

# The green economy in Algeria

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an Opportunity to Diversify and Stimulate  
Domestic Production



United Nations  
Economic Commission for Africa  
Office for North Africa

## Summary

In Algeria, the green economy is regarded as a development thrust that can help to address two major challenges facing the country, namely economic diversification and job creation. Indeed, in a context where industry contributes as little as about five per cent to economic growth), increasing investment in such sectors/branches of the green economy as renewable energy, energy efficiency, sustainable agriculture and fisheries, water and waste management, eco-tourism, sustainable transport, eco- building, medicinal plants and environment-related services could improve the current industrial integration rate (ranging from 10 to 15 per cent) and promote local development in rebalancing the approach to land use.

The green economy also makes for technological progress, a fundamental factor for improving the competitiveness of SMEs/SMLs, which remain little open to innovation and to the incorporation of environmental sustainability. In this context, the State must strengthen, enhance and expand SME access to such support and upgrading measures as financing, training and access to technical innovation, in order to enable them to take advantage of technological advances and market trends.

The country has initiated a number of reforms and initiatives intended, in particular, to diversify the economy, improve the business climate, enhance energy security, protect the environment, green its industries and promote land use. These initiatives, however, need to be consolidated and better articulated as part of a national strategy to promote the green economy, with a preference for sustainable production and consumption, while contributing to wealth and job creation. Such a strategy should notably be underpinned by local stakeholder approaches which address the challenges of environmental sustainability.

The implementation of the new five-year growth plan (2015/2019), which lays special emphasis on key sectors such as energy, water resource use, construction, health, education and vocational training, could be an opportunity for the country to reconsider its economic model and redirect public and private investment towards productive sectors such as industry and agriculture. That would encourage the development of innovative green industries with high value-added, help to promote entrepreneurship and job creation, particularly for youth and women, and achieve the goal of stronger and more sustainable growth (seven per cent in 2019). Efforts should also be geared towards increasing investments and partnerships in the areas of education, training, research and innovation, which currently seem insufficient and unsuited to equipping people for new occupations in the green economy.

The new five-year growth plan (2015 - 2019) encourages investment in key sectors of the green economy (agriculture, water, recycling, recovery of waste, industry and tourism).

## The green economy, a fulcrum for development and technological progress

Algeria considers the green economy as a means of achieving the objectives of sustainable development, creating jobs, sustaining economic growth (diversifying the production base and increasing value-added), strengthening innovation and reducing poverty. The country wants to transition gradually to a green economy in keeping with its national priorities, particularly the crucial issue of energy transition. The new five-year growth plan (2015/2019)<sup>1</sup> considers the green economy as a fulcrum for development and technological progress. It enhances investment in key sectors of the green economy (agriculture, water, waste recycling and recovery, industry and tourism) and the development of small and medium-sized enterprises<sup>2</sup>.

According to the study on youth and women's employability and entrepreneurship in the green economy<sup>3</sup>, the job creation potential is huge but little known. Indeed, it is hard to conduct a comprehensive assessment of the potential number of green jobs in the absence of a nomenclature of such jobs. The sector is reported to have provided about 450 000 jobs in 2012 and could generate a little over 1.4 million jobs by 2025, especially in five sectors: renewable energy, energy efficiency, water management, waste treatment<sup>4</sup> and recycling, environment-related services and management of green zones. The study highlights the interest of youth and women in such new jobs and recommends the institution of an integrated policy of human resource management, based on the introduction of green jobs in the classification of economic activities and bringing vocational training up to speed from its current inadequacy to address emerging needs.

Factoring in the green economy also forms part of a land-use approach with the proposed greening of cities such as that of Boughezoul as a pilot scheme in energy saving and renewable energy development (solar, photovoltaic and wind) and the plans to develop green business areas and industries, including agro-food processing and mostly agricultural waste recovery, in the Wilaya of Tipasa.

### *Corporate social responsibility (CSR) remains limited to big business*

The private sector still too often favours the logic of profit over that of sustainability. Factoring environmental issues into production strategies and instituting a CSR approach have been making timid and differentiated progress by sector type and business size. Big businesses generally pursue a more proactive policy based both on their brand image and the need to play by the rules. Such businesses generally see the green economy as reinforcing their CSR<sup>5</sup>.

Limited knowledge of environmental legislation, low investment capacity, insufficient expertise and limited access to technology, are the main obstacles to the environmental commitment of SMEs / SMIs, which account for almost 95 per cent of the industrial fabric. Most often, they are also unaware of support schemes instituted by the State.

