

# **Inclusive green economy policies and structural transformation in Tunisia**



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## Executive summary

Tunisia is experiencing a situation unprecedented in its history following the popular uprising which overthrew the Government in 2011. The ensuing political transition has been characterized by fragile institutions, economic and social turbulence and security threats. The Tunisian economy has been affected by the political situation prevailing in the country, such as the rise in terrorism and the upsurge in social movements, as well as the downturn in the international economic situation.

Since independence, the country has experienced more or less steady economic growth, interspersed with occasional political, economic and social crises, but with an average growth rate of 5 per cent. The rate of economic growth has resulted in a steady increase in per capita income.

However, economic growth has been accompanied by a structural imbalance that has had a lasting effect on the country, producing an energy deficit, which first appeared at the beginning of the 2000s and which has continued to grow. In 2012, it represented 20 per cent of total demand. This situation poses risks to the country's energy supply and has led to an increase in supply costs following a structural increase in the price of oil for all public and private operators. This situation and the challenges caused by climate change have prompted an acceleration in actions to master energy, leading to an uncoupling between economic growth and growth in energy consumption.

The pressure exerted by economic development on the ecosystem and natural resources is reflected in the obvious signs of environmental degradation that affect the quality of water, air, soils, forest and coastal areas. The effects of climate change are also felt in every region of the country, particularly in the central and southern regions.

Furthermore, despite economic growth, unemployment remains high, especially among wom-

en, and has worsened in recent years. There has been a steady reduction in poverty, although extreme poverty has not been eradicated and the number of people living under the poverty line remains unchanged.

The concept of structural transformation was not officially and explicitly used by political or economic decision-makers. Economic and social development activities were accompanied, from the beginning of the 1960s, by medium-term plans that implemented the main themes of public policies, providing a framework for all stakeholders. Nevertheless, those global trends and sectoral policies and programmes resulted in structural transformations that can be seen in plans and programmes and especially in the effect and results of policies and actions.

Sectoral transformation of economic activities was characterized by a decline in the share of agriculture as a percentage of gross domestic product (GDP), a change in the composition of manufacturing industries and, above all, a rise in the services sector, in communications, transport and tourism before more recent years of instability.

Following the adoption of economic liberalism as a development model since the 1980s, development plans generally emphasized the need to guarantee social solidarity as an essential factor in development. This explains the importance and scope of social security and other types of mechanisms promoting redistribution and solidarity in Tunisia.

With respect to demographics, Tunisia is undergoing the final stage of its rapid demographic transition. The population continued to grow until the 1980s when it slowed and then stabilized at the end of the 2000s. This trend is the result of strong interventions and the nature of the social, demo-

graphic and economic policies that have been implemented since independence.

Spatial distribution of the population was also modified. Consequently, the urban population grew at a faster rate than that of the population as a whole. With an increase from 29 per cent in 1956 to 40 per cent in 1966, the urban population now represents two thirds of the total population.

Although the concept of the green economy has been introduced only recently in the country, environmental concerns have formed part of public policies from a very early stage. Over time, various factors have promoted an awareness and an understanding of the effects of the pressure exerted by economic development on the ecosystem and on renewable and non-renewable natural resources, and of the risks of quantitative and qualitative degradation of Tunisia's natural heritage.

Since the 1960s, the State has accorded great importance to the protection of natural forest and water resources. At the beginning of the 1980s, with an expected reduction in national energy resources and an increase in energy needs, an energy control policy was put in place.

Tunisia also participated in international initiatives to address sustainable development and subsequently incorporated them into its own development programmes. In its eighth development plan (1992–1996), Tunisia integrated the concept of the environment into its development policy. It consolidated the plan with an emphasis on sustainable development in its tenth development plan (2002–2006). Since that time, economic and social development plans have matched corresponding actions with a list of targets and the means to implement them.

In order to implement the policy and achieve its targets, an institutional, legislative and regulatory framework was designed with a view to initiating, supporting and coordinating sectoral and cross-cutting programmes.

Policies for promotion of an inclusive green economy in the country's structural transformation programmes have been integrated in the form of guidelines, projects and mechanisms contained in economic and social development plans. They contain specific reference to social concerns as well as the will to protect and recognize the importance of protecting forest and water resources and water and soil conservation. Subsequently, the thematic goals will be realized through appropriate laws and regulations (reflecting the tenets of international agreements) and sectoral policies will be carried out in projects and programmes by the institutions and stakeholders operating in each area.

The links between policies promoting an inclusive green economy and structural transformation of the country are reflected on two levels: in the conditions and ways in which the policies are defined and drawn up; and the specific initiatives and actions implemented in major economic sectors, with respect to national policy guidelines for development and transformation of these sectors.

All national policies are prepared as part of the process of economic and social planning and development, under the aegis of the ministry responsible for the plan, with a joint mechanism:

- Macroeconomic simulations, using econometric modelling based on strategic development guidelines and corresponding to a coherent, comprehensive physical, economic and financial plan.
- Sectoral (corresponding to sectors managed by ministerial departments) and regional (corresponding to the country's governorates) analyses and consultations which provide an assessment of current situations, estimate the scope for change and summarize the guidelines and proposals in the sectoral and regional documents. They

are carried out by sectoral and regional committees.

All of the policies and programmes are chosen and agreed upon by a national coordinating committee.

For the past 20 years, protection of the environment and safeguarding of natural resources and, subsequently, formally, sustainable development, have been included in plans in two ways: in comprehensive guidelines concerning development policy (a document with overall content); and in sectoral programmes managed by the relevant line ministry (a document with sectoral content). Apart from the Ministry of Planning, which initiates sustainable development actions and programmes, there is the National Commission for Sustainable Development, which is tasked with promoting integration and coordination between policies on the inclusive green economy and structural transformation.

With respect to sectoral issues, initiatives and activities which promote sustainable industry have aimed at improving, over the longer term, the competitiveness of companies, the promotion of innovation and its transformation into a driver of development, especially in the strategic context of opening up the economy to international markets and integration with the global economy. Facilitating measures and initiatives to support employment have been adopted; these include reducing employment costs and assistance for training and skills in the workplace. With respect to the environment, various regulations and programmes have been introduced in order to link industry activities to concerns surrounding sustainable management of the environment and of natural resources, promoting environmental upgrading and energy management.

Initiatives for the development of sustainable agriculture have targeted diversifying activities and production, efficient use of resources and promotion of integrated and consistent planning.

With respect to the tourism sector, integration of the principles of an inclusive green economy has been achieved mainly through actions to protect the coast, streamlining the use of natural resources and developing ecotourism.

Concerning social issues, Tunisia has implemented a consistent social policy since independence, in line with its principles. They are derived from the national liberation movement and, although they have been adjusted as a result of changes in government policy and economic circumstances, the principal components remain the same. They comprise:

- Provision of free and subsidized services in the fields of education, vocational training and health;
- Installation and funding of equipment to provide access to potable water, sanitation and electricity for all social classes;
- Direct in-kind and cash assistance to families with limited incomes, including at key periods such as at the start of the school year or during religious festivals;
- Subsidized basic goods (to compensate for the gap between the actual cost and the retail price);
- Social security services such as pensions, sick pay, compensation for workplace accidents and grants for families.

With the gradual liberalization of the economy, social policies (in particular, the expansion of social security and the introduction of social assistance payments) were strongly linked to transformations, especially the diminished role of the public sector and redeployment of the role of the State.

Initiatives, actions and programmes to promote the green economy that have been implement-



ed with a view to integrating the environmental dimension into the economy require an improvement in the management of natural resources and energy management. They are achieved principally through the following means:

- Corrective measures based on the principles of polluter pays and/or polluter (producer) carries out the recovery (in particular with regard to waste management);
- Preventive measures with the introduction of environmental impact assessments;
- Incentive schemes in terms of financing and tax incentives;
- Gradual introduction of an environmental tax;
- Public investment.

Recent assessment reports on environmental policies and a review of development programmes in Tunisia have revealed important gaps in the tools, mechanisms and procedures to implement these policies:

- Although there is a strong framework of environmental regulations, it is not strictly enforced and there is a lack of effective monitoring. The situation has deteriorated since the revolution of January 2011;
- There has been a failure to properly implement some tools (environmental impact assessments, eco taxes, and so on);
- Incentives have been provided for large-scale enterprises and the tourism industry while small and medium-sized industrial enterprises and farms have been neglected;

- Essential environmental resources such as water and energy are in the perplexing situation of being subject to tariff subsidies;
- Approaches and modalities for the preparation and implementation of policies are not fit for purpose, the sectoral approach is prevalent and there is an absence of mechanisms and tools for integrated planning as in the case of strategic environmental assessments;
- Ineffective and weak governance, with a prevalence of centralized power, an almost total lack of citizen participation and a significant level of corruption.

Although Tunisia has drawn up a system of national indicators for sustainable development, a comparison with available international environmental indicators shows that, since January 2011, there have been serious gaps and weaknesses: the data often lack precision, they do not cover all aspects of a problem and they are often ad hoc and difficult to access.

These failings are in addition to the structural weaknesses in the information system: insufficient integration of green industry sectors in the national classification of industries and delays in setting up a national green accounting system that is consistent with the United Nations system. A weak presence of green industry in the official statistics system makes it difficult to build credible and reliable quantitative models in order to carry out ex ante and ex post assessments of the inclusive green economy programmes.

Despite these challenges, Tunisia has put in place policies that include the principles of a green economy. In addition, it can take comfort from successful initiatives such as the programmes on energy efficiency or organic farming in order to strengthen the role of the green economy in the country's development.

Furthermore, the political transition at the national level and the international context in which thinking on the post-2015 development programme has taken place have provided additional opportunities for Tunisia to strengthen the implementation of green economy policies.

Although implementation of development programmes has enabled sustained economic growth and establishment of diversified economic activity, serious imbalances have also been noted, in particular:

- Growing regional and social exclusion, as evidenced in particular by regional disparities between the coast and disadvantaged regions inland. In addition, persistent unemployment affects university graduates;
- Rampant corruption in key sectors of the economy which hampers economic growth and investment;
- Ineffective methods of governance, with excessive centralization dominated by a narrow political elite and a static administration that exclude citizen engagement.

These major failures have influenced sustainable development policies and programmes. The results achieved by the programmes have not done justice to the resources used. The policies have often been fragmented. In addition, they have not been sufficiently integrated into the development process. Stakeholders and, above all, the population, have been excluded from the planning phase, which has been dominated by sectoral and centralized concerns and the integration of the three components – economic, social and environmental – have been weak and have negatively impacted the sustainability of development.

Faced with these gaps in the development process, the emergence of an inclusive green economy requires significant changes to structural transformation policies and to mechanisms for implementation of development programmes. This can be achieved through an evaluation of successful experiences such as programmes on energy management or development of organic farming. The main objectives of this strategy are as follows:

- Consolidation of a cross-cutting approach to sustainable development;
- Effective implementation of policies for promotion of green production channels (industry, agriculture, services) and the strong involvement of the private investment;
- Establishment of a genuine information system on the inclusive green economy;
- Participation of civil society, raising awareness and empowering citizens.

Recent public decisions seem to support this strategy. This has been confirmed by the formal adoption of a national sustainable development strategy during national conferences on sustainable development. In this way, all social actors (political leaders, companies, trade unions, civil society organizations) recognize that adoption of a “sustainable structural transformation” approach is an appropriate and suitable strategy. They have also taken measures and undertaken actions to ensure the success of this transition to an inclusive green economy, the removal of barriers which have been identified and the implementation of drivers to achieve results.

# 1. Introduction: an inclusive green economy and structural transformation

Protection of the environment and sustainable management of natural resources and their effective use are essential today in order to respond to the challenges of climate change. Against such a background, the concept of the green economy<sup>1</sup> is defined as an economy that respects the principles of sustainability, which adopts low-carbon growth plans and conserves natural resources. In addition, the definition incorporates social equity and social inclusion. This aspect is characterized by participation in economic and social activity with decent work and equitable sharing of the benefits of growth, in particular through poverty reduction.

According to the United Nations Environment Programme,<sup>2</sup> the green economy is “an economy that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities”. The green economy, the inclusive green economy and sustainable development thus cover a field that comprises three aspects (economic, social and environmental) of a country’s development.<sup>3</sup> This is achieved through public or private investment that promotes wealth and job creation while reducing carbon emissions, eliminating pollution, improving effective use of resources and energy efficiency and preventing

the loss of biodiversity and environmental services. Actions and policies to achieve those ends must take into account social equity and reduce inequalities between population groups and geographic areas.

The concept of structural transformation, as it is generally accepted, entails “systematic changes in sector contributions to output as economies grow”. This leads to:

- Diversification of economic activities (a declining share of agriculture in GDP and the rise of a modern industrial and service economy);
- Rapid urbanization;
- Demographic transition from high rates of births and deaths.

Structural transformation in the context of an inclusive green economy entails strong economic growth, the creation of decent work, social inclusion and environmental sustainability.<sup>4</sup> The challenge for the environment “is therefore to transform the economic structure, while increasing human well-being and minimizing resource and pollution intensities. In other words, there is the need to attain high-quality growth by decoupling the increases in the level of material throughput – and consequently the pressure from the environment – from improvements in human well-being”<sup>5</sup>

<sup>1</sup> The introduction of this concept and development of thinking around and international decisions on this subject can be found in A guidebook to the Green Economy, published by the Department of Economic and Social Affairs.

<sup>2</sup> United Nations Environment Programme, 2011. Towards a green economy: Pathways to sustainable development and poverty eradication.

<sup>3</sup> International Labour Organization and Organization for Economic Cooperation and Development, 2012. Sustainable development, green growth and quality employment.

United Nations Environment Programme, 2008. Green Jobs: Towards decent work in a sustainable, low-carbon world.

<sup>4</sup> United Nations Conference on Trade and Development, 2012. Report on economic development in Africa. Structural transformation and sustainable development in Africa.

<sup>5</sup> United Nations Conference on Trade and Development, 2012. Report on economic development in Africa. Structural transformation and sustainable development in Africa.

This process involves:

- Streamlining of natural resources, their optimal contribution to wealth creation and their conservation for future generations;
- Choosing sectors in order to strengthen activities that are likely to lead to green growth, with policies and incentives to mobilize the investments necessary to achieve that end. The choice must be made from the following sectors: agriculture; fishing and forestry; extractive and mining industries; food production; power and renewable energy; construction; transport and transport infrastructure; and tourism;
- Adopting methods of consumption and production that reduce carbon emissions and respect the environment.

Technological development is critical for the structural transformation process. It involves the integration and use of green technologies and upgrading through technological innovation. This

approach improves productivity levels, eliminates and replaces ineffective or inefficient production systems and contributes to the creation of new sustainable activities.

The Economic and Social Commission for Asia and the Pacific (2013)<sup>6</sup> has developed an analysis of quality of growth that integrates structural transformation for an inclusive green economy and specifies the requirements for this transformation in respect of three dimensions of sustainable development: economic, social and environmental. This analysis also applies to the policy and institutional enablers that implement governance mechanisms (see table 1).

The purpose of this report is to examine the contribution of policies and strategies that promote an inclusive green economy to implementation of structural transformation in Tunisia, in the general approach outlined above. The study highlights current limits and challenges with respect to the inclusive green economy and structural transformation, identifies opportunities and suggests guidelines. In addition, the report aims to improve understanding of the green economy and structural transformation and to encourage the adoption of policies that promote an inclusive green economy and that

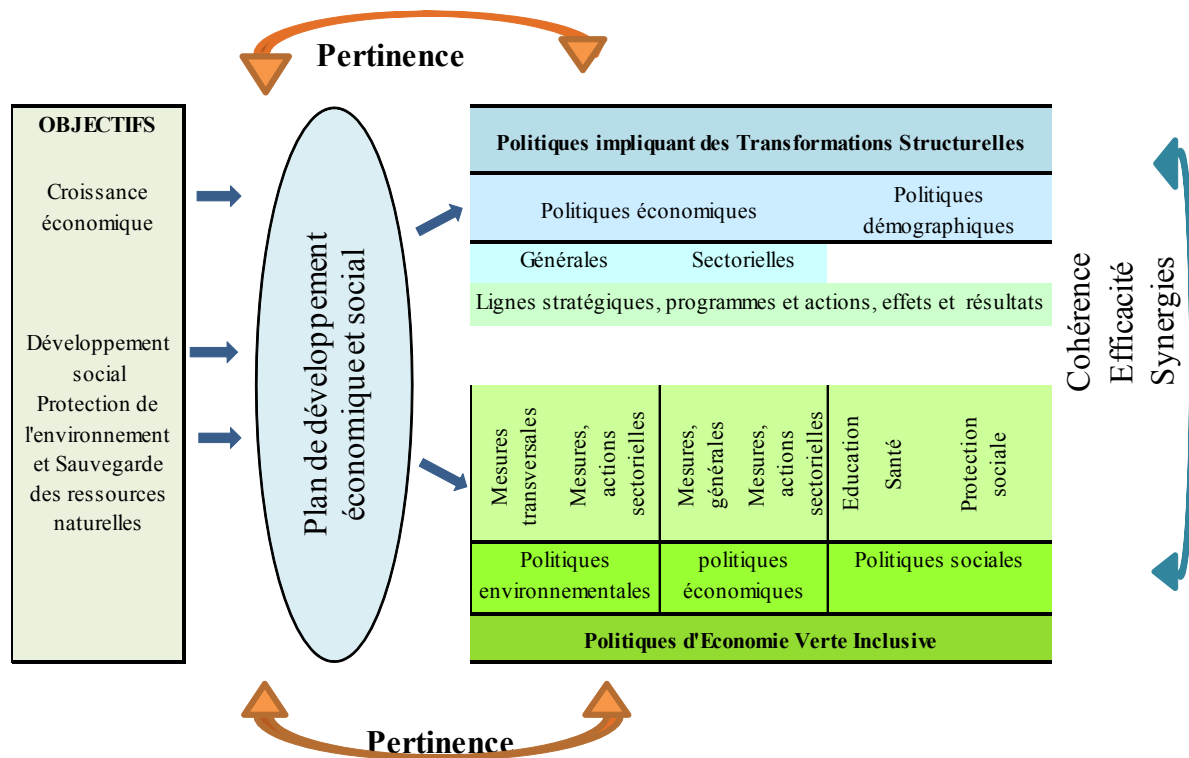
**Table 1: Structural transformation and dimensions of sustainable development**

	Dimensions of sustainable development			Governance
	Economic	Environmental	Social	Institutional and policy enablers
Structural transformation	Moving from low-value added to high-value added, economic diversification and complexity, job creation	Moving from high resource intensity and emissions intensity sectors to lower resource and emissions intensity sectors, using resources effectively and efficiently (green investments, production of environmental goods and services, green jobs)	Investment in social and human capital formation  (Networks, research and development, knowledge, skills and physical and emotional health)	Institutional and policy support for multi-sectoral integration and coordination; social, technology and other innovation; and adaptive governance, including stakeholder participation and monitoring and feedback mechanisms

Source: Economic and Social Commission for Asia and the Pacific (2013)

<sup>6</sup> United Nations Economic and Social Commission for Asia and the Pacific, 2013. Shifting from quantity to quality: Growth with equality, efficiency, sustainability and dynamism.

