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REVIEW

UK environmental law post Brexit

Veerle Heyvaert and Aleksandra Čavoški

The implications of Brexit
for future EU environmental law and policy

Céline Charveriat and Andrew Farmer

The EU as guarantor of environmental protection in Germany

Thomas Ormond

Emissions into the environment and disclosure of
information - Comments on ECJ C-442/14 and C-673/13P

Ludwig Krämer

Promoting the Green Economy in Morocco:
Analysis of the contextual specificities

Fatima Arib

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Editorial

Brexit is definitively making the headlines in Europe and so too shall it be in the current issue of the *elni Review*.

How the United Kingdom will one day really be able to leave the EU is still very uncertain. But whatever the proposed scenarios, one cannot avoid the fact that such a rupture, necessarily, will also concern environmental law and policy. An impact that has not escaped many key actors, including Commissioner Barnier and the House of Lords (report on *Brexit: Environment and Climate Change, February 2017*). It will have an impact both in the UK but also possibly in the EU, as will be developed in the current issue.

The reader certainly knows that UK Environmental Law, like the law of every Member State, is very deeply europeanised. Its ambition, as brilliantly demonstrated in the recent case law on air pollution (CJEU, *Client Earth*, 2014), is decisively bound to the control of the CJEU. But the UK wants to quit the realm of the CJEU, according to the Great Repeal Bill White Paper, while ‘keeping’ the current *acquis*. What does this possibly mean, as far as environmental protection is concerned?

As to the other side of the coin, the rupture will also possibly affect, somehow, environmental law and policy in the EU. In the rich encounter of various conceptual approaches, the UK has indeed brought a wave of challenging new ideas, in the ‘big bowl’ in which EU law is being processed. And this not least because the UK is a country abiding by a strong common law tradition.

The two first contributions of this issue, one on the ‘UK Environmental Law Post Brexit’ and the other on ‘The Implications of Brexit for Future EU Environmental Law and Policy’, are the written tracks of presentations that were given by Prof. Veerle Heyvaert (LSE, London) and Céline Charveriat (IEEP, Brussels), on 11 May 2017 in Brussels, at the occasion of a new *elni* forum. That forum on Brexit and Environmental Law took place at the Université Saint-Louis Bruxelles, at the joint invitation of CEDRE and ELNI, under the chair of Prof. Delphine Misonne and Prof. Gerhard Roller.

In their contribution on UK Environmental Law Post Brexit, Veerle Heyvaert and Aleksandra Cavoski go beyond assumptions and investigate what a gradual repatriation of EU law might mean, for specific areas (climate, ETS, biodiversity, air and water), for public authorities but also for civil society – where will be the guarantees civil society shall still need in

order to challenge domestic policies? The authors also envisage how cooperation between the UK and the EU could actually proceed in the future, on environmental law issues. Because there is actually no escape, or rather “*an inescapable physical reality*”: environmental problems will continue to require concerted action.

In their paper on ‘The Implications of Brexit for Future EU Environmental Law and Policy’, Céline Charveriat and Andrew Farmer present their thoughts on the possible consequences of Brexit for EU environmental policy in a, by necessity, quite speculative context. But they actually demonstrate that the first effects of Brexit on EU policy are already at work. There is a “*general atmosphere of environmental policy making*”, that should not be underestimated. The context might further lead to a ‘distraction’ from important issues and even impede crucial discussions, such as on the possible renewed interest in an EU carbon tax.

Thomas Ormond in his programmatically entitled article ‘The EU as guarantor of environmental protection in Germany’ adds another perspective as to how the EU shapes Member State environmental law and policy, highlighting inter alia “*innovation from Brussels*” such as EIA, access to environmental information and climate protection, as well as the systematic and risk-based approach as hallmark of EU legislation.

Next, Ludwig Krämer comments on ECJ C-442/14 and C-673/13P (see already the case report in *elni Review* 2016/2) which concern the diverging interests of disclosing environmental information on the one hand, and protecting confidential business information on the other – two judgments which according to Krämer are likely to have a far-reaching influence on the disclosure of product information.

Finally, Fatima Arib in ‘Promoting the Green Economy in Morocco’ analyses the main contextual features, including socio-economic, environmental as well as regulatory aspects and identifies progress made by Morocco and the challenges lying ahead.

We hope you enjoy reading.

The editors welcome submissions of contributions addressing current national and international environmental law issues (e.g. transboundary EIA) for *elni Review* 2017/2 by 15 September 2017.

Delphine Misonne/ Julian Schenten
June 2017

Promoting the Green Economy in Morocco: Analysis of the contextual specificities

Fatima Arib

1 Introduction

The green economy grew out of an international context marked by multiple socio-economic crises under severe environmental pressures. Responding to these crises, it is defined as an economic model, whose production, distribution and consumption activities aim at using natural resources efficiently and improving human well-being in the long run. This concept has since its emergence raised a broad debate in developing countries as to its content, objectives, functioning, conditions for its promotion and the role that each actor should play in the ecological transition.

Over the past decades, the protection of the environment has become one of the major challenges that Morocco has committed to. The limited impact of the socio-economic programs, coupled with significant environmental degradation, require a shift in policy and priorities to a green and inclusive economy that can contribute to the reduction of poverty and unemployment, and the unwinding of territorial imbalances.

