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Compilation of information on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol

Note by the secretariat

Contents

I. Mandate

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by decision 15/CMP.1, requested the secretariat to compile annually the supplementary information referred to in paragraphs 3 and 4 below.

2. Under Article 3, paragraph 14, of the Kyoto Protocol, each Party included in Annex I to the Convention (Annex I Party) shall strive to implement the commitments mentioned in Article 3, paragraph 1, of the Kyoto Protocol, in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the Convention.

3. In accordance with decision 15/CMP.1, Annex I Parties, which are also Parties to the Kyoto Protocol, shall provide the supplementary information as referred to in paragraph 2 above. Parties included in Annex II to the Convention, and other Annex I Parties that are in a position to do so, shall incorporate information in their submissions on how they give priority, in implementing their commitments under Article 3, paragraph 14, of the Kyoto Protocol, to the following actions, based on the relevant methodologies referred to in decision 31/CMP.1:[1]

1) The progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions, and subsidies in all greenhouse-gas-emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities;

2) Removing the subsidies associated with the use of environmentally unsound and unsafe technologies;

3) Cooperating in the technological development of non-energy uses of fossil fuels and supporting developing country Parties to this end;

4) Cooperating in the development, diffusion and transfer of lower-greenhouse-gas-emitting advanced fossil-fuel technologies and/or technologies relating to fossil fuels that capture and store greenhouse gases, encouraging their wider use, and facilitating the participation of least developed countries and other Parties not included in Annex I to the Convention in this effort;

5) Strengthening the capacity of developing country Parties identified in Article 4, paragraphs 8 and 9, of the Convention to improve efficiency in upstream and downstream activities relating to fossil fuels, taking into consideration the need to improve the environmental efficiency of these activities;

6) Assisting developing country Parties, which are highly dependent on the export and consumption of fossil fuels, in diversifying their economies.

4. Where the information referred to above has been provided in earlier submissions, Annex I Parties shall include information on any changes that have occurred compared with the information reported in their last submissions.

5. One of the purposes of this compilation is to facilitate the detailed examination by an expert review team of the supplementary information incorporated in the annual

[1] In accordance with decision 31/CMP.1, paragraph 11, the secretariat to organized a workshop on reporting methodologies in the context of Article 3, paragraph 14, of the Kyoto Protocol, which was held in Abu Dhabi, United Arab Emirates, from 4 to 6 September 2006. The workshop report is contained in document FCCC/SBI/2006/27.

inventory during an in-country visit, in conjunction with the review of the national communication, in accordance with decision 22/CMP.1, annex, paragraph 125.

II. Approach

6. In 2013, 37 Annex I Parties submitted information in their national inventory reports (NIRs) on the minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol. The information contained in section III of this document is reproduced as received from Parties in their 2013 NIRs. The secretariat has, however, made minimal changes to the format of the information to ensure consistency in presentation.

7. There are four different types of presentation, explained as follows:

a) In the case that the majority of the information provided in the 2013 national inventory report (NIR) differs from the information provided in the 2012 NIR, the complete text as included in the 2013 NIR is presented in this compilation;

b) In the case that only a small part of the information provided in the 2013 NIR differs from the information provided in the 2012 NIR, only the varied part is presented;

c) In the case that additional information is provided in the 2013 NIR on top of the information provided in the 2012 NIR, only the additional part is presented;

d) In the case that no difference was found between the 2013 and 2013 NIRs, it is stated "No additional information was included in the NIR for 2013" below the respective Party's name.

III. Compilation of information on minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol

8. Compilation of information on minimization of adverse impacts in accordance with Article 3, paragraph 14, of the Kyoto Protocol by Party is provided below.

1. Australia

Australia provided the following information in its NIR for 2013.

Australia is pleased to provide an update of its last submission and supplementary information on how Australia is striving, under Article 3, paragraph 14, of the Kyoto Protocol, to implement its greenhouse gas emission limitation and reduction commitments mentioned in Article 3, paragraph 1, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the United Nations Framework Convention on Climate Change.

Australia is serious about tackling climate change and is taking a range of actions to reduce emissions in line with our 2020 emissions reductions target. Australia's action includes the renewable energy target, and the Clean Energy Future (CEF) package of legislation, which introduced a price on carbon on 1 July 2012. Australia's CEF includes in its design effective measures to address the domestic social and economic impact of action to mitigate climate change, including through assistance to households and industries most affected by the legislation. The CEF reforms also aim to capture the range of economic and social benefits from mitigation action including the benefits flowing from the deployment of green technology.

Australia actively engages in key multilateral, regional and bilateral forums and discussions relevant to international cooperation on climate change and related economic, environmental and social issues.

Carbon Capture and Storage (CCS)

In cooperation with many developed and developing countries, Australia is contributing to global efforts towards development, diffusion, and transfer of advanced technologies, which capture and store greenhouse gases.

CCS technology provides an important avenue for climate change mitigation to occur by minimising emissions potential from existing energy infrastructure. As such, important steps were taken at COP 17 in Durban to include CCS as an eligible activity in the Clean Development Mechanism. Australia has a market-based energy system and an ongoing co-operative reform agenda aimed at increasing transparency and flexibility in the wholesale and retail energy markets. These reforms aim to ensure reliable and affordable energy supply for consumers, and the setting of energy prices which reflect the costs of supply.

Australia facilitates the participation of least developed countries and other non-Annex I Parties in this effort. This includes working to strengthen the capacity of developing country Parties identified in Article 4, paragraphs 8 and 9, of the Convention to assist them to participate in efforts that improve efficiency in upstream and downstream activities relating to fossil fuels. Australia's activities to achieve this are set out below.

Carbon Sequestration Leadership Forum

The Carbon Sequestration Leadership Forum (CSLF) is a Ministerial-level international climate change initiative that is focused on cooperation to develop and apply technologies for the separation and capture of carbon dioxide for its transport and long-term safe storage. The purpose of the CSLF is to make CCS technologies broadly available internationally, and to identify and address wider issues relating to

its deployment. This could include promoting the appropriate technical, political, and regulatory environments for the development of such technology.

Australia is a foundation member of the CSLF, which has a membership comprising twenty one countries and the European Commission. Australia has been actively involved in the CSLF since it was formed in June 2003 and is a member of a number of CSLF task forces. Australia hosted the CSLF Annual Meeting in Perth in October 2012.

Australia is an active participant in the CSLF Capacity Building Program, which is designed to assist CSLF members to develop the information, tools, skills, expertise and institutions required to implement CCS demonstrations and then move to commercial operation. To date, Australia has made the highest contribution to the CSLF Capacity Building Fund (US$968,160.00). Twelve capacity building projects in four countries have been approved under the program.

Clean Energy Ministerial

Carbon Capture Use and Storage (CCUS) Action Group

The Carbon Capture, Use and Storage (CCUS) Action Group was established by the governments of Australia and the United Kingdom at the first Clean Energy Ministerial (CEM) in 2010. It brings together governments, institutions and industry to facilitate political leadership and provide recommendations to the CEM on concrete, near-term actions to accelerate the deployment of CCS. Ministers at the second CEM in 2011 endorsed a set of key recommendations from the CCUS Action Group that cover a range of areas including CCS financing, regulation, knowledge-sharing and storage.

One recommendation highlights the need to 'identify and advance appropriate funding mechanisms to support the demonstration of large-scale CCS projects in developing economies'. This recommendation recognises that, in order to realistically achieve domestic CO2 reduction targets, many developing countries with a heavy reliance on fossil fuel-based energy sources will need to include CCS as part of their greenhouse gas mitigation strategy. A working group chaired by the Global CCS Institute, and including the International Energy Agency, Clinton Climate Initiative, World Bank, Asian Development Bank, World Resources Institute, the Australian Department of Resources, Energy and Tourism and the UK Department of Energy and Climate Change, is driving progress in this area of work.

At the third CEM in 2012 the CCUS Action Group presented a report highlighting the progress governments had made against each of the recommendations. The CCUS Action Group has since focused on three work streams aimed at analysing the financial and commercial risks of CCS demonstration, identifying and enabling support for CCS in developing countries, and supporting CCS in industrial applications.

Global Carbon Capture and Storage Institute

The Global Carbon Capture and Storage (CCS) Institute was announced by the Australian Government in 2008, launched in April 2009 as an independent, not-for-profit company. Its mandate is to help address the barriers to the commercial deployment of CCS through fact-based advocacy and knowledge-sharing activities. The Australian Government is providing funding of $315 million out to 2016-17.

The Institute has attracted strong and widespread support from governments, corporations, industry bodies and research organisations from key markets around the globe, and has built a diversified membership profile that represents a healthy cross-

section of these international stakeholders. There are currently 361 members, including 28 national governments and the European Commission. The Institute's members account for over 80 per cent of the world's carbon dioxide emissions from energy and industrial sources.

The Institute's capacity development activities continue to focus on developing countries. They aim to help build an 'enabling environment' for CCS by addressing the barriers to CCS deployment and building in-country expertise. In recognition that 70 per cent of CCS deployment will need to occur in non-OECD countries to achieve global emission reduction targets by 2050, the Institute's *Global Status of CCS: 2012* report includes a dedicated chapter on CCS in developing countries.

Tailored capacity development programs have been developed or updated by the Institute for Malaysia, Mexico, India and South Africa, in consultation with key industry and government stakeholders. Key initiatives include:

- The introduction of an elective CCS subject into university courses in Malaysia. This included the delivery of a 'train-the-trainer' workshop, access to educational materials and expert advice;
- The Institute is undertaking a CCS scoping study and capacity assessment for India, in partnership with The Energy Research Institute (TERI); and
- The Institute continues to work on the development of a CCS strategy for Indonesia, in collaboration with the Asian Development Bank (ADB).
- The signing of a memorandum of understanding with China's National Development and Reform Commission (NDRC) regarding cooperation on CCS, including through research, development and demonstration projects; and developing industrial and academic networks.

The Institute's financial contributions and strategic advice has also contributed to the work of its strategic partners in developing countries.

Australia-China Joint Coordination Group on Clean Coal Technology (JCG)

The JCG was established in 2007 to facilitate and enhance the mutually beneficial development, application and transfer of low emissions coal technology, and is supported by $20 million of Australian Government funding. Under the JCG the Australian Government Department of Resources, Energy and Tourism (RET) is working closely with China's National Energy Administration (NEA). The JCG meets as a group annually, with regular meetings being held between RET and the NEA.

In December 2010, China's NEA signed a MoU with RET to collaborate on a feasibility study for a full scale post combustion capture (PCC) project with CCS in China. The feasibility study will draw on $12 million committed under the JCG, and focus on a commercial-scale (600 MW), integrated CCS demonstration project using the PCC process. In December 2012 RET and the NEA agreed to commence Stage Two of the project.

The JCG also supports a range of collaborative projects that target a range of priorities along the low emissions coal technologies commercialisation curve.

Asia Pacific Economic Cooperation (APEC) Expert Group on Clean Fossil Energy (EGCFE)

The EGCFE is an Expert Group under the APEC Energy Working Group (EWG). Membership covers the 21 member economies (developing and developed) of the APEC region.

The EGCFE's mission is to encourage the use of clean fuels and energy technologies that will both contribute to sound economic performance and achieve high environmental standards. The EGCFE undertakes activities to concurrently enhance economic development and mitigate, at the local, regional, and global levels, the environmental impact (e.g. air emissions, water and waste management) related to the production, preparation, transport, storage, and use of fossil fuels.

Australia hosted the EGCFE Business Meeting and annual seminar in February 2012. These events helped facilitate knowledge sharing and cooperation among government, industry and research representatives from APEC economies on technical and policy issues in the development and diffusion of cleaner fossil fuel technologies.

Asia Pacific Partnership on Clean Development and Climate

In the five years of its existence, the APP enhanced partnerships between the public and private sectors, promoted best practices and technologies across a range of key sectors, and deepened cooperation among its seven partner countries. The APP achieved considerable success and benefited all partners, and the Partnership has become a model of public-private partnerships to drive the development of clean technologies.

Following the launch of APP in 2006, a number of partnerships have emerged which are undertaking public-private cooperation involving APP countries and other partners. APP Partner Countries share the view that the APP's activities may be further enhanced, expanded, and shared with a broader group of countries by incorporating them into the work of these other multilateral and bilateral efforts.

The APP has agreed that the most efficient and effective way to help these efforts grow and prosper and expand to a broader group of partners would be to transition the active programming into other relevant partnerships or bodies. As such, the APP formally concluded on 5 April 2011 in Bangkok, Thailand. However, Australia and other APP Partner Countries remain committed to current and ongoing APP projects that will continue and transition to new international fora.

Global Methane Initiative

The Global Methane Initiative (GMI) aims to encourage the recovery and use of methane by focusing on the five main methane emission sources: agriculture, coal mines, municipal solid waste, oil and gas systems, and wastewater. Projects under the GMI will accelerate deployment of methane emission reducing technologies and practices, stimulating economic growth and energy security in Partner countries and helping them to minimise exposure to measures taken to mitigate climate change. The GMI addresses methane abatement as well as commercial use of fugitive emissions, and targeting additional emission sources such as wastewater.

Two successful expos have been held in China in 2007 and India in 2010 to demonstrate methane technologies, practices and projects. The next expo will be held in Vancouver in 2013.

The GMI now has 41 members including all of the 10 largest methane emitters in the world. A large number of its members are developing countries with a broad geographical spread. The GMI has supported more than 700 projects that will reduce emissions by 30 Mt CO2-e when the projects are fully implemented.

Australia is a leading country in coal mine methane emission reduction innovation and policy. In 2012 Australia hosted the Coal Mining Methane Abatement Seminar which attracted Australian and international stakeholders. In conjunction with this seminar, Australia hosted the 16th session of the GMI Coal Subcommittee.

2. Austria

The following information provided in Austria's 2013 NIR differs from the 2012 NIR.

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24. Parties included in Annex II, and other Parties included in Annex I that are in the position to do so, shall incorporate information on how they give priority, in implementing their commitments under Article 3, paragraph 14, to the following actions, based on relevant methodologies referred to in paragraph 11 of decision 31/CMP.1

(a) The progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse-gas-emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities.

Fiscal incentives

- **Mineral Oil Tax**

The Mineral Oil Taxes have been raised constantly since 2005.

  - for fuel: raised at 4 Cent since 2007 and amounts to 48 Cent per liter
  - for diesel: raised at 5 Cent since 2007 and amounts to 39 Cent per liter

- **NoVA (from 1 March 2011, NoVA Ökologisierungsgesetz: BGBl. I Nr. 46/2008)**

1) newly authorized automobiles with a CO2 emission of at most 120 g/km get a bonus of 360 Euro,
2) alternativly operated vehicles – Hybrid, E 85, Methan in form of natural gas, hydrogen or liquefied gas – get a general bonus of 600 Euro and
3) newly authorized automobiles with a CO2 emission of more than 160 g/km will have to pay 30 Euro for each gram over the threshold, newly authorized automobiles with a CO2 emission of more than 180 g/km will have to pay additionally 30 Euro for each gram over the threshold).

Consequences of the ecologisation of the NoVA for newly authorized automobiles are easily observable:

1) The shares of all alternativly operated vehicles have increased significantly,
2) From January 2008 until November 2009 the shares of small vehicles with emissions of less than 120 g/km have increased from 5% to 20% and
3) From January 2008 until November 2009 the shares of big vehicles with emissions of more than 180 g/km decreased from 21% to 11%.

- **Flight Fee Law**

In December 2010 the Flight Fee Law was passed within the Budget Act of the Republic of Austria. From April 2011 all flights starting from an Austrian Airport have to pay a fee at a specific amount per passenger (very few exceptions are granted, e.g. like military or humanitary flights):

Short distance (within Austria, as well as e.g. Sweden, Cyprus): 8 Euros

Medium Distance (e.g. Iraq, Sudan): 20 Euros

Long Distance (Brazil, Indonesia): 35 Euros

An amendment of the Act will lead to slight changes of the fee in 2013.

- **EU ETS**

Aviation has been included in the EU ETS from 1 January 2012. Most of the flights are taking place either inside the EU or between the EU and other industrialized countries. Thus the burden on companies of developing countries is negligible.

3. Belgium

The list of projects with which the Belgian federal and/or regional government signed an ERPA provided in Belgium's 2013 NIR differs from the one provided in the 2013 NIR, below is the full list provided in the 2013 report.

Project Name	*Type*	*Country*	*UNFCCC reference n°*
Berlin Binary Cycle Power Plant	CDM	El Salvador	1218
Alexigros Wind Farm Project	CDM	Cyprus	601
Mari Wind Farm Project	CDM	Cyprus	602
Biomass based Cogeneration Power Project in Uttar Pradesh	CDM	India	827
Palmas del Espino – Biogas recovery and heat generation from Palm Oil Mill Effluent (POME) ponds	CDM	Perú	1249
Substitution of coal with jute biomass residue (caddies) in the steam generating boiler for use onsite	CDM	India	1059
Rice Husk based cogeneration power plant-II at SBPML	CDM	India	802
EECOPALSA SA – Biomass Project	CDM	Honduras	1877
EL BOTE Small Hydroelectric Plant	CDM	Nicaragua	2999
Viyyat Power – Small Hydro	CDM	India	1514
Hubei Yihua Fertilizers Company Waste Heat Recovery and Utilization Project	CDM	China	2416
Generation of electricity from 6.25 MW capacity wind mills by Sun-n-Sand Hotels Pvt. Ltd at Soda Mada Rajasthan	CDM	India	447
Optimal Utilization of Clinker project at Shree Cement Limited (SCL), Beawar, Rajasthan	CDM	India	183

Project Name	*Type*	*Country*	*UNFCCC reference n°*
INOLASA Biomass Fuel Switch Project	CDM	Costa Rica	1314
Shalivahana 10MW Biomass Power Generation Project	CDM	India	1473
Shalivahana Non-Conventional Renewable Sources Biomass Power Project	CDM	India	591
Torrent Natural Gas Power Plant	CDM	India	1116
Electric Power Co-generation by LDG Recovery – CST - Brasil	CDM	Brazil	184
Guaracachi Energy Efficiency Project	CDM	Bolivia	2761
Comodoro Energy Efficiency Project	CDM	Argentina	1482
Orient Green Power Ltd biomass project	CDM	India	1126
Nahar Industrial Enterprise Ltd – Rice-husk based cogeneration project	CDM	India	1130
Eco-friendly export to grid	CDM	India	1236
Santa Cruz I and II hydroelectric power plant	CMD	Peru	2405 3307
Simbhaoli biomass power project	CDM	India	1112
Qiangling CFL distribution project	CDM	China	3659
Camil Itaqui biomass electricity generation project	CDM	Brazil	0231
Landfill gas recovery and energy generation project	CDM	Tanzania	0908
Dak Pone hydropower project	CDM	Vietnam	4550
Hubei Chibi Lushuihe Jiedi Small Hydropower Project	CDM	China	7345
Hunan Chenzhou Xiangdian Luhejin 48MW Wind Power Project	CDM	China	6681
Hunan Gaojiaba Hydropower Project	CDM	China	7148
Jiangxi Le'an County Dong'an Small Hydropower Project	CDM	China	7344
Yunan Fumin Baihuashan Wind Power Project	CDM	China	7202
Copiulemu landfill gas project (Center for the Storage and Transfer, Recovery and Control of Waste, Treatment and Disposal of Industrial and Household Waste) and Cosmito landfill gas	CDM	Chile	0096 and 0097

Project Name	*Type*	*Country*	*UNFCCC reference n°*
project (Improvement of Gas Extraction System in Old Cosmito Dump)			

4. Bulgaria

No additional information was included in the NIR of Bulgaria for 2013.

5. Croatia

Croatia provided the following information in its NIR for 2013.

Policy context

Parties included in Annex I are required to provide information relating to how it is striving under Article 3.14 to implement its commitments mentioned in Article 3.1. This section should provide an overview of its commitments under Article 3, paragraph 1, and how these are to be implemented to minimize adverse social, environmental and economic impacts on developing countries.

The underlying policy drivers for taking actions in climate change mitigation in Croatia are commitment under the Kyoto Protocol to reduce greenhouse gas emissions by 5 percent in the period 2008-2012 in comparison to base year emissions and harmonization with European Union climate and energy legal framework. EU membership term is agreed and it is expected that Croatia will join EU on 1 July 2013 after ratification of Accession agreement by all Member States.

It should be emphasized that in the last five years Croatian economy had suffered from recession and that economic stagnation continued in 2013 with increase in unemployment rate, public deficit and debt. These conditions have caused downturn in industrial activities and energy production and consumption and consequently decrease in greenhouse gas emissions.

Policies and measures related to climate change mitigation are stipulated by Air Protection Act and supporting regulatory framework which covers large emission sources including aviation under emissions trading regime, small and medium emission sources through energy efficiency and emissions standards, fuel quality, flexible mechanisms under the Kyoto Protocol and mechanisms for monitoring and reporting.

In respect of fulfillment of the GHG emission reduction obligations, preparation of Croatia's low carbon strategy is underway. With the aim to discuss low carbon developments meetings with stakeholders in energy, industry, waste management, forestry, agriculture, energy efficiency in buildings, tourism and transportation sectors were held during September and October 2012.

5-year Plan for Air Protection, Ozone Layer Protection and Climate Change Mitigation is a key operative document on national level which further enforces actions and measures to reduce greenhouse gas emissions. Plan for the period 2012-2016 is under preparation and will be adopted in the second quarter of 2013.

In regard to long-term planning Croatia is in the process of adopting framework Low-Emission Development Strategy which is sponsored by the UNDP Croatia. This document should represent a roadmap for transition to low-carbon society till 2050.

Croatia is finalizing its transposition of EU Directive 2009/31/EC on the geological storage of carbon dioxide. Since Croatia has potential for carbon capture and storage it is in future period necessary to assess if there is a need for this technology and also if use of these resources is of national interest.