Figure 1: Conceptual framework of the study



Source: Authors.

will contribute to achieving the aims of structural transformation in Tunisia.

The analysis takes into account the context in Tunisia in which the policies and programmes are defined and implemented. Figure 1 summarizes the analytical approach of this study. All national policies are formulated in the framework of economic and social development planning. From this process flow the population, economic, social and environmental programmes that are judged relevant in the light of major development challenges and goals. The study will examine the content of policies that include structural transformation and the results of their implementation, inclusive green economy policies and their synergies.

In accordance with the framework adopted for analysis of the links and interactions between the inclusive green economy and structural transformation, and in accordance with the terms of reference, the methodological approach to carry out the work combined quantitative and qualitative methods. This was conducted on two levels:

- Exhaustive desktop study of available data: legislation; regulations; development plans; activity reports from the relevant institutions; guidelines and sector strategies (agriculture and fishing; extractive and manufacturing industries; energy; transport; infrastructure and tourism);
- Consultation with the stakeholders involved in the field of study. These are national public sector institutions and civil society actors. This consultation took place on the basis of a survey prepared for this purpose.<sup>7</sup> Validation of the present report took place during a meeting held in Tunis on 21 and 22 October 2014.

<sup>7</sup> Given the specific conditions and the timetable for conducting the study, only a fraction of the sample of the target institutions and bodies could be used; the survey and the institutions consulted are annexed to this document.

The report is divided into seven sections. Section 2 introduces the country's macroeconomic framework and how it has developed, its characteristics in relation to economic, social and environmental imperatives. It also sets out its receptiveness to inclusive green economy principles and approaches.

Section 3 is devoted to structural transformation programmes in the country, including sector transformation of economic activity, policies and changing demographics.

Section 4 provides an introduction and analysis of policies promoting an inclusive green economy and their role and importance in the context of structural transformation.

Section 5 examines the links and correlation between policies promoting an inclusive green economy and structural transformation policies in the country, especially sustainable development initiatives, actions and mechanisms applied to the principle economic sectors and the social inclusion policies that accompany them.

Section 6 explores the challenges and deficiencies of public policies and provides information on opportunities and future strategies for structural policies that promote an inclusive green economy.

Lastly, section 7 provides an overview of lessons learned and makes recommendations.

## 2. Macroeconomic context in the country with respect to economic, social and environmental imperatives and its receptiveness to the principles and approaches of an inclusive green economy

### 2.1. Economic situation

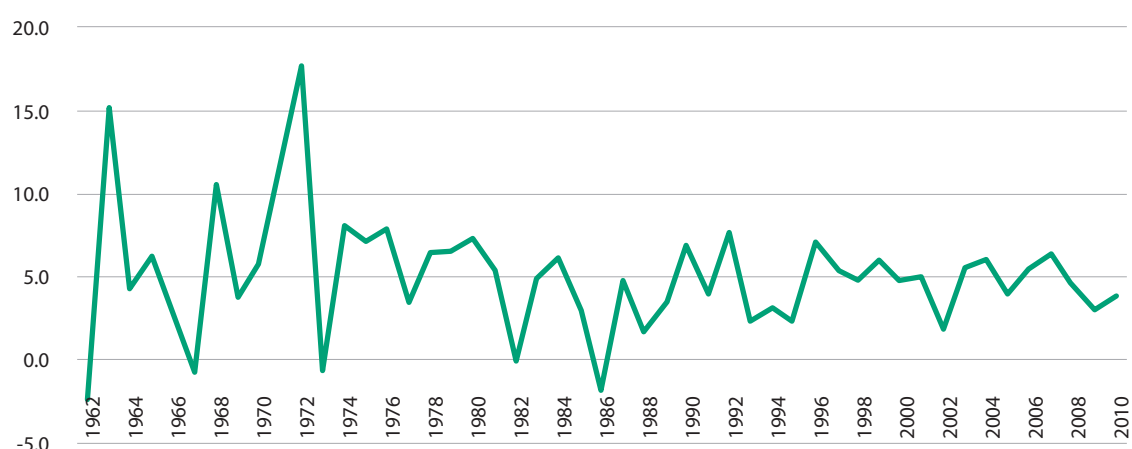
Tunisia is experiencing a situation that is unprecedented in its history. Following a popular uprising, the ruling power was overthrown and a transitional regime was established. The current political transition is characterized by fragility of institutions and economic and social upheaval, as well as security threats. As a consequence, the Tunisian economy has been affected by the uncertainty of the changing political situation, the increase in terrorist operations and the proliferation of social movements, all of which takes place against the backdrop of an international economy in recession.

The principal macroeconomic indicators (see table 2) show general imbalances in the Tunisian economy. These are: fall and then weak growth in GDP; an increase in the budget deficit and in the public debt; a deterioration in the current account deficit and foreign debt; higher inflation and high unemployment. These imbalances can have adverse effects on the economy. An increase in the debt burden decreases the resources available for investment and therefore the capacity of the country to stimulate a transition towards a green economy. However, these figures should be analysed with prudence given the specific political situation that Tunisia went through between 2011 and 2015.

**Table 2: Recent macroeconomic indicators**

Year	2010	2011	2012	2013	2014 (p)
GDP growth rate (at market rates)	3.0	-1.9	3.7	2.3	2.4
Budget deficit (as a percentage of GDP)	1.0	3.3	5.2	6.2	5.9
Public debt (as a percentage of GDP)	40.7	44.6	44.5	45.7	51.7
Current account deficit (as a percentage of GDP)	4.8	7.4	8.2	8.4	
Foreign debt (as a percentage of GDP)	49.7	52.3	55.3		
Servicing of external debt (as a percentage of current revenue)	9.3	10.6	10.5		
Inflation (%)	4.4	3.5	5.6	6.1	5.7
Unemployment rate	13.0	18.9	16.7	15.3	
Per capita income (Tunisian dinars)	5991	6055	6623		
Per capita income (United States dollars)	4166	4039	4271		

**Sources:** National Institute of Statistics, Ministry of Development and International Cooperation, Ministry of Finance, Central Bank of Tunisia.

**Figure 2: Annual GDP growth rate**


Source: Ministry of Development and International Cooperation.

**Table 3: Trend in macroeconomic indicators**

Period	7th plan	8th plan	9th plan	10th plan	11th plan*
	1987–1991	1992–1996	1997–2001	2002–2006	2007–2010
GDP growth rate (at market rates)	4.2	4.6	5.3	4.5	3.0
Budget deficit (as a percentage of GDP)		3.5	2.9	3.1	2.0
Public debt (as a percentage of GDP)	59.0	57.4	55.9	52.9	42.9
Current account deficit (as a percentage of GDP)		5.7	3.5	2.2	3.2
Foreign debt (as a percentage of GDP)		52.0	51.3	52.9	41.6
Servicing of external debt (as a percentage of current revenue)		18.5	16.2	14.1	10.0
Inflation (%)	7.6	4.9	3.2	3.2	4.1
Growth in per capita income (Tunisian dinars)		6.8	7.6	6.5	7.6
Growth in per capita income (2000 US \$)**		2.4	4.2	3.5	3,1

Sources: Ministry of Development and International Cooperation, Ministry of Finance, National Institute of Statistics, Central Bank of Tunisia.

(p): forecast

Thus, for more than 50 years and since independence, the country has experienced fairly steady economic growth,<sup>8</sup> interspersed with occasional political, economic and social crises, but with a strong underlying growth rate of around 5 per cent (see figure 2).

During the course of the last two decades, the main macroeconomic indicators have been veri-

fied and improved (see table 3): public finances have been rebalanced and the budget deficit has been reduced; public debt has decreased; the balance of payments has fallen; the situation with respect to foreign debt has improved; inflation has been markedly reduced. This economic trend has led to an increase in per capita income.

## 2.2. Environmental context

However, this economic trend has been accompanied by the appearance of a major structural imbalance which has an ongoing effect on the

<sup>8</sup> Between 1961 and 2008, the country's real GDP grew on average by an annual rate of 5.08 % (World Bank, 2010, Tunisia – Policy Development Review: towards innovation-driven growth).



situation in the country: namely, the energy deficit which has appeared since the early 2000s and which is increasing. In 2012, it represented 20 per cent of total demand. This situation poses risks for the country's energy supply and increases related costs by reason of the structural hike in the price of oil for all public and private stakeholders<sup>9</sup>. This increase in the costs together with the challenge of tackling climate change has led to an acceleration in actions to conservation energy and to the decoupling of economic growth from growth in energy consumption as indicated in the data in table 4.

**Table 4: Global energy efficiency indicators**

Average annual growth (%)			Trend					
Period	1990 – 2000	2000 – 2012	Year					
GDP	4.7	3.9	Primary energy intensity (Tep/1000 DT of GDP)	0.416	0.389	0.307	0.303	0.313
Primary energy consumption	4	2.1	Final energy intensity (Tep/1000 DT of GDP)	0.321	0.237	0.233	0.233	0.237
Energy intensity	-0.7	-1.8						
Primary energy consumption per capita	1.6							

Source: National Agency for Energy Conservation.

In addition, the pressure that economic development exerts on the ecosystem and natural resources has resulted in environmental degradation affecting the quality of water, air, soils, forests and coastlines. At the beginning of the 2000s, the cost of the degradation was estimated to affect about 2.1 per cent of GDP<sup>10</sup>. Desertification is gaining ground: inexistent or negligible for 29 per cent of the territory; somewhat present in 32 per

cent; and prevalent in 17 per cent, while 22 per cent of the territory is made up of desert zones<sup>11</sup>.

The impacts of climate change are also felt in all regions of the country and with particular severity in the regions of the Centre and South. Research studies have shown that climate change will have an impact on water resources, ecosystems and agriculture (olive growing, forestry, animal husbandry, arable farming)<sup>12</sup>. The degradation of soils and climate change could have an impact on food security and the country's agriculture sector.

### 2.3. Social context

With respect to employment, between 1975 and 1994, despite economic growth, the unemployment rate increased from 13 per cent to 15.6 per cent. Unemployment among men fell and then rose again following the global crisis of 2007. Female unemployment, however, did not follow the same trend: it was stable for 10 years with an estimated rate of between 15 and 17 per cent; it then

9 In particular with respect to public finances because of the subsidy of energy products which amounted to almost 10 per cent of the Government budget in 2010.

10 Sarraf, M and others, Cost of Environmental Degradation - The Case of Lebanon and Tunisia, World Bank, 2004.

11 National sustainable development indicators OTEDD, MEDD, June 2010.

12 National strategy for adapting Tunisian agriculture and ecosystems to climate change, Ministère de l'agriculture et des ressources hydrauliques et Coopération technique allemande GTZ, December 2006.

**Figure 3: Unemployment**



Source: National Institute of Statistics.

increased in 2007 and reached almost 19 per cent in 2009 – 2010.

The trend in poverty in Tunisia has been analysed in detail in the “National Report on implementation of the Millennium Development Goals,

the National Institute of Statistics<sup>14</sup> and data from the World Bank. Although the methodologies differ, the results taken as a whole show a clear reduction in poverty, which demonstrates that the corresponding Millennium Development Goal targets have been achieved. However, even if the

**Table 5: Trend in poverty rate revised (%)**

Year	Poverty rate			Extreme poverty rate		
	2000	2005	2010	2000	2005	2010
Large towns	21.5	15.4	9.0	4.3	2.2	1.3
Medium-sized towns	32.5	22.1	14.0	10.5	6.5	2.9
Rural areas	40.4	31.5	22.6	19.1	13.4	9.2
<b>Overall</b>	<b>32.4</b>	<b>23.3</b>	<b>15.5</b>	<b>12.0</b>	<b>7.6</b>	<b>4.6</b>

Source: BCM and National Institute of Statistics.

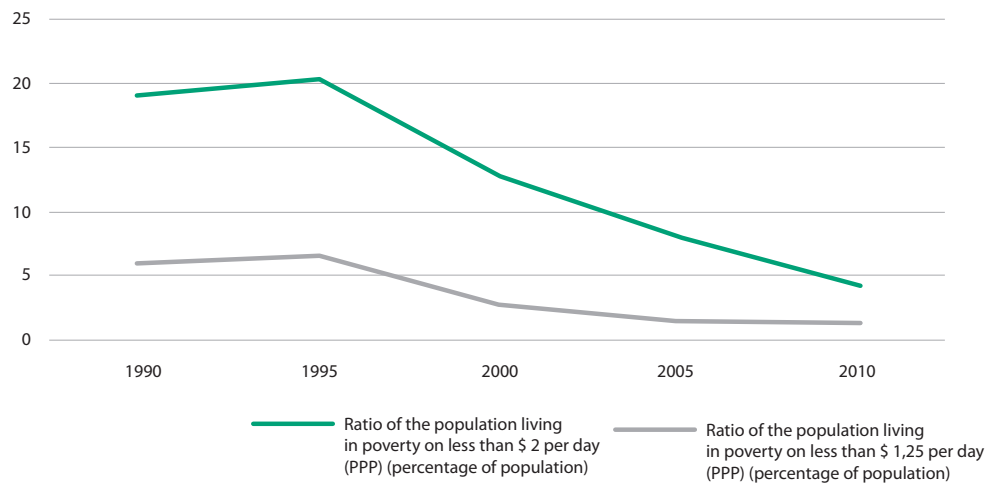
2013”<sup>13</sup>. Different statistical sources have been used to compile the report, including data collected in national surveys on the budget, consumption and the standard of living of households from

poverty rate has halved between 1990 and 2005, extreme poverty has not been eradicated and the number of people living below the poverty line has remained stable (see table 5).

13 Secretary of State for international cooperation and UNPD, 2014, Millennium Development Goals, National Report on Implementation, 2013  
<http://www.mdci.gov.tn/fileadmin/odd/Rapport%20Suivi%202013%20OMD%20Tunisia%20Final.pdf>

14 The National Institute of Statistics produced several versions of the methodology for measuring poverty, the latest of which dates from 2010.

**Figure 4: Proportion of the population living in poverty**



Source: World Bank.

## 2.4. Receptiveness to the principles and approaches of an inclusive green economy

The debate on the inclusive green economy has appeared at an appropriate time in Tunisia with respect to its development. In effect, Tunisia is currently faced with limits to its development model. Despite significant economic growth and poverty reduction that has allowed Tunisia to reach the related Millennium Development Goal, environmental and energy challenges are growing and the unemployment rate remains high. These environmental and social constraints together with spatial and gender inequalities, have hindered growth and prompted Tunisia to rethink its development model.

A number of negative effects on sustainable development have been identified, in particular:

- Agricultural production that does not always make effective and economic use of natural resources and that does not pay sufficient attention to environmental degradation;
- Industry that is uncompetitive and that requires significant efforts to raise it to the correct environmental standards;

- Predominance of coastal resort tourism leading to degradation of the coastline;
- Increasing use of individual modes of transport, leading to high energy consumption, urban congestion and unsafe roads;
- Construction and buildings with high energy use which do not respect the country's climate-specific context.

Moving towards an inclusive green economy could allow Tunisia to resolve these problems and to promote growth at the same time. The situation in Tunisia is therefore favourable to the emergence and implementation of a green economy. Nevertheless, some macroeconomic indicators, such as the deficit and the debt, have worsened in recent years. Although the figures should be analysed with caution, during the transition in the country between 2011 and 2015, the development of a green economy may have been hampered by a restricted budget. The problem of financing and, therefore, the commitment of the private sector, will be critical if Tunisia is to manage the transition to a green and inclusive economy.

## 3. The country's structural transformation programme

### 3.1. Overview

Since the beginning of the 1960s, Tunisia has adopted an indicative planning approach to the economy. Economic and social development actions have been supported by medium-term plans. The latter have translated the main strategic direction of public policies and have provided a coherent framework for all stakeholders.<sup>15</sup>

The concept of structural transformation was never officially and explicitly used by political leaders or economic operators. It is obvious, however, that sectoral choices, policies and programmes led to structural transformation that can be inferred, surmised and observed from plans or programmes and especially from the effects or results or policies and actions. Table 6 presents a summary of the main strategies and policies implemented since the 1960s.

The economic programme put in place immediately after independence gave a central and dominant role to the State: establishing publicly-owned industrial clusters; controlling salaries and prices; implementing protectionist commercial policies. In 1969, the gradual collectivization of agricultural and commercial activities led to a major political and social crisis, which was resolved by the abandoning of such economic strategies. Significant changes took place during the following decade, with considerable opening up to internal and external markets. Foreign direct investment and exports were positively encouraged through

legislation<sup>16</sup>. A deterioration in public finances and external payments at the beginning of the 1980s resulted, in 1986, in the implementation of a structural adjustment plan. Structural reforms were principally concerned with:

- Extending economic liberalism, including liberalization of external trade, prices and private investment as well as promoting the private sector and limiting State intervention and disengaging the State from competitive sectors of the economy;
- Rationalization of public finances (control of expenditure, the budget deficit and external debt), implementation of significant fiscal reform, in particular the introduction of a value added tax and restructuring of income taxes;
- Financial liberalization, modernization of the monetary and financial system (currency regime; financial markets, banks and insurance).

In addition to economic liberalism, which was adopted as a development strategy in the 1980s and 1990s, development plans also consistently demonstrate the necessary guarantee of social solidarity as an essential component of global development.

In order to achieve the goals of sustainable and inclusive growth, the following general approaches should be taken into account:

<sup>15</sup> Up to the present time, Tunisia has had 12 economic and social development plans: First plan, three years, 1962–64; Second plan, three years, 1965–68; Third plan, four years, 1969–72; Fourth plan, four years, 1973–1976; Fifth plan, five years, 1977–81; Sixth plan, five years, 1982–86; Seventh plan, five years, 1987–91; Eighth plan, five years, 1992–96; Ninth plan, five years, 1997–2001; Tenth plan, five years, 2002–2006; Eleventh plan, five years, 2007–2011; Twelfth plan, five years, 2010–2014 (not completed).