The country has embarked on extensive development programs in several sectors: agriculture through the Green Morocco Plan, revitalization of the industry with several programs, the latest Industrial Acceleration Plan, Tourism's Vision 2020, the Halieutis Fisheries Plan, the transformation of the phosphates complex into a global hub, the extension and multiplication of motorway network, harbour and airport infrastructure and the construction of new cities. All of these are major projects that contribute positively to economic growth and job creation.¹ However, they pose major risks related to the degradation of natural resources (water, biodiversity, coastal areas in particular), on which 20 to 30% of the national GDP depends. The increasingly worrying scarcity of these resources and the high cost of their degradation have obliged the State to undertake numerous actions for their protection. The environment is today a strategic issue and is at the heart of all thoughts about the future of the national economy and the sustainable development of the country.

This paper aims to analyse the main contextual features of the green economy in Morocco. The main aspects that mark the socio-economic, environmental and regulatory contexts will thus be

drawn up. The paper concludes by highlighting the importance of the progress made by Morocco and the challenges it needs to overcome.

2 The socio-economic context

To understand the socio-economic context, we shall first analyse the evolution of the main macroeconomic indicators and the characteristics of the key economic sectors. We shall then present the key features of the social context.

2.1 Macroeconomic indicators

Despite the often turbulent international context, efforts to diversify the productive base, the exported products and the target markets, and the expansion of the tertiary sector have fostered a relative stability of the macroeconomic indicators and reduced the dependence of the economy on agriculture.

The moderate level of inflation is attributed to important subsidies aimed at protecting the price of energy products² and certain food products³ from the rise in commodity prices in international markets. Petroleum products (fuel, gasoline and diesel fuel) have not been subsidized by the Compensation Fund since December 2014.⁴ Nevertheless, the economy still suffers from a deficit in the trade balance. Domestic production, most of which comes from the traditional and low-tech sectors, is characterized by its low added value and high concentration in the European market which thus puts the country's economic competitiveness in difficulty⁵.

Despite efforts at diversification, the fluctuating prices of phosphates continue to influence the Moroccan economy. With 75% of the world's reserves, Morocco is the world's largest exporter of phosphates (28% of the world market) and the third largest producer (20%), and the phosphates and

1 Arib F. (2014), «Les services dans l'économie verte au Maroc: Opportunités de création d'emplois et défis d'innovation». Sermed 2014 Conference Papers, Instituto Universitario de Análisis Económico y Social.

2 These subsidies have long been detrimental to the environment as they have encouraged overconsumption by keeping prices very low and the polarization of investments towards technologies based on the intensive use of hydrocarbons.

3 In 2014, the Compensation Fund spent nearly 20 billion dirhams to subsidize basic necessities: 14 billion dirhams for gas, 3.5 billion dirhams for sugar and 2 billion dirhams for wheat.

4 In less than one year, the State has seen its budget go from more than 50 billion dirhams to 20 billion. This is due to the drop in international oil barrel prices.

5 DEPF (2015), «Synthèse du Rapport Economique et Financier 2015», Ministère de l'Économie et des Finances, Rabat – Maroc.

derivatives sector contributes up to 3 to 4% of GDP⁶.

Morocco, whose needs consist mainly of fuel and food, is a major importer of finished products, which increase considerably during years of drought. The economy is heavily dependent on imports of fossil fuels (an average of 96% over the last decade). The need for various forms of energy will grow at a sustained annual rate of 5%, and the energy bills represented 8.3% of the national GDP⁷ in 2014 (compared with 12.5% of GDP in 2012), which puts pressure not only on the state budget and consumers, but also on the environment⁸. This situation has prompted the State to adopt an energy strategy and to prioritize the development of renewable energies and energy efficiency. Foreign direct investment, which has witnessed sustained growth in Morocco, the third most attractive country to foreign investors after South Africa and Egypt, has been encouraged in recent years by the ambitious renewable energy programs⁹.

2.2 Economic sectors

The latest figures published by the World Bank confirm the Moroccan economic trend. It is initially weighted towards services, which accounted for 54.9% of the GDP in 2014, followed by industry at 28.5% and agriculture at 16.6% of GDP¹⁰.

2.2.1 Agriculture and fisheries

Agriculture, which is more important than its share in GDP would suggest, plays a decisive role in the country's macroeconomic equilibrium and bears a large social burden, employing on average 40% of the working population (80% in rural areas). The sector accounts for 23-25% of total exports, and cereals (75% of the total cultivated area), fruits and vegetables are the main crops, which fluctuate depending on climatic changes. About one third of agricultural products are processed¹¹.

Agribusiness, which is a sector with a high growth potential (35% of industrial GDP and 11% of industrial exports), is mainly destined for export. The seafood sector is employing a very large workforce and is seen as a future component of the fisheries

sector and the Moroccan economy, accounting for 50% of agri-food exports¹² and 12% of total exports of Morocco. The logging industry, on the other hand, contributes up to 2% of agricultural GDP and provides jobs to half of the rural population.

The Green Morocco Plan (GMP)¹³, an agricultural strategy for the period from 2008 to 2020, aims to increase the value added of the sector by a factor of 2.5, to create 1.5 million jobs by encouraging investment in the framework of the Agricultural Development Fund (FDA¹⁴), and by increasing the production levels of certain crops. The Plan also provides for the creation of six agropoles in the large irrigated agricultural production areas, two of which are already operational (Meknes, Berkane). It also aims to enhance agricultural products which can be processed and marketed there and attract new industrial firms. Investors benefit from an attractive offer including a financial contribution by the FDA, a wide range of real estate offerings and technical support. Several projects, in particular with the World Bank, provide for the promotion of various sustainable practices such as the adoption of soil conservation and biodiversity measures, sustainable water management and the improvement of the livelihoods of smallholder farmers under Pillar II of the GMP.