1 The five-year growth plan 2015/2019 (262 billion dollars) aims to reduce unemployment, improve living standards, achieve an annual growth rate of 7%, and diversify the national economy.

2 Over 90% of private firms are small businesses.

3 GIZ- BMZ- Ministry of Industry, SMEs and investment promotion. "Study on youth and women's employability and entrepreneurship in the green economy in Algeria". March 2012.

4 Waste treatment business activity would have led to the creation of 160,000 jobs in 2011.

5 ECA, "National Report on industry and the green economy in Algeria". 2014

Under the aegis of the Algerian Standardization Institute (IANOR), 16 companies and organizations engaged in the MENA-SR<sup>6</sup> Regional Project, have adopted the ISO 26000 standard for corporate responsibility. The national clean technology production centre (CNTPP) encourages industrial firms to use a number of environmental management tools available to them such as environmental audits, the environmental charter, and the performance contract<sup>7</sup> whereby firms voluntarily commit to implement an environmental action plan.

## Green economy challenges: reducing dependence on hydrocarbons by developing innovative, SME-driven, high value-added industrial sectors.

The economic environment is marked by growth that remains modest (three per cent on average over the period 2010-2013)<sup>8</sup> and a trade imbalance (70 to 75 per cent of household and business inputs are imported), the surplus of which decreased from 26, 2 billion dollars in 2011 to 11,06 billion dollars in 2013 (Source: CNIS). Exports of hydrocarbons<sup>9</sup> (oil and gas), which make up almost 98 per cent of total exports and 70 per cent of budget revenue are in decline. Their contribution to GDP decreased from 43.7 per cent in 2007 to 37 per cent in 2011 and then to 35 per cent in 2013. Export earnings went down by more than 10 per cent from 70 billion dollars in 2012 to just over 63 billion in 2013. This decrease is due to the downward trend in production (205.82 million tons of oil equivalent (TOE) in 2011 against 233.3 million TOE in 2007).

Faced with the hazards that affect hydrocarbon exports (uncertain global markets, reduction of national reserves, competition from alternative energy<sup>10</sup>), Algeria must invest in sustainable productive sectors that generate wealth and jobs. Today, the services sector accounts for 58 per cent of the active population at the expense of such productive sectors as industry and agriculture, where productivity remains insufficient. Industry (excluding hydrocarbons) produced less than five per cent of GDP in 2013 (~ 4.2 per cent in 2011) and six per cent of jobs. The agricultural sector, with a GDP of 9.7 -10 percent (ONS, 2012) covers only 25 to 30 per cent of national grain needs<sup>11</sup> and the food bill (mainly grains and milk) was about nine billion dollars in 2012. Food imports, roughly 18 per cent of total imports, reached 47.5 billion dollars in 2012 and nearly 55 billion dollars in 2013, or seven per cent of GDP (source: CNIS). Agribusiness generates one third of value-added in the industrial sector and 40 per cent of industrial jobs (source: MIPMEPI). Public expenditures are around 40 per cent of GDP, mainly due to an increase in the investment programme budget (280 billion dollars for the 2010-2014 period), arising mostly from the sharp increase in spending on wages and social transfers.

Faced with the hazards that affect hydrocarbon exports, Algeria must invest in sustainable productive sectors that generate wealth and jobs.

6 The MENA-SR project (2012-2014) is supported by the International Standardization Organization (ISO) and funded by the Swedish International Development Agency (SIDA). It encourages adoption and use of ISO 26000 in the MENA region, based on national standardization bodies.

7 CNTPP monitors environmental performance contracts signed between the MATE and businesses.

8 Growth rate: 2.8% in 2013 (5.9% excluding hydrocarbons) and 3.7% in 2014 (source: MF/DGPP).

9 Algeria is the third largest oil producer and the first gas producer in Africa. 11th and 10th exporter worldwide for oil and gas respectively.

10 World production of electricity from renewable energy is expected to reach almost 26% of the total electricity production in 2020 (IEA, 2014);

11 Grain production experienced strong downward trend with a production of 34 million quintals in 2013/2014 against 49.1 in 2012/2013 and 61.2 million quintals in 2008/2009 (exceptional year).

Private sector participation is still hampered by the difficulties of access to credit, a complex regulatory environment and cumbersome business creation procedures. SME support measures (95 per cent being micro-businesses) adopted by the State in recent years (investment incentive schemes, access to industrial land and public procurement, debt rescheduling, national benchmarking programme) should be consolidated and strengthened to improve their investment, production and job creation capacity.