<sup>16</sup> See Act no. 72–38 of 27/04/1972: concerning the establishment of a specific regime for industries producing for export.

- Strengthening the role and contribution of the private sector;
- Developing human resources;
- Mastering technologies, especially information and communications technologies and biotechnologies;
- Enhancing regional development;
- Conservation of natural resources and environmental protection.

The competitive challenges of integrating into the global economy have necessitated improving the competitiveness of the country's economic activities. The policies adopted comprise implementation of a broad programme for developing the manufacturing and service industries and further diversifying the economic fabric through the

content and the promotion of the service and innovation sectors. A development programme was launched for industrial activities in 1995, in order to support companies obliged to operate in an increasingly competitive environment (Box 1). This programme has been a powerful tool for the promotion of structural transformation, changing the nature of economic activities and their spatial distribution and highlighting spatial and demographic disparities. In addition, the programme was followed up with a programme of environmental upgrading for enterprises, in order to make them more competitive, especially in European markets.

In the 2000s, policies aimed at making the country more competitive and integrating it into the global economy were maintained. In 2011, the twelfth five-year plan was suspended, although its broad approaches were maintained during the transition.

### Box 1: Industrial development programme

The programme to develop industrial enterprises was launched in 1995 in order to upgrade enterprises that are called on to operate in an increasingly competitive environment. In order to improve productivity and competitiveness, an industrial development policy was implemented in two parts:

- Development of the enterprise environment with various programmes to improve the effectiveness of industry:
  - Basic infrastructure (redevelopment and creation of industrial zones, development of free trade zones), modernization of the transport system; modernization and extension of telecommunications networks;
  - Adapting legislation to international norms and practices, simplification/modernization of administrative procedures and strengthening support structures;
  - Promotion of quality (training of experts in quality management, improving procedures for the organization of production and quality assurance, etc.);
  - Strengthening the means and structures for training.
- Industrial development. Activities in this section include upgrading production and organization systems and prioritising investment in technologies to establish or increase the po

introduction of new activities with technological

tential for technological innovation in industry and their research and development capacities. These activities are primarily promoted through incentives accorded for financing of investments.

During the almost 20 years of its existence, almost 5,500 enterprises have taken part in the upgrading programme, through some 4,700 approved programmes with 7850 million Tunisian dinars of investments. The textile and clothing industry sector has been a major beneficiary of these programmes, followed by mechanical and electrical industries and food-processing industries.

The development programme has contributed substantially to the modernization of the country's industrial base and to improving its level of technology and the integration of information and communications technologies and, as a result, to an improvement in the quality of production.

However, the programme has consolidated regional disparities in the siting of industrial activities. Some 94 per cent of the programmes implemented and 91 per cent of investments have benefited the country's three major coastal regions: the region of Tunis (33 and 36 per cent), the Centre-East (43 and 33 per cent) and the North-East (18 and 22 per cent).

**Table 6: Main features of structural transformation policies and actions**

Type of policy	Main policies and activities			
	Global approaches	Agriculture and rural development	Industrial and commercial sector	Social sectors (health, education, etc.)
1960 – 1970	Central and dominant role of the State	Permanent aspects:  Research on self-reliance/food security  Conservation of land and vegetation  Mobilization of water resources  Progressive collectivization of agricultural activities	Creation of state-owned industrial and tourism clusters  Control of wages and prices  Protectionist commercial policies	Creation of an environment in which education is accessible and free of charge  Provision of a public health system with broad access to health care  Provision of social security

Type of policy	Main policies and activities			
	Global approaches	Agriculture and rural development	Industrial and commercial sector	Social sectors (health, education, etc.)
1970 – 1980	internal and external economic openness	Restructuring of property and of agricultural activities	<p>Encouraging private initiatives in manufacturing and service industries: in particular, textiles, clothing, tourism</p> <p>Legislation supporting direct foreign investment and exports</p> <p>Development of the oil industry</p>	<p>Permanent aspects:</p> <p>(Development of the education system in response to increasing needs; progressive introduction of private operators</p> <p>Development of a public health system in response to increasing needs</p> <p>Growing share of private sector.)</p> <p>Control of labour costs and purchasing power: minimum wage in the industrial and agricultural sectors; subsidizing of essential food products</p>
1980 – 1990	Structural adjustment plan and broadening of economic liberalization	<p>Structural reforms: Adjustment programme for the agricultural sector: roles of public and private organizations; investment climate and use of sustainable resources</p> <p>Efficiency of the irrigation sector: water economy technologies and new tariff schemes</p>		<p>Assistance programme for poor families</p> <p>Support programmes for restructuring of the labour market</p>
1990 – 2000	Pursuit of openness and integration with the world: General Agreement on Tariffs and Trade, World Trade Organization, association with the European Union with gradual introduction of a free trade zone	<p>Improved productivity: investment in applied research and agricultural extension; support services for farmers</p> <p>Encouragement of private entrepreneurship</p>	<p>Industrial development programme</p> <p>Energy conservation programme</p> <p>Development of the service sector through private initiatives: transport, tourism, information technology, telecoms, etc.</p>	

Type of policy	Main policies and activities			
	Global approaches	Agriculture and rural development	Industrial and commercial sector	Social sectors (health, education, etc.)
2000 – 2010	<p>Increasing integration with the global economy</p> <p>Improvement in the country's competitiveness</p>	<p>Strengthening of investment in farming. Increased contribution from the private sector</p> <p>Extension of irrigated production</p> <p>Diversification of production and exportable products</p> <p>Promotion and control of distribution circuits</p>	<p>Intangible investments that incorporate innovation, research and development and new technologies in industrial activities</p>	<p>Reform of health insurance in order to improve cover, equity, and financing of the health system</p> <p>Subsidizing of energy products</p>

Source: Authors.

### 3.2. Sectoral transformation of economic activities

These different policies, which have been implemented since the 1960s, have changed the structure of economic activities in Tunisia. The structure has the following characteristics:

- Agriculture has decreased as a share of GDP, from between 15 and 16 per cent in the mid-1980s to around 9 per cent in more recent years (2011 and 2012).<sup>17</sup>
- While the contribution of manufacturing industries appears to have stabilized at around 18 per cent, the internal composition of the sector has changed. After strong growth in the 1990s (a share of more than 6 per cent), the textile industry has declined to 3 per cent of GDP in recent years. However, the electrical and electronic industries have taken over, with a share of around 5.5 per cent of GDP in 2010– 2012. Their contribution grew from 2 per cent in

1986 to 2.5 per cent in 1991 and 3.4 per cent in 2000.<sup>18</sup>

- Non-manufacturing industries, with around 13 per cent of GDP, have seen the return of hydrocarbons, especially natural gas, with a decline in oil activities from the mid-1990s. Mining has remained weak and it has deteriorated further since the Revolution. The share of construction and civil engineering activities has remained stable at around 5 per cent, although a dip has been noted in recent years.
- Structural transformation has been marked by the progress of market services, which contribute 42 to 46 per cent of GDP. Progress has been most noticeable in communications, transport, and tourism before the current years of instability, as well as administrative services (including social services).

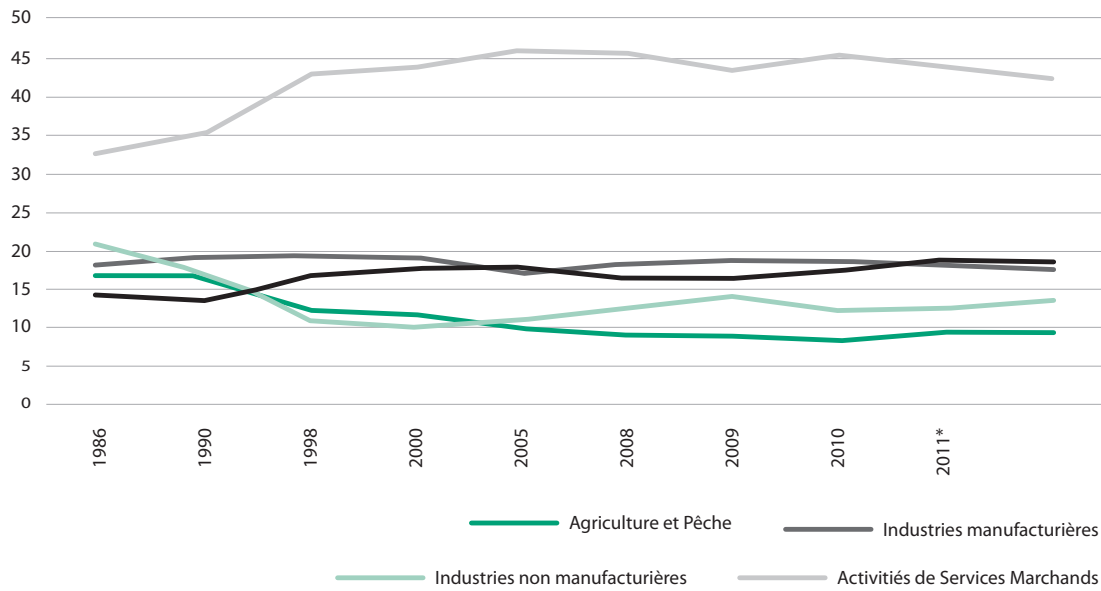
The structure of employment has followed a similar trend, with specific characteristics for some sectors:

<sup>17</sup> National Institute of Statistics, national accounts, and development plan documents.

<sup>18</sup> Ibid.

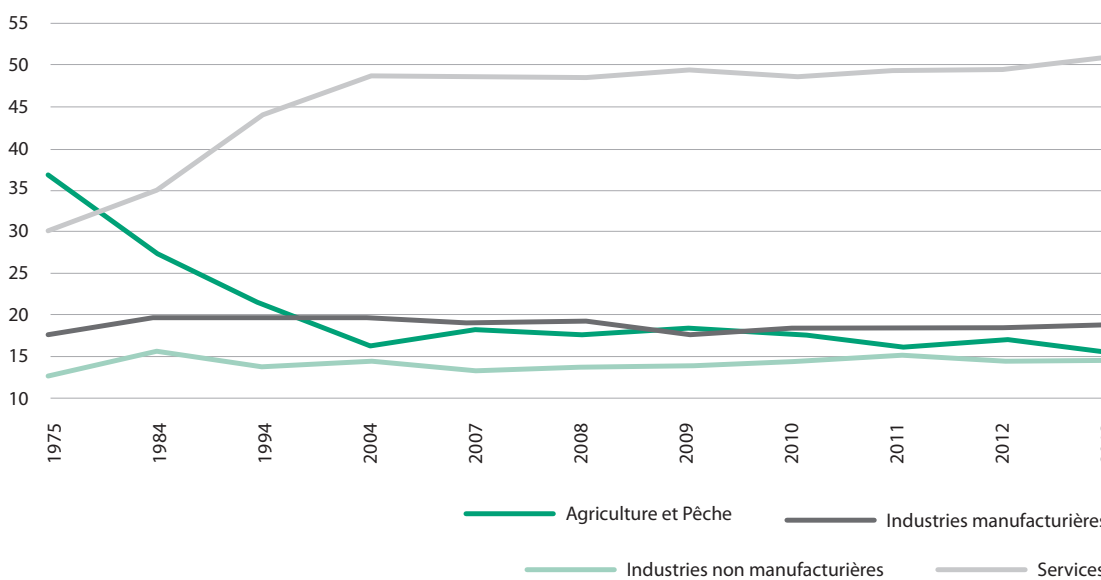


**Figure 5: Structure of value added by sector of activity**



Source: Ministry of Development and International Cooperation.

**Figure 6: Distribution of work in the labour force (percentage)**



Sources: National Institute of Statistics, National Survey on Population and Employment, Tunisian Institute for Competition and Quantitative Studies.

- Employment in the agricultural sector has seen a marked decline from 37 per cent in 1975 and 27 per cent in 1984, to a share of between 15 and 17 per cent in recent years;
- The proportion of employment in manufacturing industries appears stable and is situated at around 18 per cent.

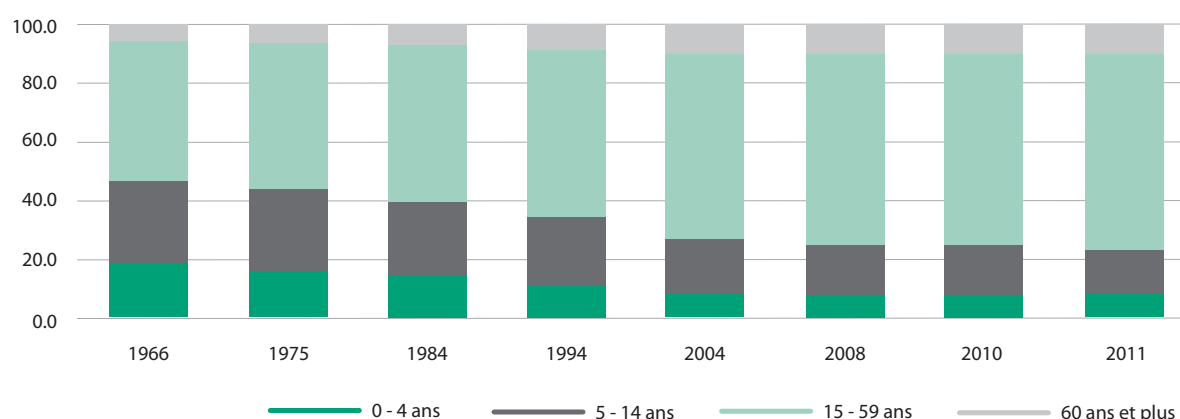
However, during the previous decade, the textile, clothing and leather industries have seen their share of total employment decrease from 9.6 to 7.6 per cent. The share of mechanical and electronic industries grew from 2.7 to 4 per cent during the same period;

- Non-manufacturing industries have retained a share of 13 to 14 per cent, led by construction and public works;
- Here, too, structural transformation has been characterized by progress in the service sector which has seen its share rise from 30 per cent in 1975 to 35 per cent in 1984 and 51 per cent in 2013, 18 to 19 per cent of which is in public administration.

Health development, in particular vaccination programmes for children, has resulted in a higher birth rate and enabled rapid growth of the population. Neonatal and postnatal mortality rates have also fallen from 43.2 per cent and 49.8 per cent respectively between 1990 and 1994 to 11.5 per cent and 5.2 per cent between 2005 and 2010.

With improved access to education for girls and the increased participation of women in the labour market, the age for marriage has risen. In

**Figure 7: Age structure of the population**



Source: National Institute of Statistics.

### 3.3. Demographic policies and changes

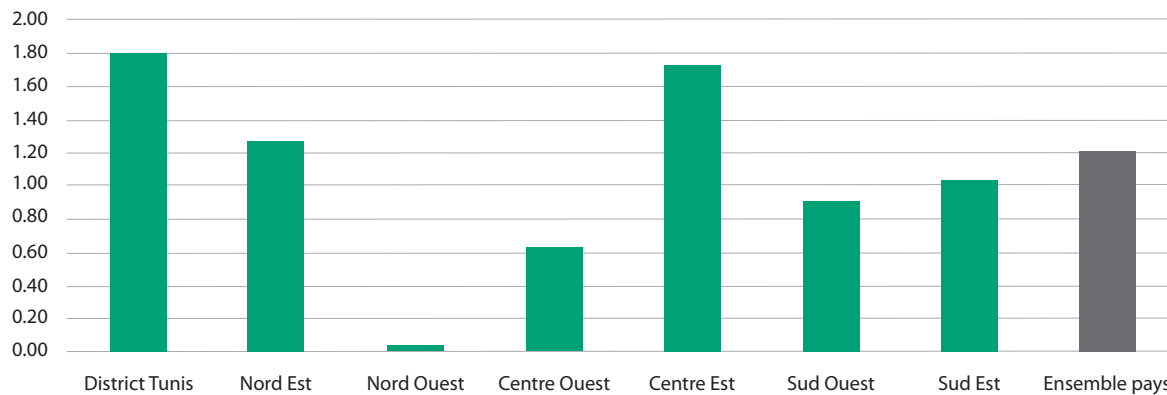
Tunisia has undergone a fairly rapid demographic transition. The population grew at an increasing rate until the 1980s and has declined to around 1 per cent since the end of the 2000s. This trend has resulted from Government initiatives and the social, demographic and economic policies put in place since independence.

The Personal Status Code (which was enacted in August 1956 and which entered into force in January 1957) reformed family relations, aiming to achieve equality between men and women and recognition of the equal right of women to access all social activities.

conjunction with family planning policies, which have facilitated access to contraception<sup>19</sup>, there has been a fall in the fertility rate and, as a result, in the birth rate. The total fertility rate has fallen significantly, from 7.2 in 1966 to 3.9 in 1994, reaching a low point of around 2 in the middle of the 2000s and then rising slightly over the past ten years.

<sup>19</sup> "The National Programme for Family Planning was launched in the early 1960s. Its principal aim was to limit the number of births in order to ease the financial burden on households and, indirectly, to improve living standards for the current population and future generations. This programme succeeded in overcoming sociological and cultural barriers experienced through communication campaigns that reached all sectors and categories of society. The right to an abortion without restrictions based on the number of children was introduced in 1973. Family planning was one of the main elements of the development strategy that triggered the demographic transition in Tunisia. Towards the end of the 1970s, contraception was used by only 31 per cent of married women. Thirty years later, this rate had almost doubled, reaching 62.5 per cent in 2011." National implementation report on implementation of the Millennium Development Goals, February 2014.

**Figure 8: Average annual growth rate by region between 1993 and 2013**



*Source:* National Institute of Statistics.

This demographic trend has been characterized by two important indicators, which demonstrate the future impacts of the demographic transition on the employment market and the social security system. Demography in Tunisia has undergone change on two levels: the age structure of the population and life expectancy.

The age structure of the population has seen a fall in groups of young people and an increase in middle- and older age groups (see figure 7). Thus, the numbers of children aged 0 to 4 and 5 to 14 years have fallen, respectively, from 18.6 per cent and 27.0 per cent of the population in 1966 to 8.2 per cent and 15.3 per cent in 2011. The groups aged between 15 and 59 years and those over 60 have risen, respectively, from 48 per cent and 5.5 per cent to 66.4 per cent and 10.1 per cent.

Between 1966 and 2012, life expectancy at birth grew from 51 years to almost 74 years, with a slightly higher age for women. Growth was rapid during the two decades from 1966 to 1990 during which life expectancy increased from 51 years to more than 70 years in 1990.