The Halieutis Plan aims at the conservation of fisheries resources and the marine ecosystem in order to make fish farming a major growth driver and strengthen Morocco's position amidst the global suppliers of sea products. This strategy aims at upgrading and modernizing the fisheries sector and improving its competitiveness and performance. It is based on three major premises: the sustainable use of resources, the development of an efficient fishery for an optimal quality in the processing of products and the improvement of competitiveness in order to conquer new market shares. It is centered around 16 strategic projects, 50 measures and 112 action plans, and it provides for the creation of three new competitiveness clusters (Tangier, Agadir, Laayoune-Dakhla).

2.2.2 Industry

The industrial sector has been relatively diversified in recent years thanks to the development of new activities. Textiles and clothing, a key sector accounting for 42% of employment and 34% of sectoral GDP,¹⁵ benefit from Morocco's proximity to

6 MEMEE, Département de l'environnement (2010), «L'environnement au Maroc: vers une protection durable» Conférence du Réseau des Entreprises Maghrébines pour l'Environnement Leader Maghreb, Partenaires pour une Croissance Verte » Casablanca, 17 Mai 2010.

7 Note de conjoncture, Direction des Etudes et des Prévisions Financières, Ministère de l'économie et des finances, N° 214, Décembre 2014.

8 DEPF (2015), «Synthèse du Rapport Economique et Financier 2015», Ministère de l'Economie et des Finances, Rabat – Maroc.

9 CEE, CEA (2014), «Examen des performances environnementales au Maroc», 2014.

10 CEA (2015), «Industrie et économie verte en Afrique du Nord: Perception, enjeux et perspectives», Rapport régional, Mars.

11 DEPF (2015), «Synthèse du Rapport Economique et Financier 2015», Ministère de l'Economie et des Finances, Rabat – Maroc.

12 Morocco is the world's largest exporter of preserved sardines, notably Sardina Pilchardus.

13 The list of acronyms is in Annex 2

14 This Fund provides farmers with subsidies to encourage good agricultural practices and undertakes awareness campaigns among farmers to improve productivity, water conservation and rational use of fertilizer.

15 The activity of the sector is a largely subcontracted clothing production, but some companies have been able to develop strategies of short circuits and

Europe.¹⁶ The competitiveness of this female labour-intensive industry has long relied on low production costs and particularly low labour costs. The chemical and para-chemical sectors are dominated by the phosphate valorisation. The pharmaceutical industry, the third largest in Africa, in terms of size and turnover, provides between 80% and 90% of drug needs. The cement industry has been boosted in recent years by the construction market, and the handicrafts produced mainly in Marrakesh, Fez, Essaouira and Safi are largely destined for export. The automotive industry is booming following the contracts signed with major French producers. Aeronautics¹⁷ with its civilian and military branches and electronics with the appearance of a new generation of more integrated subcontractors are new sectors that are growing exponentially and contribute to reducing the high level of economic dependence on agriculture. They are distinguished by the importance of skilled employment, with average annual employment growth rates of 16%, 14% and 9% for the automotive, aeronautics and electronics industries, respectively.

The new 'Industrial Acceleration Plan 2014-2020' aims to give a new impetus to all industrial sectors while maintaining the focus of Morocco's new Global Business Lines¹⁸ (automotive, aeronautics, electronics, textiles, food processing, chemical and para-chemical industry, pharmaceuticals, mechanical metallurgy and offshoring) and integrating other traditional sectors. The objective is to create around 500,000 jobs, increase the share of industry in the GDP, diversify and broaden the industrial base for a better linkage between large enterprises and SMEs. The Plan also aims to support the transition from informal to formal sectors with the introduction of a series of financial and tax incentives, the most important of which is the creation of an Industrial Development Fund (IDF). The achievement of these objectives requires the building of ecosystems, the first of which have recently emerged in the automotive sector.

The majority of the industrial sectors have professional organizations like associations and technical centers, most often created in the framework of a partnership with the supervisory ministry. New logistical assets, free zones, strategic partnerships with certain European countries (France and Spain in particular), the Gulf countries, the United States,

etc. have helped to make Morocco a regional industrial platform which can cater to several regional markets (especially in Africa) and offer a number of advantages for investment.

2.2.3 Services

The services sector, one of the most developed in North Africa, employs about 40% of the working population and is exclusively dependent on tourism (hotels, touristic services, leisure, etc.), banking and finance, communication and logistics.

Tourism in Morocco holds a significant place as a generating source of foreign exchange. The 2020 Vision has the main objective of consolidating the leading role of tourism in the economic development (8 to 12% of the GDP and about 5% of employment) as well as the social and cultural spheres of Morocco. It also seeks to place Morocco among the world's 20 top tourism destinations by 2020. This strategy is based on several programs: Azur 2020, Patrimony and Heritage, Green / Eco / Sustainable Development, Animation, Sport & Leisure, Niches with high added value, the Biladi program, etc. It equally offers incentives with financing and investment offers.

Morocco has also made great strides in the process of reforming and modernizing its financial sector. Today Casablanca is the largest financial and industrial center in Morocco and the Maghreb, and ranks among the first African stock exchanges after Johannesburg in South Africa and Cairo in Egypt, in terms of capitalization. The country has made significant advances in the field of communication and information technologies which are increasingly integrated into the services provided by the State, administrations and companies. Morocco's Numeric Plan aims to position Morocco among the dynamic countries in this field. The transport sector contributes 6% to GDP and 9% to the added value of the tertiary sector, employing 10% of the urban labour force. The national strategy for the development of logistical competitiveness has led to the realization of several logistics platforms. The World Bank's 'Connecting to Compete 2014: Trade Logistics in the Global Economy' report ranks Morocco 62 out of 160 countries on the Logistics Performance Index, partly thanks to the infrastructure of the Tanger Med Port.