Key instruments for climate change mitigation in Croatia

One of the most important financial instruments for climate change mitigation in Croatia is Environmental protection and energy efficiency fund which collects charges based on polluter pays principle and co-finance the programmes or projects related to environmental protection, energy efficiency and renewable energy. In the period 2004-2009 total revenues were 4,603 million HRK (approximately 613 million EUR), and of that amount 161 million was from charges on CO_2 emissions (approximately 21.5 million EUR).

Another market instrument which was implemented in Croatia in 2013 is emissions trading system as part of broader phase 3 European Union Emissions Trading System (EU ETS). Installations which fall under this system contribute approximately 1/3 of total greenhouse gas emissions in Croatia. These installations will be required to compensate their annual emissions with emission allowances which will be auctioned on primary market or purchased on secondary market through financial institutions or intermediaries. Revenues raised by auctions will be earmarked to full extent to projects related to climate change mitigation and adaptation in Croatia.

State of play in energy sector

Energy sector is the largest contributor to greenhouse gas emissions in Croatia with more than 70 per cent in average in the period 1990-2011 and measures to reduce emissions in this sector, including improving energy efficiency and renewable energy sources, are recognized as priorities at national level. The key indicators in energy sector related to primary energy production, energy import, energy supply, renewable energy sources and energy efficiency are concisely presented below[2].

During the six year period from 2006 to 2011 primary energy production in Croatia was decreasing at an average annual rate of 2.2 percent. This trend was recorded in the production of crude oil and natural gas as well as in hydro power utilization. The production of crude oil and natural gas was decreasing annually by average 6.1 percent and 2 percent respectively. Hydrological conditions in 2010 were unfavorable, whereupon hydro power had a negative growth of average 6 percent per year.

The fastest growing production was that of renewable energy with average annual growing rate of 65.8 percent. The production of energy from fuel wood, industrial wood waste, wood pellets, and briquettes and energy from charcoal increased by 34 percent in relation to 2010. The energy from other renewable sources includes wind energy, solar energy, geothermal energy, biodiesel, and biogas. Installed capacity for production of biofuels is 64,000 tonnes/year although only 7,551 tonnes of biodiesel was produced in 2011 where 66 percent of the production was exported. Total renewable energy production in 2011 grew by 13.3 percent in comparison to 2010.

In 2011, total energy import in Croatia decreased by 5.2 percent from the previous year. In terms of specific energy forms, the import of crude oil, natural gas, and of coal and coke decreased while the import of electricity, petroleum products and fuel

[2] Annual Energy Report, Energy in Croatia 2011, Ministry of Economy

wood and biomass increased. The import of crude oil fell by 19.5 percent, of natural gas by 18.1 percent and of coal and coke by 3.6 percent. The import of electricity increased by 30.6 percent, of petroleum products by 26.5 percent and of fuel wood and biomass by 18.5 percent. During the period from 2006 to 2011 the Croatian energy import was decreasing by average 2.7 percent per year.

In the period from 2006 to 2011, total primary energy supply was decreasing at an average annual rate of 1.4 percent. In this period the decrease was recorded in hydro power utilization and liquid fuels consumption, while consumption of other energy forms which made primary energy supply was increasing. Hydro power utilization was decreasing by 6 percent annually, and the consumption of liquid fuels by 4.2 percent annually. Consumption of renewables had a fast growing trend with an average rate of 64.2 percent annually. The consumption of heat energy from heat pumps also grew at a rather high average rate of 21.9 percent annually. The consumption of other energy products was growing at a slower pace: the consumption of imported electricity grew at 6.5 percent annually in average, of wood and biomass at 4.4 percent annually and of natural gas at 1.7 percent annually. The consumption of coal and coke was almost stagnating, with an average annual rate of only 0.03 percent.

Despite difficult economic circumstances Croatian government has continued to support investments in improving energy efficiency and renewable energy sources which are indicated as key cost-effective measures for greenhouse gas emissions reduction in Croatia. As indicated before, the fastest growing production in energy sector was that of renewable energy with average annual growing rate of 65.8 percent.

Feed-in tariff system for electricity and heat production from renewable energy sources and high-efficient cogeneration is implemented in Croatia in 2007 and is still in effect. Total incentive amount paid to all eligible producers in Croatia which delivered electricity and/or heat to the grid equals 223.8 million HRK (approximately 30 million EUR, VAT included) in 2011.

In regard to energy efficiency, the energy efficiency index ODEX (weighted average of the specific consumption index for selected branches of energy consumers) shows a decrease in the economy as a whole for 15.6 percent in the period 1995-2011 which means that economy is less energy intensive and that energy efficiency has improved in general. However, some sectors such as transport and services show higher energy intensity in the observed period.

The national framework objective of energy savings in final consumption is defined in the NAPEnU (National Action Plan for Energy Efficiency) in accordance with the methodology set out in the Directive 2006/32/EC on energy efficiency and energy services. In its absolute amount, it corresponds to 9% of referent final consumption of energy, which is defined as average energy consumption in the period 2001 – 2005.

Slow drop in final energy consumption in buildings sector has been registered in 2011. by 1,0 percent compared to 2010. Final energy consumption in buildings was 111.4 PJ for 2011, representing 42.5 percent of total energy consumption in 2011 totaling 259.2 PJ. Total energy consumption in other sectors in 2011 was 127,3 PJ. Lower energy consumption in industry and transportation is obvious, affecting total drop in consumption by 2.5 percent compared to 2010, but the buildings remain single largest energy consumer.

Considering the fact that largest energy savings can be reached in buildings, it is necessary to direct all the activities in energy efficiency towards upgrade of existing buildings and construction of nearly zero energy new buildings. Energy certification of the buildings, or appraisal and classification of the buildings according to energy use is mandatory for all buildings in the real estate market in Croatia. Energy

certification produces transparent information on energy consumption in buildings. Energy certification is becoming strong marketing and differentiation tool for the buildings even in the design process. Amended Directive 2010/31/EU of energy performance of the buildings - EPBD II - is implemented through changes in legal framework and mandatory energy certification for all new buildings and buildings being sold or leased at the market.

Energy audits of the buildings has been extended to: public sector for the public buildings and public lighting; large consumers for the buildings used for their activities; other users funded by the Environmental protection and energy efficiency fund when the energy audits have been stipulated by Funds regulations.

It is assumed that the energy renovations of the buildings will be based primarily on the buildings built before 1987, with average consumption of thermal energy for heating of 200-250 kWh/m2. Assuming that each year 3% or about 5 million m2 of the buildings' surface is renovated, and that the average annual consumption of thermal energy for heating is decreased from the average 200-250 kWh/m2 down to 25-50 kWh/m2, and with an annual addition of 10 percent of newly-built surface in nearly zero-energy standard; with more rigorous legislation, the effective savings of final energy would amount to about 20.60 PJ in 2020. With this, we would get closer to the national objective of energy savings of 22.76 PJ in 2020. The targets that are set up are very ambitious and not easily achievable without a systematic and continual approach to the implementation and without putting in place strong financing mechanisms.

The transport sector in Croatia is one of the most significant consumers of energy nowadays and in the near future a fastest-growing trend in consumption can be expected in this sector. In the period between 1991 and 2011 the share of transport sector consumption in the final consumption rose from 21% to 33%, indicating great potential for implementing energy efficiency measures.

The potentials for an energy efficiency increase in this sector are to be found mostly in optimization of modal structure (share of different transport modes), in greater capacity utilization (load factor increase) and in implementation of more energy efficient engines and vehicles, as well as appropriate driving regimes.

Cross-border cooperation and assistance to developing countries

Croatia is actively assisting developing countries in the region in building their capacities to harmonize their national systems to the UNFCCC and the Kyoto Protocol requirements as well as requirements of EU regulation since all of them are in the approximation process to EU however with different starting points. This assistance is organized through projects financed by the European Commission: Regional Environmental Network for Accession – RENA and follow-up project ECRAN.

Conclusion and changes compared to the previous submission

It could be concluded that due to Croatia's size, share in international trade and GHG footprint, policies and measures implemented in Croatia do not have any significant adverse economic, social and environmental impacts on developing countries nor will in the future. All major projects are under obligatory strategic or environmental impact assessment and environmental permitting system including public participation and consultation process and cross-border notification process in case facilities are located on or near borders. Croatia is putting much effort to revive its economy and build sustainable, diverse and competitive energy system which could create environment for investments in more environmentally friendly technologies.

While there have been no significant changes in policies and measures to minimize adverse impact in accordance with Article 3.14 this chapter was largely revised in order to provide more detailed and transparent information on actions undertaken by Croatia in mitigating climate change.

6. Czech Republic

No additional information was included in the NIR of the Czech Republic for 2013.

7. Denmark

No additional information was included in the NIR of Denmark for 2013.

8. Estonia

Estonia provided the following information in its NIR for 2013.

Estonia has provided information on minimization of adverse impacts in accordance with Article 3, paragraph 14 in its previous national inventory reports under the Kyoto Protocol. The information is provided in accordance with the guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol (Decision 15/CMP.1, Section H.).

The changes since previous inventory submission include following:

- update of information regarding fast start financing,
- update of information regarding inclusion of aviation,
- update of information regarding co-operation projects with developing countries.

15.1. Information on how Estonia is striving, under Article 3, paragraph 14, of the Kyoto Protocol, to implement the commitments mentioned in Article 3, paragraph 1, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the Convention

European Union (EU) has agreed a forward-looking political agenda to achieve its core energy objectives of sustainability, competitiveness and security of supply, by reducing greenhouse gas emissions by 20%, increasing the share of renewables in the energy consumption to 20% and improving energy efficiency by 20%, all of it by 2020.

Two major EU Directives, the Directive on the promotion of the use of renewable energy (Directive 2009/28/EC) and as well as the extension of the EU emission trading scheme to the aviation sector (Directive 2008/101/EC) are more related with potential impacts on third countries.

Inclusion of aviation in the EU Emission Trading Scheme

Aviation contributes to global climate change, and its contribution is increasing. Even though there has been significant improvement in aircraft technology and operational efficiency this has not been enough to neutralise the effect of increased traffic, and the growth in emissions is likely to continue in the decades to come. Aircraft operators from developing countries will be affected to the extent they operate on routes

covered by the EU Emissions Trading Scheme. On the 12.11.2013 the European Commission proposed a draft legislation "stop the clock" in the form of a Decision. It proposes a derogation from Article 16 of the EU ETS Directive so that action will not be taken against aircraft operators that do not meet the Directive's reporting and compliance obligations arising before the ICAO Assembly for non-European flights. As such it would cover obligations arising in respect of emissions in 2010, 2011 and 2012. At the International Civil Aviation Organisation (ICAO) Council meeting of 9 November 2012, significant progress was made in view of agreeing global action on aviation and climate change. In particular through recognising that a global market-based measure (MBM) is technically feasible and commitments made to adopt a framework for market based measures applicable to international aviation emissions. It was agreed to set up a high-level group which will take forward this policy area as a matter of urgency. The EU considers that an agreement on a global market-based measure for addressing international aviation emissions is within reach at the ICAO Assembly scheduled for September 2013. This proposal is being made by the European Commission in order to provide time for the 2013 ICAO Assembly to agree on a global market-based measure with a realistic timetable for further development and implementation, and the adoption of a framework for facilitating States' application of MBMs to international aviation pending the global measure's application. This proposal to "stop the clock" for flights to and from Europe demonstrates goodwill towards the successful conclusion of these ICAO processes.

At the moment Estonia is Administrative Member State for one aircraft operator from developing country – Zambezi Airlines of Zimbabwe. They did not have any EU related flights in the year 2012. In terms of the economic impacts, aircraft operators with higher market share on the routes covered will have to pay larger proportion of the compliance costs.

Promotion of renewable energy

The Directive on renewable energy (Directive 2009/28/EC), a part of the EU's climate and energy package, sets ambitious targets for all Member States including Estonia. In November 2010, the Government approved the National Renewable Energy Action Plan up to 2020. One of the objectives of the plan is to increase the share of renewable energy to at least 25% in gross final consumption of energy.

According to the plan, the share of electricity produced from renewable sources must grow to over 15% of consumption in ten years. Inland transport, the aim is to achieve that 10% of the used energy sources would be renewable energy.

Estonia supports regional and international development measures, encourages the exchange of best practices in production of energy from renewable sources between regional and international development initiatives and promotes the use of structural funding. For promoting the use of biomass and bio-energy, the Government approved in January 2007 the Development Plan 2007−2013 for Enhancing the Use of Biomass and Bioenergy. The objective of the plan is to create favorable conditions for the development of biomass and bioenergy production.

Co-operation projects with developing countries

One of the priorities of developing co-operation in Estonia as stated in the Development Plan for Estonian Development co-operation and humanitarian aid 2011–2015 is supporting sustainable development and achieving internationally set environmental standards in developing countries.

Under this priority Estonia funds and implements bilateral development co-operation projects for supporting the development of environmental protection institutions, in particular in the field of water resource management and energy efficiency.

Other method of supporting developing countries is through support of international environmental organisations – European and Mediterranean Plant Protection Organisation, International Atomic Energy Agency, International Plant Genetic Resources Institute, International Seed Testing Association, World Meteorological Organisation, Multilateral Fund for the Implementation of the Montreal Protocol, United Nations Framework Convention on Climate Change, Desert Convention, International Union for Conservation of Nature, Food and Agriculture Organisation of the United Nations – in their activities in supporting environmentally friendly development in developing countries.

Fast start finance projects

The Copenhagen Accord notes developed countries' commitment to providing developing countries with fast start finance approaching USD 30 billion for the 2010-2012 period, for enhanced action on mitigation (including Reducing Emissions from Deforestation and Forest Degradation, REDD), adaptation, technology development and transfer and capacity building. Fast start finance will support immediate action on climate change and kick start mitigation and adaptation efforts in developing countries.

Climate change mainstreaming in Bhutan

In 2011 Estonia contributed 796972 EUR to the co-financing action in Bhutan named "Global Climate Change Alliance- Climate Change Adaptation in the Renewable Natural Resources Sector". Co-financing is in cooperation with European Commission and total cost of the project is 4 396 972 EUR. The overall objective of the GCCA programme is to enhance resilience of Bhutan´s rural households to the effects of climate change. The specific objective is to ensure climate change readiness of the Renewable Natural Resources sector in Bhutan by mainstreaming climate change into the sector and ensuring steps are taken towards increasingly addressing climate change adaptation at multi-sectoral level. The expected results of the proposed programme are the development of a Renewable Natural Resources- Climate Change Adaptation Action Plan as well as the establishment of an institutional framework allowing a multi-sectoral approach to climate change adaptation. Required activities to achieve the expected results and objectives cover among others a thorough and consultative planning exercise, a realistic budgeting exercise for all planned actions, an assessment and determination of the responsibility of each stakeholder and the establishment of a formal coordination mechanism for the planning and implementation of climate change adaptation measures.

The Global Climate Change Alliance (GCCA) is an initiative set up by the European Commission to strengthen dialogue and cooperation on climate change between the European Union and the developing countries that are most vulnerable, in particular the least developed countries (LDCs) and small island developing states (SIDS). It was launched in 2007. Through the GCCA the EU provides technical and financial support in five priority areas: mainstreaming climate change into poverty reduction strategies; adaptation; reducing emissions from deforestation and forest degradation (REDD+); enhancing participation in the Clean Development Mechanism; and disaster risk reduction.

Let's do it! – World Cleanup 2012

In 2012 Estonian Ministry of the Environment supported one of the fastest-expanding civic movement- Let's Do It! The movement was born in 2008 in Estonia when 50.000 people came together to get rid of 10.000 tons of illegal garbage from roadsides, forests and towns, cleaning the entire country in 5 hours. Let's Do It! prepared the programme for activities in 2012 called World Cleanup 2012 where hundreds of volunteers, NGOs and many other groups and organizations came together to initiate the ambitious global volunteer action to start cleaning the world. Series of local, national and regional cleanup events took place from 24th of March 2012 until the end of 2012. More than 3 million volunteers participated in the cleanup actions in more than 65 different countries, picking up together over 100 000 tons of waste. Alongside regional gatherings took place to share existing experiences and plan next steps together. Let's Do It! local teams gather in four different regions in November 2012 European countries met in Russia, St Petersburg, Asian countries met in Nepal, North-, Central- and South-American countries met in El Salvador and African countries in Benin. Many communication documents and papers, also different audiomaterial were prepared to support World Cleanup activities and to support capacity building. During the programme the easy-to-use free online tool the World Waste Map was created. Everyone can use it to map the illegal garbage in any area in the world. By using free applications for iPhone and Android phones, it's possible to send the data and locations of the most troubling dumping areas to an open virtual world waste map, which is visible to everyone online.

Strengthening Climate Change Adaptation in Rural Communities, for Agriculture and Environmental Management in Afghanistan

Ministry of the Environment of Estonia made a contribution of 1,605,008 to the United Nations Environment Programme for "Strengthening Climate Change Adaptation in Rural Communities, for Agriculture and Environmental Management in Afghanistan" within UNEP project "Environmental Cooperation for Peace building-Phase III" in 2012-2015. The project will build national capacity to plan for community resilience to climate change based threats in Afghanistan. Focus will be on sustainable water, pasture and environmental management in pilot sites and strengthening communities in Kabul province, the North and Central Highlands of Afghanistan. Core activities involve working with national government planners, advisors and decision makers to strengthen planning and action for community resilience in vulnerable areas of the country where high potential exists for productive, financially sustainable, ecologically sound agricultural development.

15.2. Information on how Estonia gives priority, in implementing the commitments under Article 3, paragraph 14, to specific actions

Estonia reports activities that are related to the actions specified in the subparagraphs (a) to (f) of paragraph 24 of the reporting requirements in the Annex to decision 15/CMP.1.

a) *The progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse-gas-emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities*

Several fiscal measures have been introduced in Estonia to support sustainable energy consumption and reduce GHG emissions. For example excise duties on fuels and pollution charges. Current tax rates are stipulated in the Alcohol, Tobacco, Fuel and Electricity Excise Duty Act. The Environmental Charges Act (enforced in 2006) obliges the owners of combustion equipment to pay pollution charges for several pollutant emissions (e.g. sulphur dioxide, nitrogen oxides, etc.). At present, the CO2

charge has to be paid by all enterprises producing heat in the scope of District Heating Act (includes distribution and sales of heat) excluding the ones firing biomass, peat or waste.

Estonia as a Member State of the EU has to comply with the EU requirements (Directive 2003/96/EC) for the taxation of fuels and energy. Estonia has been granted some transitional time for the introduction of relevant taxes. Regarding shale oil (oil produced from oil shale), Estonia was eligible to apply a transitional period until 1 January 2010 for adjusting the national level of taxation on shale oil used for district heating purposes to the EU minimum level of taxation. Nevertheless, Estonia had already introduced the tax on shale oil. The tax exemption for natural gas (methane) is permitted by Directive 2003/96/EC, which allows an exemption on natural gas in those Member States where the share of natural gas in energy end-use was less than 15% in 2000. The exemption applies for a maximum of ten years after the directive's entry into force or until the national share of natural gas in energy end-use reaches 25%, whichever comes first. Actually, Estonia imposed excise duty on natural gas on 1 January 2008 already.

More information about tax system and fiscal measures is presented in Estonia's Fifth National Communication under the UNFCCC and Kyoto Protocol.

b) Removing subsidies associated with the use of environmentally unsound and unsafe Technologies

No subsidies for environmentally unsound and unsafe technologies have been implemented. Estonia's tax system is presented shortly above (Paragraph 24a) and through this tax system Estonia promotes sustainable production and technologies. For instance according to the Environmental Charges Act (enforced in 2006) the CO2/t pollution charge doubled between 2006 and 2009.

c) Cooperating in the technological development of non-energy uses of fossil fuels, and supporting developing country Parties to this end

Estonia does not have any support activities in this field.

d) Cooperating in the development, diffusion, and transfer of less-greenhouse-gas-emitting advanced fossil-fuel technologies, and/or technologies, relating to fossil fuels, that capture and store greenhouse gases, and encouraging their wider use; and facilitating the participation of the least developed countries and other non-Annex I Parties in this effort

Estonia has done research for enhancing technologies that emit less GHGs but at the moment there is no cooperation with developing countries in this field.

e) Strengthening the capacity of developing country Parties identified in Article 4, paragraphs 8 and 9, of the Convention for improving efficiency in upstream and downstream activities relating to fossil fuels, taking into consideration the need to improve the environmental efficiency of these activities

Estonia's development policy supports low carbon and sustainable development but at the moment there is no cooperation with developing countries in this field.

f) Assisting developing country Parties which are highly dependent on the export and consumption of fossil fuels in diversifying their economies

Estonia contributes since 2008 annually to the Neighbourhood Investment Facility Trust Fund. Trust Fund supports strengthening of infrastructure interconnections between the EU and its neighbours in the areas of transport and energy, addressing common environmental concerns and supports other relevant activities. Estonia

earmarked its contribution to the Eastern region of European Neighbourhood and Partnership Instrument (including Georgia and Republic of Moldova). Estonia is planning to contribute at least 1,000,000 EUR over the years 2011-2013 to the Neighbourhood Investment Facility Trust Fund and as for the previous period, the contribution will be earmarked to the Eastern region of European Neighbourhood and Partnership Instrument.

9. European Union

The European Unin provided the following information in its national inventory report for 2012.

15.1 Information on how the EU is striving, under Article 3, paragraph 14, of the Kyoto Protocol, to implement the commitments mentioned in Article 3, paragraph 1, of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the Convention

Editorial comment: The EU is only required to report changes related to the information on minimizing adverse impacts in accordance with Article 3, paragraph 14. However for an improved understanding, the text from the last year's inventory report was included and updated parts are marked in bold.