Spatial distribution of the population has changed during this period with a marked trend of urbanization. The urban population has increased at a higher rate than the population as a whole. The urban population was 29 per cent in 1956 and 40 per cent in 1966, but it now represents two thirds of the total population.

The structure of the population has seen further change with a greater concentration in coastal regions where 61 per cent of the population now lives. During the past two decades, in a continuation of historic trends, the three main coastal regions (District of Tunis, Centre-East and North-East) have seen the strongest growth, above average in the country (see figure 8). These regions also have the most urbanization, with an urban population of close to 71 per cent compared to 33.3 per cent for the Centre-East region.

Population dynamics have been accompanied by internal migration, which has benefited the coastal regions of the North and Centre, which are centres of more sustained economic growth and external migration to other countries.

### 3.4. Aims of current structural transformation

An economic and social development plan was drawn up during the transitional period, which the country underwent between 2011 and 2015. However, the key strategic directions previously defined have been maintained and implemented within the framework of Government budgets and public agency programmes. They were set

out in a document that appeared in 2012, entitled “Development strategy of a new Tunisia.”<sup>20</sup>

The strategic options for restructuring of the national economy are set out below:

- Sectoral policies to promote the share of GDP of sectors with high value-added (food, biotechnology, information and communications technologies, electronic and environmental industries);
- Establishing a large number of technology clusters, in all regions, in order to attract investment to these sectors;
- Undertaking industrial upgrading and modernization programmes and encouraging innovative investments and development of quality systems;
- Developing the service sector and increased liberalization;
- Creating new opportunities in the traditional sectors of agriculture, tourism, craft and commerce.

The development strategy of the new Tunisia, in addition to social and economic reforms including economic restructuring, places emphasis on the modernization of agriculture, comprehensive and balanced development of the regions, consolidation of human and social development and the promotion of sustainable development and effective management of natural resources.

Nevertheless, conditions are more difficult, with the slowdown or blocking of activities, reduction in resources and, especially, the uncertainty that weighs on policymakers.

The structural transformation that Tunisia has undergone since the 1960s has enabled it to begin a phase of modernization and a smooth transition towards a green economy. The basis for diversification of current activities can be seen as an advantage for the development of green pathways in different but complimentary sectors. In addition, infrastructures, human capital and improving governance make an important contribution to the development of a green economy in Tunisia.

<sup>20</sup> Ministry of Regional Development and Planning, Development strategy for a new Tunisia, May 2012.

## 4. Policies for promoting an inclusive green economy: their role and importance within the framework of structural transformation

### 4.1. General framework of environmental policies

Although the green economy itself is a recent concept, environmental concerns have figured from an early stage in public policies. Over time, various factors have contributed to an awareness of and an understanding of the pressures that economic development places on the ecosystem and on natural resources, both renewable and non-renewable, and the risks of quantitative and qualitative degradation on the natural heritage.

- Since the 1960s, the State has accorded great importance to the protection of natural forest and river water resources.
- At the beginning of the 1980s, at a time of dwindling natural energy resources and continually rising energy needs, an energy conservation policy was put in place; it combined energy efficiency and the development of renewable energy.
- Tunisia has consolidated issues of sustainable development at the international level by incorporating them into its own development programmes. In 1990, a national action plan for the environment (PANE) was prepared. The main priorities of the plan concerned effective use of natural resources and combating environmental degradation. In 1995, a few years after the Rio conference on sustainable develop-

ment, Tunisia established its own programme on sustainable development (Action 21 at the national level). It also implemented Action 21 at the local level, in order to embed environmental concerns into local development plans and programmes.

In its eighth development plan (1992–1996), Tunisia integrated the concept of the environment into development policy. Similarly, it integrated the concept of sustainable development into its tenth development plan (2002–2006). Since that time, economic and social development plans have listed the actions corresponding to the goals to be achieved and the means of implementation.

For the past twenty years, the main themes have been:

- Effective protection of natural resources and effective combatting of desertification;
- Improved cohesion between development needs and land-use planning;
- Targeted combatting of pollution in order to improve quality of life;
- More involvement of environmental specialists in economic and social development at national and local levels. In order to implement this overarching policy, an institutional, legislative

and regulatory framework<sup>21</sup> has been drawn up. Its implementation is intend-

ment of the legislative framework. The Ministry of the Environment was created in 1991 in order

**Figure 9: Summary of institutions and regulations dealing with environmental policies**

Ministry of Agriculture	Ministry of the Environment, 1991	Ministry of Industry and Energy
Conservation, management of natural resources (water, soil, forests, fauna)	Coordination and promotion of environmental policies	Energy conservation
Water Code, 1975	National Sanitation Office, 1974, 1993 Water sanitation	National Agency for Energy Conservation
Conservation of Water and Soil Act, 1995	National Agency for the Protection of the Environment, 1988 Combatting pollution and approval of projects Coastal Protection and Management Agency, 1995 Protection of the coast Hazardous Waste Treatment Plant, 1996 Waste management National Bank of Genes, 2003 Protection of biodiversity Tunis International Center for Environmental Technologies, 1996 Technologies and training National Commission for Sustainable Development, 1993 General Coordination	Development of a law on renewable energy in 1985 Regulations on energy efficiency and financial incentives Restructuring the energy conservation system from 2004 to 2005 : Energy Conservation Act National Fund for Energy Conservation

Source: Authors.

ed to initiate, support and coordinate sectoral and cross-cutting programmes (see figure 9).

Action taken on protection of the environment:

The Ministry of Agriculture has been responsible for programmes concerning conservation and management of natural resources for the past 60 years (water, soil, forests and fauna). The “Water Code” of 1975 and a law relating to the protection of water and soil were milestones in the develop-

to coordinate and promote environmental policy and to ensure implementation and follow-up through the agencies and centres for which it is responsible. The first institutional structure to be created was the National Sanitation Office, in 1974, in order to respond to the challenges of urban sanitation and management of the network; the Office was enhanced in 1993 and tasked with protecting water resources and combatting the pollution affecting them. The National Agency for the Protection of the Environment was created in 1988. It is an executive body for the protection of the environment and combatting different forms of pollution. The Industrial Depollution Fund is an

<sup>21</sup> The main components are given in an annex.

important financial tool that was set up to support pollution control programmes. It was established in 1992. It is responsible for supporting investments in depollution and the installation of ecological equipment. The fund grants subsidies through which it contributes to financing of these projects.

The need to combat increasing degradation of coastal zones prompted the creation of the Coastal Protection and Management Agency, the enactment of a law relating to the public maritime domain in 1995 and a law establishing a national rapid response plan to combat marine pollution in 1996.

The issue of waste, in particular solid waste from various uses and activities, led to the drafting in 1996 of a law concerning their management, control and elimination and to the creation, in 2005, of the Hazardous Waste Treatment Plant in order to deal with this area. The National Bank of Genes, established in 2003, strengthened the mechanism through its responsibility for the protection of biodiversity.

The Tunis International Center for Environmental Technologies is a support centre providing technical assistance which was established in 1996 to ensure the development and transfer of environmental technologies as well as training of technicians and experts in this area.

The National Commission for Sustainable Development, founded in 1993, is the body responsible for coordinating the various national actors in the field of development. It is mandated, *inter alia*, with reconciling economic and social development and the conservation of natural resources. The Tunisian Observatory for the Environment and Sustainable Development carries out sector studies on implementation, analysis and forecasts concerning sustainable development. Studies have been carried out on agriculture (water, forest and fishing resources), industry, tourism and

transport (ongoing)<sup>22</sup>. These studies cover the status of activities, policy implementation, the challenges of sustainable development strategy, the measures and actions that are best suited to respond to them, follow-up indicators and their current status.

Action taken on energy conservation:

The energy conservation system began with the establishment of the Agency for Energy Conservation (AME)<sup>23</sup> and the enactment of a law on the development of renewable energy in 1985. Since that date, various regulations have established mandatory energy audits (1987) and forms of public financial assistance for investments in this area (1994).

The system was strengthened in 2004–2005 with a law on energy conservation. It established the fundamental concepts and a list of stakeholders. This energy conservation system defines goals, identifies public assistance, the different actions to be undertaken as well as the terms of financing. The National Fund for Energy Conservation is part of this system. This fund sets out public interventions in this area and the financial resources available<sup>24</sup>. A new category of operators was established: the Energy Service Establishments (ESE) set up a frame of reference, the purpose of which is to study, prepare, implement and evaluate projects that improve energy efficiency for the benefit of consumers.

<sup>22</sup> OTEDD GIZ, 2009.

<sup>23</sup> It became the National Agency for Renewable Energy in 1998, and then the National Agency for Energy Conservation in 2004.

<sup>24</sup> Converted, by an act on supplementary finances in 2014, into the Energy Transition Fund.

## 4.2. Policies to promote the inclusive green economy

### 4.2.1. Policies to promote the inclusive green economy and economic and social development plans

The incorporation of policies to promote the inclusive green economy into the country's structural transformation programmes was achieved through strategies, projects and mechanisms contained in development plans. Social concerns and the importance of protecting forest and river water resources and water and soil conservation have been emphasized from the outset.

National development plans thus incorporate the major approaches of sustainable development including the corresponding investments. Sectoral and cross-cutting programmes set up in order to achieve these objectives demonstrate the following fundamental principles:

1. Recognition of the important function of forest and pastoral areas in:
  - The protection of soil and running water resources;
  - Conservation areas which are vital for biodiversity;
  - The supply of products from a range of economic activities;
  - Guaranteeing resources and revenues for populations who live in a given area, in particular those in mountain regions;
  - Providing an essential component of ecological tourism.

Reforestation programmes have contributed to growth in forest areas and an increase in the forest vegetation.

1. The absolute necessity for programmes on energy conservation and rationalization of energy consumption to reduce energy intensity, mitigate greenhouse gas emissions and reduce carbon intensity in the economy.
2. Actions to protect the ozone layer, with ratification of international conventions on the subject, the realization of programmes for the control of harmful products and preparations for their complete elimination.
3. The efficient management of river water resources which requires responding to economic and social development needs while at the same time conserving the quality and sustainability of these resources and safeguarding them for future generations.
4. Conservation of biodiversity through the development of protected zones (national parks and conservation areas) and the monitoring of species through censuses and the detection of endangered categories.

### 4.2.2. Green economy policies

For the past two decades, the main green economy policies in Tunisia have been based on the approach of development plans. Thus, for the decade between 1997 and 2006, although the environment was fully taken into account in its development policy, the major themes of the policies proposed and actions implemented were based for the most part on environmental policies in conjunction with economic and development policies. Since 2006 and the incorporation of the concept of sustainable development into the development plan, environmental policies integrated with economic policies have been implemented. The principles and cross-cutting mechanisms have therefore been designed to safeguard sec-



toral policies and their inclusion in the vision of sustainable development, in particular:

- Recourse to a policy structure for national land management in order to implement structural policies on development;
- Taking account of environmental and ecological taxation as one of the tools that can be used on a sectoral and local basis where appropriate;
- Adopting an integrated strategy on environmental communication based on a real partnership with civil society.

In this context and despite the fact that we cannot yet speak of a green economy, we can consider that the first green economy policies were put in place from 2006.

Although the approach is quite different, the main focus of the policies and of the actions that are implemented are similar. The decade from 2007 to 2016 repeated and extended the same strategies for achieving sustainable development, based on the environmental achievements of the decade from 1997 to 2006.

### ***Sustainable resource management***

Between 1997 and 2006 the main areas of focus were:

- Increasing forest and pastoral coverage;
- Rationalizing the exploitation and mobilization of water resources;
- Plans to protect soil from erosion and desertification;
- Action to conserve biodiversity, including the creation of a national genes bank and protection of natural land, marine and coastal ecosystems.

Since 2006, rationalization of the exploitation of natural resources has been encouraged through the adoption of appropriate principles and behaviours, such as:

- Incorporating the requirements for conserving ecosystems, natural landscapes and biological conservation areas into economic policies;
- Directing technical and physical assistance to modes of production (agriculture and fishing) that are economic with natural resources;
- Adopting a global and complementary approach when compiling integrated strategies for the management of natural resources;
- Taking into account the effects of climate change and desertification on economic activities and preparing programmes and mechanisms to counteract them.

In addition, effective management of water resources has become a national priority in all sectors. In order to achieve this, definition of a follow-up indicator to measure the efficiency of water resources is underway. Water conservation policies are also accompanied by action to improve water quality.

### ***Promotion of quality of life and sanitation services***

Programmes were implemented as part of the 9th (1997–2001) and 10th plans (2001–2006) in order to promote quality of life in urban and rural zones. This focus on quality of life would be continued between 2007 and 2016. Since 1997, programmes have included:

- The national programme on environmental cleanliness and natural beauty; the focus on a clean environment was renewed in the 11th and 12th plans.

The creation of urban parks and tree-lined boulevards as well as green urban zones and coastal esplanades and, from 2006, the widespread introduction of urban parks and strengthening of wooded areas in urban settings;

- Increased promotion of ecotourism;
- Sanitation programmes and redevelopment of lower-income areas.

The plans recognize the importance of improving and extending sanitation services which have a positive effect on the health of citizens, on quality of life and on effective management of water resources with:

- Continued expansion of sanitation services in urban settings;
- Providing sanitation in smaller cities and towns and in rural areas;
- Upgrading of sewage treatment installations and increase in private sector involvement in their operation;
- Protection of the ecosystem especially in the Gulf of Tunis with the absorption of growing quantities of treated water.

### **Waste management**

Between 1997 and 2006, the plans established the installation of specific mechanisms for effective waste management (supervised landfills and transfer centres, combatting pollution generated by plastics, and so on.)

After 2007, the development of the waste management chain was taken into account in particular through:

- Introducing the promotion of waste recycling as an essential component of this chain;

- Encouraging the private sector to create businesses to promote waste transformation and recycling;
- Closing illegal dump sites, redeveloping the sites and setting up controlled waste sites;
- Increasing capacities for treatment of household waste and strengthening management of industrial, hospital and agricultural waste;
- Strengthening inter-community cooperation in this area.

### **Clean production and green investment**

The concept of clean production appeared between 1997 and 2006. It comprises:

- Environmental upgrading of enterprises and providing them with financial and technical support programmes;
- Redeveloping industrial zones and integrating them within their urban environment.

From the 11th plan onwards, the concept of environmental quality, as a factor in economic competitiveness in a green economy that is increasingly integrated in the global economy, appeared as a strategic choice. In such a context, environmental upgrading must be extended to all industrial, agricultural and tourism enterprises, in particular to those that are export-oriented, and action in this regard must be incorporated in upgrading and industrial modernization programmes. The plan advocates:

- Strengthening existing mechanisms and their optimal utilization, especially the fit between the Development Fund for Industrial Competitiveness and the Industrial Depollution Fund;

- The development of training and awareness programmes for professionals in the economic sector and their joining the environmental upgrading programme;
- Supporting export-oriented industrial enterprises in adapting to European and international environmental requirements and standards;
- The integration of tourist institutions in environmental management programmes with a view to obtaining an ecolabel and a certificate of conformity with the European environmental management system.
- For new projects, feasibility studies should take into account the real costs of energy products;
- Encouraging diversification of energy sources by:
  - Promoting cogeneration of electricity and thermal energy;
  - Developing project programmes that aim to use solar, wind and biomass energy.
- Strengthening scientific research concerning energy conservation techniques and the use of renewable energy.

### **Energy efficiency and renewable energy**

Rationalization of energy consumption and promotion of renewable energy occupies an important place in the 9<sup>th</sup> plan, with:

- The adoption of a national strategy based primarily on increasing financial incentives for energy conservation;
- Promoting household use of solar energy and its widespread use on public buildings;
- Introduction of mandatory use of thermal insulation in all new buildings;
- The promotion of cogeneration of energy in industrial activities.

Despite these measures, energy conservation had become even more urgent by the middle of the 2000s as a result of the increase in the structural deficit of the energy balance. Necessary strategies relate to:

- Rationalization of energy consumption with specific programmes in the sectors of industry, transport and tourism;

Table 7 details the cross-cutting programmes and investments corresponding to the components of environmental protection and conservation of natural resources over the past two decades.

\* Completed; \*\* Plan forecasts

### **4.2.3. Realization of green economy policies**

All of these policies on the environment and promotion of a green economy had a positive effect on the environment, on quality of life and on the Tunisian economy.

#### **Environmental impact**

Public policies on reforestation have resulted in an increase in forest zones and the development of vegetation cover. The available data shows that there is little variation although vegetation cover increased from 2.5 per cent throughout the territory immediately after the independence to between 4 and 5 per cent at the beginning of the 1990s, then 7 to 8 per cent in more recent years. The goal is to reach 10 per cent by 2020.<sup>25</sup>

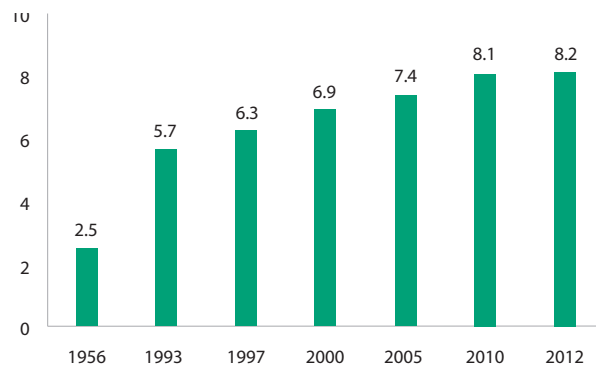
<sup>25</sup> <http://www.agriculture.tn/index.php/2014-10-19-12-07-15/ress-natu/forets> .

