater treatment projects and declining water quantities.
6. Global and local climate change (low rainfall, high temperatures, increased incidence of sandstorms) and its impact on all aspects of environment.
7. Expansion of desertification due to erosion of agricultural lands and illegal transformation of agricultural lands to residential areas, especially in the city belts and suburbs. Deterioration of agricultural lands due to use of old irrigation methods – which leads to water logging, salinisation and desertification, aggravated by climate change.
8. Dwindling agricultural lands and crops due to scarce water resources and economic challenges (dumping markets with imported products). Expanding urbanisation at the expense of agricultural lands and orchards which undermines the national food security.
9. Deterioration of pastures as a direct result of desertification and climate change, representing an additional environmental challenge.
10. The designation of Al-Ahwar (the Iraqi marshes) as a world heritage site on 17 July 2016 requires to revive, invest in and develop the capacities of this environment, as well as to preserve traditional livelihoods due to the exceptional importance of Al-Ahwar for Iraq's environment. The area's natural, economic, cultural and historical features can be used to conserve Iraq's environment and biodiversity.

10.3. Objectives

Objective 1: Ensure availability and sustainable management of water and sanitation service

- ✓ Protect and improve water quality
- ✓ Develop liquid waste management systems
- ✓ Conserve maritime and coastal environment
- ✓ Reduce oil pollution
- ✓ Implement water harvesting projects
- ✓ Systematically exploit ground water

Means of achievement:

1. Equip, install and operate treatment units;
2. Establish five wastewater treatment plants in Diyala;
3. Establish modern slaughterhouses in Al-Zubair, Abi Al-Khuseib and Al-Hai and Al-Nu'maniya;
4. Establish chemical and biological treatment units at Al-Amin Factory;

5. Implement the Common Seawater Supply Project in the southern region;
6. Implement rehabilitation works of industrial treatment unit sat power stations;
7. Implement rehabilitation works of wastewater treatment unit sat power stations;
8. Implement industrial water treatment units at Wassit Refinery;
9. Utilise modern technologies to control and treat oil pollution and prepare environmental monitoring reports, early alarms and emergency plans;
10. Regulate the technology use for loading crude oil to tankers to reduce pollution resultant from oil leaks;
11. Design and implement measures to combat marine pollution;
12. Floating bus in Shatt al-Arab;
13. Complete works according to designs in Al-Dolmoj Lake dams.

Objective 2: Reduce air pollution and its impacts

- ✓ **Protect and improve air quality**
- ✓ **Control oil pollution**
- ✓ **Implement projects to reduce electricity pollution**
- ✓ **Develop the waste management system**
- ✓ **Develop energy and environment units**
- ✓ **Reduce radioactive pollution**
- ✓ **Introduce integrated management of hazardous substances**
- ✓ **Ensure relevant institutional framework and legislation**

Means of achievement:

1. Establish an LPG unit in Al-Shamal Refinery;
2. Upgrade the Al-Darwa Refinery units;
 - Establish new environment-friendly refineries based on international standards (EURO-5):
 - Al-Nassiriya Refinery – capacity 150000 bpd, expected operation date 2022;
 - Missan Refinery – capacity 150000 bpd, expected operation date 2022;
 - Kirkuk Refinery – capacity 70000 bpd, expected operation date 2022;
3. Kerbala Refinery – capacity 140000 bpd, expected operation date 2020;
4. Ensure treatment of waste produced in the course of production (stages 2 and 3) at units for environment protection;
5. Regulate the import of environment-friendly cars;
6. Take measures to transform Iraq to the dry canal [railroad];
7. Rehabilitate closed landfills;
8. Ensure treatment of by-products and waste;
9. Establish and equip laboratories to conduct environmental tests at all power stations;
10. Introduce the combined cycle system which contributes to reducing the emissions of power projects;
11. Install fogging systems;

12. Implement project for green belts in the electricity sector;
13. Develop and update environmental data in the electricity sector;
14. Develop and update environmental legislation:
 - Pending legal review, Instructions are currently studied by the Shura State Council (on radioactive waste management, management of radioactive sources, and disposal of radioactive material);
 - Adopt the Law on National Authority for Nuclear and Radioactive Monitoring currently deliberated by the Council of Representatives.

Objective 3: Protect, restore and increase the sustainable use of ecological systems

- ✓ **Reduce land deterioration and desertification**
- ✓ **Preserve biodiversity**
- ✓ **Develop the use of alternative sources in agriculture and opt for clean agriculture**

Means of achievement:

1. Regularly prepare desertification maps including their historical changes using satellite images;
2. Use sand dunes stabilization;
3. Implement the East Al-Jazeera Irrigation Project;
4. Implement the Marshes Development Programme (Abu Zark Marsh/Thi-Qar/Al-Fuhood Qadha);
5. Implement the National Committee plan for marshes and wetlands in Iraq;
6. Improve city planning and the availability of green areas;
7. Study and tackle erosion in Shatt al-Arab;
8. Establish natural reserves;
9. Establish environmental health projects in Thi-Qar marshes/Marshes Development/Thi-Qar;
10. Establish natural reserves;
11. Eradicate radioactive pollution;
12. Build disposal site for radioactive materials in Iraq;
13. Establish central temporary storage and treatment of radioactive waste in Iraq;
14. Establish specialised central laboratories to take radioactive measurements;
15. Closing nuclear facilities and sites in Iraq/third stage.

Objective 4: Address climate change and its effects

- ✓ **Protect and improve air quality**
- ✓ **Develop the waste management system**
- ✓ **Reduce radioactive pollution**
- ✓ **Introduce integrated management of hazardous substances**
- ✓ **Ensure relevant institutional framework and legislation**
- ✓ **Take steps to mitigate and adapt to the effects of climate change**

Means of achievement:

1. Increase the number of observatories to measure air quality;
2. Establish a comprehensive database;
3. Increase the number of factories which utilise clean production mechanisms;
4. Reduce sulphur content in diesel fuel (gasoil);
5. Ensure disposal of gas waste resultant from industrial activities and services that meets environmental requirements;
6. Reduce carbon dioxide emissions;
7. Reduce the emission of ozone-depleting substances;
8. Ensure environment-friendly treatment of hazardous waste;
9. Explore sites suitable for treatment and dumping of radioactive waste;
10. Regulate the work of border crossings to control the movement of radioactive waste and hazardous chemicals;
11. Identify all areas exposed to depleted uranium;
12. Develop comprehensive maps and surveys of chemicals installations and their effects on the environment;
13. Develop a programme to evaluate the environmental impact of activities and projects;
14. Measure and follow up on the percentage of hazardous chemicals treated safely;
15. Develop and update environmental legislation;
16. Follow up on the implementation progress of the of National Environmental Strategy;
17. Build an environmental database;
18. Improve the structure of existing institutions;
19. Upgrade ports;
20. Provide car parks based on planning standards;
21. Regulate the import of environment-friendly cars;
22. Measure to make Iraq move to the railway system;
23. Adopt the Law on sustainable transport;
24. Examine vehicles annually to assess their condition and impact on the environment;
25. Utilise associated gas;
26. Reduce the production of unleaded gasoline;
27. Upgrade fuel and liquid gas stations;
28. Establish new observatories to monitor climate change, earth quake and flash flooding effects;
29. Implement projects for natural disaster response at sites destroyed by flooding or earthquake.





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