In this section the EU provides information on how it is implementing its commitment under Article 3, paragraph 14 of the Kyoto Protocol, i.e. how it is striving to implement its commitment under Article 3, paragraph 1 of the Kyoto Protocol in such a way as to minimize potential adverse social, environmental and economic impacts on developing countries. In order to strive for such a minimization, an assessment of potential positive and negative impacts – both of direct and indirect nature - is necessary with a double objective to maximize positive impacts and to minimize adverse impacts. The EU is well aware of the need to assess impacts, and has built up thorough procedures in line with our obligations. This includes bilateral dialogues and different platforms in which we interact with third countries, explain new policy initiatives and receive comments from third countries.

Impacts on third countries are mostly indirect and can frequently neither be directly attributed to a specific EU policy, nor directly measured by the EU in developing countries. Therefore, the reported information covers potential adverse social, environmental and economic impacts that result from complex assessments of indirect influences and that are based on accessible data sources in developing countries.

Impact assessment of EU policies

In the EU a wide-ranging impact assessment system accompanying all new policy initiatives has been established. This regulatory impact assessment is a key element in the development of the Commission's legislative proposals. The Commission is required to take the impact assessment reports into account when taking its decisions, while the impact assessments are also presented and discussed during the scrutiny of legislative proposals from the Council and the Parliament. This approach ensures that potential adverse social, environmental and economic impacts on various stakeholders (in the case on developing country Parties) are identified and minimized within the legislative process. In general, impact assessments are required for all legislative proposals, but also other important Commission initiatives which are likely to have far-reaching impacts. Below the impact assessment process implemented in the EU policy making is explained in more detail in order to better demonstrate how the EU is

striving for all strategies and policies to minimize their adverse impacts. Specific guidelines for the impact assessment have been adopted (European Commission 2009).

The Impact Assessment Guidelines specifically address impacts on third countries and also issues related to international relations. In this area the following questions have to be assessed:

- Trade relations with third countries: some policies may affect trade or investment flows between the EU and third countries; the impact assessment should analyse how different groups (foreign and domestic businesses and consumers) are affected, and help to identify options which do not create unnecessary trade barriers.
- Impact on WTO obligations: it should be analysed which impact each proposed policy option has on the international obligations of the EU under the WTO Agreement; the impact assessment should examine whether the policy options concern an area in which international standards exist.
- Impacts on developing countries: initiatives that may affect developing countries should be analysed for their coherence with the objectives of the EU development policy. This includes an analysis of consequences (or spill-overs) in the longer run in areas such as economic, environmental, social or security policies.

Key economic questions to be assessed in relation to third countries are:

- How does the policy initiative affect trade or investment flows between the EU and third countries? How does it affect EU trade policy and its international obligations, including in the WTO?
- Does the option affect specific groups (foreign and domestic businesses and consumers) and if so in what way?
- Does the policy initiative concern an area in which international standards, common regulatory approaches or international regulatory dialogues exist?
- Does it affect EU foreign policy and EU development policy?
- What are the impacts on third countries with which the EU has preferential trade arrangements?
- Does it affect developing countries at different stages of development (least developed and other low-income and middle income countries) in a different manner?
- Does the option impose adjustment costs on developing countries?
- Does the option affect goods or services that are produced or consumed by developing countries?

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2. Key questions on social impacts in third countries are:

- Does the option have a social impact on third countries that would be relevant for overarching EU policies, such as development policy?
- Does it affect international obligations and commitments of the EU arising from e.g. the ACP-EU Partnership Agreement or the Millennium Development Goals?
- Does it increase poverty in developing countries or have an impact on income of the poorest populations?

Key questions on environmental impacts in relation to third countries are:

- Does the option affect the emission of greenhouse gases (e.g. carbon dioxide, methane etc) into the atmosphere?
- Does the option affect the emission of ozone-depleting substances (CFCs, HCFCs etc)?
- Does the option affect our ability to adapt to climate change?
- Does the option have an impact on the environment in third countries that would be relevant for overarching EU policies, such as development policy?

If third countries are likely to be affected, the impact assessment should analyse in greater detail what the specific impacts may be, how undesired effects can be avoided or minimised, or mitigated, how the policy options compare in this respect and what trade-offs have to be addressed in the final policy choice.

Consulting interested parties is an obligation for every impact assessment and all affected stakeholders should be engaged, using the most appropriate timing, format and tools to reach them. Appropriate consultation tools can be consultative committees, expert groups, open hearings, ad hoc meetings, consultation via Internet, questionnaires, focus groups or seminars/workshops. Existing international policy dialogues are also be used to keep third countries fully informed of forthcoming initiatives, and as a means of exchanging information, data and results of preparatory studies with partner countries and other external stakeholders.

The EU's 5th national communication provides a detailed overview of the European policies and measures to mitigate GHG emissions in all sectors; the 6th national communication, currently under preparation, will update this overview. All key strategies and climate policies have been subject to impact assessments as described above. All impact assessments and all opinions of the Impact Assessment Board are published online (see http://ec.europa.eu/governance/impact/ia_carried_out/cia_2012_en.htm).In addition to the general approach described above to address adverse social, environmental and economic impacts, more specific ways to minimize impacts depend on the respective policies and measures implemented. As the reporting obligation related to Article 3, paragraph 14 does not include an obligation to report on each specific mitigation policy, the EU chooses the approach to provide some specific examples for a more complete overview on the ways how the EU is striving to minimize adverse impacts.

Major EU policies such as the Directive on the promotion of the use of renewable energy (Directive 2009/28/EC and the extension of the EU emission trading scheme (ETS) to the aviation sector (Directive 2008/101/EC) are presented in more detail as examples in this chapter, because the related impact assessments identified potential impacts on third countries. Furthermore, updates of EU policies which should lead to a low carbon and energy efficient economy are also addressed in more detail in the following subchapters

Directive on the promotion of the use of renewable energy - Promotion of biomass and biofuels

The Directive on renewable energy (Directive 2009/28/EC), a part of the EU's climate and energy package, sets ambitious targets for all Member States, such that the EU will reach a 20% share of energy from renewable sources in the overall energy consumption by 2020 (with individual targets for each Member State) and a 10% share of renewable energy specifically in the transport sector, which includes biofuels, biogas, hydrogen and electricity from renewables.

The impact assessments related to enhanced biofuel and biomass use in the EU showed that the cultivation of energy crops have both potential positive and negative impacts. Positively, as the growing of EU demand for bioenergy generates new export revenues and employment opportunities for developing countries and boosts rural economies. Thus there could be clear economic and social benefits. At the same time, the new EU energy crop demand could increase the impact on biodiversity, soil and water resources and can have positive as well as negative effects on air pollutants. The extent of carbon reduction and other environmental effects from the promotion of biofuels can vary according to the feedstock employed, the way the feedstock and the biofuels are produced, how they are transported and how far. Growing future demand for biomass feedstock combined with growing global food consumption could add to the agricultural sector's pressure on land use and result in adverse land use change.

To address the risk of adverse impacts, Article 17 of the EU's Directive on renewable energy sources creates pioneering "sustainability criteria", applicable to all biofuels (biomass used in the transport sector) and bioliquids. The sustainability criteria adopted include:

- establish a threshold for GHG emission reductions that have to be achieved from the use of biofuels;
- exclude the use of biofuels from land with high biodiversity value (primary forest and wooded land, protected areas or highly biodiverse grasslands),
- exclude the use of biofuels from land with high C stocks, such as wetlands, peatlands or continuously forested areas.

Developing country representatives as well as other stakeholder were extensively consulted during the development of the sustainability criteria and preparation of the directive and the extensive consultation process has been documented.

In October 2012 a new Commission proposal was published to limit global land conversion for biofuel production, and raise the climate benefits of biofuels used in the EU (European Comission 2012b). The Commission is therefore proposing to amend the current legislation on biofuels through the Renewable Energy and the Fuel Quality Directives and in particular:

- To increase the minimum greenhouse gas saving threshold for new installations to 60% in order to improve the efficiency of biofuel production processes as well as discouraging further investments in installations with low greenhouse gas performance.
- To include indirect land use change (ILUC) factors in the reporting by fuel suppliers and Member States of greenhouse gas savings of biofuels and bioliquids;
- To limit the amount of food crop-based biofuels and bioliquids that can be counted towards the EU's 10% target for renewable energy in the transport sector by 2020, to the current consumption level, 5% up to 2020, while keeping the overall renewable energy and carbon intensity reduction targets;
- To provide market incentives for biofuels with no or low indirect land use change emissions, and in particular the 2nd and 3rd generation biofuels produced from feedstock that do not create an additional demand for land, including algae, straw, and various types of waste, as they will contribute more towards the 10% renewable energy in transport target of the Renewable Energy Directive.

With these new measures, the Commission wants to promote biofuels that help achieving substantial emission cuts, do not directly compete with food and are more

sustainable at the same time. While the current proposal does not affect the possibility for Member States to provide financial incentives for biofuels, the Commission considers that in the period after 2020 biofuels should only receive financial support if they lead to substantial greenhouse gas savings and are not produced from crops used for food and feed. The Impact Assessment of the proposal for for a Directive is analysing social, economic and environmental impacts on third countries in detail.

Any negative economic aspects will also be monitored by the Commission. In addition, Article 18(4) of the Directive provides that the EU shall endeavour to conclude bilateral or multilateral agreements with third countries containing provisions on sustainability criteria that correspond to those of this Directive. Where the EU has concluded agreements containing provisions relating to matters covered by the sustainability criteria set out in Article 17(2) to (5), the Commission may decide that those agreements demonstrate that biofuels and bioliquids produced from raw materials cultivated in those countries comply with the sustainability criteria in question.

The Directive also ensures that the Commission will report every two years, in respect to both third countries and Member States which constitute a significant source of biofuels or of raw material for biofuels consumed within the Union, on national measures taken to respect the sustainability criteria for soil, water and air protection. On 27 March 2013, the European Commission published its first Renewable Energy Progress Report (European Commission 2013a) under the framework of the 2009 Renewable Energy Directive, which also includes information on biofuels and bioliquids sustainability criteria. The report and its accompanying staff working document discuss inter alia the origin of biofuel foodstock consumed in the EU, whereby 83% of EU consumed biodiesel in 2010 was produced within the EU and 80% of the EU consumed bioethanol was produced in the EU. In 2010, imports of biodiesel came primarily from Argentina (10%), Indonesia (3%), Malaysia (1%) and China (1%), while Brazil (8%), USA (4%), Peru (1%), Kazakhstan (1%) and Bolivia (1%) were the top five importers of bioethanol. The report states that key export countries (Argentina, Brazil, Indonesia, and Malaysia) have adopted new regulatory measures to improve their environmental practices in biofuels related areas.

Whilst imported mineral oil still constitutes the vast bulk of fuel used in the transport sector, the 4.7% share of biofuels is estimated to have generated 25.5 Mt CO_2eq savings, based on national reporting (22.6 Mt CO_2eq based on the application of global default values), not taking into account indirect land use change effects.

The same report finds that the transposition and implementation of the biofuel sustainability criteria in many Member States is still not complete or correct. The Commission continues to assess Member State progress in implementation of the renewable energy Directive and legal measures are being taken in those cases where the transposition is incomplete.

In addition, the Commission reported on the effects on food prices, on land use rights and on the need for specific measures for air, soil and water protection, all of which concluded that notwithstanding current lack of major issues, future monitoring on these parameters should continue.

The criteria pursuant to Article 17 apply to biofuels and bioliquids, not to solid biomass which is also promoted by the Directive. With regard to the energy use of all biomass forms, Article 17, paragraph 9 of the Directive requires the Commission to report on "*requirements for a sustainability scheme for energy uses of biomass, other than biofuels and bioliquids, by 31 December 2009."* In 2010, the Commission adopted a report on sustainability requirements for the use of solid biomass and biogas

in electricity, heating and cooling together with an impact assessment. The report makes recommendations on sustainability criteria to be used by those Member States that wish to introduce a scheme at national level, in order to avoid obstacles for the functioning of the internal market for biomass.

In addition to the official progress report, the Commission contracted a consortium led by Ecofys to perform support activities concerning the assessment of progress in renewable energy and sustainability of biofuels (Ecofys and consortium 2012). The Ecofys study revealed *inter alia* that:

- In 2010, the use of renewable energy in transport was 4.70%, consisting of:
  - 13.0 Mtoe of sustainable biofuels or 4.27%;
  - 1.3 Mtoe of renewable electricity, or 0.43%;
- Between 2008 and 2010, the volume of biofuels consumed in the EU increased by 39%, whereas the volume of petroleum fuels consumed in road transport decreased with 3.5%;
- The role of the EU in the global biofuel market has remained constant in the last years. The EU remained in 2010 by far the largest producer of biodiesel in the world with 8.5 Mtoe (55% of global market share) compared to global production of 15.5 Mtoe. Brazil and Argentina have significantly increased the production of biodiesel in recent years, whereas the production of biodiesel in the USA decreased by almost more than half compared to 2008. In the rest of the world, bioethanol plays a much larger role. World bioethanol production reached 43.8 Mtoe in 2010, of which only 2.0 Mtoe or 5% were produced in the EU. The USA is the world's largest ethanol producer since 2006 (24,929 Mtoe produced in 2010), followed by Brazil. Net EU trade in the global biofuels market is therefore fairly insignificant;
- The most important feedstock for biodiesel is rapeseed originating from the EU, followed by Argentinean soy, Indonesian and Malaysian palm oil, and rapeseed from Canada and Ukraine. EU-produced biodiesel is partially produced from imported feedstock (palm oil, soy and part of the rapeseed);
- EU-produced bioethanol is mainly produced from EU feedstock, with only small shares of wheat and maize originating from Switzerland, Ukraine and a few other countries. Sugar cane and maize play a role via the bioethanol supplying countries – Brazil and the USA mainly;
- Statistical analysis reveals that the total land use worldwide, to produce the feedstock for EU-consumed biofuels in 2010, is about 5.7 Mha. Of this, 3.2 Mha (57%) is within the EU and 2.4 Mha (43%) resides outside the EU. True valuation of co-products would yield a lower figure;
- In most of the non-EU countries, the land dedicated to the production of feedstock for EU biofuels is less than 1% of the cropland. Notable exceptions are Argentina and Paraguay, where 3% and 4% of the total cropland produces soybean for EU biodiesel in 2010;
- Back-casting scenario analysis of the global agricultural market development clearly shows that EU-27 expanding biofuel use has contributed only little to the historical cereal price increases from 2007 to 2010, resulting in a wheat and coarse grain price increase of about 1-2%. The impact was more substantial for price increases of non-cereal food commodities by about 4%, notably through its demand for vegetable oil in the production of biodiesel;

- Estimates of the effects of EU biofuels consumption on global employment vary widely and are not often easy to determine. Still, based on on estimates and projections of the Global Renewable Fuels Association global ethanol and biodiesel production supports nearly 1.4 million jobs in all sectors of the global economy in 2010.

The EU's biofuel sustainability criteria form the first global initiative to address the climate change and sustainability issues surrounding crop production.

The biofuels scheme, by imposing environmental standards and requiring high greenhouse gas savings (35% rising to 60%), put also pressure on the production of the raw materials used for other purposes. Some examples of voluntary sustainability scheme out of the biofuels field are in the pipeline.

The recent Communication from the Commission on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme (2010/C 160/01)[3] sets up a system for certifying sustainable biofuels, including those imported into the EU. It lays down rules that such schemes must adhere to if they are to be recognized by the Commission. This will ensure that the EU's requirements that biofuels deliver substantial reductions in greenhouse gas emissions and that biofuels do not result from forests, wetlands and nature protection areas.

The European Commission has so far (April 2013) recognised 13 voluntary schemes: International Sustainability and Carbon Certification (ISCC), Bonsucro EU, Round Table on Responsible Soy (RTRS EU RED), Roundtable of Sustainable Biofuels (RSB EU RED), Biomass Biofuels voluntary scheme (2BSvs), Abengoa RED Bioenergy Sustainability Assurance (RSBA), Greenergy Brazilian Bioethanol verification programme, Ensus voluntary scheme under RED for Ensus bioethanol production, Red Tractor Farm Assurance Combinable Crops & Sugar Beet Scheme, SQC (Scottish Quality Farm Assured Combinable Crops (SQC) scheme), Red Cert, NTA 8080 and RSPO RED (Roundtable on Sustainable Palm Oil RED)[4].

In line with Article 19(4) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources[5] the Commission published in 2010 a report on the feasibility of drawing up lists of areas in third countries with low greenhouse gas emissions from cultivation (COM(2010) 427 final) concluding that, "while desirable, it is not yet feasible to set up legally binding lists of areas for third countries where a major component of the underlying calculation is uncertain and can easily be questioned, and where third countries have had no possibility to contribute on the methodology and data used. It is therefore not appropriate, at least at this stage, to produce legislative lists for third countries based on the current modelling of N_2O emissions from agriculture. However, it is important to enhance the understanding of the topic and survey the data used in view of a new assessment in 2012. The Commission has thus published the preliminary results of the JRC work together with all necessary data and description of methodology to support such a process on the webpage of the JRC. It will use this as the basis for a discussion with third countries in the framework of its dialogue and exchange with them under Article 23(2) of the Renewable Energy Directive."

Another way the EU will strive to minimize potential adverse impacts of biomass use is to promote second generation biomass technologies. Within the renewable energy Directive, second generation biofuels are promoted through Article 21, paragraph 2

[3] OJ C160, 19.6.2010, p.1
[4] http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm
[5] OJ L 140, 5.6.2009, p. 16

which establishes that the contribution made by biofuels produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material shall be considered to be twice that made by other biofuels for the purposes of demonstrating compliance with national renewable energy targets; and EU research also has a major focus on bioenergy technologies. The goal of second generation biofuel processes is to extend the amount of biofuel that can be produced sustainably by using biomass consisting of the residual non-food parts of current crops, such as stems, leaves and husks that are left behind once the food crop has been extracted, as well as other crops that are not used for food purposes (non food crops) and also industry waste such as woodchips, skins and pulp from fruit pressing. Second generation biofuels are expected to expand the biomass feedstock available for biofuel production. Further research and impact assessments in this area are necessary to assess e.g. the long-term effects of the energy use of non-food parts of crops compared to their existing use. The Commission continues the efforts to promote second and third generation biofuels, shifting away from food-crop based fuels. In this light, it recently put forth a proposal to limit to 5% the use of food-based fuels in meeting the EU renewable energy target in transport (see discussion above on Proposal from October 2012).

Inclusion of aviation in the EU emission trading scheme

In 2005 the Commission adopted a Communication entitled "Reducing the Climate Change Impact of Aviation", which evaluated the policy options available to this end and was accompanied by an impact assessment. The impact assessment concluded that, in view of the likely strong future growth in air traffic emissions, further measures are urgently needed. Therefore, the Commission decided to pursue a new market-based approach at EU level and included aviation activities in the EU's scheme for greenhouse gas emission allowance trading. The finally adopted legislation was the result of an extensive stakeholder consultation including an internet consultation and an Aviation Working Group of experts set up as part of the European Climate Change Programme that identified the integration of aviation in the EU ETS as the lowest cost option to address the challenge of reducing emissions from this sector. The impact assessment also specifically addressed the effects on developing countries (European Commission 2006).

Aircraft operators from developing countries will be affected to the extent they operate on routes covered by the scheme. Data from Eurocontrol on the nationality of operators has been used to make an estimate of the aggregated costs for third country airlines from regions that include developing countries. As operators from third countries generally represent a limited share of emissions covered, the impact is also modest. For example, the total additional operating costs according to the impact assessment for all operators based in Africa would, at current activity levels, vary from €2 to €35 million per year depending on allowance prices and the share of allowances auctioned. In terms of the economic impacts, a larger proportion of the compliance costs would naturally be borne by carriers from Annex I countries as they generally have a higher market share on the routes covered. However, carriers from developing countries that are able to operate in competition with Annex I carriers on such routes would need to be covered in order to avoid a) distortions of competition and b) discrimination as to nationality in line with the Chicago Convention.

For carriers with relatively old and inefficient fleets the impact may be higher as the effective proportion of allowances acquired for free through benchmarking is lower. However, as third country airlines would generally only have a fraction of their fleet operating in Europe, they may in some cases be able to reduce any negative effects by shifting their most efficient aircraft to operate on routes covered by the scheme.

To the extent that aviation's inclusion in the EU ETS creates additional demand for credits from JI and CDM projects, there will also be indirect positive effects as such projects imply additional investments in clean technologies in developing countries.

Similarly, additional finance for climate change mitigation and adaptation in developing countries should be raised through the auction of emissions allowances by EU Member States. The legislation provides a list of such areas by which the Member State should use the monies raised, and specifically mentions use for adaptation in developing countries.

The aviation sector joined the EU emissions trading system in January 2012, requiring airlines to hand over emission allowances to cover CO_2 emissions from all domestic and international flights to and from airports in the EU and the EFTA countries, Iceland, Liechtenstein and Norway. In November the Commission proposed deferring the application of the scheme to 2013 for flights to and from countries outside this group (the so-called 'stop-the clock' proposal as a goodwill gesture to allow more time for a global market-based agreement addressing aviation emissions to be reached within the International Civil Aviation Organisation (ICAO) in 2013. The Commission's proposal demonstrates the EU's strong political commitment to facilitate and bring forward the successful conclusion of these ICAO processes. The legislation continues to apply to all flights within and between the 30 European countries.]

A roadmap for moving to a competitive low carbon economy in 2050

In 2011 the Commission released the Communication "A Roadmap for moving to a competitive low carbon economy in 2050" (COM(2011) 112 final) outlining a strategy to meet the long-term target of reducing domestic emissions by 80 to 95% by 2050 as agreed by European Heads of State and governments. The Roadmap shows how the sectors responsible for Europe's emissions - power generation, industry, transport, buildings and construction, as well as agriculture - can make the transition to a low-carbon economy over the coming decades. The transition towards a competitive low-carbon economy means that the EU should prepare for reductions in its domestic emissions by 80% by 2050 compared to 1990. Such a pathway would result in annual reductions compared to 1990 of roughly 1% in the first decade until 2020, 1.5% in the second decade from 2020 until 2030, and 2 % in the last two decades until 2050.