The service sector has an important place in the development of the green economy. It will have to meet the sustained needs of other sectors by offering them the workable solutions necessary for this transition and making the economy cleaner and more environmentally friendly. They will thus be

finished products in response to the expectations of the international markets.

16 The sixth largest supplier to the European Union, the sector exports mainly to Spain, France, Great Britain and Germany.

17 Morocco has ISO certification in the field of maintenance and repair of aircraft engines and exports certain specific components.

18 Morocco's new businesses: automotive, aeronautics, electronics and offshoring. They contributed 86% of total exports by all of Morocco's global businesses between 2008 and 2013.

less and less divided up and more bridges will be established between the services.¹⁹

2.3 Social context

Despite the relatively substantial efforts to boost the economy, create jobs and raise the income levels of the population, Morocco still faces major social challenges such as poverty, inequalities, social and territorial disparities, unemployment, etc. In this context, public actors have implemented several sectoral policies and programs aimed particularly at improving the living conditions of the population. These policies have resulted in the relatively positive development of the main social indicators, notably those related to employment, education and health. Programs to combat poverty and exclusion and the relatively large state budget (around 54.4% of the total in 2014) allocated to the social sectors have consolidated this improvement.

Morocco's commitment to achieving the Millennium Development Goals (MDGs) and the The National Initiative for Human Development (INDH)'s contributions (Phase I (2005-2010) and Phase II (2010-2015)) have also contributed to the achievement of significant advances in the field of human development. However, the poverty rate remains one of the largest in the Mediterranean, with more than 15% of the population living below the absolute poverty line. The labour market also suffers from a number of disadvantages (as for example the inadequacy training employment) resulting in a high unemployment rate (+9%), particularly in cities (36% compared with 8.4% in rural areas), affecting particularly the population aged 15-24 (19.3%). Unemployment is also high among graduates at 18.1% (18.5% for middle-level graduates and 17.4% for the upper levels), which is more worrying for holders of vocational and university diplomas.

3 Environmental context

The environmental context is characterized by water scarcity, desertification, deforestation, loss of biodiversity, and a high vulnerability to climate change. Environmental degradation in some areas has reached a level that could jeopardize the achievements made over the course of the last decades and limit the possibility of well-being for the population. Protecting the environment is therefore becoming increasingly important in Morocco due to this exacerbating degradation by human and economic activities that lies in the demographic growth combined with intensive industrialization,²⁰ rapid

urbanization,²¹ tourism expansion and climate change.²² A sustainable socio-economic development that requires more exploitation of natural resources is thus compromised if adequate measures for their sustainable management are not in place.

Environmental degradation entails a significant economic cost, estimated at 8% in 2010²³, compared to 3.7% in 2003²⁴ (WB, 2003). Degradation costs due to household and similar waste and air pollution have been estimated at 0.5% and 1.03 of 2002 GDP, respectively. These figures remain significant and are sufficient to strengthen efforts and take the necessary measures to safeguard the environment. The environmental context categorizes the different economic sectors according to the size, the type of activity and the materials used, with the aim of reducing their impacts on the environment.

Agriculture is the main water-consuming sector and it exerts strong pressure on the soil and biodiversity due to the unreasonable use of chemicals. The sector accounts for 18.7% of the final energy balance and its consumption, dominated by fossil fuels (57%), increased by 17% between 2007 and 2010. Industry is the cause of several forms of pollution which has a significant impact on the environment and on public health, especially as the budget allocated to health is very insufficient. 80% of the activities are highly concentrated on the Atlantic coastline and particularly in the Casablanca- Mohammedia and Safi - El Jadida axes. The dominant technologies are often considered inadequate and polluting both during the production processes and effluent treatment; industrial sites located in urban areas are still under-equipped for the remediation of liquid and solid industrial waste.

Degradation of water quality results from the dumping of industrial and domestic waste without prior treatment. Only 37% of the waste water is treated, the rate of their purification does not exceed 20%, and tertiary treatment remains very limited with the exception of a few regions. The sea is the main recipient of industrial and domestic discharges. Sea transport and ship discharges also put significant pressure on the marine environment. Likewise,

«Prospective Maroc 2030: Eveil aux problématiques du Maroc de 2030», Rabat.

21 The proportion of urbanization has increased from 29% in 1960 to 60% in 2015 due to the increase in population and to the rural exodus and the transition of certain localities from rural to urban status.

22 For example, "A 4°C temperature increase could reduce agricultural yield by up to 39%", Banque Mondiale (2014), «Connecting to Compete 2014: Trade Logistics in the Global Economy».

23 MEMEE, Département de l'Environnement, «développement durable au Maroc: bilan et perspectives», juin 2012.

24 Banque Mondiale (2003), «Rapport de la banque mondiale sur l'évaluation du coût de la dégradation de l'environnement», Bureau régional Moyen Orient Afrique du Nord, département eau et environnement.

19 Cf. *supra* note 1.

20 Projected population growth: + 25% between 2010 and 2030, and change in energy demand between +4 and + 8% annually since 1998, HCP (2005).

overfishing and rising temperatures of marine waters due to climate change are leading to the decline in fisheries resources.

Air pollution, which is mainly due to industrial activities and road traffic, has a direct and dangerous impact on health,²⁵ particularly in large urban agglomerations and industrial areas. Diesel fuel is a significant source of this type of pollution. Casablanca remains the most polluted city, with 30% of its pollution caused by transport.²⁶ Emissions of greenhouse gases (GHG) are mainly due to the energy sector (56%). Furthermore, only 70% of urban waste is collected, while 2% is recycled or landfilled, and about 220 landfills still do not meet sanitary standards. Municipalities spend an average of 15% of their small budgets on solid waste management.