Socially, consumption levels are rising and the overall jobless rate fell to 9.8 per cent in 2013. However, youth (15-24 years) and women's unemployment remained high at 21.5 and 17 respectively in 2011. Joblessness was more acute in Saharan rural areas where the poverty rate reached 11 per cent in 2008. Widespread subsidies and social transfers exceeded 28 per cent of GDP in 2012. To reduce regional disparities, the Government plans to develop productive activities and create business hubs in several of those wilayas most disadvantaged in terms of employment and development.

Algeria has an ecological vulnerability characterized by the sensitivity of its ecosystems to drought and desertification (more than 90 per cent of its land is arid and oases are disappearing), heightened coastal erosion and chronic water stress in some areas. Having less than 600 m<sup>3</sup>/person/year of water placed Algeria's population of 36 million among the world's most water-deprived in 2010. Uncontrolled urbanization (69 per cent of the population lived in the cities in 2013 against 58 per cent in 2000)<sup>12</sup> and the poorly managed industrialization process, generate increasing pollution<sup>13</sup>. Climate change particularly threatens agriculture, water resources and health<sup>14</sup>. The cost of the damage due to climate change ranges from 1.3 to 4.3 per cent of the 2009 GDP (source: ANCC). A 1994 report by the Ministry of Environment stated that Algeria emits about 100 million teq of CO<sub>2</sub> per year. Gross emissions were estimated at 3.95 teq of CO<sub>2</sub> /per capita and CO<sub>2</sub> emissions at 2.61 tons of CO<sub>2</sub>/per capita in 2000. Nearly 75 per cent of that came from the energy sector.

Structural transformation of the economy will require diversification of the economy, development of innovative activities with high value-added (identification of strategic industrial sectors), reduction of subsidies, improvement of the business climate and integration of the informal sector.

National energy consumption relies almost entirely on fossil fuels. Renewable energy sources like hydro, wind, solar, geothermal and biomass power play a very marginal role in the energy balance (generating five MW of electricity currently). Electricity production comes almost completely from natural gas and absorbs 40 per cent of the consumption of this primary energy. National energy consumption has been increasing steadily by six to seven per cent/ per year<sup>15</sup>; from 46.1 million TOE in 2011 to 50.6 MTOE in 2012 and 53.3M TOE in 2013 and could reach 100 MTOE by 2030.

Algeria's energy bill amounted to nearly 40 billion dollars in 2013. The energy intensity reached 0.357 TOE per 1000 GDP dollars in 2012, twice as much as in OECD countries.

Economic losses and public health cost overruns related to environmental degradation were estimated at 7.23per cent of 1998 GDP (source: Ministry of Physical Planning and Environment, 2002). The cost of environmental damage caused by the industrial sector ranges from 1.8 to 2 per cent of GDP.

12 Current trends suggest an urbanization rate of around 80% in 2030

13 The cost of damage to the environment from the industrial sector represents almost one third of the total damage cost, about 1.8 to 2.0 % of GDP.

14 Second National Communication on Climate Change (2010).

15 Source APRUE

## Environmental performance and green economy policies: progress to be consolidated

Rational management of water and energy resources, finding solutions to address the eventual depletion of hydrocarbon resources, combatting desertification and deforestation, curbing emissions resulting from the burning of fossil fuels, adapting the water, health and agro-forestry sectors to climate change and reducing industrial and urban pollution are the main environmental challenges facing the country. The five-year public investment programme (2010-2014), amounting to 286 billion dollars favoured infrastructure modernization<sup>16</sup> and privatization of the economy<sup>17</sup>.

Programmes have been implemented in the areas of environmental protection, water management and the stabilization of greenhouse gas emissions. A budget of 2,000 billion dinars (27 billion dollars) has been allocated to water supply and sanitation projects having to do with systems for water catchment and transfer to deficit areas<sup>18</sup>, sewage treatment and desalination while seven billion dollars has gone into the physical planning and environment sector (creation of four new cities and building some one hundred infrastructural facilities for environmental protection). The national desertification control plan (PNLCD) is being implemented. Concrete efforts have been made in the field of forestry; restoring a forest area exceeding 530, 000 hectares since 2000.