The shift to a resource-efficient and low-carbon economy should be supported by using all resources, decoupling economic growth from resource and energy use, reducing CO_2 emissions, enhancing competitiveness and promoting greater energy security. A low-carbon economy will mean a much greater use of renewable sources of energy, energy-efficient building materials, hybrid and electric cars, 'smart grid' equipment, low-carbon power generation and carbon capture and storage technologies.

Because more locally produced energy would be used in a low-carbon economy, mostly from renewable sources, the EU would be less dependent on imports of oil and gas from outside the EU. On average, the EU could save € 175 - 320 billion annually on fuel costs over the next forty years.

With the shift from fuel expenses (operating costs) to investment expenditure (capital expenditure) in clean technology and clean energy, investments costs will occur in the domestic economy, requiring increased added value and output from a wide range of manufacturing industries (automotive, power generation, industrial and grid equipment, energy–efficient building materials, construction sector etc.), while fuel

expenses for fossil fuel imports which are to a large extent flowing to third countries would be reduced.

Green Paper on a 2030 framework for climate and energy policies

In March 2013 the European Commission published a Green Paper with the title "A 2030 framework for climate and energy policies" (COM(2013)169 final) (European Commission 2013b) to reflect on a new 2030 framework for climate and energy policies. The EU has a clear framework to steer its energy and climate policies up to 2020, but providing clarity on a policy framework for 2030 is also needed, giving more certainty to investors, stimulating innovation and demand for low-carbon technologies and allowing the EU to engage actively in the international negotiations for a new climate agreement.

The 2030 framework should build on the experience and lessons from the current framework. It should also take into account the longer term perspective set out by the Commission in the Roadmap for moving to a competitive low carbon economy in 2050, the Energy Roadmap 2050 and the Transport White Paper.

The Green Paper raises a set of questions: on the main lessons from the 2020 framework; on the type, nature and level of climate and energy targets for 2030; on the coherence between different policy instruments; on competitiveness and security of energy supply; and on distribution of efforts between Member States.

The aim of this Green Paper is to consult stakeholders to obtain evidence and views to support the development of the 2030 framework. The 2030 policy framework should strike a balance between concrete implementing measures at EU level and Member States' flexibility to meet targets in ways which are most appropriate to national circumstances, while being consistent with the internal market.

The consultation on the Green Paper will be open for until 2 July 2013.

Resource Efficient Europe flagship initiative

In 2011 a new initiative "Resource-efficient Europe – Flagship initiative of the Europe 2020 Strategy" was launched (European Commission 2011b). as part of the overall Europe 2020 Strategy for smart, sustainable and inclusive growth. The flagship initiative for a resource-efficient Europe supports the shift towards a resource-efficient, low-carbon economy to achieve sustainable growth. It provides a long-term framework for actions in many policy areas, supporting policy agendas for climate change, energy, transport, industry, raw materials, agriculture, fisheries, biodiversity and regional development. This is to increase certainty for investment and innovation and to ensure that all relevant policies factor in resource efficiency in a balanced manner. The Communication on the strategy outlines that the EU has a strong interest in deepening cooperation on resource efficiency with international partners and emphasizes its willingness to continue efforts to provide a level playing field for industry, to improve the conditions for sustainable supply of raw materials, and better deployment of green technologies to support the most efficient use of scarce resources globally.

15.2 Information on how the EU gives priority, in implementing the commitments under Article 3, paragraph 14, to specific actions

The EU reports activities that are related to the actions specified in the subparagraphs (a) to (f) of paragraph 24 of the reporting requirements in the Annex to decision 15/CMP.1. However, no decision was agreed yet that these actions form part of the commitment under Article 3, paragraph 14. For some of the actions specified in the reporting requirements, it seems rather unclear how they relate to the minimization of

adverse social, environmental and economic impacts resulting from policies and measures to mitigate GHG emissions, e.g. information related to the cooperation activities requested are activities that help both Annex I and Non-Annex I Parties in reducing emissions from fossil fuel technologies, but they do not directly address the minimization of potential adverse impacts in Annex I Parties.

For the purposes of completeness in reporting, the EU addresses all subparagraphs specified in the reporting requirements, however the main ways how the EU is striving to minimize adverse impacts are described in the previous section.

a) The progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse-gas-emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities

The actions addressed in subparagraph a) also form part of the commitment to implement policies and measures requested under Article 2, paragraph 1(a) (v), however Article 2 specifies that Annex I Parties shall "implement and/or further elaborate policies and measures in accordance with national circumstances, such as progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors that run counter to the objective of the Convention and application of market instruments." Subparagraph a) in the reporting requirements lacks such objective and therefore seems somewhat inconsistent with the commitment under Article 2. The promotion of research, demonstration projects, fiscal incentives or carbon taxes is important instrument to advance the objectives of the Convention, e.g. the use of renewable energies. A progressive reduction of all fiscal incentives or subsidies in all GHG emitting sectors would run counter the objective of the Convention and counter the ability of the EU to meet its commitment under Article 3, paragraph 1 of the Kyoto Protocol. Therefore the EU interprets this reporting requirement in a way consistent with Article 2 paragraph 1(a)(v) that the EU should focus on the progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies that run counter the objectives of the Convention and application of market instruments.

The 2009 Review of the EU Sustainable Development Strategy assesses that "the Commission has been mainstreaming the progressive reform of environmentally harmful subsidies into its sectoral policies". For instance, environmental concerns have been gradually incorporated into the EU Common Agricultural Policy, including "decoupled" direct payments which have replaced price support; environmental cross compliance; a substantial increase in budget for rural development. As part of 2008 Common Agriculture Policy Health Check, additional part of direct aid has been shifted to climate change, renewable energy, water management, biodiversity, innovation; - transparency of agricultural subsidies has improved. It is important to note that in the other areas most subsidies are within the competence of the Member States and not of the EU, within the limits established by EU state aid rules.

EU policies aim to address market imperfections and to reflect externalities. For example the EU has made significant efforts to liberalise the internal energy market and to create a genuine internal market for energy as one of its priority objectives. The existence of a competitive internal energy market is a strategic instrument both in terms of giving European consumers a choice between different companies supplying gas and electricity at reasonable prices, but also in terms of making the market accessible for all suppliers, especially the smallest and those investing in renewable forms of energy.

With the implementation of the EU Emissions Trading Scheme, the EU uses a market instrument to implement the objective of the Convention and its commitment under Article 3, paragraph 1 of the Kyoto Protocol which aims at creating the right incentives for forward looking low carbon investment decisions by reinforcing a clear, undistorted and long-term carbon price signal.

With respect to financial support provided by the Member States to undertakings, the EU Treaty pronounces a general prohibition of "State aid". This concept encompasses a broad range of financial support measures adopted at national or sub-national level (i.e. not at EU level), and which can take various forms (subsidies, tax relieves, soft loans…). The Treaty provides for exceptions to this general prohibition. When State aid measures can contribute in an appropriate manner to the furtherance of objectives of common interest for the EU, and provided that they comply with certain strict conditions, they may be authorised by the Commission. By complementing the fundamental rules through a series of legislative acts and guidelines, the EU has established a worldwide unique system of rules under which State aid is monitored and assessed in the European Union. This legal framework is regularly reviewed to improve its efficiency. EU State aid control is an essential component of competition policy and a necessary safeguard for effective competition and free trade.

State aid reform in the EU aims to redirect aid to objectives of common interest which are related to the EU Lisbon Treaty, such as R&D&I, risk capital measures, training, and environmental protection. Environmental protection, and in particular, the promotion of renewable energy and the fight against climate change, is considered one of the objectives of common interest for the EU which may, under certain circumstances, justify the granting of State aid.

Specific "Community Guidelines on State aid for Environmental Protection"[6] have been established. The Guidelines foresee in particular the possibility to authorise the following types of State aid under certain conditions:

- Aid for undertakings which go beyond EU environmental standards or which increase the level of environmental protection in the absence of EU standards
- Aid for early adaptation to future EU standards
- Aid for energy saving
- Aid for renewable energy sources
- Aid for high-efficient cogeneration
- Aid for energy-efficient district heating (DH).

Directive 2003/96/EC on the taxation of energy products and electricity establishes EU-wide rules for the taxation of energy products used as motor or heating fuel, taxes on energy consumption, and common minimum levels of taxation. Under certain conditions the Directive allows for exemptions or reductions to promote renewable sources of energy. Thus, the tax exemptions allowed under this directive further promote the objectives of the Kyoto Protocol.

In June 2012, the Commission adopted Guidelines on certain State aid measures in the context of the EU Emissions Trading System (EU ETS). The Guidelines provide a framework under which Member states may compensate some electro-intensive industries, such as steel and aluminium producers, for part of the higher electricity costs expected to result from the application of the harmonised allocation rules to be applied in the EU ETS as from 2013. The rules, subject to state aid scrutiny, ensure

[6] Official Journal No C 82, 1.4.2008, p.1.

that national support measures are designed in a way that preserves the EU objective of decarbonising the European economy and maintains a level playing field among competitors in the internal market. The sectors deemed eligible for compensation include producers of aluminium, copper, fertilisers, steel, paper, cotton, chemicals and some plastics. The Guidelines give a right, not an obligation to provide subsidies to energy intensive industries.

Carbon leakage means that global greenhouse gas emissions increase when companies in the EU shift production outside the EU because they cannot pass on the cost increases induced by the ETS to their customers without a significant loss of market share to third country competitors. Based on the ETS Directive (2003/87/EC as amended by 2009/29/EC), the Commission shall compile a list of sectors and sub-sectors deemed exposed to significant risk of carbon leakage. Sectors on the list will receive a higher share of free allowances. The criteria and thresholds to determine whether a sector is deemed exposed to carbon leakage or not are defined in Article 10a(13-18) of the ETS Directive and focus on additional costs incurred by the ETS Directive and trade intensity. The calculations are based on official Eurostat data and data collected from Member States.

b) Removing subsidies associated with the use of environmentally unsound and unsafe technologies

There is no clear definition of environmentally unsound and unsafe technologies; therefore the EU interprets this provision in the context of the Kyoto Protocol that unsound and unsafe technologies would be those increasing GHG emissions.

The phase-out of subsidies to fossil fuel production and consumption by 2010 was one of the objectives in the Communication from the Commission "A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development (Commission's proposal to the Gothenburg European Council, 2001)".[7]

Council Decision 2010/787/EU of 10 December 2010 on State aid to facilitate the closure of uncompetitive coal mines adopted a new coal regulation enabling Member States to grant State aid to facilitate the closure of uncompetitive mines until 2018, following the expiry of the current Coal Regulation (Council Regulation (EC) N° 1407/2002 of 23 July 2002) on 31 December 2010. The decision includes the following main elements:

- the possibility of continuing to grant, under certain conditions, public aid to the coal industry with a view to facilitating the closure of uncompetitive hard coal mines until December 2018;
- the modalities for the phasing-out of the aid, under which the overall amount of aid granted by a member state must follow a downward trend, in order to prevent undesirable effects of distortion of competition in the internal market. Subsidies will have to be lowered by at least 25% until 2013, by 40% until 2015, by 60% by 2016 and by 75% by 2017;
- the obligation for member states granting aid to provide a plan on intended measures to mitigate the environmental impact of the production of coal; and
- the possibility of allowing subsidies, until December 2027, in order to cover exceptional expenditure in connection with the closure of mines that are not related to production, such as social welfare benefits and rehabilitation of sites.

[7] See http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0264en01.pdf.

c) Cooperating in the technological development of non-energy uses of fossil fuels, and supporting developing country Parties to this end;

The technological development of non-energy uses of fossil fuels is not a current research priority in the EU, nor a priority of cooperation with developing countries because the EU is not a major producer of oil and gas. Given the long-term depletion of fossil fuel resources and the decline in coal production, the EU's priority in general is the replacement of the use of fossil fuels by renewable resources and the more efficient use of resources.

d) Cooperating in the development, diffusion, and transfer of less-greenhouse-gas-emitting advanced fossil-fuel technologies, and/or technologies, relating to fossil fuels, that capture and store greenhouse gases, and encouraging their wider use; and facilitating the participation of the least developed countries and other non-Annex I Parties in this effort;

In March 2005, the EU and China signed an Action Plan on Clean Coal, which included cooperation on carbon capture and storage. The subsequent 2005 EU-China Summit established the EU-China Climate Change Partnership, which includes a political commitment to develop and demonstrate in China and the EU advanced, near-zero emissions coal (NZEC) technology through carbon capture and storage (CCS) by 2020. Phase I of this cooperation will be completed in 2009. Phase II of NZEC will run from 2010-2012. It will examine the site-specific requirements for and define in detail a demonstration plant and accompanying measures. It will include the technical and cost analysis of different options. Based on this analysis, the site of the power plant as well as the combustion technology (pulverised coal or IGCC), the capture technology and the transport and storage concepts will be determined. Phase II shall also include a detailed roadmap for the construction and operation of the demonstration plant as well as an Environmental Impact Assessment of the demonstration power plant and the carbon storage site. Phase III should commence thereafter and will see the construction and operation of a commercial-scale demonstration plant in China.

The EU is cooperating with other Annex I and Non-Annex I Parties (Australia, Brazil, Canada, China, Colombia, Denmark, France, Germany, Greece, India, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Poland, Russian Federation, Saudi Arabia, South Africa, United Arab Emirates, United Kingdom and USA) in the "Carbon Sequestration Leadership Forum (CSLF)". The CSLF is a Ministerial-level international climate change initiative that is focused on the development of improved cost-effective technologies for the separation and capture of carbon dioxide (CO_2) for its transport and long-term safe storage. The mission of the CSLF is to facilitate the development and deployment of such technologies via collaborative efforts that address key technical, economic, and environmental obstacles. The CSLF will also promote awareness and champion legal, regulatory, financial, and institutional environments conducive to such technologies. In 2010 a Technology Roadmap was released by the Carbon Sequestration Leadership Forum. This road map indicates that significant international progress has been made in the past year on advancing carbon capture and storage, but that a number of important challenges remain that must be addressed to achieve widespread commercial deployment of CCS. The 2012 Strategic Plan Implementation Report recognized five new CCS projects bringing the total number of CSLF recognized technology demonstrations to 34, including 24 active projects. A number of meetings and workshops were held in 2012, such as the 2012 CSLF Technical Group Meeting and CO_2 Capture Workshop, CSLF Risk and Liability Workshop, Financing CCS Roundtable held in Paris, Capacity Building

Workshops in Mexico City and Capacity Building Courses in Brazil. In 2012 also the final report from CSLF Risk Assessment Task Force was published.[8]

e) Strengthening the capacity of developing country Parties identified in Article 4, paragraphs 8 and 9, of the Convention for improving efficiency in upstream and downstream activities relating to fossil fuels, taking into consideration the need to improve the environmental efficiency of these activities

In the oil and gas industry the upstream sector is a term commonly used to refer to the exploration, drilling, recovery and production of crude oil and natural gas. The downstream sector includes the activities of refining, distillation, cracking, reforming, blending storage, mixing and shipping and distribution.

The EU contributes to strengthening of the capacities of fossil fuel exporting countries in the areas of energy efficiency via the work of the Energy Expert Group of the Gulf Cooperation Council (GCC)[9], in particular in the working sub-group on energy efficiency. As part of the EU's research programme, a project called "EUROGULF" was launched with the objective of analysing EU-GCC relations with respect to oil and gas issues and proposing new policy initiatives and approaches to enhance cooperation between the two regional groupings.

The European e-network on clean energy technologies, currently under development as part of the EU's research and development, is also aiming at the objective: promote research and technical development of clean energy technologies in the GCC countries. The Commission has recently started a project with the specific objective to create and facilitate the operation of an EU-GCC Clean Energy Network during the next three years. The network is to be set up to act as a catalyst and element of coordination for development of cooperation on clean energy. A website was created at **http://www.eugcc-cleanergy.net** where further information on the EU-GCC Clean Energy Network and its recent activities can be found. The Masdar Institute of Science and Technology in Abu Dhabi has been selected as the lead research institution to represent the Gulf Cooperation Council (GCC) in the European Union-GCC Clean Energy Network. A number of discussion groups and training seminars took place, e.g. on solar resource assessment. In January 2013, the EU-GCC Energy Cooperation Conference was held in Abu Dhabi, UAE, as a side event of the "World Future Energy Summit- WFES 2013. The presentation by the high-level team of attendees from the GCC and Europe highlighted the achievements in areas of mutual interest for the two regions including renewables, energy efficiency and demand-side management, electricity interconnections, carbon capture and storage, as well as natural gas. Some of the concrete outcomes that were summarized during the sessions include publications, research work/papers, established partnerships between the GCC and EU, co-operation project ideas, targeted working meetings and training workshops.

Energy efficiency activities in the upstream or downstream sector are also candidates for CDM projects. Thus, the development of the CDM under the Kyoto Protocol and the demand of CERs by Annex I Parties under the Kyoto Protocol as well as by operators under the EU ETS have fostered such activities performed by the private sector. Related CDM projects are for example:

- Rang Dong Oil Field Associated Gas Recovery and Utilization Project in Vietnam: The purpose of this project activity is the recovery and utilization of gases

[8] See http://www.cslforum.org/ for more specific information.

[9] The Gulf Cooperation Council covers Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

produced as a by-product of oil production activities at the Rang Dong oil field in Vietnam with the involvement of ConocoPhillips (UK).

- Recovery of associated gas that would otherwise be flared at Kwale oil-gas processing plant in Nigeria involves the capture and utilisation of the majority of associated gas previously sent to flaring at Kwale OGPP plant. The Kwale OGPP plant receives oil with associated gas from oil fields operated by Eni Nigeria Agip Oil Company.
- Recovery and utilization of associated gas produced as by-product of oil recovery activities at the Al-Shaheen oil field in Qatar
- Flare gas recovery and utilisation project at Uran oil and gas processing plant in India which is handling the oil and gas produced in the Mumbai High offshore oil field.
- Flare gas recovery and utilisation project at Hazira gas and condensate processing plant in India.
- Flare gas recovery and utilisation project from Kumchai oil field in India
- Flare gas recovery and utilisation project at the Ovade-Ogharefe oil field operated by Pan Ocean Oil Corporation in Nigeria
- Flare gas recovery and utilisation project at Soroosh and Nowrooz offshore oil fields in Iran.
- Leak reduction in aboveground gas distribution equipment in the KazTransgaz-Tbilisi gas distribution system in Georgia where leakages at gate stations, pressure regulator stations, valves, fittings as well at connection points with consumers are reduced.
- There are currently 21 Coal Mine Methane Utilization Project in China which use coalmine methane previously released to the atmosphere.

Improved energy efficiency in the energy and the transport sector in a more general way is one of the priorities in the EU's development assistance as well as for the EIB (European Investment Bank) and the EBRD (European Bank for Reconstruction and Development). The EIB has also developed other means of financing, such as equity and carbon funds, to further support renewable energy and energy-efficiency projects (see here GEEREF and the Mediterranean Solar Plan, MSP). Related projects and specific activities can be found for example at http://www.eib.org/projects/topics/environment/renewable-energy/index.htm or **http://www.ebrd.com/saf/search.html?type=eia**

f) Assisting developing country Parties which are highly dependent on the export and consumption of fossil fuels in diversifying their economies.

The EU actively undertakes a large number of activities aiming at reducing dependence on the consumption of fossil fuels, in particular the EU support activities for the promotion of renewable energies and energy efficiency in developing countries contribute to reduction of dependence on fossil fuels, meeting rural electricity needs, and the improvement of air quality. As explained in more detail in chapter 8 of the EU's 5th national communication several support programmes exist in this respect. These include:

- *Renewable energy cooperation with the Mediterranean and Gulf countries*

The major objective of the cooperation between the EU and the Mediterranean and Gulf countries in the field of renewable energy is to contribute to sustainable energy

and climate mitigation and to develop an integrated and interconnected 'Green Energy Market'.

Several initiatives are already being developed by the European Union in cooperation with the partners in the Gulf region to boost energy as well as renewable energy development. This includes the EU-GCC (Gulf Cooperation Council) Energy Expert Group, which started working at the beginning of 1990s' and the EU-GCC Climate Change Expert Group that has met on a regular basis since 2007. In 2009 EU and GCC partners agreed on extending energy cooperation and more specifically on establishing an EU-GCC clean energy network thus bringing together the relevant EU and GCC stakeholders. The European Commission supports the establishment of a network of key actors from public and private sectors in the EU and the GCC with a view to deepening cooperate on clean energy. This network will act as a facilitator and identify projects in fields of common interest, such as solar and other renewable energies.

Given the importance of research to further development of renewable energy in the GCC region, the Commission is also contributing to the establishment of a specific large-scale platform to foster international R&D cooperation with partners of the Gulf region.

The expansion and deployment of renewable energy is currently a key element in cooperation between the EU and the Mediterranean countries. The most important initiative is the Mediterranean Solar Plan, endorsed in 2008. The objective is the creation of 20 GW of new generation capacity in solar and other renewable energy sources around the Mediterranean Sea by 2020. The Regional Centre of Excellence for Renewable Energy and Energy Efficiency (RCREEE) facilitates development of renewable energy sources and promotion of energy efficiency measures in the Southern Mediterranean partner countries. Since 2008, when the centre was established in Cairo, the European Union has provided a financial contribution to enable the launch and initial operation of the Centre. Bearing in mind the importance of the infrastructures necessary for deployment and exports of green energy, the EU is contributing to the Maghreb Electricity Market Integration Project (IMME). The objective is to create a sub-regional electricity market between Morocco, Tunisia and Algeria and its progressive integration with the EU's electricity market. The Commission has so far provided a support of €5.6 million. These are only some examples from the cooperation with the Mediterranean countries.

- *Africa, Caribbean and the Pacific (ACP-E) Energy Facility*

The ACP-EU Energy Facility is a contribution under the EU Energy Initiative to increase access to energy services for the poor. The Facility was approved by the joint ACPEU Council of Ministers in June 2005, with an amount of € 220million. The main activity of the Facility is to co-finance projects that deliver energy services to poor rural areas.