The construction, industrial (including agri-food) and transport sectors account for more than 90% of energy consumption, which is heavily dominated by coal, gas and fuel. Energy recovery remains very marginal, although renewable energy sources (solar, wind and biomass²⁷) are abundant and there are significant energy saving opportunities thanks to energy efficiency in the industry, construction, agriculture and transport.

Out of a total of about 2 million tons of industrial waste, agro-industry, chemical and para-chemical industry and metallurgical industry account for 60%, 25% and 8%, respectively. Organic waste accounts for 55% and hazardous waste²⁸ for 20%. The regional and sectoral distribution of these wastes show that Casablanca contributes about 37%, while the chemical and textile-leather sectors produce 40% and 33%, respectively. Furthermore, almost 100,000 tons of electronic waste is produced in Morocco every year. This represents approximately 3.07 kg per capita.²⁹ The large volume of solid waste has made it increasingly difficult to collect and get rid of. Only 23% of industrial waste produced is recycled and 73% is disposed of in landfill sites. Their management is generally considered not to be in conformity with international standards.

25 Eco-epidemiological studies have shown that in Casablanca air pollution has been the cause of the outbreak of certain diseases (asthma, bronchitis, respiratory infections in children under 5 years old and conjunctivitis).

26 The transport sector contributes to air pollution through the emission of toxic gases such as nitrogen oxides (NOx) with 35,000 t / year, sulfur dioxide (SO₂) with 21,000 t / year, carbon dioxide (CO₂) with 7 million t / yr and suspended particles with 5,000 t / yr.

27 The biomass energy potential in Morocco (waste from agro-industry and crop residues included) is estimated at 950 MW.

28 Toxic, reactive, explosive, flammable, biological or bacterial, hazardous industrial waste is a danger to the ecological balance.

29 According to a world map produced by Solving E-Waste Problem (StEP) in partnership with the United Nations listing each country in terms of the weight of its electronic waste.

The chemicals sector is the most important source of liquid discharges, especially phosphate treatment, which consists of phosphogypsum suspended in seawater mainly on the coastline of Safi and Jorf Lasfar. While the textile and leather industry produces relatively small amounts of liquid waste, it is very rich in polluting products (tanneries in particular). Agro-food is the main source of organic pollution (68%), while the cement industry is characterized by high carbon dioxide production (5568 kilo tonnes per year). Greenhouse gas emissions from the energy industry, on the other hand, accounted for 48% of Morocco's emissions in 2012. The craft industry also has a detrimental impact on the environment. This includes brassware, oil mills³⁰ and pottery.

The multitude of sources of production, the inadequate resources and lack of channels specialized in the treatment and recovery of waste, along with the presence of a large informal sector mean that waste management always poses important challenges despite the great potential for improvement shown by numerous scientific projects and studies.

4 Institutional, legal and regulatory framework

Until the early 1990s, Morocco's environmental actions were limited to combating some forms of pollution. Today, public actors have become aware of the importance of the country's ecological challenges and the need to take action with regards to certain problems. Policies and tools have been developed in recent years and institutional, regulatory, technical and financial progress has been made, which has enabled the country to acquire a number of environmental management tools enabling the country to improve the conservation of natural resources substantially.

4.1 Institutional framework and visions of the actors

Environmental awareness has become institutionalized with the involvement of several political and development actors, contributing, according to their missions, to the process of the ecological transition of the national economy. In addition to the Ministries (Energy and Mines, Water, Environment, Industry, Agriculture, Equipment, Transport, Health, Finances) and local and regional authorities (Regions, Wilayas, Provinces and Prefectures) the State has set up specialized development agencies (ABH, ADA, ADEREE, MASEN, SIE³¹, IRESEN, ANRE, AND-MDP ...), and has set up tools for measuring and monitoring environmental quality (ONEM,

30 The pollution generated by one litre of amurca is equivalent to that of 500 litres of domestic wastewater.

31 Established in 2010, SIE is the leading state investor in the field of renewable energies and energy efficiency.

OREDD ...). Higher and national councils (CNE, CSEC, CNEI, CSAT CNF, CESE³²,...) have also been set up which can make proposals and act as advisory panels to develop environmental governance policies in partnership with the private sector and other international actors.

Active professional associations and foundations (APC, FENELEC, AMISOLE, FIMME, FNBTP ...) are also involved in many programs related to the green economy. The Mohammed VI Foundation for Environmental Protection³³ and the Association of Teachers of Life and Earth Sciences are examples of non-governmental organizations that are active in the environment field.

The CGEM, an essential actor in this vast process of structural change in the national economy has set up its 'Energy, Climate and Green Economy' Commission.³⁴ The Moroccan Cleaner Production Center CMPP was created in the framework of a public-private partnership. Its mission is to contribute to improving the productivity and competitiveness of Moroccan SMEs in compliance with environmental requirements, to strengthen national expertise and skills in environmental engineering and to create a national market for clean production and technologies. The establishment of regional centers on the model of the CMPP is also considered. CGEM has also set up the RSE Charter and label and made it available to companies. It also holds annual RSE conferences. Some environmental managers of large companies have created the RSO association in Morocco to promote socially responsible practices.

A study on industry and the green economy in Morocco³⁵ (CEA, 2014) revealed that the majority of these actors are relatively aware of the importance of the challenges related to the green economy, the utilization of the environment as a lever for development and the need to provide the necessary means for the protection of the environment and the promotion of sustainable practices. They organized several awareness-raising workshops, forums and international, national and regional events about sustainable development in general and the environment and the green economy in particular. Pro-

jects of public-private partnerships have led to programs to encourage companies to integrate the ecological transition process through several technical and managerial improvements and with the involvement of scientific research institutions.