Significant progress has been made in terms of capacity for harnessing dam surface water resources and connecting the urban population to public drinking water and sewerage systems (see Table 1). Improving the water supply access of people in dispersed settlements has become a new priority to guarantee their right of access to water and sanitation under the water Act. In terms of harnessing non-conventional water resources, a major programme for the construction of new waste water treatment plants (239 units) was expected to reach a total treatment capacity of 1.2 billion cubic metres / year in 2014 (against 660-750 million m<sup>3</sup>/year in 2010). The volume of treated waste water available to agriculture reached 600 million m<sup>3</sup> in 2011 from a mere 90 million in 1999. This volume was expected to double by 2014 with the new treatment stations being built. A legal framework has been established for supervising the use of treated waste water for irrigation, in compliance with health and environmental security requirements.

Nine desalination plants are in operation (BOO) with a capacity of 1.4 million m<sup>3</sup>/day and two others are nearing completion. Pilot programmes are underway to promote desalination unit plants using renewable energy systems such as solar or wind power.

**Table 1: Growing access to water and sanitation**

	1999	2011	2015 target
Dam mobilization capacity	3,3 billion m <sup>3</sup>	7,4 billion m <sup>3</sup>	9 billion
Urban connection rate to public drinking water network	78%	94% in 2011 95% in 2012	
Urban connection rate to public sewerage network	72%	86% in 2010 87% in 2012	95% en 2014. 100% by 2030 (urban) 80% by 2030 (rural)

<sup>16</sup> The bulk of public expenditure went mainly into infrastructure projects (70%).

<sup>17</sup> Privatization efforts continue to grapple with the challenges of improving the business climate, increasing bank financing for productive and new technology acquisition investment. Less than 1/10th of companies are upgrading their businesses.

<sup>18</sup> Algeria has opted for making significant regional transfers that ensure territorial equity in access to water and support areas having high agricultural potential.



The country has a National Environment Strategy, an Environment and Sustainable Development Action Plan for 2002-2012, a physical planning scheme for 2010-2030 and a National Climate Plan which is being finalized for 2015-2050<sup>19</sup>. Sectoral policies are being implemented in the areas of environmental education, energy resources<sup>20</sup>, water saving and adaptation of water resources to climate change, ecosystem conservation, rural development and the curbing of industrial pollution. A national integrated coastal management strategy is being prepared. Measures to improve energy efficiency<sup>21</sup> and a renewable energy promotion programme have been adopted. A first hybrid plant has been operating since 2011, 23 photovoltaic plants and a wind farm should start producing by 2017.

#### Objectives of the National Climate Plan (2015-2050)

- To Reduce carbon emissions, particularly through CO2 sequestration;
- Develop clean energy;
- Reduce the carbon footprint of industrial and domestic activities;
- Adapt infrastructure to climate change: improving the water system, massive reforestation and extension of the green dam to fight desertification;
- Adapt agriculture to climate change

#### National Renewable Energy Development Programme (PNDER) - 2011 to 2030

Total estimated cost: 80-100 billion dollars (pilot project phase and sector testing underway)

- Law No. 04-09 (2004) on Renewable Energy(RE)
- National RE Fund (2009) funded up to 1% from oil royalties

Goals (by 2030):

- 22,000 MW including 12,000 MW for the domestic market (22% of global electricity production);
- To cover 40% of national electricity needs, solar thermal and photovoltaic energy (37%) and wind energy (3%). The share of renewable energy in national electricity consumption will increase from 2% (2011) to 5% in 2015, 14% in 2020 and 40% by 2030.
- Create nearly 200,000 direct and indirect jobs;
- Save nearly 600 billion cubic meters of gas;
- Increase local industry integration rate: 50% by 2020 and 80% by 2030.
- First solar-gas power plant generating 25MW with 150MW from thermal solar (Hassi R'Mel)
- Establish a national renewable energy research programme.
- 2015-2020 : Equipment deployment and manufacturing phase
- 2020-2030: large-scale development phase

19 The climate plan replaces the Climate Change Adaptation Plan (2003-2013)

20 The energy strategy aims to intensify oil and gas deposit prospection and production, renewable energy development, long-term exploitation of shale gas and nuclear energy.

21 Particular progress has been made in promoting the use of clean fuels (LPG, CNG and unleaded fuel) and solar water heaters, widespread use of energy-saving lamps; thermal insulation of buildings. Also included are solar energy air conditioning projects and the promotion of energy efficiency in the building sector (the most energy-consuming, with more than 42% of final consumption) and the industrial sector, particularly the cement industry which consumes nearly 60% of total industrial energy output (electricity and fuel costs representing 40% of production costs).