**Table 7: Investment programmed into plans for protection of the environment and conservation of natural resources**

	8th Plan		9th Plan		10th Plan		11th Plan		12th Plan	
	(1992 – 1996)*		(1997 – 2001)*		(2002 – 2006)*		(2007 – 2011)**		(2010 – 2014)**	
	Volume (millions of Tunisian dinars)	%	Volume (millions of Tunisian dinars)	%	Volume (millions of Tunisian dinars)	%	Volume (millions of Tunisian dinars)	%	Volume (millions of Tunisian dinars)	%
Global investment	20802	100.0	31571	100,0	41236	100,0	63521	100,0	98321	100,0
Investment in the environment and conservation of natural resources:	2172	10.4	3470	11.0	3792	9.2	4896	7.7	5740	5.8
Environmental protection	646	3.11	1089	3.45	1011	2.45	1680	2.64	2131	2.17
Sewerage	424	2.04	592	1.88	700	1.70	794	1.25	1045	1.06
Protection of the environment	188	0.90	439	1.39	224	0.54	770	1.21	955	0.97
Protection of towns from flooding	34	0.16	58	0.18	87	0.21	116	0.18	131	0.13
Conservation of natural resources and combating desertification	1526	7.34	2381	7.54	2781	6.74	3210	5.05	3606	3.67
Mobilisation and exploitation of river water	1087	5.23	1602	5.07	1803	4.37	2149	3.8	2287	2.33
Forests, pastures and combatting desertification	216	1.04	273	0.86	267	0.65	383	0.60	501	0.51
Water and soil conservation	223	1.07	211	0.67	267	0.65	269	0.42	360	0.37
Fishing and marine resources			162	0.1	277	0,67	240	0,38	265	0.27
Integrated agricultural projects			133	0.2	167	0.40	169	0.27	193	0.20
Land development							<b>6,1</b>	<b>0,01</b>	<b>3,4</b>	<b>0,0035</b>

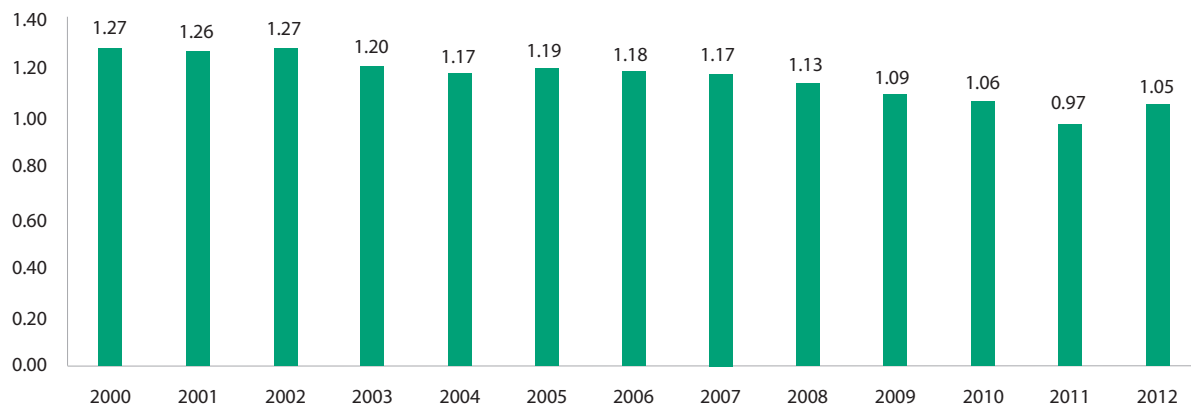
Source: Ministry of Development and International Cooperation.

**Figure 10: Trend in rate of vegetation cover (in relation to total area)**



**Sources:** Ministry of Agriculture, Ministry of Equipment, Land Planning and Sustainable Development, National report on the state of the environment, 2012–2013.

**Figure 11: Trend in carbon intensity (TeCO<sub>2</sub>/1000 Tunisian dinars of GDP)**



**Source:** National Agency for Energy Conservation.

Excluding desert areas and the salt lakes, the rate has risen from 4 per cent to 13 per cent over the past 50 years.

Furthermore, efforts to conserve energy have contributed to a reduction in energy intensity (see table 4), mitigation of greenhouse gas emissions and a reduction in carbon intensity in the economy, as indicated in the following graphs. More detailed data is presented in section 8.1.

### **Impact on access to water and sanitation services**

With respect to access to drinking water and sanitation, Government action has resulted in a remarkable increase in the provision of drinking water, with supplies reaching almost all of the

population by 2012. The share of the population supplied with drinking water rose from 85.7 per cent in 1994 to 98.8 per cent in 2012. The improvement in access to drinking water is most obvious in rural areas where the rate of supply has risen from 50 per cent to close to 91 per cent over the same period.

Improving access to drinking water in rural areas, including the remaining “pockets of resistance” where the physical context is most difficult, relies on the combined efforts of participating institutions, such as local agricultural development groups, through an increase in resources, improved management conditions and extension of their service.

Sanitation in urban settings, which is provided by a public operator, has undergone a substantial increase, with connections to networks rising from 670,000 households in 1994 to almost 1.6 million in 2012, which represents a connection rate of 85.3 per cent. However, the proportion of the total population with access to the sanitation network, including the rural population, is only close to 54 per cent. Therefore there are marked regional disparities in accessing these services.

### **Impact on employment**

Green economic activities have been developed in particular in the fields of energy conservation,<sup>26</sup> waste management and agriculture. Ad hoc studies have evaluated the extent of these activities and in particular their contribution to employment. Thus, in 2011, the energy conservation sector comprised some 392 private enterprises providing 2,389 permanent jobs. The majority of the enterprises (60 per cent) operate in the fields of solar hot water and energy efficiency of buildings (24 per cent).<sup>27</sup> There are 850 enterprises in the field of management of non-hazardous waste (52 per cent for plastic waste). There are 138 enterprises operating in the field of hazardous waste including collection, sorting and recycling of which 76 per cent cover four branches: recycling of printer cartridges (23.4 per cent); medical and hospital waste (17.4 per cent); drilling fluids (17.4 per cent); and transport (17.4 per cent).<sup>28</sup> In 2011, there were 167 organic farms occupying some 330,000 ha, which is equivalent to 6.6 per cent of cultivated land. Olive farming and olive oil production represent 35 per cent and 20 per cent of fruit production.<sup>29</sup>

Based on the institutional and regulatory platform and the structural characteristics of the Tunisian economy, analyses have been carried out on the potential of the green economy, in particular with

respect to employment, following implementation of investment programmes. It has been estimated,<sup>30</sup> green investments of 2 per cent of GDP would lead, over a period of five years, to the creation of employment of between 227,000 and 307,000, representing between 7 and 9.5 per cent of total employment. This potential would be spread over the following sectors: 12 per cent, energy; 56 per cent, construction; 30 per cent, agriculture and 2 per cent, water.

### **4.3. Social policies**

Since independence, Tunisia has implemented a social policy that has maintained certain core directions based on the characteristics of the national liberation movement, albeit with some adjustments as a result of changes in policies or the economy. The main components include:

- Provision of free and subsidized services for education, vocational training and health;
- Installing basic infrastructure and contributing to projects that give all sections of the population access to drinking water, sanitation services and electricity supply;
- Direct assistance in cash and in kind to families on low incomes, including ad hoc assistance, such as at the start of the school year or for religious festivals;
- Subsidized basic products (in order to compensate for the gap between the real cost and the public sale price);
- Services provided by social services and their affiliates: pensions, health insurance, workplace accidents, sick pay, social payments to families, and so on.

26 Specific and detailed data is presented in section 9.1 on best practices.

27 State of the Art Green Entrepreneurship in Tunisia, Regional Activity Centre for Cleaner Production (CP/RAC), Mediterranean Action Plan, December 2011.

28 Ibid.

29 Ibid.

30 International Trade Union Confederation, An economic analysis by the Millennium Institute, Towards green and decent employment, April 2012 ([www.ituc-csi.org](http://www.ituc-csi.org)).

**Table 8: Trend in social transfers**

	2000			2012			2013			Average annual growth 2000 – 2013 (%)
	Amount (MD)	%	% GDP	Amount (MD)	%	% GDP	Amount (MD)	%	% GDP	
Schools, education and training	1816.0	35.0	6.2	4607.2	27.4	6.6	4968.4	25.2	6.6	8.0
Public health	570.0	11.0	1.9	1253.4	7.4	1.8	1450.4	7.4	1.9	7.4
Other social expenditure (social affairs, youth, culture, etc.)	345.0	6.7	1.2	1303.2	7.7	1.9	1444.9	7.3	1.9	11.6
Spending on subsidies	257.0	5.0	0.9	3208.0	19.0	4.6	4200.0	21.3	5.5	24.0
Of which:										
Essential foods				1242.0	7.3	1.8	1350.0	6.9	1.8	
Energy production				1700.0	10.0	2.4	2520.0	12.8	3.3	
Assistance funds (families in need, regional programmes, etc.)	771.0	14.8	2.6	849.0	5.1	1.2	1117.5	5.7	1.5	2.9
Social security payments	1423.0	27.5	4.8	5804.6	33.4	8.1	6517.9	33.1	8.6	12.4
<b>Total</b>	<b>5182.0</b>	<b>100.0</b>	<b>17.6</b>	<b>17025.4</b>	<b>100.0</b>	<b>24.1</b>	<b>19699.1</b>	<b>100.0</b>	<b>26.0</b>	<b>10.8</b>

Source: Ministry of Development and International Cooperation.

The decade of the 1960s saw the organization of the broad directions of social policy, with social security organized at the institutional level, the development of a social solidarity network, school food programmes, literacy programmes, vaccination campaigns and employment centres.

During the 1970s, social policies were strongly interconnected and influenced by profound changes in public policies: liberalization of the economy; a reduced public sector and the changing role of the State; restructuring of agricultural activities after the failure of the system of collectivization; and development of export-oriented manufacturing industries.

The orientation towards a liberal economy resulted in the organization of labour relations with a

“social contract” between social partners. The desire to conserve purchasing power led to the introduction of a minimum wage for the industrial and agricultural sectors. However, in order to contain labour costs for enterprises, a system subsidizing basic consumer goods was introduced with a general compensation scheme. In 2004, in response to an increase in oil prices, energy subsidies were introduced (oil products, natural gas and electricity) and paid either directly or indirectly to producers. These subsidies influenced both consumer spending power and the production costs of economic activity thus contributing to competitiveness.

These policies taken as a whole required significant resources which were evaluated at 18 per cent during the period of the 7th economic and

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Total	5182.0	100.0	17.6	17025.4	100.0	24.1	19699.1	100.0	26.0	10.8	

*Source:* Ministry of Development and International Cooperation.

social development plan, 1987–1991, then 17.6 per cent of GDP in 2000 and between 24 and 26 per cent in 2012 and 2013 (see table 8). Two components were subject to growth: subsidies to basic energy products, especially in recent years, and social security payments.

Social protection policies and mechanisms are closely linked to demographic transformation as well as to economic trends and to changes in distribution of the population between different activities and the size of unemployment.

Tunisia has developed a social protection system to deal with the risks and uncertainties linked to old age, illness, poverty and workplace accidents.

Two types of collective insurance mechanisms have been adopted:

- Social insurance, with social security institutions founded on the basis of collective financing; this is the case for the public sector pension fund, the national pension and social security fund, a separate fund for people in the private sector, the national social security fund and, to cover some health care costs, the national health insurance fund, for affiliated employees in the public and private sectors.



- Social assistance, provided by the State and funded through taxation, is intended to cover those sections of the population living in precarious conditions, especially: needy and low-income families, people with disabilities and children without families.

The principal mechanism for direct assistance for the poorest members of the population is the programme for needy families. It is part of the national programme for assistance to needy families. Founded in 1986, it covers all of the country and provides direct financial assistance and free access to health care to the populations concerned. It was created as part of the measures to accompany the structural adjustment programme in order to mitigate its effect on the most vulnerable sections of society.

Although the device of using social policies to accompany economic development in order to ensure social cohesion and guarantee that the benefits of economic growth are shared equally has achieved substantial results, it appears to have reached its limits and to have become dysfunctional, making it less effective and unable to fulfil the objectives of the original policies. In addition, demographic trends have begun to challenge the financial viability and sustainability of unfunded pension schemes. They are in deficit despite multiple adjustments (in particular to the levels of contributions).

Concerning poverty reduction, although important progress has been made in terms of attainment of the Millennium Development Goal on halving the number of people living in poverty between 1990 and 2015, the rate of poverty remains high at 15.5 per cent and extreme poverty was 4.6 per cent in 2010.<sup>31</sup> Furthermore, the benefits of poverty reduction have not been equal-

31 INS, 2012, Measuring poverty, inequalities and polarization in Tunisia 2000 – 2010.

Secretary of State for Development and International Cooperation and UNDP, 2014, Millennium Development Goals, National Implementation Report, 2013 (<http://www.mdci.gov.tn/fileadmin/odd/Rapport%20Suivi%202013%20OMD%20Tunisia%20Final.pdf>).

ly distributed to every region of the country: the West remains disadvantaged, and extreme poverty stands at 14.3 per cent in the Centre-West; the gap in relation to the least poor regions has grown; rural areas are still suffering from extreme poverty (9.2 per cent) and they have not experienced the progress made in urban areas (large or medium-sized towns).<sup>32</sup>

These regional disparities are symptomatic of the results of public policy: gaps and shortfalls in education; a failure to provide access to the basic services of water, sanitation and electricity and maternal and child health care.<sup>33</sup>

In addition, the increase in financial resources devoted to public subsidy of basic foodstuffs, energy and transport services have placed a burden on the State budget.

However, in attempting to query this mechanism we encounter some of the fundamental characteristics of subsidies. Although general compensation for products of final consumption (mostly food and energy) is primarily of benefit to those who are not living in poverty, it is nevertheless crucial for poor populations. Consequently, removal of the subsidy would make their lives untenable.<sup>34</sup>

Targeting public assistance to those who need it the most would require an improvement in the identification of poor populations. It would allow their progress to be monitored and constant evaluation of action and results. However, information on population income would be required in order to facilitate effective allocation of direct cash

32 Secretary of State for Development and International Cooperation and UNDP, 2014, Millennium Development Goals, National Implementation Report, 2013

(<http://www.mdci.gov.tn/fileadmin/odd/Rapport%20Suivi%202013%20OMD%20Tunisia%20Final.pdf>).

33 Ibid.

34 Therefore, the withdrawal of subsidies for basic foodstuffs would increase the rate of poverty in the short term by 3.6 per cent, causing it to rise from 15.5 per cent to 19.1 per cent. For those living in extreme poverty, the withdrawal would lead to an increase in extreme poverty of 1.7 per cent, according to an analysis on the impact of food subsidies and social assistance programmes on poor and vulnerable populations, INS-CRES-BAD, June 2013.

transfers, based on the level of resources and on a decreasing basis.

### 4.3. Evaluation of inclusive green economy policies

Tunisia has developed a system of national indicators on sustainable development. In keeping with international strategies (Agenda 21, global action plan for sustainable development), Tunisia tested the sustainable development indicators of the United Nations in 1998 and those of the Mediterranean Commission on Sustainable Development in 1999, by carrying out several studies in order to verify their relevance in relation to the country's specific characteristics and priorities and in relation to the availability of the information and statistical data required in order to establish them. This process resulted in the identification of a set of indicators (120) that were assessed as being relevant and adapted to the country's socio-economic context. Included within the set was a list of 45 priority indicators<sup>35</sup>; regional indicators of improved living conditions (50) and sectoral indicators on sustainable development were also drawn up.

However, here too, from January 2011, serious gaps and weaknesses became evident:<sup>36</sup> the data often lacked precision, it did not cover all aspects of a problem and they were often ad hoc and generally difficult to access.

These failings are in addition to the structural deficiencies previously noted<sup>37</sup>. Indeed, a major obstacle to carrying out analyses of green economy activities, structural integration of environmental policies in the planning approach to development and to the evaluation of their impacts lies

in the lack of integration of the concept of green activities in economic sectors corresponding to the National Classification of Activities,<sup>38</sup> which underpins collection of the principal data on economic statistics. It should be noted however that in 2009, the National Classification of Activities<sup>39</sup> introduced a change with respect to the former classification (1996) with the creation of a new section devoted to the production and distribution of water, sanitation, waste management and decontamination. This section combines "sanitation" activities of water catchment, treatment and distribution as well as the recovery of raw materials. This adjustment, however, is still far from producing the conditions required for national green accounts, which have become increasingly desirable since publication of the "Integrated Environmental and Economic Accounting 2003 (SEEA 2003) of the United Nations and which has just been updated in "The System of Environmental-Economic Accounting 2012 – SEEA Central Framework", adopted as an international standard in March 2012. It states that "the traditional industry and product classifications are not capable of identifying the economic activities, products and producers that are characteristic of the environment. Alternative classifications are needed to distinguish the products and industries frequently associated with the environment from those in other activities through consideration of the purpose of different activities."<sup>40</sup>

Insufficient integration of green activities in the official statistics system makes it difficult to build credible and reliable quantitative models for ex-ante and ex-post evaluations of inclusive green economy programmes. Yet these are the only tools that will enable credible studies and useful simulations to be carried out, including on

35 National Sustainable Development Indicators, Ministry of the Environment, Tunisian Observatory for the Environment and Sustainable Development (OTEDD), June 2010.

36 Ministry of the Environment, October 2011, Preparations for the United Nations Conference on Sustainable Development (Rio+20), National Report of Tunisia.

37 See in particular MDG Fund and the Ministry of Vocational Training and Employment, 2012, Study on competences for green employment in Tunisia.

38 National Institute of Statistics, 1996. Classification of activities in Tunisia.

39 National Institute of Statistics, Classification of Activities in Tunisia in 2009 (NAT2009).

40 United Nations, European Union, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organization for Economic Cooperation and Development, The World Bank, System of Environmental Economic Accounting 2012, Central Framework, 2014.

impacts on the structure of investment and development actions and programmes.

Ad hoc and partial attempts were made in individual studies which defined specific goals, using specifically designed methodologies.<sup>41</sup>

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<sup>41</sup> For example: The National Energy Conservation Agency and GIZ, December 2012. Renewable Energy and Energy Efficiency in Tunisia: jobs, qualifications and economic impacts.

## 5. Links and correlations between policies promoting the inclusive green economy and structural transformation policies in Tunisia

### 5.1. Introduction: institutional links

The links between policies to promote an inclusive green economy and those targeting structural transformation in Tunisia are on two levels: firstly, the conditions and ways of defining and establishing these policies; and, secondly, the specific initiatives and actions implemented in the main sectors of the economy with respect to national strategies for the development and transformation of these sectors.

National policies are drawn up during the planning process for economic and social development, which is led by the Ministry of Planning. This process is based on a dual mechanism:

- Macroeconomic simulations which are supported by development strategies and are in keeping with a coherent physical, economic and financial plan;
- Analyses and consultations by sector (corresponding to sectors managed by ministerial departments) and by region (through the country's governorates) which produce diagnostics of existing situations, estimate the potential for change and summarize the guidelines and proposals in sectoral and regional documents. They are conducted by sectoral and regional committees.

Policies and programmes as a whole are selected and agreed upon by a national coordinating committee. For almost 20 years, protection of the environment and conservation of natural resources and then, officially, sustainable development, have appeared in the plans on two levels: in the overarching strategies as development policies (documents containing the overall content), and as sectoral programmes managed by the responsible ministry document (with sectoral content).