4.2 Legal and regulatory framework

Moroccan law has been established gradually to protect the environment and to respond to the numerous practices that degrade its quality and threaten its integrity. Morocco has subscribed to most international environmental agreements.³⁶ Free trade agreements with several countries and the European Union in particular have also contributed to the creation of an institutional and legal framework for the approximation of social and environmental standards (new 2004 Labor Code, Action Plan against corruption, INDH ...). The establishment of the Central Authority for the Corruption Prevention and the Competition Council aims to foster business ethics and encourage the moralization of economic governance.

Several laws and regulations based on the polluter pays principle, for environmental protection and sustainable development have been gradually adopted. This framework is defined by the adoption of two categories of laws:

- Laws reinforcing environmental protection. These include water (1995), environmental protection and development (2003), environmental impact assessments³⁷ (2003), the fight against air pollution (2003), the management and disposing of waste, (2006), the use of degradable or biodegradable plastic bags and bags (2010), protected areas (2010).
- Recent laws that are more in line with sustainable development, notably the Renewable Energies Act (2010), the National Environmental and Sustainable Development Charter (2014), etc.

The latter law is a reference for public policies to promote the green economy in Morocco. It determines the future directions of public policies and defines responsibilities and commitments that all concerned parties concerned must abide by in this respect. It also provides for a number of institutional, economic and financial measures aimed at setting up an environmental governance structure, particularly in terms of strategies, evaluation,

32 In 2013, Morocco transformed the Economic and Social Council (ESC) into Economic, Social and Environmental Council (EESC), making it one of the most influential institutional players to develop the green economy and sustainable development in Morocco.

33 Founded in 2001, the Foundation has initiated a process of awareness-raising, education and accountability, involving several potential change agents. It initiated several programs: clean beaches, young reporters for the environment, Eco-schools, restoration of parks and historical gardens. It invested in responsible tourism with the 'Green Key'

34 The 'Business and Sustainable Development' Commission was set up in 1998. It was replaced by the 'Green Economy' Commission in 2012 and by the 'Energy, Climate and Green Economy' Commission in 2015.

35 CEE, CEA (2014), «Examen des performances environnementales au Maroc», 2014.

36 Morocco has ratified more than 80 multilateral environmental agreements and participated in various international forums on environmental issues.

37 This law guarantees the involvement of the populations. It stipulates that each project submitted to the environmental impact assessment shall be publicly investigated, in order to enable interested parties to become aware of the possible environmental impacts of the project and encourage their observations and proposals which authorities consider during the environmental impact assessment.

awareness, education and communication. This law also establishes a system of environmental taxation. A reform of the VAT is being undertaken and an eco-tax on plastic (0.8%)³⁸ has been established and generates between 150 and 180 million Dirham³⁹ in revenue per year. These revenues will help to integrate some of the informal sector actors and to finance projects such as recycling, waste sorting and the construction of waste treatment plants.

An analysis⁴⁰ of the tax system has revealed the existence of a number of environmental tax bases: quarry tax, fees on phosphate mining, charges for the use of public services (water, sanitation, waste), landing fees, aerodrome charges, motorway network development tax, parking fees, driver's license tax, taxi and coach tax, vehicle inspection fee for vehicles over 5 years old, tax on motorcycles with a cylinder capacity equal to or greater than 125 cm³, internal taxes on energy products, sewage treatment fee, spill charge, a special tax on cement, eco tax on plastics processing, a special tax on rebar, a special tax on sand as well as other tax exemptions and cuts encouraging the protection of the environment.

The protection of the environment has also found its place in Moroccan jurisprudence. The inclusion of the right to a healthy environment, water and sustainable development in the new Constitution adopted in 2011 (Article 31) reveals the awareness of environmental challenges. These measures have been reinforced by an environmental enforcement agency set up in 2014 by the Ministry of the Interior in partnership with the MEMEE, addressing some of the most polluted areas (Casablanca, Mohammedia, Rabat) to monitor environmental offences, investigate and bring offenders to justice. It will also be involved in improving prevention, risk prediction and pollution control measures. The National Strategy for Inspection, Control and Environmental Monitoring (SNICSE), a legally-binding instrument developed by MEMEE and GIZ, aims to strengthen government policy on environmental law enforcement.⁴¹

The legal framework of the system of standardization has been in place since 1970. The Inter-ministerial Higher Council for Quality and Productivity (CSIQP), the Standardization Technical Committees (CTN) and the Moroccan Industrial Standardization Office (SNIMA) are the three Moroccan standardization organizations. Morocco is a member of the International Organization for

Standardization (ISO), the International Electrotechnical Commission (IEC) and the European Committee for Standardization (CEN). The State also passed Law No. 12.06 on standardization, certification and accreditation which set up the Moroccan Institute for Standardization⁴² (IMANOR) and introduced measures of flexibility into the process of endorsement of standards to keep up with the development of the country.

Alongside international and European standards, Morocco has already published more than 3,700 standards covering many aspects of different sectors. All international standards for quality, environmental, health, safety and security management systems have been adopted as Moroccan standards. They are followed by vulgarization and promotion actions aimed at facilitating their implementation by companies wishing to adopt management approaches recognized by the market and the business world in general. The experience of plastic bags is rich in lessons for any possible effort to adapt standards and laws.

5 Conclusion

Morocco has initiated a new dynamic on the political, regulatory, economic, social and environmental levels. The environment in particular has been a priority national issue in recent years. Several advances have been achieved, but challenges still remain. The country's ability to achieve the ecological transition to an inclusive economy that respects environmental constraints raises several questions. To achieve this, stakeholders must have a good understanding of the fundamentals of such a transition in terms of challenges, opportunities and impacts.