Environmental policies are financed through a range of instruments such as sovereign funds, dedicated tax measures and investment lending at preferential rates. The 2014 Finance Act encourages investment in fisheries and aquaculture.

**Table 2: Examples of Financing Instruments**

Major Sovereign Funds	Examples of environmental taxes
Environment and pollution control Fund (FEDEP)	Tax on environmentally polluting and hazardous activities;
Energy Management Fund (FNME)	Taxes on air pollution (fuel tax, tax on petroleum products, tax on plastic bags);
Agricultural Investment Fund;	Incentives for disposal of toxic and hazardous industrial waste;
Renewable Energy Fund (FNER)	Additional levy on industrial waste water;
Desertification control fund;	Supplementary levy for industrial air pollution;
Shore and coastline protection Fund.	Tax on household refuse removal.

The efforts made also include research and training for environmental sectors, particularly through the establishment of the National Conservatory for Environment Training (CNFE) that provides training, environmental education and awareness and the creation of a college for water resources management (2010). Several specialized institutes such as the Renewable Energy Development Centre, the Centre for Scientific and Technical Research on Arid Regions and the National Biotechnology Centre are also available. A Sustainable Development Institute of Africa, under the jurisdiction of the United Nations University (UNU-IRADDA) was created in late 2013.

However, unsuited national education and vocational training systems have combined with insufficient and zero research funding to impede the development of innovative green industries and the obvious compartmentalization of the various actors involved in research limits the impact of existing arrangements. Mainly public expenditure on research and development falls below one per cent of GDP; only a few large corporations invest in innovation. Algeria is 133rd (out of 143 countries) on the 2014 World Innovation Index rankings.

**The main international indicators show what efforts remain to be made**

- 92nd/178 countries of the Environmental Performance Index (EPI<sup>22</sup>, 2014); 86th/132 countries (2012) and 42nd /163 countries in 2011;
- 66th/124 countries of the world energy architecture Performance Index (EAPI<sup>23</sup>, 2014) and 2nd of MENA countries, followed by Morocco (79th/124), Egypt (81st/124) and Libya (86th/124), but lagging behind Tunisia (60th/124);
- In 2013, the Arab Future Energy Index (AFEX)<sup>24</sup> ranked Algeria (45 points) behind Morocco (71 points), Egypt (53 points), Tunisia (47 points) but ahead of Sudan (25 points) and Libya (20 points), in the development of renewable energy in the Arab region;
- 45th/58 countries according to the natural<sup>25</sup> resources governance index (RGI, 2013); behind Morocco (25th), Egypt (38th) but ahead of Libya (55th); and
- 49th/58 countries according to the climate change performance index, IPCC, 2014; behind both Morocco (15th), and Egypt (26th).



### ***The green economy, an opportunity to restructure the economy and boost industrial development in the strategic sectors***

Promoting a green economy is part of the new investment plan (2015-2019) which emphasizes investment promotion, entrepreneurship and increased productivity in the industrial sector (excluding hydrocarbons). But developing high-value-addition green industries requires the adoption of a new industrial policy that encourages investment, improves business competitiveness and boosts innovation and technology acquisition, particularly in the context of targeted partnerships.

With that in mind, the Government has launched two new programmes to address major concerns in the areas of housing and fisheries :

- The public investment programme in the construction sector (65 billion dollars) aims at creating 1.6 million new homes by 2019. The programme will build on partnerships with national and international firms, incorporating new construction technologies, in line with national environmental standards and ensuring the transfer of know-how, particularly to young people;
- The new 2020 Aqua-fisheries Vision (2015-2020) aims to double national fisheries production (200,000 tons / year) through the development of aquaculture (representing nearly 70 per cent of production). It will help to support fledgeling enterprises and strengthen the training system for the development of fishing occupations.

But other sectors are lagging behind - organic farming with only 700 hectares against 20,000 ha in Morocco and 330,000 ha in Tunisia; ecotourism, waste management and renewable energy development, are still in a pilot phase.

Deploying the industrial branches of a green economy will also require :

- An improved business climate<sup>26</sup> and incorporation of green economy provisions in the new investment law under preparation;
- A financial system that meets the needs of SMEs/SMLs; in the absence of guarantees, long-term bank loans are generally inaccessible to SMEs;
- A national education system that integrates emerging needs and a training system oriented more towards specialization in areas of the green economy.
- Industrial production that forms part of a land-use approach.