With respect to sustainable development actions and programmes, the National Commission for Sustainable Development, through its institutional and sectoral representativeness and its mission (see box 2), promotes and guarantees integration, coherence and synergy between inclusive green economy policies and structural transformation.

Since January 2011, all of these mechanisms have been put on hold. Yet the new Constitution states that the State is committed "to work for the realization of social justice, sustainable development and regional balance", and to conducting "sound management of natural resources" (Art. 12). Similarly, the State "guarantees the right to a healthy and balanced environment and to support for climate protection" and ensures the means necessary to prevent environmental pollution (Art. 45). It establishes a "Commission on Sustainable Development and the Rights of Future Generations" which must be consulted concerning all legislation relating to economic, social and environmental issues and development plans (Art. 129).

## 5.2. Green economy initiatives and policies applied in the major economic sectors

The previous chapter identified and analysed the broad outline of strategies on sustainable development and the inclusive green economy in Tunisia.

In this section, we will see how these major strategies, in terms of sustainable development and the green economy, have been translated into policies for sectoral development which are enablers for structural transformation. The section will examine, with respect to major sectors of economic activity, the actions and significant projects that contribute to promoting an inclusive green economy, to wealth creation, efficient conservation and use of resources and social inclusion and equity.

Sectoral plans in Tunisia bring together strategies, programmes and projects that are specific to each sector of economic activity. An assessment study carried out in 2009<sup>42</sup> examined the situation of several sectors with respect to sustainable development. It recorded in particular the progress made towards achieving an inclusive green economy. We show hereafter the principal actions employed in the industrial, energy, agricultural and tourist sectors.

### 5.2.1. Programmes and mechanisms implemented to promote sustainable industries

Since the adoption of the strategy to open the economy to international markets and integrate with the world economy at the beginning of the 1970s and, increasingly from the middle of the 1990s, the main objective of industrial policy has

<sup>42</sup> Study on the most successful initiatives for embedding sustainable development within sectors, analytical diagnosis of sustainable development in the industrial, tourist, agricultural and transport sectors carried out by the Ministry of the Environment and Sustainable Development in 2009.

been to promote the competitiveness of enterprises in the long term and to promote innovation as an engine of development. This journey has been punctuated by a series of actions, some of the most significant of which have been:

- Establishing the Fund for Industrial Promotion and Decentralization in 1973, in order to encourage the decentralization of industrial projects and investment;
- Launching a development plan in 1995 to support industrial enterprises in improving productivity and developing competitiveness;
- Establishing business incubators;
- Launching an Industry Modernization Programme in 2003, in order to assist enterprises, particularly small- and medium-sized enterprises, in adapting to international competition; replaced in 2009 by the Enterprise Competitiveness and Market Access Facilitation Support Programme;
- Creating technology parks housing production, technological innovation, training, scientific research and public service activities;
- Establishing the Export Market Access Fund to support export enterprises, diversify their export markets and develop new activities.

Since the beginning of the 2000s, the environment has also been considered a long-term competitive factor for enterprises and for the country. The development of the green economy in Tunisia is also based on investment in clean industry. A number of mechanisms have formed the basis for this sustainable industry:

## Box 2: National Commission for Sustainable Development

Established in October 1993, the Commission is headed by the Prime Minister. Its permanent members include:

- Minister for the Environment and Sustainable Development, vice-chair, and eighteen other members of Government;
- Representatives of Parliament;
- Representative of professional organizations and trade unions;
- Representative of the National Union of Women of Tunisia;
- Representatives of non-governmental organizations that deal with environmental and development issues;
- National Agency for the Protection of the Environment as rapporteur for the Commission.

The Commission is assisted by:

- Technical committee, headed by the Minister for the Environment and Sustainable Development and composed of officials responsible for environmental issues in the relevant ministries, representatives of bodies dealing with environmental matters and members of national research institutions, university lecturers and representatives of non-governmental organizations;
- Sectoral committees chaired by the relevant ministers (sustainable agriculture, sustainable industry, etc.);
- National committee for combating desertification as the national coordinating body for implementation of the Convention to Combat Desertification;
- National committee on biodiversity and biosafety is chaired by the Minister for the Environment and Sustainable Development and gathers together managers and specialists on questions relating to implementation of the Convention on Biological Diversity and the Cartagena Protocol on Biosafety;
- National committee on climate change.

The National Commission for Sustainable Development is charged with missions that lead to re-adjustment of national development programmes and their harmonization with the objective of sustainable development. The Commission is responsible for:

- Drawing up and implementing a strategy and a national action plan on sustainable development;
- Working on integrating environmental issues into policies, strategies and sectoral development plans;
- Preserving the rights of future generations to a healthy and sustainable environment;
- Putting an end to unsound ecological methods of production and consumption;
- Achieving self-reliance and food security;
- Ensuring proper use of natural resources, especially water resources;
- Proposing appropriate regulatory measures to contain pollution;
- Proposing adequate measures to:

- Reinforce institutional structures and procedures ensuring the full integration of environmental and development issues at all levels of decision-making;
- Promote the participation of groups, local authorities, bodies and individuals involved in decision-making processes at local, regional and national levels;
- Develop a system of environmental accounting based on the use of new development indicators.

*Source:* Ministry for the Environment and Sustainable Development.

- The environmental impact study system which was set up in 1991 (decree no. 362 - 1991), revised in 2005 (decree n° 2005 - 1991) as a preventive mechanism to protect the environment and promote sound management of natural resources;
- Establishing the Industrial Depollution Fund in order to clean up and combat pollution with assistance from the Fund and through tax incentives set out in an investment code which encourage investment in industry and public services;
- The Environmental Upgrade Programme 2010–2014 aiming to certify 500 Tunisian enterprises by 2014, in conformity with international standard ISO 14001, in order to satisfy the environmental requirements of external markets and customers.
- Implementation from 2005, for a period of five years, of the Energy Efficiency Programme for Industry, the purpose of which was to encourage sound management of energy in the industrial sector through audits, technical assistance and investments in order to achieve energy saving.

An industry cannot be sustainable unless it can create employment and improve the well-being

of the population. Thus to support employment, in particular the recruitment of a skilled workforce, and facilitate the accumulation of human capital within Tunisian enterprises, Tunisia has adopted facilitating and incentivising measures based principally on State funding for all employer social security costs and for part of the wages bill. This is the case for the subsidized internship, designed for graduates or for those who have completed the first cycle of their university education. The measures also cover continuing professional development and retraining of workers through:

- Reimbursement of the tax on vocational training, the oldest and most important form of continuing professional development;
- Registration for the National Programme for Continuing Professional Development.

### 5.2.2. Energy conservation programmes

The characteristics of the institutional, legislative and regulatory framework and the measures for encouragement and incentivization contained in the plans, have been presented in the previous chapters and constitute the basis for the success of energy conservation programmes.

The strengthening of national policy with the implementation of actions leading to a real change in scale has been carried out through two pro-

grammes: a three-year programme (2005–2007) and then a four-year programme (2008–2011), focusing on the two policy sectors of energy efficiency and renewable energy.

Energy efficiency actions have been deployed through:

- Energy efficiency programme contracts in industry, transport and tertiary sector activities;
- Cogeneration in the industrial sector;
- Development and use of natural gas in the industrial and residential sectors;
- Distribution of low-energy bulbs for residential use and public lighting;
- Energy-efficient buildings;
- Various energy efficiency programmes: labelling of refrigerators to promote use of the “responsible energy” function;

Actions in the field of renewable energy with respect to development:

- Solar thermal energy, with the installation of solar hot water heaters, mostly in the residential sector;
- Wind power;
- Solar photovoltaic power, particularly for rural electrification.

Energy conservation programmes constitute a benchmark strategy for inclusive green growth. They respond to the growing demand for energy which results from economic development as well as contributing to environmental protection by reducing greenhouse gas emissions and reducing carbon intensity in the economy. They contribute to social inclusion by creating employment.

The development of these activities has sectoral implications and consequently it affects the structural evolution of the economy by reinforcing certain sectors, diversifying their contents (the production of electricity for example) and creating new activities (for example the production of and installation of solar panels to heat water).

Thus the national energy conservation policy has resulted in a decrease of 27.4 per cent in the primary energy intensity of the economy over the past twenty years, which has accelerated during the decade from the year 2000; this form of intensity fell from 0.416 in 1990 to 0.389 in 2000, 0.34 in 2005 and 0.302 in 2011. Naturally, this movement has been accompanied by a fall in carbon intensity which decreased from 1.43 tonnes equivalent CO<sub>2</sub> (t<sub>é</sub>CO<sub>2</sub>) / 1000 Tunisian dinars of GDP in 1990 to 1.09 t<sub>é</sub>CO<sub>2</sub> / 1000 Tunisian dinars of GDP in 2009<sup>43</sup>.

The main indicators concerning achievement of energy conservation programmes for the period from 2005 to 2010 are given below and listed in table 9:

- Up to 2011, 1030 programme contracts had been signed (670 for industry, 288 for the tertiary sector and 72 for transport), while there were only 220 in 2004;
- For cogeneration, the capacity installed has progressed from 5 MW in 2005 (for 40 GWh of electricity produced) to 36.6 in 2011 (and 236 GWh of electricity produced). The potential of the country with respect to cogeneration is however evaluated at about 606 MW (522 MW in industry and 84 MW in the tertiary sector);
- Number of low-energy bulbs installed increased from 380 in 2004 and 14200 in 2011;

43 ANME, April 2012. Energy conservation, key figures ANME-GIZ, December 2012. Renewable energy and energy efficiency in Tunisia: jobs, qualifications and economic impact.



- Areas installed with thermal solar panels progressed from 73,500 m<sup>2</sup> in 2000 to 132,000 m<sup>2</sup> in 2004 and 560,000 m<sup>2</sup> in 2011;
- The national electricity and gas company established a wind farm in 2001 with a capacity of 10 MW, which was increased to 20 MW in 2003 and then to 55 MW in 2008<sup>44</sup>. In 2013, an additional capacity of 190 MW was put into service;
- Number of households with electricity supplied by photovoltaic kits has risen from about 7,600 in 2000 to almost 13,200 in 2001; in 2010, the PRO-SOL-Elec programme was established in order to promote photovoltaic panels connected to the grid;
- Energy savings realized between 2005 and 2010 are estimated at around 2,700 ktep, of which close to 91 per cent were the result of steps taken to improve energy efficiency (with 47 coming from programme-contracts, 35 per cent from electricity use and 5.4 per cent from transport); 9 per cent of savings came from renewable energy;
- Greenhouse gas emissions avoided in the period from 2005 to 2011 have been estimated at 8,447 KteCO<sub>2</sub>, of which almost 2,000 were in 2011 alone. Energy efficiency programmes were responsible for 90 per cent of the results achieved and 10 per cent came from the development of renewable energy<sup>45</sup>.

In addition, between 3,500 and 5,000 jobs were created in the sector between 2005 and 2010. The types of jobs created by energy conservation pro-

grammes and the share of employment created are evaluated in table 10.

\*: the number of jobs created in this programme appears to have been underestimated since it records the number of installers who often come from very small enterprises of between two, three or four persons. An estimate made by the Millennium Development Goal Fund and the Ministry of Vocational Training and Employment in 2012, recorded that the personnel was composed of one manager, one assistant and two technicians, which would mean an overall total for the programme of around 5,000 jobs of a more-or-less technical nature (Vocational Training Certificate in plumbing and sanitation and Advanced Vocational Training Certificate).

The success of energy conservation programmes relies on the conjunction of several essential factors and the adoption of mechanisms that are fit for purpose:

- Need to respond to major challenges to the national economy in the context of a structural deficit in the energy budget and the steep rise in the price of fossil fuels, to satisfy the growing requirements resulting from economic growth while making efficient use of this energy by reducing the intensity of consumption. It is a case of benefiting from surges in energy efficiency and making the best of use of national available resources, particularly with regard to renewable energy;
- Obligation and the benefit of adopting climate change strategies and the reduction in greenhouse gases. This commitment is all the more profitable when contrasting the estimates of the quantities of mitigated greenhouse gas emissions and the costs of programmes which is around 10 euros per

44 The national electricity and gas company recorded capacity of around 53 MW (Annual report 2011).

45 ANME, April 2012, Energy efficiency, key figures.

teCO<sub>2</sub><sup>46</sup>, whereas carbon markets have much higher prices at the time of the programmes (up to 35 euros) and will probably remain at an average of 25 euros<sup>47</sup>:

- Adopting institutional, organizational and financial mechanisms that will ensure a “win-win” approach for all partners within the programmes: policy makers; technical operators; and beneficiaries of the programmes (enterprises or households). The organizational plans and the implementation procedures as well as the shared financial arrangements rely on a public-private partnership approach that is clearly structured and that is beneficial for each party.

The success factors in these actions guarantee the sustainability of green economy policies and they

**Table 9: Energy efficiencies achieved**

Actions	2005 – 2007		2008 – 2010		2005 – 2010	
	ktep	%	ktep	%	ktep	%
Programme-contracts	436.6	56.7	839	43.4	1275.6	47.2
Cogeneration	9.2	1.2	72.4	3.7	81.6	3.0
Energy efficiency from buildings		0.0	8	0.4	8	0.3
Energy efficiency from electricity use	222.4	28.9	721	37.3	943.4	34.9
Energy efficiency in transport	42	5.5	104	5.4	146	5.4
Total partial EE	710.2	92.2	1,744.4	90.2	2,454.6	90.8
Wind power	30.6	4.0	113	5.8	143.6	5.3
Solar hot water	29.1	3.8	75	3.9	104.1	3.9
Photovoltaic		0.0	1	0.1	1	0.0
<b>Sub-total ER</b>	<b>59.7</b>	<b>7.8</b>	<b>189</b>	<b>9.8</b>	<b>248.7</b>	<b>9.2</b>
<b>Total</b>	<b>769.9</b>	<b>100.0</b>	<b>1,933.4</b>	<b>100.0</b>	<b>2,703.3</b>	<b>100.0</b>

Source: ANME-GIZ, December 2012, Renewable energy and energy efficiency in Tunisia: employment, qualifications and economic impact; ANME, April 2012, Energy conservation, Key figures.

46 Cf. ANME-GIZ, December 2012. Renewable energy and energy efficiency in Tunisia, jobs, qualifications and economic impact.

47 It is true that the crises and dysfunctions in the European markets in particular caused a dramatic fall in these prices to below 5 euros per tonne in 2012.

are assets in the development of its industries. Adopting and strengthening them creates a positive platform for the extension and intensification of energy conservation programmes as set out in the Tunisian Solar Programme (see box 3).

### 5.2.3. Initiatives for the development of sustainable agriculture

Despite the significant fall in the share of agriculture in the Tunisian economy, it still represents almost 10 per cent of GDP. Given the degradation of land and limited water resources, it has become essential to develop initiatives for sustainable agriculture. These can be divided into four categories:

#### Agroforestry and pathways

Forestry Development Project I (PDF I), the aim of which was to promote services for the management of forest products and to incentivize the private sector, was followed by Forestry Development Project II (PDF II), the purpose of which

was to launch a participatory approach to forestry development that would include local people in the management of forest resources in associa-

**Table 10: Jobs created in the field of energy conservation**

Type of work	Tests	Research and development	Supply	Installation	Operation & maintenance	Support and management	Total jobs 2005–2010
<b>Programme</b>							
<b>Energy efficiency</b>	<b>30</b>	<b>162</b>	<b>210</b>	<b>425</b>	<b>129</b>		<b>956</b>
Energy audits and CP		152					152
Energy efficiency in buildings	25			36			61
ESE		9					9
Cogeneration		1		35	24		60
Diagnostic tests				4	105		109
Energy conservation equipment	5		210	350			565
Renewable energy	15	10	374	1,159	14	0	1,572
PROSOL Residential*	15		374	1,100			1,489
PROSOL Tertiary		4		19	4		27
PROSOL Elec				38	2		40
Rural electrification							
Wind power		6		2	8		16
Horizontal activities						975	975
Promotion and supervision						200	200
Training and development						200	200
Research and development						25	25
Energy Manager						500	500
Specialist consulting						50	50
<b>Total</b>	<b>45</b>	<b>172</b>	<b>584</b>	<b>1,584</b>	<b>143</b>	<b>975</b>	<b>3,503</b>

*Source:* ANME-GIZ, December 2012. Renewable energy and energy efficiency in Tunisia: employment, qualifications and economic impact.

tion with non-governmental organizations. The initiatives have enabled the establishment of integrated development plans, in parallel with land development and planning.

### ***Fishing and aquaculture***

The development of sustainable fishing was promoted with the upgrading of fishing activities and strengthening of procedures to prevent uncontrolled fishing and adapting the pressure of fishing according to the status of the species. In addition, it covered the promotion of the aquaculture sector in fresh and brackish water. It was accompanied by improvements in port structures and promotion of seafood, improved competitiveness and quality standards.

### ***Agricultural production***

Sectoral policies have followed an integrated approach to rural development through conservation of resources and improvement in people's income and standard of living. This has been achieved through optimization of the resources used, promotion of the most productive sectors which are also the most profitable, better organization of industries and upgrading of circuits with respect to production, storage and distribution, strengthening the capacities of private operators and the role of professionals as well as improving working conditions.

Water resources have also been optimized and protected by the connections between hillside dams and the increase in the contribution of irrigated areas to total production.

### Box 3: Tunisian Solar Plan

The Tunisian Solar Plan for the period 2010 – 2016, has continued to focus on energy conservation and to expand it to a larger scale. It also incorporates the country within the Mediterranean space and within its solar plan (the Mediterranean Solar Plan). The aim is to build a regional platform for industrial and energy production and to confirm the country's commitment to socioeconomic development that conserves energy and has low carbon emissions.

The Plan is composed of 40 complementary projects that involve solar energy, wind power, energy efficiency, a connection to the electricity grid in Italy and the manufacture of solar panels.

The overall cost of the Plan was estimated in 2009 at 3,600 billion dinars or 2,000 billion euros, with the following funding plan:

- 260 billion dinars or 145 billion euros from the National Fund for Energy Conservation
- 800 billion dinars or 445 billion euros from the public sector (of which 580 billion dinars is from the STEG)
- 2,500 billion dinars or 1,390 billion euros from private funds of which 1,074 billion dinars corresponds to projects producing for export
- 40 billion dinars or 20 billion euros from international cooperation.

The expected energy savings after all of these projects have been carried out is in the order of 660 kTep per year, corresponding to 22 per cent of the overall reduction in national energy consumption expected for 2016. The quantity of CO<sub>2</sub> emissions avoided as a result of these projects is estimated at 1,300,000 tonnes per year.