38 The CESE (2012) estimated recycled plastic products deposit at 40,000 tonnes per year.

39 This tax on plastics and plastic products came into force on 1 January 2015.

40 Bouayyad Amine N. et al (2015), «La fiscalité verte au Maroc: Etats des lieux et perspectives», actes des 7èmes journées scientifiques du Forum des Economistes Marocains, Marrakech, mars.

42 Autonomous public institution managed by a board of directors composed of state representatives, the private sector and consumers.

Annex 1: Major environmental issues in Morocco

Water	<ul style="list-style-type: none"> - Pollution of surface water (40% is of poor quality) - Overexploitation of groundwater: 730 m³ per inhabitant per year, compared with 2,560 m³ per inhabitant per year in 1960 (UNO threshold is 1000 m³), 530 m³ per inhabitant per year by 2030 - Degradation of lakes - Several dams are filled with mud which means the loss of an enormous amount of water - Rainfed agriculture: 80 to 90% of water requirements and 50% of water losses - Water deficit: + 3 to 5 billion cubic meters by the start of 2030 - Average return on drinking water distribution systems: 70% - Climate change
Land	<ul style="list-style-type: none"> - Desertification (92% of the forest spaces initial) - Landslide - Salinization - Loss of arable lands and drought - Solid wastes and irrational use of pesticides and fertilizers
Air	<ul style="list-style-type: none"> - 2.3 tonnes of CO₂ per year per capita - Agriculture: 31% of global greenhouse gas emissions - Industrial pollution (Carbon dioxide: cement industry), (Greenhouse gas GES: energy) - Pollution from transportation (vehicle fleet ~ 2,500 thousand vehicles, 70% of vehicles are over 10 years old and account for 60% of pollution), Growth of 5% of the number of vehicles per year - Most polluted cities: Casablanca, Mohammedia, Safi - OCP production (state-owned phosphate mining company) accounted for 7% of the 32 million tons of CO₂ emitted in Morocco in 2000.
Coastal and marine resources	<ul style="list-style-type: none"> - Urban planning (60% of the population) - Tourism (90% of tourism infrastructure) - Industrial pollution (80% of units), liquid waste - Illegal sand mining - Erosion (4000 tons / km²)
Biodiversity	<ul style="list-style-type: none"> - Overexploitation of fishery resources (fleet = 2522 vessels) - Invasion of foreign species - Extinction of fauna and flora - Flora: 25,000 species, 11% of which are endemic - Fauna: 7,000 species, 25% of which are endemic
Forest	<ul style="list-style-type: none"> - Overgrazing, overexploitation through various activities - Fires, clearing - Urbanization - Drought: 40,000 hectares lost per year - Average rate of deforestation is 9%
Energy	<ul style="list-style-type: none"> - Petroleum products: ¾ of primary energy consumption - Coal: 20% - Consumption: +400 to 500 MW /year - Gas: 10% (4% in 2010, 0.5% in 2000) - Industry is first energy consuming sector, while agriculture accounts for 18.7% of total energy consumption
Waste	<ul style="list-style-type: none"> - 8 million tons per year (12 million tons in 2020) - Household waste (18,000 tons per day) - Industrial waste (2,000,000 tons per year, 55% of which is organic while 18% is hazardous) - Medical and pharmaceutical waste (6,000 tons per year) - Plastic bags

Source:

ADA, « Plan Maroc Vert », <http://www.ada.gov.ma/ApprochesConceptuelsPMV.php>; ADEREE, «Stratégie Nationale d'Efficacité Energétique à horizon 2030», Mars 2014; IMANOR (2010), «Bilan de la normalisation au Maroc», Rabat. <http://www.imanor.ma/index.php/content/download/18156/265186/file/bilan%20de%20la%20normalisation%20au%20Maroc.pdf>; MAPM (2011), «Etude Cadre de l'Impact Environnemental et Social», Projet d'Intégration du Changement Climatique dans la Mise en Œuvre du Plan Maroc Vert (PICCPMV); MEMEE, Département de l'environnement (2010), «L'environnement au Maroc: vers une protection durable» Conférence du Réseau des Entreprises Maghrébines pour l'Environnement« Leader Maghreb, Partenaires pour une Croissance Verte » Casablanca, 17 Mai 2010; MEMEE, Département de l'Environnement, «Bilan des réalisations» 2014; MEMEE, Département de l'Environnement, «développement durable au Maroc: bilan et perspectives», juin 2012 and further documents already cited.