22 The Environmental Performance Index (EPI) is a composite index created to evaluate, compare and improve the effectiveness of environmental policies. It was introduced for the first time in January 2006 by researchers from the American universities of Yale and Columbia. It is established every two years.

23 EAPI, published by the World Economic Forum, measures the strengths and weaknesses of national energy systems based on economic, environmental and energy security criteria.

24 The AFEX was launched by RCREEE (Regional Centre for Renewable Energy and Energy Efficiency) in 2013.

25 The RGI index established by the "Revenue Watch Institute", an NGO, in collaboration with the local authorities concerned with energy issues (oil, gas and mining sectors) measures every two years the quality of natural resources governance (legal and institutional framework, disclosure and governance practices). The countries covered produce about 85% of the world's oil.

26 The 2015 Doing Business report ranks Algeria 154th/189 countries.

## **Household and associated waste (HAW) management: An under-exploited branch holding strong potential for investment and job creation**

Algeria lags far behind in waste management (collection, transport, and disposal) and recovery, with significant economic and sanitation consequences. Recycling is marginal and compost production virtually non-existent. According to the Secretary of State in Charge of Environment, Algeria loses nearly € 300 million a year because for not recycling waste. The integrated national municipal waste management programme (PROGDEM) aims to reduce waste and increase the recycling rate to 70 per cent by 2020 against the 5-6 per cent current rate. In the short term, an ambitious target has been set to improve solid matter recycling by 40 per cent come 2016. In this regard, arrangements have been made to institute subsidies, regulatory reforms and conclude agreements with relevant manufacturers while conducting awareness, communication and training campaigns to sensitize them to the economic viability of the waste industry. Construction a thermal waste treatment plant, a plastic recycling plant and a compost-making plant are expected to start in 2015 (Source: Ministry of the Environment).

The management of solid household waste is supported primarily by the public sector through municipalities or, in some major cities, through environmentally-conscious companies that collect waste and convey it to landfills or burial sites and clean up the towns. In 2010, the National Centre for Trade Registration (CNRC) reported that more than 4,000 companies were engaged in waste recovery and recycling and that 193 had been created by women. Waste recovery and recycling are mostly informal activities; private sector participation remains very limited. The National Waste Agency (AND) and the National Youth employment support agency (ANSEJ) launched a project to create 5,000 micro-enterprises/a year that should have generated some 10,000 green jobs/a year over the period 2012-2014.

## Conclusion

The Algerian economy is mainly structured around revenue accruing from the export of hydrocarbons. Massive raw material imports are adversely affecting the trade balance, in a context marked by depleting oil reserves, falling oil prices and increased competition on international gas markets. The country also has a high level of environmental vulnerability, including to climate change.

The economy is driven partly by public investment (major programmes in the sector of housing, infrastructure and research), while private sector contribution remains limited and industry can barely make its weight felt in an economy that is strongly oriented to trade and imports. And yet industry is the engine of economic transformation and a source of development and progress.

Faced with all these challenges, the country needs to develop a new environmentally-friendly industrial model which is competitive, job creating and helpful to local development. Energy transition and development of green industries are part of this objective. But the efforts should be consolidated and better articulated within the framework of a national strategy for promoting a green economy.

## Recommendations

- Adopting a comprehensive green economy strategy having specific and measurable objectives and indicators, focusing more particularly on green jobs, technological innovation, R&D, industrial integration and natural capital enhancement;
- Defining a nomenclature of green jobs for incorporation in the standard classification of economic activities;
- Adapting the educational system, vocational training and continuing education to emerging jobs and strengthening partnerships between the universities, research centres, businesses, chambers of commerce and industry and professional organizations;
- Establishing a more efficient national innovation system underpinned by public policies to support innovation, particularly for SMEs whose financial resources and skills are limited;
- Reforming industrial policy to encourage green investment;
- Strengthening monitoring and evaluation systems, including the development of indicators for the green economy;
- Facilitating the transfer of technology in the context of (North-South and South-South) cooperation.

## Acronyms

ANCC	National Agency for Climate Change
CNIS	National Centre for Customs' statistical information
APRUE	Energy promotion and rational use agency
EGES	Emissions of Greenhouse Gases
FEDEP	National Environment and Pollution Control Fund
FNME	Energy Management Fund
GNC	Compressed Natural Gas
LPG	Liquefied Petroleum Gas
MIPMEPI	Ministry of Industry, SMEs and Investment Promotion
ONEDD	National Observatory of Environment and Sustainable Development
TEP	Oil Equivalent Tons

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