The Energy Facility was mainly implemented through a €198 million Call for Proposals which was launched in June 2006. Out of 307 proposals received, 74 projects have been contracted by the end of 2008 for a total amount of €196 million from the Energy Facility, with a total project cost of €430 million. Since 2008, the Facility has financed around 140 national and cross-border projects in ACP countries for about EUR 300 Million. Almost 13 Million people should benefit of an improved access to energy mostly utilising Renewable Energy technologies.

The main activities performed through Energy Facility projects can be classified into three different groups: (1) energy production, transformation and distribution, (2) extension of existing electricity grids and (3) "soft" activities such as governance,

capacity building or feasibility studies. The sources of energy used for electricity generation were mainly renewable energies (77 % of the projects). Only one project using exclusively fossil fuels was funded. In total, € 81 million of commitments have been marked as climate change related under the Energy Facility, covering support to enhance use of renewable energies or increase energy efficiency. A replenishment of the ACP-EU Energy Facility has been decided under the 10th European Development Fund for the period of 2009-2013. Endowed with € 200 Million, it will focus on improving access to safe and sustainable energy services in rural and peri-urban areas. The new Energy Facility will also contribute to the fight against climate change by emphasizing the use of renewable energy sources and energy efficiency measures and by taking into account impacts of climate change on energy systems. The new Facility started being implemented by the end of 2009 and funding guidelines were approved in October 2010. The Second Call for Proposals of the Energy Facility with a budget of EUR 55 million has been launched. The deadline for submission of Concept Notes and Full Applications is 03/06/2013. The second ACP-EU Energy Facility is one of the instruments implementing the Africa-EU Energy Partnership, which is part of the 2011-2013 Joint Africa-EU Strategy. A specific website for the monitoring of the ACP-EU Energy Facility was created under http://www.energyfacilitymonitoring.eu/.

- *Latin America Investment Facility (LAIF)*

The European Commission also established the Latin America Investment Facility (LAIF). The European Commission has foreseen an amount of € 125 million for the period 2009-2013. The LAIF focuses on energy, environment and transport investment, contributing to cleaner transport infrastructure, improved energy efficiency and energy savings, the use of renewable energy, low-carbon production and of climate change adaptation technologies. The LAIF will operate by providing financial non-refundable contributions to support loans to partner countries from the European Investment Bank (EIB) and other European, multilateral and national, development finance institutions and will encourage the beneficiary governments and public institutions to carry out essential investments in the relevant sectors. The contribution of the Commission to the LAIF will be decided annually. In 2010 a commitment of € 34.85 million was available for grants. In 2011, additional € 40 million were approved.

- *Global Energy Efficiency and Renewable Energy Fund (GEEREF)*

The European Commission has launched an innovative pilot instrument to involve the private sector. The Global Energy Efficiency and Renewable Energy Fund (GEEREF), launched in 2007, is focused on energy efficiency and renewable energy projects in developing countries and economies in transition. GEEREF invests in regionally-oriented investment schemes and prioritises small investments below €10 million. It particularly focuses on serving the needs of the ACP, which is a group of 79 African, Caribbean and Pacific developing countries. It also invests in Latin America, Asia and neighbouring states of the EU (except for Candidate Countries). Priority is given to investment in countries with policies and regulatory frameworks on energy efficiency and renewable energy.:

- €12.5 million investment in Berkeley Energy's Renewable Energy Asia Fund (REAF) for operationally and economically mature wind, hydro, solar, biomass, geothermal and methane recovery projects in India, Philippines, Bangladesh and Nepal.

- €10 million investment in the Evolution One Fund, dedicated to clean energy investment in Southern Africa (SADC countries).

- Furthermore, GEEREF invested €12.5 million in the Clean Tech Latin American Fund (CTLAF II), where the main objective is focused on the areas of renewable energy and clean technologies The CTLAF II is a capital fund investing in private companies and was established as the continued success of Cleantech Fund (I) which is now fully made available. The main geographic focus is Mexico, Brazil, Chile, Peru and Colombia and more information is available http://www.emergingenergy.com/).

- A new Fund called DI Frontier Market Energy and Carbon Fund ("DI") under the GEEREF package committed € 10 million. The main distinguishing feature is an integrated approach to project development, investment, and carbon trade. The Fund has a focus on Eastern and Southern Africa. Core focus countries include: Kenya, Mozambique, Tanzania, Uganda and Zambia. (more information is available under **http://www.frontier.dk/**).

- Armstrong Asset Management receives commitment of Euro 10 million from GEEREF for their South East Asia Clean Energy Fund.

In the regions where the two funds operate, there is a lack of equity investment available through the market for these types of projects. It is envisaged that GEEREF will invest in regional sub-funds for the African, Caribbean and Pacific (ACP) region, Neighbourhood, Latin America and Asia. Together the European Commission, Germany and Norway have committed about €**112** million to the GEEREF over the period 2009-2013, the majority of which is provided by from the EU budget. It is envisaged that further financing from other public and private sources will be forthcoming. GEEREF will fundraise in 2013 to bring the total funds under management above €200 million. The target funding size for GEEREF is €200-250 million and as of March 2013, GEEREF has secured a total of €112 million.

The EU through Directorate General Development and Cooperation - EuropeAid also supports African, Carribean and Pacific countries in diversifying their economies; however, these activities are not limited to fossil fuel exporting countries, but are open to ACP countries based on Economic partnership agreements (EPAs). EPAs help ACP countries integrate into the global economy and improve the business environment, build up regional markets and promote good economic governance through reinforced regional cooperation in trade related issues. In 2008 the EU signed a comprehensive EPA with 13 CARIFORUM countries. In January 2009, Côte d'Ivoire and Cameroon have signed interim EPAs. Some ACP partners have signed interim economic partnership agreements with the EU as a first step towards comprehensive regional EPAs. The interim agreements secure and improve ACP access to the EU market and provide for more favourable rules of origin. Negotiations are ongoing with the African and Pacific regions to move from interim agreements to comprehensive regional agreements. The negotiations cover regional trade integration, trade in services, investment and trade-related rules. The strategy for private sector development in the ACP recommends the use of horizontal instruments (applicable to all ACP countries) in five priority areas where the Commission has a good experience and comparative advantages:

(1) Improvement of the macroeconomic framework and regulatory environment for enterprise development (Private Sector Enabling Environment Facility of the Business Environment (PSEEF) or BizClim with €20 million for 5 years);

(2) Investment and inter-enterprise co-operation promotion activities (PROINVEST - €110 million for 7 years);

(3) Facilitation of investment financing and development of financial markets (Investment Facility managed by the European Investment Bank (EIB) as revolving

fund with €3,137 billion, completed by the EIB own resources with €2 billion for 2008-2013 and financial envelope of €400 million for the interest subsidies and technical assistance);

(4) Support for Small and Medium- sized Enterprises in the form of non-financial services (Centre for the Development of Enterprise (CDE) with €18 million per year, PROINVEST);

(5) Support for micro-enterprises and micro-finance (ACP-EU Microfinance Framework Programme with €15 million for 6 years, in collaboration with Consultative Group to Assist the Poor program (CGAP) and investment in debt and equity for banks and microfinance institutions provided by the EIB Investment Facility).

More specific information related to these activities can be obtained at: **http://ec.europa.eu/europeaid/what/development-policies/intervention-areas/epas/epas_en.htm**

10. Finland

Finland explained in its 2013 NIR, that no particular changes in the information have occurred since the previous inventory submission. However, the number and names of countries covered by the Energy and Environment Partnership Programme mentioned in Table 15.1-1 point (f) below has been updated.

(f) Assisting developing country Parties that are highly dependent on the export and consumption of fossil fuels in diversifying their economies.	Action has been undertaken both through support by international organisations such as UNCTAD (United Nations Conference on Trade and Development) and through bilateral partnerships. Examples on bilateral partnerships include capacity building support to Southern African Development Community (SADC) secretariat to develop regional renewable energy strategy and action plan as well as support to the Lao PDR in development and implementation of renewable energy strategy. These policy level programmes aim at diversifying the economies and energy mix of partner countries towards renewable sources that provide local employment and increase energy and income security. Finland is also supporting the Energy and Environment Partnership Programme with Central America (EEP), launched during the United Nations World Summit on Sustainable Development in 2002, implemented by 8 Central American partner countries. Austria and EU has joined as donors. In 2009/2010 Finland has replicated the EEP model in 4 other regions: the Mekong Region covering Lao PDR, Cambodia, Vietnam and Thailand; Southern and Eastern Africa covering 13 countries: Botswana, Burundi, Kenya, Lesotho, Mozambique, Namibia, Rwanda,

	Seychelles, South Africa, Swaziland, Tanzania, Uganda, Zambia; Andean Region covering Bolivia, Colombia, Peru and Ecuador; and Indonesia covering initially 2 provinces. The EEP programmes focus on supporting the participating countries in developing, adopting and scaling-up appropriate and affordable renewable energy and energy efficiency technologies for improved energy access and local employment. The programmes support thematic policy studies, feasibility studies and pilot and demonstration projects as well as some R&D&I projects. The projects are developed and implemented by partnerships of public, private and civil society actors. The regional approach supports South-South co-operation, regional integration and knowledge sharing.

11. France

France provided the following information in its NIR for 2013.

15.1 Description des externalités potentielles des politiques et mesures de la France

Les parties doivent selon l'article 3.14 du protocole de Kyoto faire en sorte que la mise en oeuvre de leurs politiques nationales dans le cadre du protocole de Kyoto ne nuise pas aux autres parties.

La France a mis en oeuvre de nombreuses actions de renforcement de capacité des pays en développement et de transfert de technologie. On peut citer les actions de Ubi France et le COFACE . En 2009, UBIFRANCE, l'agence pour le développement international des entreprises et COFACE, dont l'une des activités consiste à gérer pour le compte de l'Etat des garanties publiques à l'exportation, ont decide de renforcer leur coopération en signant une convention de partenariat pour accompagner de façon plus soutenue un plus grand nombre de PME (petites et moyenne entreprises) sur les marchés étrangers.

Ces actions de transfert de technologies, qui permettent de minimiser les effets adverses de ces politiques et mesures, sont présentées dans la partie 15.2 de ce chapitre.

Par ailleurs, la France aide les pays en développement à renforcer et à enrichir leurs systèmes d'observation du changement climatique via son réseau d'observation du climat mais également ses projets de recherche (voir le chapitre recherche et observation de la 5ème communication nationale de la France).

Concernant les politiques et mesures mises en place dans le cadre de politiques européennes, la France en tant qu'Etat membre de l'Union européenne se doit de transposer le droit européen dans son système législatif. Dans le processus d'adoption de politiques européennes, l'Europe a mis en place un système permettant d'estimer les impacts positifs et négatifs de celles-ci, dont les effets sur les autres pays dans le cadre des études d'impact. La prise en compte de ces études d'impact est un élément clef de la décision finale de la définition de la politique et mesure. Elles permettent de

s'assurer que les impacts négatifs d'une politique européenne sur les pays en développement soient minimisés et d'assurer ainsi que les dispositions législatives françaises issues du droit européen respectent bien l'engagement pris dans le cadre du protocole de Kyoto en accord avec l'article 3.14. Toutes ces études d'impacts sont rendues publiques sur le site :

http://ec.europa.eu/governance/impact/ia_carried_out/cia_2010_en.htm

Le tableau présenté ci-après liste les effets directs et indirects des politiques et mesures climatiques de la France.

	Effets directs			Effets indirects		
Mesure	Social	Environnemental	Economique	Social	Environnemental	Economique
SCEQE			Effet économique potentiellement positif sur les pays extérieurs à l'Union européenne en cas de différence de compétitivité induite par l'introduction d'un signal prix sur le carbone pour les activités économiques européennes		positif - Incitation des firmes internationales sous SCQE à développer des procédés plus efficaces au niveau environnemental potentiellement transférables dans les pays en développement	
MDP	Effet positif de maintien ou création potentielle d'emplois locaux dans les pays en développement accueillant des projets	Positif car permet l'implémentation de techniques sobres en carbone dans les pays en développement	Effet positif d'investissement étrangers dans le développement d'infrastructures dans les pays en développement		Négatif - Incitation potentielle pour les pays en développement à ne pas développer d'infrastructures moins émettrices pour générer une importante additionnalité environnementale des projets MDP	
MOC	Effet positif de maintien ou création potentielle d'emplois locaux dans les pays accueillant des projets	Positif car permet l'implémentation de techniques sobres en carbone dans les pays	Effet positif d'investissement étrangers dans le développement d'infrastructures dans les pays		Incitation potentielle pour les pays en développement à ne pas développer d'infrastructures moins émettrices pour générer une importante additionnalité environnementale des projets MOC	Effet potentiel de détournement de l'investissement du MDP
Développement des biocarburants	Effet positif de maintien ou création potentielle d'emplois dans les pays en développement exportateurs	effet positif à la condition que des critères de durabilité (cas européen) soient mis en place notamment par rapport au problème de changements d'affectation des sols	Effet positif sur les importations de biocarburants en provenance des pays en développement		Effet négatif sur la déforestation et sur la ressource alimentaire Mais mise en place de critère de durabilité des biocarburants via des accords entre la commission européenne et les pays en développement	Effet de diminution de la demande de pétrole et potentielle moindre tension sur les prix des énergies fossiles
Affichage environnemental dont CO2			Effet négatif de diminution potentielle des importations en provenance des pays en développement (au profit des circuits courts) Mais processus d'échange d'informations visant à une harmonisation des procédures d'étiquetage en cours (voir texte),			
Promotion de l'efficacité énergétique	Effet positif de maintien ou création potentielle d'emplois dans les pays en développement exportateurs		Effet positif sur les importations en provenance des pays en développement pour des équipements générant de l'efficacité énergétique		Amélioration de la qualité de l'air dans les pays en développement	Effet de diminution de la demande et potentielle moindre tension sur les prix des énergies fossiles
Promotion des énergies renouvelables dans le bâtiment	Effet positif de maintien ou création potentielle d'emplois dans les pays en développement exportateurs		Effet positif sur les importations en provenance des pays en développement pour des équipements de production d'énergie renouvelable		Amélioration de la qualité de l'air dans les pays en développement	Effet de diminution de la demande et potentielle moindre tension sur les prix des énergies fossiles
Obligation de réalisation d'un bilan d'émissions de gaz à effet de serre et d'un plan d'action associé pour les grosses entreprises		Potentielle participation accrue du secteur privé aux efforts de réduction des émissions de daz à effet de serre			Effet d'apprentissage du management énergétique et environnemental sur les entreprises multinationales ayant des implantations en France	

Ci-dessous sont décrits deux exemples de mesures mises en place afin de réduire, voire éviter les effets adverses des politiques climatiques françaises, en sus du transfert de technologie et de la recherche :

Concernant le paquet énergie climat adopté en 2008, la directive sur l'incorporation de biocarburants dans les transports fixe un objectif de 10 % d'énergies renouvelables à l'horizon 2020. Elle définit par ailleurs des critères de durabilité pour les biocarburants consommés en France :

- une réduction d'au moins 35 % des émissions de gaz à effet de serre, en tenant compte de l'ensemble du cycle de production et de consommation du carburant, par

rapport à l'usage des carburants fossiles en 2010 ; ce taux sera porté à 50 % à partir de 2017 ;

- la préservation des terres riches en biodiversité et des grands stocks naturels de carbone : forêts, zones humides et tourbières.

Seuls les biocarburants et les bioliquides respectant ces critères pourront bénéficier d'incitations fiscales et être pris en compte pour l'atteinte des objectifs de la France en matière de développement des énergies renouvelables.

Ces critères de durabilité ont été traduits par la France dans une ordonnance. Ceci témoigne de la volonté Française de concilier le développement des biocarburants avec la protection de la biodiversité, des zones naturelles et de l'approvisionnement alimentaire dans les pays en développement.

Concernant l'expérimentation de l'étiquetage environnemental des produits (multicritères dont le CO2):

- La France a co- organisé, co-financé et participé (MEDDE, CGDD) à quatre séminaires internationaux dans l'antenne sud-américaine de l'ONU, la CEPAL-C à Santiago de Chile. Ces séminaires ont tous été très suivis et en particulier par des pays en développement ou émergents de la région sud-américaine. Chacun des quatre séminaires a porté sur les interactions possibles entre les dispositifs publics et privés d'empreintes environnementales à l'échelle des produits et le commerce international. Les dimensions techniques, scientifiques, juridiques et économiques ont été discutées.

- Actuellement, la France travaille toujours avec le PNUE dans le cadre d'une convention annuelle sur un programme visant à stimuler des rapprochements internationaux sur les méthodes, les données et la communication au consommateur (affichage/ environnemental), et sur des activités de renforcement de capacités dans les pays émergents et en développement.

Conformément à la loi n°2010-788 du 12 juillet 2010 portant engagement national pour l'environnement, la France soutient les initiatives similaires au niveau de l'Union européenne. La France soutient ainsi la Commission dans la finalisation du guide « Product Environmental Footprint ».

La France a mené une expérimentation nationale d'un an entre juillet 2011 et juillet 2012 à laquelle trois entreprises implantées dans des pays étrangers dont deux dans des pays en développement (Chili et Colombie) ont participé. De nombreuses branches françaises de multi-nationales y ont également participé.

Critères de choix des projets MOC et MDP

Dans le cadre de mise en place de projets MDP et MOC, la France, dans sa qualité de pays Annexe I, sollicitée pour la délivrance de lettres d'agréments aux projets, s'efforce d'encourager le développement de projets qui maximisent les impacts positifs pour les pays hôtes, au-delà des réductions d'émissions, comme la création d'emplois et la sauvegarde de la biodiversité locale.

Ci-dessous sont décrits à titre d'exemples, trois de ses projets.

Le projet « Araku Valley Livelihoods Project » est un projet d'afforestation/reforestation en Inde. Situé dans la vallée de Araku, le projet consiste en l'implantation d'arbres arboricoles sur une superficie de 6000 Ha afin de conjuguer les revenus des réductions d'émissions liés à la reforestation pour le porteur de projet à ceux liés à l'exploitation de ces arbres fruitiers par les communautés locales. Ce projet s'étend sur 302 villages regroupant diverses communautés dont 90% de la population vit sous le seuil de pauvreté. Ce projet de reforestation pourrait mener à

une réduction totale d'émission de 1 330 791 tCO2, soit une réduction moyenne de 66 540 tCO2 par an.

Le programme d'activité (POA) « Sustainability CFL Replacement » consiste en la mise en oeuvre d'une série de projets d'efficacité énergétique pour le remplacement d'ampoules incandescentes (ICL) par des ampoules fluorescentes compactes (CFL) dans le secteur résidentiel. L'objectif du projet est de distribuer entre 20 et 40 millions d'ampoules «CFL». Le début de l'activité du POA commencera à la date de son enregistrement pour une durée de 28 ans.

Situé en Equateur, le projet « Solar PV Project-Shyri-1» consiste en l'installation de panneaux solaires d'une puissance nominale totale de 50 MW qui généreront 74 997 Mwh/an incorporés au réseau national. Ce projet d'une période de crédit de 10 ans, devrait mener à une réduction de 49 086 tCO2/an et de 490 862 tCO2 sur la période.

15.2. Ressources financières et transfert de technologie envers les pays en développement

15.2.1. L'aide publique au développement - la coopération bilatérale

La France mobilise l'essentiel de ses financements environnementaux en faveur de la lutte contre le changement climatique : la lutte contre le changement climatique représente à elle seule environ 10% des financements publics internationaux climat en faveur des pays en développement. Ainsi, les montants engagés dans le cadre de son aide publique au développement bilatérale s'élève à 8,5 Md€ en 2011, dont 2 Md€ via l'Agence française de développement (AFD), opérateur pivot de l'aide française, notamment en matière d'environnement. Elle s'est par ailleurs engagée, sur 2012-2016 à un objectif de contributions financières à la lutte contre le changement climatique représentant 50% des octrois de l'AFD dans les Etats étrangers et 30% des octrois de PROPARCO[56] . Par ailleurs, 45% des engagements du FFEM (Fonds français pour l'environnement mondial) se font aujourd'hui en faveur du climat et le fonds a déjà engagé 86 M€ depuis sa création en 1994.

En octobre 2012, l'AFD a adopté une nouvelle stratégie énergie qui fixe l'objectif d'atteindre un volume d'engagements de 2 Mds € pour les trois prochaines années pour des projets d'énergies renouvelables et d'efficacité énergétique dans les pays en développement.

15.2.2. L'aide publique au développement - la coopération multilatérale

Les ressources financières dédiées par la France au titre de l'aide publique au développement multilatérale ont représenté 4,5 Md$ en 2011. Cette aide a été allouée via les banques multilatérales de développement, l'Union européenne et les Nations unies. La France est donc le 4ème bailleur mondial en terme de volume et se situe au 2nd rang des pays du G7 en terme de part du Revenu national brut. Elle a été l'un des États à l'origine de la création du Fonds pour l'environnement mondial (FEM), principal instrument multilatéral en matière de préservation de l'environnement global. La France est le cinquième contributeur au FEM et le finance à hauteur de 215 M€ sur la période 2011-2014 (en incluant la participation au fonds pour les pays les moins avancés – LDCF – géré par le FEM), ce qui représente une augmentation de 57% de la contribution française par rapport à la reconstitution précédente (2007-2010). Au 30 juin 2011, le FEM avait financé depuis sa création en 1991, 784 projets de limitation d'émissions dans 154 pays en développement pour un montant total de 3,2 Md$. Sur 2011-2014, le FEM a prévu de consacrer un total de 1,35 Md$ à la lutte contre le changement climatique (150 M$ ont déjà été décaissés en 2011). La France participe aussi au Fonds pour les technologies propres créé en 2008 par la Banque mondiale,

pour un montant de 203 M€ (ce qui la place en 5ème position sur l'ensemble des bailleurs).