*Source:* National Agency for Energy Conservation.

### ***Development of the organic agriculture industry***

Organic agriculture, which first appeared in the 1980s, properly took hold in the 1990s with the introduction of a specific legislative, institutional and operational framework.<sup>48</sup>

An incentive scheme was also put in place with the following two principal measures:

- A subsidy of 70 per cent for equipment, tools and resources dedicated to organic production;

- A subsidy of 70 per cent for conservation and certification expenses for five years for investors in organic farming.

In 2012, the area of the country that was certified organic or converting to organic was estimated at more than 196,000ha, or 2 per cent of agricultural land, compared to 34,000ha in 2003. The productive area is more than 109,000ha, representing 2.18 per cent of the nation's cultivable land. 87000ha is composed of forests, pathways and fallow land, or 1.7 per cent of all forests, pathways and fallow land.

The largest crop is from organic olive trees (representing 6.5 per cent of the land devoted to olive growing nationally), which occupy 51 per cent of the total land and 92 per cent of productive

<sup>48</sup> Since the Act of April 1999 on organic agriculture and the laws following it. See <http://www.ctab.nat.tn/default.php?p=regle>.

land (excluding pathways, fallow land, forests and scrubland).

Exports were 90 MD in 2012, or close to 4.4 per cent of agricultural exports.

Of course, the progress made in this industry was facilitated by the conditions put in place for the operators: specially adapted legislation and regulations; a State administration that listened and responded; effective technical assistance; and attractive financial incentives. The stimulating factor was provided by effective external demand. The expansion of this industry to satisfy internal demand, which corresponds mainly to high-income consumers at present, depends on the prices at which the produce is sold.

#### 5.2.4. Development of sustainable tourism

This sector is of strategic importance in Tunisia, representing almost 7 per cent of GDP; it is one of the main providers of foreign currency and employs almost 12 per cent of the population. However, its impact on the environment, and in particular on water resources and coastal degradation, is an important consideration. Several elements in the general approach and in public policies in the sector promote the development of a wider range of sustainable tourism opportunities:

- Diversification of tourist products with the development of golf, thermal spas, tourism in the Sahara, deep-sea diving, and so on;
- Increased upgrading of the quality of the areas devoted to tourism;
- Development of training in the different specialities in sufficient quantities to respond to needs in the sector;

- The adoption of measures allowing deployment to respond to need throughout the year.

With respect to the environment, the principle measures taken have impacted on coastal areas and on the use of natural resources and the development of ecotourism.

#### **Coastal protection**

Since tourism was first developed in Tunisia, various laws have been introduced to regulate and protect the coast:

- Since 1973, decree no. 73-162 has defined five priority tourist zones (Tunis North, Tunis South, Hammamet-Nabeul, Sousse-north, Djerba and Zarzis), which have development plans and specifications for hotel units with in-built standards on coastal protection;
- The code on land development and urbanization of 1994;
- Decree no.94-426, in 1994 which defined tourism investment zones;
- Act no. 95-73, of 1995, which defined the boundaries of the public maritime domain and the conditions for its conservation.

From 1995, the creation of the Coastal Protection and Management Agency enabled conservation and effective management of the coast.

#### **Sound management and use of natural resources**

The goal of the main measures taken is to conserve water and energy resources and to effect sound land management. The policies targeted economising water consumption through recycling of used and treated water from the irrigation of golf courses and green zones; reducing energy use by carrying out the appropriate investments; and through sound management of land and de-

**Table 11: Organic farming industry indicators in 2012**

National land certified as organic or in the process of conversion			Number of operators	
Crops	Ha	%	Operators	Number
Olive trees	100,500	51,04	Producers	2,320
Date palms	1,030	0,52	Processing	100
Vegetables	90	0,05	Exporters	53
Arable and fodder	1,210	0,61	Importers	50
Fruit trees	2,920	1,48	Total	2,523
Aromatic and medicinal plants	820	0,42		
Cacti	2,680	1,36		
Pathways	16,287	8,27		
Fallow and uncultivated	14,336	7,28		
Total organic farm land	139,873	71,03		
Forest	15,329	7,78		
Wild plants	41,716	21,18		
<b>Wild organic plants</b>	<b>57,045</b>	<b>28,97</b>		
<b>Total</b>	<b>196,918</b>	<b>100,0</b>		

Source: Ministry of Agriculture.

fining and delimiting new tourist zones within the framework of the master plan for land development and in accordance with the code on land development and urbanization.

### **Development of ecotourism**

This activity is focused on nature and biodiversity and was developed by identifying green tourism zones through:

Development that prioritizes horse-back riding, pedestrian traffic and non-polluting forms of transport;

Reducing housing density, with proximity to organic agriculture as a support to tourism.

All of the actions have been incorporated into the development strategy for the tourism sector with the principal instrument being the Development Programme for Hotels (PMNH)<sup>49</sup>, which was launched in 2005.

## **5.3. Inclusive green economy policies and their impact on structural transformation**

Inclusive green economy policies, which implement the major strategies developed in the past and which are still retained (in the context of political and social restructuring) in particular through the national sustainable development strategy, contribute to structural transformation, influencing their scope and content.

### **Management of natural resources**

Conservation and protection of resources involves actions and programmes that have an impact on all economic sectors.

In farming, for example, it requires first and foremost combatting land degradation and sound management of water resources.

Land conservation takes two forms: i) improving vegetation, with revegetation, development and sound management of forest and pastoral; ii) efforts to direct the choice of crops on the basis of environmental constraints. These actions result in

49 See <http://www.pmnt.tn/>.

an improvement in production and yield, as well as in jobs and income for the populations living in the areas concerned. Above all, they enable productive, sustainable activity since they also contribute to preservation of the biodiversity of ecosystems, habitats, species and genetic resources; they also contribute to mitigating the effects of climate change. Diversification of agricultural production and development of raw materials for green industries, lead at the same time to intrasectoral transformation with, in particular, promotion of organic industries and sectoral transformation and growth in agriculture and associated green industries. Another, not insignificant effect, is the stabilization of rural populations and the reduction in excessive rural-to-urban migration which is prompted by the search for work.

Efficient management of water in agriculture (which uses about 80 per cent of available resources) requires economy policies, a reduction in crops that have high water consumption and low yields, an increase in high-yield crops and the adoption of suitable, high performance irrigation technologies. The conversion and restructuring of activities results in intrasectoral diversification by strengthening or establishing competitive and exportable subsectors of production. Efficiency policies also imply restructuring the size of agricultural companies, with possible negative effects on employment.

Mobilization of water resources involves the development of unconventional water sources (treatment of used water, desalination, etc.)<sup>50</sup>, which can be used in different activities (tourism, industry, etc.), thus contributing to saving conventional resources. These programmes therefore benefit the development of non-manufacturing industries, and prompt the emergence of specialized services of evaluation and management. Nevertheless, some activities are not exempt from ecological risks: for instance, desalination of sea water entails high energy consumption and is the

origin of possible negative effects on the marine environment.

Among policies for protection of the country's coastline is the reduction of the domination and weight of seaside tourism. Its modalities are translated by diversification of the offer (tourism in the Sahara, spa treatment, golf, nature and archaeology) and a rise in the number and value of products. This leads to intrasectoral diversification and strengthens the service sector as a component of GDP. A balanced distribution of these activities also contributes to a reduction in regional inequalities. There are however risks arising from possible increased pressure on natural resources (water, energy) and on fragile areas (parks, nature reserves, deserts, monuments, etc.) and from new sources of pollution.

### ***Energy efficiency and renewable energy***

Energy conservation, with its two components, which are energy efficiency and renewable energy, represents a vast field in which to deploy inclusive green economy policies. The Tunisian solar energy plan is an important part in this and it provides substantial employment (estimated at between 7,000 and 20,000 jobs<sup>51</sup>), industrial activities (in the mechanical, electrical, electronic and construction sectors) and services. In addition to this plan, the policies have been widely implemented, leading to: (i) industrial diversification with the development of innovative industries and energy-efficient materials and procedures; (ii) development of monitoring and auditing services; (iii) the adaptation and creation of related jobs; (iv) a boost to redevelopment activities in order to meet existing standards.

Implementation of these policies must respond to two major challenges: funding of the necessary investments (in particular for renewable energy) and the availability of essential qualified personnel and a training system that has the capacity to respond.

<sup>50</sup> These resources are expected to reach 330 mm<sup>3</sup> in 2030, or 7 per cent of the total potential volume in use. See National sustainable development strategy 2014–2020.

<sup>51</sup> ANME-GIZ, December 2012. Renewable energy and energy efficiency in Tunisia: jobs, qualifications and economic impact.



### ***Clean production and green investment***

Environmental upgrading of industrial enterprises constitutes an essential component of inclusive green economy policies in Tunisia. Within the framework of industrial modernization, its aim is to ensure compliance with international standards and improve the competitiveness of these enterprises. It is characterized by the adoption of clean technologies and efficient management of resources (water, energy, etc.) and of industrial waste (liquid, solid or gas). In the context of this process, the Tunis International Centre for Environmental Technologies plays an essential role in providing support and training. The centre is a public institution, which sits within the Ministry of the Environment and Sustainable Development. Since its creation in June 1996, the centre has been committed to developing national competencies that will improve mastery of environmental technologies in order to ensure sustainable development in Tunisia and in the Arab and Mediterranean regions. It plays an essential role in environmental upgrading of industry through a variety of technical assistance services, which help it to satisfy the requirements of national and international standards and to improve their competitiveness.

The effects of developing clean production on structural transformation are: (i) strengthening the potential to integrate with the global economy; (ii) benefitting the competitive sectors and strong value-added; (iii) the emergence of new green activities such as innovation in industrial processes and services to enterprises.

### ***Promoting quality of life, sanitation services and waste management***

The protection of rural and urban spaces, through policies on sanitation, efficient management of the waste chain and safeguarding air quality, improves the quality of life of the population and the operation of enterprises. It contributes to the attractiveness of the territory and to the growth in high-performance activities linked to international markets.

It also enables the development of environmental services by private operators and new activities for the treatment, recycling and recovery of all types of waste. This results, both directly and indirectly, in greater sectoral diversification of the economy.

### ***Social inclusion and development of social services***

Although economic growth creates jobs, leads to a reduction in unemployment and is the principal factor in social inclusion, inclusive green economy policies also deal with social equity and solidarity between different social groups. In Tunisia, this takes the form of action on education, health and social protection programmes.

Development of education and health services contributes to the training of productive and educated human resources who have the tools to support sustained economic development and growing sectoral diversification. They also lead to demographic changes characterized by a lower birth rate and lower infant mortality and to an increase in life expectancy.

In addition to direct social assistance (in cash) to the poorest in order to mitigate difficulties in living conditions, indirect assistance, State subsidy of food and energy influence structural transformation. Public subsidy of some employment costs helps to make the exporting of economic activities more competitive, to safeguard them and to extend them within the productive structure. At the same time, it leads to distortion in the behaviour of operators, encouraging them to continue inefficient use of resources and delaying the adoption of clean and innovative technologies. It is also a burden on the State budget, reducing its margins for intervention for the investment of infrastructures that are so important for all economic sectors.

Expanding cover through the social security system is an essential component of social protection policy. This policy addresses two essential needs: socioeconomic efficiency by guaranteeing the well-being of people by tempering the risks



of personal and professional circumstances; equity and social justice, by preserving access on an equal a basis as possible to basic social services such as basic health care. This can be achieved by shrinking the area occupied by informal sector activities.

The policy of increasing the benefits of social security is not without risks and must be fully assessed, since, for producers, they increase labour costs in an environment in which competition is widespread. The business sectors that are most affect-

ed are those that are labour-intensive, especially unskilled sectors. In the absence of arbitration that is suited to the competitive context, structural distortions may arise that are detrimental to labour-intensive sectors and/or that encourage a return to or an increase in the informal sector.

Demographic changes increase financial imbalances in the system, especially at times of high unemployment, and put significant pressure on public finances and State investment.

**Table 12: Summary of contributions of policies promoting an inclusive green economy to structural transformation in Tunisia**

Policies	Actions	Impact of structural transformation	Potential risks
<b>Conservation and protection of resources</b>			
Combatting land degradation (Agriculture)	Increasing vegetation cover  Choice of crops adapted to environmental constraints	Intrasectoral transformation of agriculture: diversification of crops and of agricultural production  Sectoral diversification: raw materials for green industries  Stabilization of the population and reduction in rural-to-urban migration	
Effective management of water resources (Agriculture)	Choice of crops that are economic in terms of water consumption and give higher yields  Adopting suitable and high-performance irrigation technologies	Converting and restructuring activities  Intrasectoral diversification, increase in subsectors that are competitive and exporting  Restructuring in the amount of land cultivated	End result takes account of employment
Mobilization of water resources	Development of non-conventional water (Treatment of waste water, desalination)	Development of industries in the non-manufacturing sector  Specialist services for testing and control	Risk of activities that are high in energy consumption

<p>Coastal protection: Reducing the burden of beach tourism</p>	<p>Diversification of offer: tourism in the Saharan, spa treatment, golf, nature trips and archaeology</p> <p>Improvement in the range and value of products</p>	<p>Intrasectoral diversification and strengthening the service sector as proportion of GDP</p> <p>Reduction in regional inequalities through balanced distribution of activities</p>	<p>Possibility of worsening pressure on natural resources (water, energy, etc.) and on fragile areas (parks, nature reserves, deserts, monuments)</p> <p>Pollution of new areas</p>
<p>Environmental upgrade of industrial enterprises</p>	<p>Clean technologies</p> <p>Efficient management of resources (water, energy)</p> <p>Efficient waste management</p>	<p>Strengthening the potential for integration into the global economy</p> <p>Advantages to competitive sectors and those offering significant value added</p> <p>Spill-over effect following the emergence of new green activities: technology, services to enterprises, etc.</p>	
<p>Energy conservation: Energy efficiency</p> <p>Renewable energy</p>	<p>Construction and efficient use of buildings</p> <p>Specific programme: industry, transport, tourism, household consumption</p>	<p>Industrial diversification: innovative, energy-efficient goods and services industries</p> <p>Development of electrical, electronic and mechanical industries</p> <p>Development of audit and monitoring services</p> <p>Adaptation and creation of adapted jobs in associated fields</p> <p>Rehabilitation activities for existing building standards</p>	
<p>Improvement of urban and rural spaces</p>	<p>Sanitation policies</p> <p>Efficient management of the waste chain</p> <p>Air quality conservation</p>	<p>Attractiveness of the territory and growth in activities linked to the most profitable international markets</p> <p>Strengthening sectoral diversification: development of environmental services provided by private operators; new activities for processing, recycling and transformation of different kinds of waste</p>	

<p>Social equity</p>	<p>Poverty eradication</p> <p>Strengthening the effectiveness of the education system</p> <p>Improving access to health care</p> <p>Extending social security cover</p> <p>Strengthening mechanisms for solidarity and assistance</p>	<p>Enhancing workers' skills</p> <p>Developing sectors with a skilled workforce, high productivity and value added</p> <p>Reduction of the share of the economy devoted to the informal economy</p>	<p>Possible impact of high labour costs on competitiveness of certain sectors that are subject to strong competition</p>
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## 6. Challenges and opportunities

### 6.1. Challenges and weaknesses in public policies

Challenges remain in implementing green economy policies. Considerable inefficiencies have been identified, gaps and failings in the tools, mechanisms and procedures needed to implement the policies.

#### ***A failure to integrate economic, social and environmental components into sectoral policies***

Planning has been characterized by its sectoral and centralized nature and therefore integration of its three components – economic, social and environmental – has been weak. Indeed, until the present time, initiatives, actions and programmes to promote the green economy have been carried out with a view to protecting the environment and natural resources and energy conservation. This approach has relied principally along the following:

- Corrective (curative) measures based on the principles of polluter pays and the polluter (producer) is responsible for recovery (in particular with respect to waste management);
- Preventive measures with the establishment of environmental impact assessments<sup>52</sup>;
- Incentivization and encouragement measures through:

- Contributions to financing (Industrial Depollution Fund, National Fund for Energy Conservation, Development Fund for Industrial Competitiveness, and so on);
- Tax incentives, such as tax relief on equipment for depollution and other projects for protection of the environment;
- Gradual introduction of environmental taxation, “green taxes”, with establishment of a tax for protection of the environment (TPE)<sup>53</sup>;
- Public investments, mentioned above, in various sectors.
- Furthermore, there is a lack of compatibility between the approaches and methods of preparation and the implementation of policies, including:
- A lack of mechanisms and tools for integrated planning for strategic environmental assessments (EES), which are not regulated in Tunisia<sup>54</sup>;

<sup>52</sup> Action was first introduced through the Act of 1988 which created the National Agency for the Protection of the Environment, as amended in 2000, which gave the Agency the responsibility for inspecting and monitoring pollution waste and the plants that process it. Then the Act of 2005 which set up environmental impact assessments, setting out their powers and those contained solely in specifications.

Cf. Ministry of the Environment and Sustainable Development, National Agency for Protection of the Environment, Environmental Impact Assessment.

<sup>53</sup> The TPE was introduced for the first time in Tunisia with the Finance Act of 2003. It was first applied to plastic and the field was then widened in the years that followed to other products (to engine and brake oil, car batteries, filters, batteries, grease, pollutant chemical products, etc.). It is calculated on the basis of 5 per cent of turnover of the listed products that are produced locally and that have a customs value if they are imported. The revenue from this “green tax” is allocated to two funds: to the Industrial Depollution Fund (70 per cent) and the Fund for protection of the environment and urban development (30 per cent). The revenue from the TPE grew from 27 billion Tunisian dinars in 2006 to 44 billion Tunisian dinars in 2009.

<sup>54</sup> A study on the issue was conducted by the Ministry of the Environment: Feasibility study on the establishment of a process of strategic environmental assessment (EES) in Tunisia, Ministry for Equipment and the Environment - GIZ, July 2010 (<http://star-www.giz.de/fetch/5pEi5X001J00gcxa0Q/giz2013-1545fr-environmentale-strategie.pdf>)

An initial study had been carried out on an experimental basis in 2008 – 2009 for the Development project for the Centre-East region ‘Enfidha’.

- Growing limitations in the institutional fabric, which is faced with increasingly complex and multidimensional problems that require new approaches and methods with respect to management and planning.

### ***Weak enforcement of existing policies and regulations***

Despite the wealth of environmental regulations, their application is still weak and there are insufficient effective inspections. The situation has deteriorated since the revolution of January 2011.