Annex 2: ACRONYMS

ABH	Agence du Bassin Hydraulique / Hydraulic Basin Agency
ADA	Agence de Développement Agricole/ Agricultural Development Agency
ADEREE	Agence de Développement des Energies Renouvelables et de l'Efficacité Energétique/ Agency for the Development of Renewable Energies and Energy Efficiency
AMISOLE	Association Marocaine des Industries Solaires et Eoliennes/ Moroccan Association of Solar and Wind Industries
AND-MDP	Autorité Nationale Désignée du Mécanisme de Développement Propre/ Designated National Authority of the Clean Development Mechanism
APC	Association Professionnelle de la Cimenterie/ Professional Association of the Cement Industry
BM	Banque Mondiale / World Bank
CEA	Commission Economique pour l'Afrique / Economic Commission for Africa
CESE	Conseil Economique, Social et Environnemental/ Economic, Social and Environmental Council
CGEM	Confédération Générale des Entreprises du Maroc/ General Confederation of Moroccan Companies
CMPP	Centre Marocain de Production Propre / Moroccan Clean Production Center
CNDD	Charte Nationale de l'Environnement et du Développement Durable/ National Charter for the Environment and Sustainable Development
CNE	Conseil National de l'Environnement / National Council for the Environment
CSAT	Conseil Supérieur de l'Aménagement du Territoire/ Higher Council for Regional Development
CSEC	Conseil Supérieur de l'Eau et du Climat /Higher Council for Water and Climate
DEPF	Direction des Etudes et des Prévisions Financières/ Directorate of Studies and Financial forecast
FDA	Fonds de Développement Agricole / Agricultural Development Fund
FDI	Fonds de Développement Industriel/ Industrial Development Fund
FENELEC	Fédération Nationale de l'Electricité et de l'Electronique / National Federation of Electricity and Electronics
HCP	Haut Commissariat au Plan / High Commission for Planning
IMANOR	Institut Marocain de Normalisation/ Moroccan Institute of Standardization
INDH	Initiative Nationale du développement Humain/ National Human Development Initiative
IRESEN	Institut de Recherche en Energie Solaire et Energies Nouvelles / Institute for Research in Solar Energy and new Energies
MASEN	Morocco Agency for Solar Energy
MAPM	Ministère de l'Agriculture et de la Pêche Maritime/ Ministry of Agriculture and Maritime Fishing Ministère de l'Energie, des Mines, de l'Eau et de l'Environnement/ Ministry of Energy, Mines, Water and Environment
MEMEE	
OIT	Organisation Internationale du Travail/ International Labor Organization
OMD	Objectifs du Millénaire pour le Développement/ Millenium Objectives for Development
OMI	Observatoire Marocain de l'Industrie / Moroccan Observatory of Industry
ONE	Office Nationale de l'Electricité/ National Office of Electricity
ONEM	Observatoire National de l'Environnement du Maroc/ National Observatory of the Environment of Morocco
OREDD	Observatoire Régional de l'Environnement et du Développement Durable/ Regional Observatory on Environment and Sustainable Development
PIVM	Plan d'Investissement Vert du Maroc/ Morocco Green Investment Plan
PMV	Plan Maroc Vert / Map of Green Morocco
PNUE	Programme des Nations Unies pour l'Environnement/ United Nations Environment Program (UNEP)
RSE/ RSO	Responsabilité sociale des entreprises/organisations/ Corporate social responsibility
SIE	Société d'Investissements Energétiques /Energy Investment Company Foreign direct investment

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If you want to join the Environmental Law Network International, please use the membership form on our website: <http://www.elni.org> or send this form to the elni Coordinating Bureau, c/o IESAR, FH Bingen, Berlinstr. 109, 55411 Bingen, Germany, fax: +49-6721-409 110, mail: Roller@fh-bingen.de.

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The University of Applied Sciences in Bingen was founded in 1897. It is a practiceorientated academic institution and runs courses in electrical engineering, computer science for engineering, mechanical engineering, business management for engineering, process engineering, biotechnology, agriculture, international agricultural trade and in environmental engineering.

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The Society for Institutional Analysis was established in 1998. It is located at the University of Applied Sciences in Darmstadt and the University of Göttingen, both Germany.

The sofia research group aims to support regulatory choice at every level of public legislative bodies (EC, national or regional). It also analyses and improves the strategy of public and private organizations.

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elni

In many countries lawyers are working on aspects of environmental law, often as part of environmental initiatives and organisations or as legislators. However, they generally have limited contact with other lawyers abroad, in spite of the fact that such contact and communication is vital for the successful and effective implementation of environmental law.

Therefore, a group of lawyers from various countries decided to initiate the Environmental Law Network International (elni) in 1990 to promote international communication and cooperation worldwide. elni is a registered non-profit association under German Law.

elni coordinates a number of different activities in order to facilitate the communication and connections of those interested in environmental law around the world.

Coordinating Bureau

Three organisations currently share the organisational work of the network: Öko-Institut, IESAR at the University of Applied Sciences in Bingen and sofia, the Society for Institutional Analysis, located at the University of Darmstadt. The person of contact is Prof. Dr. Roller at IESAR, Bingen.

elni Review

The elni Review is a bi-annual, English language law review. It publishes articles on environmental law, focusing on European and international environmental law as well as recent developments in the EU Member States. elni encourages its members to submit articles to the elni Review in order to support and further the exchange and sharing of experiences with other members.

The first issue of the elni Review was published in 2001. It replaced the elni Newsletter, which was released in 1995 for the first time.

The elni Review is published by Öko-Institut (the Institute for Applied Ecology), IESAR (the Institute for Environmental Studies and Applied Research, hosted by the University of Applied Sciences in Bingen) and sofia (the Society for Institutional Analysis, located at the University of Darmstadt).

elni Conferences and Fora

elni conferences and fora are a core element of the network. They provide scientific input and the possibility for discussion on a relevant subject of environmental law and policy for international experts. The aim is to gather together scientists, policy makers and young researchers, providing them with the opportunity to exchange views and information as well as to develop new perspectives.

The aim of the elni fora initiative is to bring together, on a convivial basis and in a seminar-sized group, environmental lawyers living or working in the Brussels area, who are interested in sharing and discussing views on specific topics related to environmental law and policies.

Publications series

elni publishes a series of books entitled "Publications of the Environmental Law Network International". Each volume contains papers by various authors on a particular theme in environmental law and in some cases is based on the proceedings of the annual conference.

elni Website: elni.org

The elni website www.elni.org contains news about the network. The members have the opportunity to submit information on interesting events and recent studies on environmental law issues. An index of articles provides an overview of the elni Review publications. Past issues are downloadable online free of charge.

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