Par ailleurs, la Direction Générale du Trésor finance :

- **le FASEP**, qui finance sous la forme de dons des prestations réalisées par des entreprises françaises (études de faisabilité, assistance technique, projets-pilotes) pour assister les pays émergents dans leur développement en préparant des projets d'infrastructures. Le FASEP-Innovation verte constitue une déclinaison de cet instrument permettant d'inclure le financement d'un démonstrateur de technologie verte. Les secteurs concernés visent essentiellement le développement durable et la thématique du changement climatique (transports de masse, eau et environnement, énergies renouvelables, etc.). Le montant total engagé pour financer des projets par le FASEP, sur des thématiques en lien avec la lutte contre le changement climatique, s'élève à 5,4 M€ en 2009 (pour 11 projets dont 3 innovations vertes), 12,9 M€ en 2010 (pour 19 projets dont 5 innovations vertes) et 8,9 M€ en 2011 (pour 14 projets dont 1 innovation verte). En 2011, ce montant se répartit selon les secteurs suivants : énergies renouvelables et efficacité énergétique (23%), transports ferrés et urbains (74%), gestion des déchets (2%). Les zones géographiques concernées sont : l'Asie (14%), l'Amérique latine (29%), l'Europe centrale et orientale et les pays de la CEI (21%), l'Afrique et le Moyen-Orient (36%).
- Enfin, **la Réserve pays émergents (RPE)** finance par des prêts concessionnels la fourniture de biens et de services français aux pays émergents pour des projets d'infrastructures. En 2011, 3 projets en lien avec la lutte contre le changement climatique ont été engagés pour un montant total de 125 M€ (en 2009 un montant de 665 M€ avait été engagé avec 9 projets et en 2010 un montant de 238 M€ avait été engagé avec 5 projets). Les secteurs concernés par les projets en 2011 ont été les secteurs du transport ferré et du transport urbain. Plus largement, les projets RPE contribuant à la lutte contre le changement climatique peuvent aussi concerner l'eau et l'assainissement ou la surveillance des ressources naturelles. En 2011, deux projets ont été engagés en Asie et un en Europe centrale et orientale. Les autorisations d'engagement pour le FASEP et la RPE n'étant pas affectées a priori, il est difficile d'anticiper le montant attribué à des projets ayant un impact positif sur le changement climatique sur les exercices 2012 et 2013.

15.2.3 La coopération technologique française en dehors de l'aide publique au développement

En plus des canaux bilatéraux et multilatéraux de l'aide publique au développement, la France est également engagée dans de nombreux projets et forums internationaux qui génèrent une coopération technologique de grande ampleur avec une multitude d'acteurs.

Au plan bilatéral, cette coopération passe par le biais de travaux avec l'Afrique notamment, mais également de grands pays émergents comme le Brésil ou la Chine. De même, les collectivités territoriales françaises sont très actives sur le plan de la coopération technologique, et sont engagées dans de nombreux projets et initiatives.

La France s'attache à développer des coopérations bilatérales stratégiques avec un nombre de plus en plus important de pays, producteurs et consommateurs d'énergies fossiles. Ainsi, pour faire stimuler des avancées dans le cadre du plan solaire méditerranéen, la France a signé des accords de coopération dans le domaine des énergies renouvelables et de l'efficacité énergétique avec le Maroc et la Tunisie (deux des pays de la région les plus avancés dans ce domaine, et disposant désormais de

plans solaires nationaux) et négocie actuellement d'autres accords avec des pays de la région. Un accord de coopération sur les énergies renouvelables et le développement durable a également été signé en avril 2010 avec le Koweït. On peut enfin signaler qu'un centre franco-russe sur l'efficacité énergétique a été créé en décembre 2010 dont le programme de travail a été validé lors de son premier conseil stratégique en avril 2011.

Sur le plan multilatéral, notre coopération technologique se fait au travers des grands partenariats énergétiques internationaux, comme l'Agence internationale pour les énergies renouvelables (IRENA) ou l'Agence internationale de l'énergie (AIE), et notamment au sein de la plate-forme internationale de l'AIE sur les technologies sobres en carbone établie en octobre 2010. Il convient également d'évoquer les traités multilatéraux de grande ampleur, au premier rang desquels la Convention cadre des Nations Unies sur les changements climatiques (CCNUCC), sous laquelle un Mécanisme technologique en faveur du transfert de technologies en appui à l'atténuation et à l'adaptation au changement climatique vers les pays en développement a été créé et est en cours d'opérationnalisation.

Quelques unes des principales initiatives sont détaillées ci-dessous:

- **L'IRENA** (Agence Internationale pour les Energies Renouvelables) : l'Agence créée en 2009, compte aujourd'hui plus d'une centaine de membres. Elle a pour objectif la promotion de l'utilisation de l'ensemble des énergies renouvelables à travers le monde pour lutter contre le changement climatique, pour assurer la sécurité énergétique et pour permettre un accès à l'énergie aux populations des pays en développement. Dans ce cadre, à travers des soutiens humains et financiers, et une coopération en renforcement, la France travaille activement au sein de l'IRENA pour faciliter une transition énergétique des économies concernées, et notamment celles des pays en développement, vers une croissance sobre en carbone. La France est le cinquième contributeur de l'Agence (1,4 MUSD en 2012). Elle salue et appuie en ce sens les récentes études, outils et dispositifs d'accompagnement mis en place par IRENA en 2012.
- **L'IPEEC** (Partenariat International pour la collaboration en matière d'efficacité énergétique) : à la suite des travaux des précédents sommets du G8 en matière d'efficacité énergétique (Gleneagles, Saint-Pétersbourg, Heiligendamm), le G8 Energie, élargi à l'Inde, la Chine et la Corée (format G8+3), a adopté le 8 juin 2008 à Aomori au Japon une déclaration créant un Partenariat international pour la coopération en matière d'efficacité énergétique (IPEEC). Dans le cadre de l'IPEEC, les parties se sont engagées à :
    - développer des indicateurs nationaux en termes d'efficacité énergétique, effectuer une compilation des meilleures pratiques ;
    - adopter des mesures susceptibles d'améliorer l'efficacité énergétique de manière significative, sur des bases sectorielles et pluri-sectorielles.

  L'IPEEC s'est révélé être une plateforme idéale en ce qui concerne le partage des bonnes pratiques entre pays producteurs d'énergies fossiles (Russie, Brésil) et pays consommateurs. Des projets concrets ont également été lancés au sein de cette initiative, visant à permettre le déploiement à l'échelle internationale des technologies et des politiques qui permettront d'améliorer l'efficacité énergétique de tous les participants à ce forum et au-delà. La France est un membre fondateur et actif au sein de l'IPEEC puisqu'elle pilote un projet visant à développer, en particulier dans les grands pays émergents, la capacité de création et d'utilisation d'indicateurs fiables d'efficacité énergétique.

- Initiative « Sustainable Energy for All » (SE4All) et l'Initiative Climat « Paris-Nairobi » (ICPN) : la France est très investie sur les questions énergie-climat-développement. Elle a lancé en partenariat avec le Kenya une initiative multilatérale pour favoriser l'accès aux technologies énergétiques propres en Afrique et dans les pays les plus vulnérables au changement climatique, lors d'une conférence ministérielle qui s'est tenue le 21 avril 2011 à Paris. L'initiative SE4ALL, lancée en 2012 à l'occasion de l'Année Internationale de l'énergie durable pour tous, se pérennise avec la création d'un secrétariat à Vienne. Elle a vocation à créer cadre mondial commun aux multiples initiatives en faveur de la diffusion des technologies énergétiques propres vers les pays en développement, avec le triple objectif d'accès universel à des services énergétiques modernes, de doublement du taux mondial de progression de l'efficacité énergétique et de doublement de la part des énergies renouvelables dans le bouquet énergétique mondial. La France et le Kenya ont exprimé leur disponibilité à mettre les facilités existant à Nairobi (actuellement au service du secrétariat de l'ICPN) à disposition de SE4All pour la mise en oeuvre de ses objectifs en Afrique.
- Dans le cadre de sa présidence du G20, la France a proposé début 2011 la création d'un groupe de travail spécifique sur les énergies propres et l'efficacité énergétique (Clean Energy and Energy Efficiency – C3E) pour répondre au mandat de Séoul sur la croissance verte. Le groupe d'experts C3E a tenu sa première réunion à Paris, en juin 2011. Une deuxième réunion d'experts et un « business symposium » visant à susciter un débat entre secteur privé, organisations internationales et membres du G20 sur les meilleures pratiques dans les domaines visés par le groupe se sont tenus à Séville en octobre 2011. Ces travaux d'experts sous présidence française ont abouti à la rédaction d'un rapport de progrès et un rapport de situation faisant l'état des lieux des politiques des différents pays du G20 pour le développement et le déploiement des énergies propres et l'amélioration de l'efficacité énergétique. Le travail engagé, qui s'est poursuivi sous présidence mexicaine, se poursuivra sous présidence russe.

[S'agissant des questions d'énergies propres, il convient de souligner par ailleurs que la France est un membre fondateur de l'Institut mondial du captage et du stockage du carbone, le GCCSI (Global Carbon Capture and Storage Institute), créé par l'Australie en 2009. Les objectifs du GCCSI sont le partage du savoir, la promotion et l'aide au développement des projets de captage et stockage du carbone.]

12. Germany

No additional information was included in the NIR of Germany for 2013.

13. Greece

No additional information was included in the NIR of Greece for 2013.

14. Hungary

No additional information was included in the NIR of Hungary for 2013.

15. Iceland

No additional information was included in the NIR of Iceland for 2013.

16. Ireland

No additional information was included in the NIR of Ireland for 2013.

17. Italy

The following information was updated in Italy's NIR for 2013.

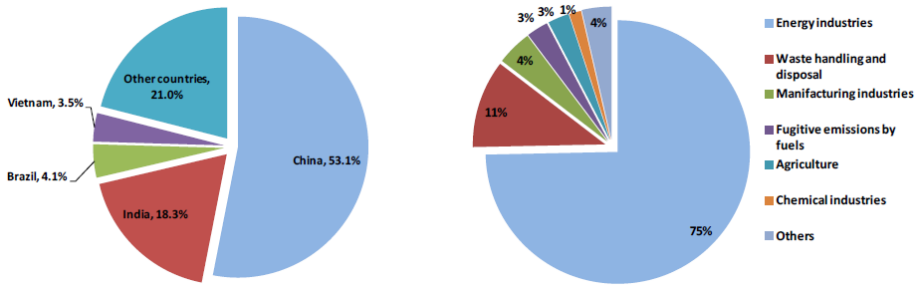
14.3 Italian commitment under Art 3.14 of the Kyoto Protocol

Procedure for assessing sustainability at local and national level for CDM and JI

The Clean Development Mechanism (CDM), defined in Article 12 of the KP, allows a country with an emission-limitation commitment (Annex B Party) to implement an emission-reduction project in developing countries.

For this section, information was collected from the UNFCCC CDM Project Search Database (UNFCCC, 2013[a]). On 13 March 2013, the UNFCCC CDM Database reported a total of 6,558 registered project activities. By the time the CDM database was consulted world-wide 85.3% of CDM projects were registered in Asia and the Pacific Region, 12.0% in Latin America and Caribbean, 2.1% in Africa, and 0.4% in Countries with economies in transition. The distribution of registered projects by scope activity was mainly: energy industries (74.7%), waste handling and disposal (10.7%) and manufacturing industries (4.3%). Registered projects by Host Party were mainly in China (53.1%), India (18.3%), Brazil (4.1%) and Vietnam (3.5%). The distribution of CDM projects by Host country and scope is presented in Figure 14.1.

Italy as investor Party, contributes with 1.6% of world-wide CDM project portfolio. Italy is involved in more than 100 CDM projects at different stage, and is involved directly, as government, in 27 registered CDM (MATTM, 2011[a]). Up to day Italy is involved in 106 CDM registered projects (UNFCCC, 2013[a]), 37.7% more than the beginning of 2012. Projects by dimension are 55.7% large scale and 44.3% small-scale. Italy is the only proposer for 50% of the CDM projects. In Annex A8.2.4 a complete list of CDM projects is available.



Source: UNFCCC (UNFCCC, 2013)

Figure 14.1 Italian CDM projects by Host country and scope (as for 13/03/2013)

Parties should follow a project cycle to propose CDM projects (first designing phase and realization phase). During the first phase, among other activities, Parties participating in the CDM shall designate a national authority (DNA). Each Host Party has implemented a procedure for assessing CDM projects. The DNA evaluates project documentation against a set of pre-defined criteria, which tend to encompass social, environmental and economic aspects. For instance, India has SD criteria such as the social, economic, environmental and technological 'well-being'. Instead, China

discriminated projects by priority area and by gas based-approach (Olsen and Fenhann, 2008; Boyd et al., 2009).

Most of the CDM projects (if large-scale) are subject to ex-ante assessments. For instance, environmental impact assessments (EIA) are required. In other cases, because of the size of the project, EIA are not necessary. Still some CDM projects have performed voluntary EIA. This is the case for the Santa Rosa Hydroelectric CDM project in Peru (Endesa Carbono, 2010). After, a second evaluation is performed by the DNA as described previously. For example, in the Peruvian DNA, the process follows the: submission of the project to the Ministry of competence on the activities, a site visit of the project done by the Ministry of Environment, and the conformation of an ad hoc committee that evaluate projects considering legal, social, environmental and economic criteria (MINAM, 2010). Thus, possible impacts of the CDM projects are mainly subject to local and national verification.

In some cases, an ex-post assessment could be also performed by the Designated Operational Entities (DOE), which validated CDM projects and certifies as appropriate and requests the Board to issue CERs. For some CDM projects, for instance, Poechos I Hydroelectric project (Peru), CERs are approve only if the project complies also with social and environmental conditions (Endesa Carbono, 2010). In addition, Italy agreed to accept in principle common guidelines for approval of large hydropower project activities. EU Member States have arrived at uniform guidelines on the application of Article 11b(6) of the Directive 2004/101/EC to ensure compliance (of such projects) with the international criteria and guidelines, including those contained in the World Commission on Dams 2000 Report. It aims to ensure that hydro projects are developed along the SD and the not damaging to the environment (exploring possible alternatives) and addressing such issues as gaining public acceptance, and fair and equitable treatment of stakeholders, including local and indigenous people (MATTM, 2010[a]).

Another feedback for participating to CDM project with SD characteristics comes from the carbon funds. For instance, Italy participates to the BioCarbon Fund (BCF), the Community Development Carbon Fund (CDCF) and the Italian Carbon Fund (ICF). The first two funds aim to finance projects with strong social impact at local level, that combine community development attributed with emission reductions and will significantly improve the life of the poor and their local environment (MATTM, 2010[a]). Italian CDM projects which are under the CDCF initiative are listed in Annex A8.2.4.

The Joint implementation (JI) is defined in Article 6 of the KP allowing a country with a limitation commitment (Annex B) to earn emission reduction units (ERUs) from an emission-reduction or emission removal project in another Annex B Party. Two procedures could be followed. ‘Track 1’ procedures apply when the Host Party and investors meets all of the eligibility requirements to transfer and/or acquire ERUs, and the project is additional to any that would otherwise occur. ‘Track 2’ applies when the Host Party fulfils with a limited set of eligibility requirements or there is not an institutional authority able to follow up the project cycle. In this case the project should go through the verification procedure under the Joint Implementation Supervisory Committee (JISC). The development of the project is divided in a design and implementation phases (see MATTM 2011[b]). Parties involved in JI activities should designated focal point for approving projects, and prepared Guidelines and Procedures for approving Art.6 Projects, including the consideration of stakeholders’ (MATTM, 2010[b]). By the time the JI database from EGIS source show only one project with Italy involved. The task of the project is to reduce fugitive emissions (IGES, 2013).

Voluntary validation of sustainable development is taking place at international level for CDM and JI projects. The UNEP Risoe Centre database59 highlights the Gold Standard (GS) and the Climate, Community and Biodiversity Alliance (CCB) for assessing SD on CDM project, and only GS for JI projects. The GS operates a certification scheme for premium quality carbon credits and promotes sustainable development (GS label). Indicators include air/water quality, soil condition, biodiversity, quality of employment, livelihood of the poor, access to affordable and clean energy services, etc (Gold Standard, 2011). After labelling, these projects are tracked in the UNFCCC/CDM Registry. The CCBA is a voluntary standard, which support the design and identification of land management activities that simultaneously minimize climate change, support sustainable development, and conserve biodiversity. Project design standards include: climate, community, and biodiversity indicators (CCBA, 2011). Up to 13 March 2013, the UNEP Risoe database reports 756 JI projects (track1+track2) from which 596 projects are registered (91.9% track 1+8.1% track 2). Up to 13 March 2013, the UNEP Risoe database reports 9,016 CDM projects with 6,556 registered from which 3 projects are validated with CCB, and 130 projects with GS.

14.4 Funding, strengthening capacity and transfer of technology

According to Art 3.14 of the KP information on funding and transfer of technology need to be described, thus, brief information is provided in this section.

The flow of financial resources to developing countries and multilateral organisations from Italy is shown in Table 14.2 (OECD, 2011). Between 2006 and 2008 the Ministry of Foreign Affairs has contributed with around 30 million EUR in bilateral and multilateral cooperation with developing countries for climate change related activities. In order to contribute to the implementation of the commitment foreseen in the "Bonn Declaration", since 2002 the Ministry for the Environment, Land and Sea, has been authorized to finance bilateral and multilateral activities in developing countries for 55.1 million EUR/year as of 2008 (MATTM, 2009). A recent peer review report of the Development Assistance Committee (DAC) describes bilateral and multilateral cooperation funding activities in Italy. The Directorate General for Development Co-operation (DGCS) from the Ministry of Foreign Affairs in collaboration with other players in Italian Co-operation is in charge of implementing recommendations (OECD, 2009). The most important institutional actor is the Ministry for the Environment, Land and Sea, because of its contribution to implementing the Kyoto Protocol and other Rio conventions in developing countries.

The Ministry of Foreign Affairs defined the Programming Guidelines and Directions of Italian Development Co-operation 2011-2013, where priority areas are identified (MAE, 2010[c]): i) agriculture/food security; ii) human development, particularly referred to health and education/training; iii) governance and civil society; iv) support for endogenous development, inclusive and sustainable, the private sector, and v) environment, land and natural resources management, particularly referred to water and mitigation/adaptation to climate change. The aid effectiveness is a top priority for the Italian cooperation as described in the 'Aid Effectiveness Action Plan' (DGCS, 2009). The Ministry of Foreign Affairs has a database of environmental projects available online (DGCS, 2011). The ecosystem approach management is a strategy adopted by Italian cooperation. In the environment field, projects that have been monitored by the Central Technical Unit/DGCS - Ministry of Foreign Affairs, are subject to field visit and ex-post assessments in order to verify compliance in the framework of climate change activities (MAE, 2010[a]).

Table 14.2 Financial resources to developing countries and multilateral organisations from Italy

	Italy				
	2000-01	2008	2009	2010	2011
NET DISBURSEMENTS			USD million		
I. Official Development Assistance (ODA) (A + B)	**1 502**	**4 861**	**3 297**	**2 996**	**4 326**
ODA as % of GNI	**0.14**	**0.22**	**0.16**	**0.15**	**0.20**
A. Bilateral Official Development Assistance	409	1 838	875	759	1 703
of which: General budget support		55	9	5	1
Core support to national NGOs	56	-	-	15	-
Investment projects	- 134	81	37	- 34	310
Administrative costs	27	67	59	42	53
Other in-donor expenditures	12	15	5	5	526
of which: Refugees in donor countries	10	3		3	525
B. Contributions to Multilateral Institutions	1 092	3 022	2 423	2 237	2 623
of which: UN	203	210	205	170	150
EU	628	1 713	1 862	1 557	1 924
IDA	120	556	214	386	179
Regional Development Banks	76	351	24	6	206
II. Other Official Flows (OOF) net (C + D)	- 24	408	- 72	- 151	- 214
C. Bilateral Other Official Flows (1 + 2)	- 24	408	- 72	- 151	- 214
1. Official export credits	16	34	- 28	- 28	117
2. Equities and other bilateral assets	- 40	374	- 44	- 123	- 330
D. Multilateral Institutions					
III. Grants by Private Voluntary Agencies	35	105	162	150	111
IV. Private Flows at Market Terms (long-term) (1 to 4)	3 817	207	2 181	6 612	7 689
1. Direct investment	1 317	1 544	129	4 366	7 530
2. Private export credits	663	2	463	882	1 234
3. Bilateral portfolio investment	1 837	-1 339	1 590	1 365	-1 074
4. Securities of multilateral agencies	-	-	-	-	-
V. Total Resource Flows (long-term) (I to IV)	**5 329**	**5 581**	**5 569**	**9 608**	**11 912**
Total Resource Flows as a % of GNI	**0.49**	**0.25**	**0.27**	**0.47**	**0.55**

Source: OECD (OECD, 2013) http://www.oecd.org/document/9/0,3746,en_2649_34447_1893129_1_1_1_1,00.html

Italian multilateral cooperation on climate change has been performed with different United Nations organizations, funds, and institutions. Cooperation has involved from the supply of financial resources, to the design and implementation of programmes and projects, the promotion of transfer of environmentally-sound technologies aiming at reducing the impacts of human activities on climate change, and support to adaptation measures. Italian bilateral cooperation continues activities described in the Fourth National Communication to the UNFCCC and has implemented new projects on climate change. Focus is given to different geographical regions world-wide45. Funding climate change and related topics in developing countries has different and ambitious objective: efficient use of energy, implementation of innovative financial mechanisms, efficient water management, carbon sequestration, professional training, and exchange of know-how, promotion of eco-efficient technologies. Further detailed description is given in 'Chapter 7 Financial assistance and Technology Transfer' of the Fifth National Communication from Italy (MATTM, 2007; 2009).