In particular, the purpose of the environmental impact assessments as set out in the regulatory framework and in the documents of the supervising authorities, is to be “the core document for monitoring and inspection of measures for protection of the environment during every phase of the life cycle of the project” and to be both “a tool for prevention of pollution and of environmental degradation [...] and a planning tool that defines the actions to be implemented [...] and enables examination of different facets of the project in order to identify which ones best respond to the economic and social needs and to the requirements of environmental protection”.

In fact the environmental impact assessments seem to be “perceived as an obligatory step for authorization of projects; public consultations, which was not provided for in the regulations, are rarely carried out; the application of the recommendations of the environmental impact assessments and the requirements set out in the specifications is weak, due to a lack of effective controls”<sup>55</sup>.

### ***Gaps and inefficiencies in legislation***

- Incentives are directed towards large industrial and tourism enterprises. They do not take into account small and medium-sized industrial enterprises or agricultural firms, which make up the

majority of the economic fabric of the country;

- The introduction of green taxes affects a small number of imported products (17 currently) and has been met with distrust on the part of industry;
- Essential environmental goods, in particular water and energy products, are in the paradoxical situation of tariff subsidies, where the price paid by the end consumer (whether enterprises or households) does not correspond to the real cost. This policy, which has been put in place in order to safeguard the purchasing power of consumers and in order to support production in several sectors and their competitiveness, undermines the imperative of efficient use of natural resources and controlling the impact of human activities on the environment.

### ***Governance must be improved***

Governance in Tunisia is sometimes ineffective and weak, with:

- Predominantly centralized power, where decisions are taken at the national level with little attention paid to regional and local needs;
- An almost total absence of citizen engagement in the different processes of decision-making and the absence of mechanisms that enable participation in choosing the means of socioeconomic development; a weak start was made just after the revolution with the introduction of public consultations in the environmental impact assessments;
- Endemic corruption affecting the major sectors of the economy.

55 Euronet Consortium, European Union, October 2012.

**Development of the private sector**

A major obstacle to the development of green development activities which has been identified and highlighted, relates to the barriers to private investment.

It has influenced the closure of certain markets, in particular energy markets, which harbour significant potential for green growth, as well as intervention in other areas which are essential for this type of growth, such as infrastructure and environmental services, while the public financial constraints grow ever more strict. The progress to be made here is in the legislative field, in order to free private initiative in these areas, which is a guarantee of productivity, competitiveness and effective governance, while establishing modern and efficient regulatory tools.

**Growing vulnerability to climate change**

A study was carried out on the national strategy on climate change. The study analysed the vulnerabilities of the economic and social development process and the impact of climate change on the country's resources and activities. Based on the results of the study, it was suggested that a road map should be adopted to identify and implement institutional mechanisms and tools aimed at helping the country to adapt to climate change.

## 6.2. Opportunities for a new development model based on an inclusive green economy in Tunisia

Despite the scale of the changes and the adaptation measures required for Tunisia's transition, the national and international climate with respect to these issues has created real opportunities.

**Mature reflection**

Recent and ongoing studies and analyses evaluate the status, analyse the challenges and predict the best policies to implement in order to facilitate the development of an inclusive green economy.

This is the case in respect of the National strategy for sustainable development (December 2011, updated in May 2014).<sup>56</sup> Between that time and 2020, nine challenges have been identified,<sup>57</sup> with steps and actions to be taken and the tools to monitor them:

- i. Establishing sustainable consumption and production that incorporate the concept of the green economy;
- ii. Promoting a well-functioning economy, strengthening social equity and combating regional disparities;
- iii. Sustainable management of natural resources;
- iv. Promoting more balanced land development that relies on efficient and sustainable transport;
- v. Promoting a better quality of life for citizens;
- vi. Developing energy efficiency and promoting renewable energy;
- vii. Strengthening capacities to respond to climate change;
- viii. Promoting knowledge societies;
- ix. Adapting governance in order to better promote sustainable development.

At the national level, the analytical approach adopted by Tunisia and the need to take into account the structural imbalances noted have prompted the formal adoption of a green economy strategy. As indicated above, the Ministry of the Environment has begun an assessment on

<sup>56</sup> National strategy for sustainable development, Ministry for the Environment, State Secretariat for Sustainable Development. National strategy for sustainable development 2014–2020, Ministry for Equipment, Land Development and Sustainable Development. See <http://www.environnement.gov.tn/fileadmin/pdf/SNDD-Rapport%20Version%20Mai%202014.pdf>.

<sup>57</sup> The dashboard of the summary is given in the annex.

the development of the national green economy strategy. This assessment forms part of continuing government policy “to seek a balance between strong economic growth and sustainable development”. For the implementation strategy, this should lead to “a new development model based on an inclusive green economy”. In addition, the strategy should evaluate, in two phases (2016–2026 and 2026–2036), the mechanisms for integrating environmental concerns into economic growth, economic and technological restructuring for the success of sustainable development programmes.

A national strategy for the promotion of green jobs<sup>58</sup> has been prepared as part of the National employment strategy (2013–2017), which contains the specific actions required in order to develop various employment categories. Naturally, these programmes will form an integral part of the national green economy strategy.

### ***A favourable international context***

This approach forms part of the post-2015 regional and global strategy. The adoption of the Sustainable Development Goals will then take over from the Millennium Development Goals. To this end, the Secretariat for development and international cooperation is currently carrying out a national consultation on the post-2015 development programme. African regional consultations have led to a joint proposal for the Sustainable Development Goals. Among the priorities agreed upon is sustainable transformation of economies with “diversification and sustainable industrialization in order to create the jobs required and to ensure more inclusive growth and sustainable management of the environment”.<sup>59</sup>

Similarly, the Ministry of the Environment participated, in collaboration with the Economic and Social Commission for Western Asia, in a discus-

sion on and definition of an approach for the Arab Region to the Sustainable Development Goals.

In the framework of this general approach, an office of support for the green economy was created in 2013 and based in the Ministry of the Environment, with the Economic and Social Commission for Western Africa as principal partner, in order to encourage, promote and help to coordinate initiatives for the promotion of employment in green activities and to integrate social inclusion and green growth.

Pilot projects, espousing the inclusive green economy approach, have been programmed and implemented in the framework of international cooperation. This is the case in respect of the “Tunisia-green jobs platform” project<sup>60</sup>, the purpose of which is to allow young graduates seeking employment to acquire the necessary competences to develop small service enterprises in the “Clean-tech” sector, and competences that are suited to current demand on the green job market in Tunisia; they are focused on three governorates: Bizerte, le Kef and Gabes. The project, which should lead to the creation of more than 2,500 jobs over three years, adopts a public-private partnership approach and participative, and largely decentralized, governance.

This is also the case for the “Generation employment for young people in Tunisia”,<sup>61</sup> which is a pilot project in three governorates (Siliana, Jendouba, Bizerte), which seeks in a participative approach both to promote youth employment and to alleviate unemployment by providing technical, vocational and business start-up training, in particular with respect to the green economy.

### ***A timely political transition***

Tunisia is currently undergoing a period of political transition with parliamentary and presidential elections and, in the near future, local and region-

58 International seminar on: Green jobs, environmental action and creation of decent jobs, 21 and 22 May 2013, Ministry of Equipment and the Environment – Ministry of Professional Training and Employment – International Labour Organization and GIZ.

59 Africa regional meeting on consultations on the Sustainable Development Goals, March 2013, Hammamet, Tunisia.

60 The Tunisia green jobs platform project, Ministry of Vocational Training and Employment and UNOPS.

61 See [http://www.tn.undp.org/content/tunisia/fr/home/operations/projects/poverty\\_reduction/programme-de-generation-d-emploi-pour-les-jeunes-en-Tunisia--gou/](http://www.tn.undp.org/content/tunisia/fr/home/operations/projects/poverty_reduction/programme-de-generation-d-emploi-pour-les-jeunes-en-Tunisia--gou/).



al elections. Among the political and social actors (political parties, professional organizations and trade unions, civil society associations) there has been lively debate on the approach, initiatives and actions necessary to correct the major development faults of previous decades, to overcome the deadlock of multiple crises which still affect the country and put in place a new development model that links economic performance, social stability and environmental efficiency.

It is within this framework that “the national conference on sustainable development” took place at the beginning of October 2014, with the aim of “adoption by national stakeholders of a shared vision on sustainable development policies” and “the design of new, alternative forms of development with different thematic strategies which, taken as a whole, would strengthen sustainable development in Tunisia”. The conference identified and set out six main themes:

- Methods of production and consumption;
- Management of natural resources, ecosystems and adapting to climate change;
- Land, urban and transport development;
- Citizens’ quality of life and combatting environmental problems;
- Education, innovation and knowledge management;
- Environmental governance for sustainable development.

The conference adopted an inclusive green economy approach and defined the principles and prerequisites for implementation: the first indispensable concept or principle is the separation of economic growth and consumption of resources. The second concept is integration whereby each project should take into account environmental and social factors. The third major principle is resilience, with the necessary adaptation to the risks of climate change but also to other types of risk. Lastly, the fourth concept is that of good governance, both on the part of public institutions and enterprises. On this basis, six areas in which the inclusive green economy has been given priority with important contributions to make in: energy efficiency; water conservation, particularly with respect to recycling; ecological agriculture; ecotourism; waste management and the digital economy.

The conference affirmed that all social actors (politicians, enterprises, trade unions, civil society organizations) must recognize unequivocally that adoption of a “sustainable structural transformation” approach is an appropriate and suitable strategy. The success of this transition towards an inclusive green economy depends, however, on the removal of obstacles which have been identified and on decisive momentum to achieve that process.

A summary of the new policies and measures to be implemented in order to promote the establishment of an inclusive green economy and sustainable structural transformation is given in section 7 hereafter.

## 7. Conclusions and recommendations

Development programmes implemented over the past 50 years have given rise to steady economic growth and have established a basis for diversification of activities. However, the following serious imbalances persist:

- Growing regional and social exclusion, as demonstrated in regional disparities between the coast and the poorest regions in the interior, and in the endemic unemployment which affects young university graduates;
- Deficit in the energy balance which appeared at the beginning of the 2000s and which continues to increase;
- Corruption in key sectors of the economy, which negatively impacts economic initiatives and investment;
- Ineffective governance models, with excessive centralization dominated by a political elite and a static administration which excludes citizen participation.

These major failings have affected sustainable development policies and programmes, the results of which do not appear to do justice to the means used to achieve them. These policies are often fragmented and are insufficiently integrated into the development process; they are designed and implemented without the participation of the principal stakeholders, including members of the public. Planning is dominated by a sector-based and centralized approach and inclusion of the three principal components – economic, social and environmental – remains weak, with negative effects on the sustainability of development. Legislation and regulations were insufficiently applied. Environmental assessment tools for projects and actions were limited to superficial use in environmental impact assessments. The monitoring mechanism for achievement of sustainable devel-

opment programmes appears to be limited and unreliable.

Serious and multiple degradations after the revolution (natural resources in numerous regions in the country, water, fishing resources, deforestation and overgrazing in pastoral areas; poor management of solid waste and a growing number of illegal dump sites, industrial pollution, unfettered expansion of urban sites, damage to the countryside in rural areas, and so on.) resulted in a weakening of institutions and of the authority of the State. All of these gaps reflect the failure of policies implemented over decades to produce a profound awareness, among economic operators and citizens, on the importance of the natural heritage in achieving sustainable development.

Faced with these gaps in the development process, the emergence of an inclusive green economy requires corresponding adjustments to structural transformation policies and mechanisms for implementing development programmes, drawing on best practices (such as programmes on energy conservation or development of organic agriculture). The central challenges of this approach can be summarized along the following lines:

### 7.1. Consolidation of the cross-cutting approach to sustainable development

- Improving consistency between economic, social and environmental policies, by establishing tools and mechanisms that incorporate them into the development process. This would require integrating environmental and social policies into sectoral policies, programmes and projects on economic development;

- Adoption and effective implementation of tools to ensure coordination and consistency, in particular environmental impact assessments and strategic environmental assessments and internalization of environmental costs in project evaluations;
- Establishing in the ministries responsible for each sector and in large enterprises having a significant impact on natural resources, departments responsible for sustainable development issues, including follow-up and monitoring of laws and regulations.

## 7.2. Supporting effective policies for promoting green production sectors (industry, agriculture, services)

- Developing a genuine industrial policy that prioritizes the promotion of new strategic green growth sectors based on the use and operation of innovative technologies;
- Developing and implementing funding mechanisms for new and appropriate technologies with particular emphasis on small and medium-sized enterprises;
- Supporting enterprises in their integration/transition into/towards the green economy, in the context of globalization;
- Availability of conditions that are favourable to private investment, independently and/or in partnership with the public sector;
- Developing local and regional resources and guaranteeing conditions for effective and equitable spatial distribution of;
- Defining a system of prices and taxes that is consistent with sustainable development and effective and equitable tariffs for environmen-

tal services as well as the introduction of environmental taxation;

- Adapting systems for training and competency and programmes to respond to new needs, in coordination with the operators concerned;
- Rigorous and transparent use of regional and international cooperation on knowledge sharing, the development of joint programmes and the implementation of mainstreaming tools.

## 7.3. Building an effective information system for the inclusive green economy

- Strengthening the sustainable development indicator mechanism: precision data, increased coverage, frequency of production, guaranteeing the necessary means and human resources;
- Establishing effective green national accounting; this is an important and essential platform for statistics; a first step would be the inclusion of green industries in the nomenclature of activities.

## 7.4. Participation of civil society and informing, raising awareness and empowering citizens

- Participation of credible representatives of civil society in the bodies preparing the plans and programmes at national, regional and local levels;
- Effective communication, in particular for young people, raising public awareness concerning the vulnerabilities of natural resources, environmental constraints and the benefits of an inclusive green economy;

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- Providing information on the green credentials of products and raising consumer awareness on behaviours that support the green economy.

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# Annex 1

## Institutions consulted and having provided a response

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# Annex 2

## Questionnaire

### Part A: Identification of the structure surveyed

Name of the structure: \_\_\_\_\_

Type (Public sector / Private operator / Civil society / ...): .....

Mission/Area of responsibility: .....

Reporting to (for public structures): .....

Contact (contact's name and address): .....

Status within the structure: .....

### Part B: Status with respect to the green economy

1. Does the country have a national development strategy or a national development plan?

Yes = 1 No = 2

If yes, give the name of the most recent and the date on which it was adopted

2. How would you rate the national development strategy?

Poor = 1 Fair = 2 Good = 3

3. How would you rate the level of motivation provided in the national development strategy in order to encourage compliance?

Poor = 1 Fair = 2 Good = 3

4. In your opinion, what is the level of flexibility of the national development strategy?

Poor = 1 Fair = 2 Good = 3

5. Has the country developed a national green economy (or green growth) strategy?

Yes = 1 No = 2

If yes, state which document / provide a reference.

6. Are there any ongoing actions, projects or programmes that are implementing an inclusive green economy approach?

Yes = 1 No = 2

If yes, give examples

Have these actions, projects or programmes been successful?

Using what means, methods or tools have they been assessed?

7. Has the country established a dialogue mechanism (or any other type of appropriate coordination) for local institutions that are engaged in the green economy?

No institutional mechanism has been identified = 1

Informal dialogue takes place = 2

An institutional dialogue mechanism has been put in place = 3

Given an example of such a mechanism: \_\_\_\_\_

8. How would you rate the level of effectiveness of this mechanism?

Very high = 1 High = 2 Average = 3 Low = 4 Very low = 5

9. Is it desirable to include civil society in defining inclusive green economy policies?

Yes = 1 No = 2

If yes, by which mechanisms, according to the type of organization and participant?

10. What is the level of transparency of the information provided to civil society on this subject?

Poor = 1 Fair = 2 Good = 3

11. How would you rate the statistical observation arrangements with respect to areas linked to the green economy?

Poor = 1 Fair = 2 Good = 3

12. Is there an adopted nomenclature for the green economy activities that you use in your work?

Yes = 1 No = 2

If yes, specify the references and the classification indicators

13. Has the country established international cooperation programmes that are coordinated with respect to the green economy?

Yes = 1 No = 2

If yes, state which you consider to be the most important

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Part C: Constraints, opportunities and prospects with respect to the green economy

14. What activities do you consider to be the most promising for green growth?

15. How do you rate the potential for green growth in the following sectors (give examples if possible):

Agriculture and forests:

Good = 1 Fair = 2 Poor = 3

Manufacturing industries:

Good = 1 Fair = 2 Poor = 3

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Energy:

Good = 1 Fair = 2 Poor = 3

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Water and sanitation:

Good = 1 Fair = 2 Poor = 3

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Transport:

Good = 1 Fair = 2 Poor = 3

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Construction:

Good = 1 Fair = 2 Poor = 3

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Services (business, hotels and tourism, administration,...):

Good = 1 Fair = 2 Poor = 3

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16. How do you rate the potential impact of the development of the green economy on:

Poverty reduction

Good = 1 Fair = 2 Poor = 3

Job creation

Good = 1 Fair = 2 Poor = 3

Distribution by sector of economic activities

Good = 1 Fair = 2 Poor = 3

If "Good", what sectors are impacted and how?

.....

The balance between the spatial location of economic activities and habitat

Good = 1 Fair = 2 Poor = 3

Reduction in regional disparities

Good = 1 Fair = 2 Poor = 3

What do you think are the major opportunities for Tunisia with respect to the green economy?

.....

17. Are there barriers to the promotion of an inclusive green economy:

institutional?

Yes = 1 No = 2

If yes, state the most significant

financial?

Yes = 1 No = 2

If yes, state the most significant

What political or financial measures should be implemented in your view?

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What measures are necessary in order to make growth inclusive?

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18. How do you assess the possibility of integrating the private sector into activities in the inclusive green economy?

Good= 1 Fair = 2 Poor = 3

19. Do incentivization measures exist with respect to youth employment in sectors linked to the green economy?

Yes = 1 No = 2

If yes, state what measures

20. Can regional integration (between countries) promote the development of an inclusive green economy?

Yes = 1 No = 2

21. Are the necessary conditions in place for this? (institutional, regulatory, infrastructure,...) :

Yes = 1 No = 2

If yes, indicate which ones appear to be the most important

22. During the past five years, have all multilateral cooperation partners developed a country strategy with respect to the inclusive green economy?

All = 1 Some = 2 None = 3

23. How do you rate state funding of the development of the green economy given during the past five years?

Poor = 1 Fair = 2 Good = 3