The DGCS of the Ministry of Foreign Affairs is contributing with bilateral projects in the energy sector, for example, in Albania, Bangladesh, Sierra Leone and Palestinian territories (improvement of electric system or hydroelectric power generation) (DGCS, 2011). An example is the hydroelectric project in Ethiopia that has been supported by the Ministry of Foreign Affairs. Next step of this project will be an ex-post assessment of adverse effects through the use of the OECDDAC guidelines (MAE, 2010[b]). These guidelines include the assessment of the relevance, effectiveness, efficiency, impact (positive/negative) and sustainability of the activities (OECD, 2008). In June 2010 the guidelines for on-going and ex- post evaluation of official development assistance implemented by the DGCS-Ministry of Foreign Affairs were published (MAE, 2010[d]).

Evidence of technology transfer activities were found in the context of the Kyoto Mechanisms. An study analyzed comprehensively technology transfer in the CDM: 3296 registered and proposed projects (Seres et al., 2009). Results address that roughly 36% of the projects accounting for 59% of the annual emission reductions claim to involve technology transfer. These authors concluded that as the number of projects increases, technology transfer occurs beyond the individual projects. This is observed for several of the most common project types in China and Brazil with the result that the rate of technology transfer for new projects in those countries has fallen significantly.

18. Japan

No additional information was included in the NIR of Japan for 2013.

19. Latvia

No additional information was included in the NIR of Latvia for 2013.

20. Liechtenstein

No additional information was included in the NIR of Liechtenstein for 2013.

21. Lithuania

Lithuania provided the following information in its NIR for 2013.

Lithuania continues to finance the projects to minimize the adverse social, environmental and economic impacts of the developing countries. It continued to provide financing under the Fast Start Financing. During the period of 2010-2012, Lithuania contributed to the financing of developing countries both providing finance to mitigation and adaptation projects. Overall contribution from Lithuania to fast start financing was around 64 000 USD. In addition to the contribution of 26 711, 44 USD to the Energy Sector Management Assistance Programme (ESMAP) through the World Bank in 2010, Lithuania continued to provide financing to this fund, additionally contributing the amount of 30 000 USD and further amount of 100 000 LTL, respectively for the year 2011 and 2012.

In 2012 Lithuania has adopted the Strategy for National Climate Change Management Policy by 2050. Currently the draft Action Plan on the Implementation of the Goals and Objectives of the Strategy of National Climate Change Management Policy for the Period 2013-2020 is under preparation and will be approved by the Government. Under these policy documents contributions are outlined for the assistance to the developing countries by the year 2020.

Lithuania is currently planning to increase its bilateral project assistance through ODA and additional contributions from its Climate Change Special Programme fund. It has further envisaged to increase its financing to developing countries from 2013.

22. Luxembourg

No additional information was included in the NIR of Luxembourg for 2013.

23. Monaco

Monaco provided the following information in its NIR for 2013.

15.1 Description des effets potentiels des politiques et mesures nationales

Les politiques et mesures mises en place en Principauté de Monaco, visent à :

- Améliorer l'efficacité énergétique;
- Réduire les consommations de fioul domestique en développant les énergies renouvelables et en opérant parfois une substitution du fioul par du gaz naturel dont le facteur d'émission est moindre;
- Réduire les consommations de carburant dans les transports;
- Réduire la productions de déchets incinérés et développer la valorisation matière.

Ces mesures peuvent avoir des effets positifs sur l'économie de certains pays en développement, en particulier le recyclage dont certaines filières existent sur la rive sud de la méditerranée (cartouches, électronique…).

Une petite tendance à la baisse existe pour les énergies fossiles de type pétrolières qui se reportent partiellement sur le gaz naturel. Les quantités sont cependant insignifiantes à l'échelle des pays producteurs mais peuvent soulever à terme la question générale de la diversification de certaines économies pétrolières.

Les politiques et mesures de la Principauté de Monaco ont conduit aux variations suivantes :

- Variation de la consommation de produits pétroliers (carburants, fioul domestique et fioul lourd) :

  Réduction de 2 770 m3 entre 1990 et 2011

  (soit environ 9% de la consommation initiale)

- Variation de la consommation de gaz :

  Augmentation de 10,64 GWh

Au vu de la nature de nos politiques et mesures il ne nous a pas été possible de déterminer si il existait des effets adverses avérés de nos politiques et mesures sur les pays en développement.

Ne sachant qualifier si un effet adverse existe, la Principauté de Monaco n'as pas mis en place de mesures spécifiques pour leur minimisation.

La Principauté participe à des programmes de coopération avec les pays en développement qui ne sont pas directement liés à la minimisation d'effet adverses de ses politiques et mesures.

15.2 Ressources financières et transfert de technologie

Monaco participe au Mécanisme pour un Développement Propre (MDP) prévu par l'Article 12 du Protocole de Kyoto.

Dans ce cadre, en 2008 un Accord cadre de coopération dans le domaine du Mécanisme pour un développement propre a été signé entre la Principauté de Monaco et la République Tunisienne.

En application de cet accord deux axes de partenariat ont notamment été identifiés :

- L'accompagnement financier d'un projet de réduction d'émissions vers la certification MDP;
- Le renforcement des capacités de l'autorité tunisienne en charge de la promotion du MDP dans le secteur de l'énergie et de l'industrie.

Le premier volet visant l'accompagnement de l'enregistrement d'un projet de réduction d'émissions permettra pour le pays de tirer un revenu issu de la vente des unités de réductions certifiées d'émissions (URCE) qui seront attribués pour les réductions d'émissions constatées.

Le deuxième volet devrait notamment permettre la création d'emplois pour l'autorité tunisienne en charge de la promotion du MDP dans le secteur de l'énergie et de l'industrie sur le territoire national.

Cet Accord devrait également permettre d'accroître le nombre et la qualité des projets soumis au titre du MDP et, en ce sens, favoriser les investissements étrangers et aider le pays à réaliser les objectifs de développement qu'il s'est fixé dans ses programmes stratégiques de développement.

En 2012 et afin de tenir compte des avancées de la négociation intergouvernementale sur le climat à Cancun et à Durban, une troisième activité complémentaire a été initiée dans le cadre de cet Accord avec pour objectif d'accompagner les efforts de la République Tunisienne dans la formulation de Mesures d'Atténuation Appropriées au niveau National - NAMA (définition d'une stratégie nationale et d'un premier portefeuille de projets NAMA).

En ce qui concerne la promotion des énergies renouvelables dans les pays en développement, il est également à noter qu'au titre de l'Aide Publique au Développement (APD), et dans le cadre de projets de construction d'infrastructures (école ou dispensaire de santé) dans des régions isolées, l'accès à l'eau potable et à l'électricité est assuré par l'installation de systèmes photovoltaïques quand le raccordement au réseau électrique national n'est pas possible.

24. Netherlands

The Netherlands provided the following information in its NIR for 2013.

The Netherlands has reported information on the minimisation of adverse impacts in its 5th National Communication, submitted to the UNFCCC in December 2009, and in the NIR 2010, 2011 and 2012. Since the submission of the NIR 2012, there have been limited changes in the activities on minimising adverse impacts. Policies are still in place and being executed.

The Netherlands is pleased that the Kyoto Protocol has been amended with a second commitment period 2013-2020, agreed upon at COP 18 in Doha. The Netherlands and the European Union have made every effort to achieve this result. Although fewer countries are now participating, the reduction of this second commitment period is now 18 per cent compared with 1990, as compared with the 5.2 per cent of the first commitment period. Moreover the amendment ensures that the KP regulatory system,

on emission trading and reporting for instance, is still in place. The Netherlands will also actively participate in the working programme that has been established to work towards a new, legally binding instrument for the period after 2020, which should be applicable to all parties. Now new steps are urgently needed to develop a new climate arrangement that is able to meet the ever greater climate challenges in the areas of mitigation, adaptation, technology and finance during the 21st century.

Recent changes concerning Dutch efforts on the minimisation of adverse impacts include improvements to the Green Climate Fund and New Market Mechanisms. These are seen as important steps to assist developing countries in climate adaptation and mitigation. Furthermore, there have been some developments in carbon capture and storage, which are described in this chapter.

Green Climate Fund

By establishing the Green Climate Fund by agreeing on its Governing Instrument, COP 17 in Durban has taken an important step towards the full operationalisation of the GCF. In the Transitional Committee, The Netherlands has been actively involved in formulating an effective governing instrument that will enable wise spending and maximum climate benefits in terms of enhanced resilience and robust mitigation efforts. The consolidation of these rules in the Durban Agreements in the Governing Instrument is welcomed by The Netherlands.

The Netherlands are pleased that, the important role of the private sector in realising the necessary investments has been formally acknowledged by COP 17 through endorsement of the Governing Instrument.

As part of the GCF the 'private sector facility' will have to facilitate public–private partnerships as part of the Fund. This will have to be a crucial part of operationalising the business model of the Green Climate Fund in 2013 similar to ensuring wise spending, performance-based allocation and ensuring transformational impact.

2013 will be crucial to turn vision into impact. The selection of the host country and the establishment of the Interim Secretariat were crucial to that end. A fully operationalized business model will be crucial as a basis for capitalisation of the Fund.

Collaboration between authorities, business and knowledge institutions Market Mechanisms

In the years ahead, The Netherlands will be working more closely with companies and knowledge institutions to contribute to combating climate change and its consequences. The innovations and financial strength of these parties are essential to meet the challenges of climate change together. The Netherlands has, for example, a great deal of expertise in the fields of water, food security and energy and we are already collaborating with various countries in these fields: on water, for instance, with Vietnam, Colombia and Indonesia. In the future, the private sector and knowledge institutions will be more closely involved and this is a key factor in the Dutch strategy. It is also in line with our ambitions for the new climate instrument: to offer customisation and to let everyone make an appropriate contribution.

Fast start finance

Meanwhile, The Netherlands has fulfilled the Copenhagen agreement on 'Fast Start Finance'. This involved financially supporting immediate action on climate change and kick starting mitigation and adaptation efforts in developing countries from 2010 to 2012. Although this agreement terminated at the end of 2012, The Netherlands will continue to finance climate initiatives in developing countries: in 2013 to the amount

of 200 million euros. It was agreed in Doha that in 2013 further discussion will take place on what the structure of climate funding should be between now and 2020.

The Netherlands is pleased that its website, www. faststartfinance.org, could be of value to the promotion of transparency on fast start finance. This module on the UNFCCC website safeguards the UNFCCC responsibility for transparency. It is confident that with the established fast start finance module on the UNFCCC website, this transparency will be safeguarded.

Market Mechanisms

In the view of The Netherlands, COP 17 in Durban showed important progress on the future and the use of (flexible) market mechanisms. COP 17 'defined a new market-based mechanism operating under the guidance and authority of the COP' (note that in 1997 the word 'define' was also used to establish CDM under the Kyoto Protocol). In 2013, work will continue to develop the modalities and procedures for the use of this new market-based mechanism, which in fact will allow different approaches, including sectoral ones, to accommodate the differing needs of countries. However, The Netherlands also intends to actively participate in the further discussions on the development and implementation of the Framework for Various Approaches in order to, on the one hand allow flexibility in the use of market instruments and, on the other, ensure that environmental integrity is safeguarded. By this approach, fragmentation of the carbon market can beminimised.

An important outcome of COP 18 is the decision to continue the Kyoto Protocol, which in practice implies that CDM and JI can continue to operate beyond 2013. For CDM and JI, decisions were taken to further enhance their efficiency and credibility.

Carbon Capture and Storage

Carbon capture and storage (CCS) will reduce emissions of CO2 into the air, noting that the use of fossil fuels will still be inevitable in the coming decades.

The Netherlands is preparing two large-scale demonstration projects on CCS. The first project, the ROAD project, will capture CO2 from a coal-fired power plant with storage in a depleted gas field under the North Sea close to the shore.

The second project, the Green Hydrogen Project, is a collaboration of industries from The Netherlands and Denmark with the aim of capturing CO2 from an industrial source, transport it by ship and inject it into an oil field under the North Sea for EOR and consequently storage.

25. New Zealand

New Zealand provided the following information in its NIR for 2013.

This chapter provides information on New Zealand's implementation of policies and measures that minimise adverse social, environmental and economic impacts on non-Annex I Parties, as required under Article 3.14 of the Kyoto Protocol.

Most of this information is the same or very similar to that provided in the 2012 submission. However, some revised information is provided for the following:

- further information on market imperfections, fiscal incentives, tax and duty exemptions and subsidies (see section 15.2)

- information on capacity-building workshop around fossil fuel subsidy reform (see section 15.2)
- further information on solar energy electricity project on Tokelau (see section 15.6).
- information on New Zealand's involvement in activities to provide assistance to non-Annex I Parties that are dependent on the export and consumption of fossil fuels in diversifying their economies (see section 15.7).

15.1 Overview

New Zealand's Cabinet and legislative processes to establish and implement climate change response measures include consultation with the Ministry of Foreign Affairs and Trade and with members of the public. The Ministry of Foreign Affairs and Trade provides advice to the Government on international aspects of proposed policies. During the public consultation phase, concerns and issues about the proposed measure can be raised by any person or organisation.

Through the New Zealand Government's regular trade, economic and political consultations with other governments, including some non-Annex I Parties, there are opportunities for those who may be concerned about the possible or actual impacts of New Zealand policies to raise concerns and have them resolved within the bilateral relationship. To date, there have been no specific concerns raised about any negative impact of New Zealand's climate change response policies.

The New Zealand Government, through the New Zealand Aid Programme (www.aid.govt.nz), has regular Official Development Assistance programming talks with partner country governments, where partners have the opportunity to raise concerns about any impacts and to ask for or prioritise assistance to deal with those impacts. From these discussions, New Zealand works closely with the partner country to prepare a country strategic framework for development. These engagement frameworks are relatively long term (five or 10 years) and convey New Zealand's development assistance strategy in each country in which it provides aid. They are aligned to the priorities and needs of the partner country, while also reflecting New Zealand's priorities and policies.

On many of the issues related to the implementation of Article 3.14, New Zealand gives priority to working with countries broadly in the Pacific region. The New Zealand Aid Programme also works with partner developing countries to strengthen governance and improve their ability to respond to changing circumstances.

Climate change, including adaptation and finance, was a key part of discussions by leaders at the 42nd Pacific Island Forum meeting held in Auckland, New Zealand, in September 2011. New Zealand, as current Chair of the Pacific Islands Forum, is working closely with non-Annex I Parties in the Pacific in a wide range of technical, economic and political fields, addressing the climate change concerns raised by leaders.

New Zealand maintains a liberalised and open trading environment, consistent with the principles of free trade and investment, ensuring that both developed and developing countries can maximise opportunities in New Zealand's market regardless of the response measures undertaken.

15.2 Market imperfections, fiscal incentives, tax and duty exemptions and subsidies

Annex I Parties are required to report any progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all

greenhouse-gas-emitting sectors, taking into account the need for energy price reforms to reflect market prices and externalities.

New Zealand does not have any significant market imperfections, fiscal incentives, tax and duty exemptions or subsidies in greenhouse-gas-emitting sectors of this nature.

New Zealand has been working in a number of international fora to promote the global reform of inefficient fossil fuel subsidies. For example, New Zealand is helping to build capacity for the reform of inefficient fossil fuel subsidies within Asia-Pacific Economic Cooperation (APEC) member economies. New Zealand co-hosted awareness-raising workshops with the United States at both energy official and senior official levels in 2011, and will co-host a capacity-building workshop in March 2013. The 2013 workshop will be aimed primarily at energy officials from APEC economies and will focus on building support for reform through effective communication and consultation strategies.

New Zealand volunteered to be one of the first economies to present a submission under APEC's fossil fuel subsidy reform voluntary reporting mechanism in November 2012 (along with the United States, Canada and Thailand). In line with New Zealand's commitment to transparency, we reported all policy measures that directly or indirectly support fossil fuels. New Zealand's submission drew on information published by the Organisation for Economic Co-operation and Development (OECD) in its 2011 *Inventory of Estimated Budgetary Support and Tax Expenditures Relating to Fossil Fuels in Selected OECD Countries*. The OECD has not yet made any assessment of which support measures in its inventory might constitute inefficient subsidies. The New Zealand Government has reviewed the measures listed in its submission and is satisfied that they are efficiently achieving relevant policy objectives.

New Zealand is a member of 'the Friends of Fossil Fuel Subsidy Reform', an informal group of non-G20 countries that encourages and supports the G20 countries to meet their commitments to reform inefficient fossil fuel subsidies. The group's support for reform is based on the essential notion that it is incoherent to continue to underwrite the costs of emissions from fossil fuels at the same time as making concerted efforts to mitigate those emissions through actions elsewhere.

15.3 Removal of subsidies

Annex I Parties are required to report information concerning the removal of subsidies associated with the use of environmentally unsound and unsafe technologies. New Zealand does not have any subsidies of this nature.

15.4 Technological development of non-energy uses of fossil fuels

Annex I Parties are required to report on cooperation in the technological development of non-energy use of fossil fuels and support provided to non-Annex I Parties. The New Zealand Government has not actively participated in activities of this nature as yet.

15.5 Carbon capture and storage technology development

Annex I Parties are required to report on cooperation in the development, diffusion and transfer of less-greenhouse-gas-emitting advanced fossil fuel technologies, and/or technologies relating to fossil fuels that capture and store greenhouse gases, and encouragement of their wider use; and on facilitating the participation of non-Annex I Parties.

New Zealand is a member of the United States-led Carbon Sequestration Leadership Forum (www.cslforum.org), the Australian-led Cooperative Research Centre for Greenhouse Gas Technologies (CO2CRC – www.co2crc.com.au), Global Carbon Capture and Storage Institute (www.globalccsinstitute.com) and the International Energy Agency Greenhouse Gas Research and Development Programme (www.ieaghg.org).

15.6 Improvements in fossil fuel efficiencies

Annex I Parties are required to report how they have strengthened the capacity of non-Annex I Parties identified in Article 4.8 and 4.9 of the Climate Change Convention, by improving the efficiency in upstream and downstream activities related to fossil fuels and by taking into consideration the need to improve the environmental efficiency of these activities.

An example is New Zealand's commitment to a major energy programme in Tonga. Working closely alongside other development partners, New Zealand is at the forefront of supporting practical implementation of Tonga's Energy Roadmap, an ambitious 10-year sector-wide plan to improve Tonga's energy efficiency and energy self-reliance. As part of an NZ$8.5 million commitment, support has initially focused on upgrading Tonga's power distribution network.

Similar work is currently being planned in the energy sectors in Tuvalu and Tokelau – two of the most vulnerable island countries in the Pacific. Work reported in the 2011 submission on the upgrade of the Cook Islands energy supply network is ongoing. Tokelau has, until now, been 100 per cent dependent upon diesel for electricity generation, with heavy economic and environmental costs. A New Zealand-funded project to construct solar-based mini grids on three atolls has meant that nearly 100 per cent of Tokelau's electricity needs are now met through solar generation.

15.7 Assistance to non-Annex I Parties dependent on the export and consumption of fossil fuels for diversifying their economies

Annex I Parties are required to report on assistance provided to non-Annex I Parties that are highly dependent on the export and consumption of fossil fuels in diversifying their economies. New Zealand is a member of the International Renewable Energy Agency (IRENA), an intergovernmental organisation that aims to promote the widespread and increased adoption and the sustainable use of all forms of renewable energy. A large part of IRENA's work programme relates to promoting renewable energy development in less-developed countries. New Zealand is involved with a number of IRENA's work streams, including work related to the Pacific Islands and to geothermal energy in Latin America.

New Zealand is also a member of other multilateral institutions that play a role in these areas, for example, the International Energy Agency and APEC.

The New Zealand Government will co-host (with the European Union) a Pacific energy summit in March 2013 in Auckland, New Zealand. This summit aims to promote energy development in the Pacific Islands and will provide an opportunity for Pacific Island countries to showcase their energy plans and targets, and seek donor and private sector advice or finance to translate these plans into action.

The New Zealand Aid Programme provides support to a number of non-Annex I countries in relation to economic diversification and renewable energy (refer to section 15.6).

According to the International Monetary Fund, Timor-Leste is the world's most oil-dependent economy. In 2009, petroleum income accounted for almost 80 per cent of

gross national income. New Zealand is helping to provide new economic opportunities in Timor-Leste through rehabilitating the coffee sector, to increase the quality, quantity and value of coffee products, and providing capacity and capability building for small business in rural areas, particularly those run by women. New Zealand's aim is to target one-third of its development assistance in Timor-Leste to support sustainable economic development through private sector investment.

26. Norway

Norway provided the following information in its NIR for 2013.

Norway approaches the report on activities under Article 3.14 mainly from the perspective of being a major exporter of fossil fuels. However, Norway is also involved in several initiatives that contribute to technology transfer and capacity building to developing countries in shifting the energy mix away from fossil fuels to more renewable energy systems, including The Clean Energy for Development Initiative and the International Energy and Climate Initiative. These initiatives are reported on here as relevant activities under Article 3.14 of the Kyoto Protocol.

Setting a price on greenhouse gas emissions:

Most international analyses point to carbon pricing as the most important policy instrument in the work to combat climate change. Carbon pricing motivates initiatives to reduce emissions, finance climate measures and stimulates development of new technology. In its economic, energy and environmental policies Norway therefore strives to have an approach where prices reflect costs, including for externalities. The reflection of the costs of externalities with respect to emissions of greenhouses gases is undertaken through levies and participation in of an emissions trading scheme. Following the expansion of the European Emissions Trading System (EU-ETS) system in 2013, about 80 per cent of the domestic emissions will be subject to mandatory allowances or a CO2 tax. A description of the structure of levies on energy commodities, as well as design of the emissions trading scheme, can be found in chapter 4 of the Fifth National Communication (NC 5).

Norway believes that the best way to reduce emissions on a global scale in line with the two degree target is to set a global price on carbon. A global price on carbon is the most efficient way to ensure cost effectiveness of mitigation actions between different countries and regions and secure equal treatment of all emitters and all countries. This will help minimize adverse impacts of mitigation.

During 2008-2012, Norway has pledged to over-fulfill its Kyoto Protocol commitment by ten percent. In 2006, The Norwegian Parliament authorized the Ministry of Finance to procure emissions credits from Clean Development Mechanism (CDM) and Joint Implementation (JI) projects to obtain emission reductions acknowledged by the Kyoto protocol. Norway's commitment under the second commitment period under the Kyoto Protocol, 2013-2020, implies a sustained credit need. Norway will thus be a significant contributor to the development of the carbon market, also in the years to come. For more information on Carbon Neutral Norway, see NC 5 chapter 4.3.1.9 and www.carbonneutralnorway.no.

Changes in 2012:

The Government decided in 2012 to increase the CO2 tax by NOK 200 per tonne of CO2 for the offshore petroleum activities. Based on the current price of allowances in the EU ETS, this yields an overall carbon price in the petroleum sector which the

Government believed to be reasonable. If the price of allowances in the EU ETS increases over time, it provides a basis for reducing the CO2 tax so that the overall carbon price remains at about the same level.

Unsafe and unsound technologies:

Norway does not intend to subsidize environmentally unsound and unsafe technologies. There is an ongoing and increasing emphasis on fossil fuel subsidies in the international context. Norway sees phasing out fossil fuel subsidies as a crucial element for short term climate action. We need to address this issue in both developing countries and developed countries. There is a need for international exchange of policies and experience on addressing subsidy reform. Norway supports and contributes to work done on this issue in several foras, such as the IMF, WB, IEA and OECD. Norway is also developing a strategy for our international work for reform of fossil fuel subsidies.

Changes in 2012:

There have been no significant changes to the policy implementation of unsafe and unsound technologies in 2012.

Cooperation on carbon capture and storage

Due to its large mitigation potential, Norway has prioritized the development of carbon capture and storage as a mitigation option. As a petroleum producer Norway strives to reduce the emissions from the production and refining of petroleum. The national carbon capture and storage projects already in operation, the Sleipner and Snøhvit projects, and the newly approved Gudrun project, are in the petroleum sector. Norway has taken steps to disseminate information and lessons learned. These efforts are made both through international fora such as the Carbon Sequestration Leadership Forum, and through bilateral cooperation with both developing and developed countries. The results from the Sleipner Project are made available to interested Parties.

The Storting (Norwegian parliament) has endorsed an action plan for dissemination of information on carbon capture and storage as a mitigation option. Four geographical areas have been given priority: Southern Africa, Indonesia, China and the Gulf States (Saudi Arabia, Kuwait, The United Arab Emirates and Qatar). In November 2011, the Norwegian Ministry of Petroleum and Energy and the Administrative Centre for China's Agenda 21 of the People's Republic of China entered into an agreement on the funding of the China-EU Cooperation on Near Zero Emission Coal Project Phase IIA. The 4 Kingdom Initiative with the Kingdom of Saudi Arabia, the United Kingdom and the Kingdom of the Netherlands are exploring alternative uses for CO2 and serve as an informal forum where government representatives and technical experts from the four kingdoms meet, share their experiences and explore potential areas of cooperation. Norway is currently co-funding The World Bank CCS Trust Fund for Capacity Building and The Carbon Sequestration Leadership Forum's Capacity Building Trust Fund for CCS. Norway has also supported the South African CCS center.

In addition the Norwegian petroleum company Statoil ASA, which operates the Norwegian storage projects, is a partner in the Algerian carbon capture and storage project in Salah. The South African energy company Sasol is a partner in a test centre for CO2 capture (Technology Centre Mongstad, please view NC 5 chapter 4.3.9).

Changes in 2012:

The Technology Centre Mongstad started operation in May 2012. Two different capture technologies - amine- and the ammonia-based CO2 capture, are being tested. The technology centre is designed to have a capture capacity of 100,000 tonnes of CO2 per year. The size of the facility, its flexibility and its design allow different types of test to be performed. It has access to flue gas produced by the thermal power station and the cracking plant at the oil refinery. The CO2 content of the gases from these sources is 3.5% and 13% respectively. Both sources of flue gas can be piped to both the amine- and the ammonia-based CO2 capture plants. In addition, the facility is able to adjust the concentration of CO2 in the flue gas by enriching exhaust gas from the thermal power station with captured CO2. This allows testing of the CO2 captured from flue gases with different concentrations of CO2. The technology centre is therefore able to test CO2 capture technologies which are relevant to both coal- and gas-fired power stations, as well as refineries and other industrial operations. The South African energy company Sasol is a partner in the Technology Centre Mongstad.

Cooperation with developing countries related to fossil fuels – "Oil for Development"

The Norwegian Oil for Development (OfD) initiative aims at assisting developing countries, at their request, in their efforts to manage petroleum resources in a way that generates economic growth and promotes the welfare of the whole population in an environmentally sustainable way. A description of the OfD programme can be found at www.norad.no.

Decades of experience in the oil and gas sector has given Norway valuable expertise on how to manage petroleum resources in a sustainable way. The Norwegian expertise could be useful for developing countries with petroleum resources, or countries that are in the exploration phase.

OfD takes a holistic approach through capacity and institution building of public authorities in the partner countries. OfD's assistance covers technical assistance in the following areas: the establishment of legal frameworks, administration and supervision mechanisms, licensing and tendering processes, public/ private interfaces of petroleum governance, local content and industrial development. In the environmental management area, impact assessment studies are emphasized, so as to consider the potential social and environmental impacts that petroleum activities may have. Moreover, reducing emissions from gas flaring is another crucial element. Revenue management considers the establishment of government take systems, taxation, anti-corruption and petroleum funds.

By end of 2012, Norway is primarily working with eight countries; Angola, Ghana, Mozambique, Sudan, South-Sudan, Timor-Leste and Uganda, while 16 countries receive limited assistance. These are Bolivia, Cuba, Iraq, Ivory Coast, Kenya, Lebanon, Liberia, Nicaragua, Nigeria, São Tomé and Príncipe, Sierra Leone and Tanzania.

The OfD initiative was launched in 2005. However, Norway through the Norwegian Petroleum Directorate and other agencies has assisted developing countries with petroleum resources for almost 30 years. A Steering Committee has been established to formulate strategic direction, guidelines and priorities for the OfD. The Steering Committee consists of the Ministry of Foreign Affairs (Chair), the Ministry of Petroleum and Energy, the Ministry of Finance and the Ministry of the Environment. The OfD secretariat is part of the Norwegian Agency for Development Cooperation (Norad), and is responsible for the coordination and implementation of the initiative. The Norwegian embassies play an essential role in the OfD, as they have extensive development cooperation responsibilities. The resources allocated to OfD grew from

about NOK 80 million in 2006 to NOK 205 million in 2008 and NOK 340 million in 2011.

Key implementing agencies include the Norwegian Petroleum Directorate, Petrad (International programme for petroleum management and administration), the Climate and Pollution Agency, the Directorate for Nature Management and the Petroleum Safety Authority. A range of consultancies and research institutions are also involved.

National and international NGOs are involved in the OfD initiative. These organizations are involved in building civil society's capacity on issues related to governance and petroleum activities in OfD partner countries. Moreover, Norway gives priority to the Extractive Industries Transparency Initiative (EITI. OfD also works with the World Bank, International Monetary Fund, African Development Bank and the UNDP. The Norwegian oil and gas industry is also drawn upon in transferring expertise and knowledge.

Changes in 2012:

The cooperation with some countries have been completed (Afghanistan, Bangladesh, Ecuador, Vietnam) while discussion is on-going on possible cooperation with some other countries. The resources allocated to OfD increased in 2012 compared to previous year.

Cooperation with developing countries related to renewable energy – "Clean energy for Development"

Energy has been at the core of Norway's development assistance policy for several years. . There has been a steady increase in funds allocated to clean energy activities during recent years, both within multilateral and bilateral development assistance. In 2011 the Norwegian assistance to clean energy for development amounted to approximately NOK 1.5 billion. Seven core countries receive the larger amount of the funding (Ethiopia, Liberia, Mozambique, Nepal, Tanzania, Timor Leste and Uganda), but the Initaitive is also engaged in 30 other countries at a smaller scale.

Increased focus on energy issues and its importance in the climate agenda, coupled with a significant increase of funds allocated to energy related activities within Norwegian development aid, required better coordination of Norwegian efforts. The Clean Energy for Development Initiative was launched in 2007 to address these challenges, with the following overarching goal:

"To increase access to clean energy at an affordable price based on the long-term management of natural resources and efficient energy use. It is also intended to contribute to sustainable economic and social development in selected partner countries and to international efforts to reduce greenhouse gas emissions."

Source: "Clean Energy for Development Initiative – Policy Platform"

Through the Clean Energy for Development Initiative Norwegian funds contribute to poverty reduction by supporting rural electrification with for example solar power, or through support to efficient wood fuel - or charcoal stoves.

Key features of the Initiative:

- In order to reach the goals set forth in the Clean Energy for Development Initiative, funds are often utilised to assist in developing a well functioning framework of institutions, policies, rules and regulations in the energy sector. Capacity building and institutional strengthening is therefore of great significance for the overall Norwegian energy efforts. In several of the countries where Norway engages in the energy sector, assistance and expertise from key partners

is crucial to support the capacity building and institutional strengthening activities.

- The Clean Energy for Development Initiative is accommodating the private sector in various ways. The main tools for direct support to the private sector are the funding mechanisms of Norfund, GIEK and Norad's Section for Private Sector Development. Public-private partnerships are essential, and support is also given to infrastructure projects (e.g. transmission lines), capacity building, regulatory reforms and research projects to facilitate for private investments and improve the investment climate.
- Results management is a priority within the Clean Energy for Development Initiative; to ensure and communicate the effects of development programmes/projects and to develop best practice systems. Projects and programmes develop results management systems and logical models to create a basis for evaluating effects of the intervention. The various programmes and activities are reviewed and assessed regularly. Smaller scale reviews are undertaken throughout the project cycles as part of their results management systems, while larger scale assessments are undertaken in a more strategic manner.

Changes in 2012:

There have been no significant changes to the Clean Energy for Development program in 2012.

The International Energy and Climate Initiative – "Energy+"

In order to promote increased access to energy and at the same time reducing greenhouse gas emissions in developing countries, Norway has initiated a new International Energy and Climate Initiative – "Energy+". The initiative was launched at the Energy For All conference in Oslo 10.-11. October by the Norwegian Prime Minister and the UN Secretary-General. The initiative focuses on increasing the use of renewable energy resources and increasing energy efficiency in developing countries, and thereby reducing the reliance on fossil fuel consumption.

Energy+ is based on a result based sector level approach. The Initiative will provide results based financing to developing countries based on results in the form of increased access and reduced emissions relative to a business as usual baseline, and measures taken to support these goals through a phased approach. Energy+ aims to incentivize private sector actors to significantly increase investments in renewable energy and energy efficiency in developing countries, targeting the entire energy sector. Through the Initiative developing countries and private sector are be given incentives to shift the energy sector to low-carbon platforms by providing financial, technological and technical incentives. Public funds spent wisely can achieve considerable impact by leveraging private capital through carefully considered, targeted interventions to develop commercially viable renewable energy and energy efficiency business opportunities. The Initiative will also work to mobilize additional financial resources with the purpose of increasing access to renewable energy and improving energy efficiency.

An international partnership, with more than 30 partner countries and organizations, has been established. Currently, about 55 countries and institutions have signed up the voluntary and non-binding Energy+ Partnership. The Energy+ Partnership is open to all and comprises countries and institutions that agree with and aim to work towards the principles stated in the Energy+ Guiding Principles.

Through the Energy+ partnership, activities in and agreements with the following developing countries have been established: Ethiopia, Kenya, Liberia, India, Bhutan, South Africa (through the South African Renewables Initiative – SARI). New partnerships are under discussion. Denmark has agreed to take the lead in developing an Energy+ program in Nepal. Discussions are ongoing with partners interested in joining the existing Energy+ country partnerships, e.g. in Ethiopia and Kenya. See http://www.regjeringen.no/en/dep/ud/campaigns/energy_plus.html?id=672635 for more information.

Changes in 2012:

In June 2012, Norway entered into three bilateral partnerships:

- **Ethiopia**: Norway entered into a five-year 500 million NOK agreement with Ethiopia to support efforts to increase access to sustainable energy in rural areas.
    - 17% of population access to electricity. Install 9 million new improved cookstoves by 2015. Emission reduction of 14 Mt CO2/year. Total costs for cookstoves program about USD 47 million.
- **Kenya:** Norway entered into a five-year 250 million NOK agreement with Kenya to support increased access to sustainable energy and reduced greenhouse gas emissions through replacement of kerosene lamps with solar lanterns, as well as production and distribution of improved cook stoves and more efficient and environmentally friendly cooking.
    - 23 % of population access to electricity. “Kerosene Free Kenya» program. Use 3 million ton of kerosene – annual cost USD 500 million. Emission reduction of 400 000 tCO2e/year.
- **Liberia:** Norway entered into a five-year 100 million NOK agreement with Liberia to support the development and implementation of a National Energy and Climate Plan in line with other plans in the energy sector that promote increased deployment of renewable energy to generate electricity and more efficient production and use of energy. The partnership will also support increased access to electricity and access to fuel efficient cook stoves.
    - 2% of population access to electricity. Replace diesel generators and heavy fuel oil with renewable energy. Emission reduction of 520 000 tCO2e/year.

27. Poland

Poland provided the following information in its NIR for 2013.

According to chapter I.H of the annex to the decision 15/CMP.1 and recommendation of ERT from 2011 below Poland provides new information (since the last NIR 2012) on how it is implementing its commitment under Article 3.14 of the Kyoto Protocol related to striving to implement its commitment under Article 3.1 of the Kyoto Protocol in such a way as to minimize potential adverse social, environmental and economic impacts on developing countries.

The Ministry of Environment implements the project *GreenEvo - Green Technology Accelerator,* which is in line with the idea of the Poznań Technology Transfer Strategy whose acceptance was one of the achievements of the Poznań conference COP14. It assumes increasing the efficiency of technology transfer through good

identification of the developing countries' needs in this regard. By executing the project, the Ministry of Environment practically implements the assumptions of the most important strategic environmental document, State Environmental Policy, regarding technology transfer and conduction of environmental activities.

Moreover, the Ministry of Environment, observing the potential of native companies at the market of environmentally friendly technologies strives, in the most effective way, to support the development and promotion of green entrepreneurs. Apart from GreenEvo mentioned above, in 2013, jointly with the National Fund for Environmental Protection and Water Management (NFOSiGW) and National Centre for Research and Development (NCBR) the programme called GEKON (Ecological Concepts Generator) was initiated. It is aimed at developing financial support for scientific and industrial consortia related to the search and implementation of environmentally friendly technologies.

Additionally, among activities undertaken in Poland aiming at minimization of adverse social, environmental and economic impacts on developing country Parties, there is implementation of the Polish government's declaration regarding so called *fast start financing*. This is one of the elements of the Copenhagen Accord on December 2009 concerning financial support provided by the developed countries in 2010−2012 to the developing countries for the implementaFon of their climate policies. In frames of this declaration Poland mobilised 12.75 million EUR in 2010-2012.

Furthermore in 2012 the Polish climate development support amounted to 7.546 million EUR. The activities in frames of bilateral co-operation were realised covering 6.656 million EUR. Poland continued the project in the area of climate change adaptation in China amounted to 5.816 million EUR in 2012. Other adaptation projects were carried out in Armenia, Ethiopia, Kenya, Kyrgyzstan, Nigeria and Palestine on 380 thousands EUR. Poland was also involved in the climate change mitigation projects in Autonomous Republic of Crimea, Egypt, Moldova, Tanzania, Ukraine with the 400 thousands EUR. Projects aimed at adaptation and mitigation were accomplished in Azerbaijan and Democratic People's Republic of Korea with the amount of 60 thousands EUR.

Poland supported financially international organisations acting in climate change combat with 890 thousands EUR.

There should be mentioned also that in September 2012 the Ministry of Foreign Affairs appointed interdepartmental coordination group for the *Policy Coherence for Development (PCD)*. This action is aimed at eliminating incoherent actions in the area of development policy thus resulting in minimizing negative impact on developing countries.

28. Portugal

Portugal provided the following information in its NIR for 2013.

This chapter provides information on how Portugal is implementing its commitment under Article 3, paragraph 14 of the Kyoto Protocol in such a way as to minimize adverse social, environmental and economic impacts on developing countries.

Portugal's contribution to the minimization of the adverse effects of climate change in other Parties, particularly developing countries, is carried out first of all through a strong commitment to implementing the Convention and the Kyoto Protocol.

By working on the implementation of the Protocol, Portugal is struggling to minimize not only the adverse effects of climate change in specific sectors, industries or other Parties, but also any adverse effects due to the reduction of greenhouse gases. This is due to the development of different actions and implementation of different instruments conceived to promote sustainable development and the commitment to support developing countries.

The policies and measures implemented, adopted or foreseen in the National Plan for Climate Change (PNAC), targeting the six GHG of the Kyoto Protocol through its broad portfolio of instruments and wide-ranging coverage of all sectors of the economy, make up a significant effort by the Portuguese Government to address climate change, including the minimization of adverse effects of such policies.

The transition to a lower carbon Portuguese economy relies on the contribution of all sectors. Particularly, the Portuguese Energy Strategy relies to a great extent in the diversification of energy sources (including those referring to fossil fuels) and to the increase of endogenous resources (renewable). In some cases, the measures pertaining to the diversification of primary energy sources (namely shifting to natural gas), can simultaneously have positive effects on Portugal's emissions reduction and in the economy of some fossil fuel exporting countries as in the case of:

- EU Emissions Trading System (EU ETS): the EU's main policy mechanism for reducing CO2 emissions from energy intensive sectors, and enables the creation of additional financial resources for climate change mitigation and adaptation in developing countries through the auction of emission allowances by member states;
- Inclusion of aviation in the EU emission trading scheme which addresses the challenge of reducing emissions from this sector, and enables the creation of additional financial resources for climate change mitigation and adaptation in developing countries through the auction of emission allowances by member states;
- EU Renewables Directive (Directive 2009/28/EC): sets ambitious targets for each member state for the share of renewable energy generation by 2020 and the proportion of renewable energy in the transport sector (includes biofuels, biogas, hydrogen and electricity from renewables);

Furthermore, the cooperation of Portugal with third countries looks to the integration of the adaptation dimension of climatic change in the several sectoral policies and instruments of planning, vulnerabilities and risks associates to climate change. The action of the Portuguese cooperation is developed on the basis of geographical priorities which are centered in the countries of Portuguese official language, in particular the PALOP and Timor East. All these countries are within the group of more vulnerable countries to the variations caused by climate changed either, because they are situated in its majority in Africa, or belong to the set of least developed countries and/or are small insular States.

At a multilateral level, Portugal supports the implementation of adaptation measures in the most vulnerable countries, in particular within the CPLP (Comunidade dos Países de Língua Portuguesa), and contributes to the adaptation fund, in the framework of the EU responsibilities. It also supports institutional capacity building within RELAC/CPLP (Rede Lusófona para as Alterações Climáticas).

At a bilateral level, assists ONGD (non-governmental organizations for development) projects in Angola, Cabo Verde, Guiné-Bissau, Moçambique e São Tomé e Príncipe; and promotes the sectoral integration the adaptation component in the Cooperation

Programs, in particular in the scope of Superior education and of Research in the field of Environmental Engineering, Agriculture and Rural Development, and Health.

29. Romania

No additional information was included in the NIR of Romania for 2013.

30. Russian Federation

The Russian Federation provided the following information in its NIR for 2013.

В Российской Федерации планируются и осуществляются политика и меры, направленные на предотвращение антропогенных изменений климата и снижение воздействия на климати- ческую систему. Осуществление политики и мер выполняется в комплексе с решением таких задач, как повышение энергоэффективности и общей эффективности экономики, охрана ок- ружающей среды и охрана здоровья населения. Указом Президента Российской Федерации от 4 июня 2008г. №889 «О некоторых мерах по повышению энергетической и экологической эф- фективности российской экономики» предусмотрено снижение к 2020г. энергоемкости вало- вого внутреннего продукта Российской Федерации не менее, чем на 40 процентов по сравне- нию с 2007г., обеспечение рационального и экологически ответственного использования энер- гии и энергетических ресурсов, что приведет к значительному снижению удельных (на едини- цу ВВП) выбросов парниковых газов.

«Основные направления государственной политики в сфере повышения энергетической эффективности электроэнергетики на основе использования возобновляемых источников энергии на период до 2020 года», утвержденные распоряжением Правительства Российской Федерации от 8 января 2009г. № 1-р, определяют цели и принципы использования возобнов- ляемых источников энергии, содержат целевые показатели объема производства электриче- ской энергии с использованием возобновляемых источников энергии и ее потребления в сово- купном балансе производства и потребления электрической энергии, а также меры по дости- жению этих показателей. На период до 2020 года устанавливаются следующие значения целе- вых показателей объема производства и потребления электрической энергии с использовани- ем возобновляемых источников (без учета гидроэлектростанций установленной мощностью более 25 МВт): в 2010г. – 1,5 %; в 2015г. – 2,5 %; в 2020г. – 4,5 %.

Российская Федерация практически полностью обеспечивает себя энергоресурсами за счет внутренней добычи. Значительный объем энергоресурсов экспортируется[10] Российский природный газ замещает в странах-импортерах более карбоноемкие виды топлива, снижая, таким образом, выбросы в атмосферу парниковых газов, в первую очередь, CO2. Экспорт осуществляется как в развитые, так и в развивающиеся страны. В 2010 – 2011 гг. Российская Федерация и Китайская Народная Республика (КНР) согласовали порядок экспортных по- ставок природного газа из России в КНР. Доставка природного газа будет производиться по двум направлениям: западному – из Западной Сибири и восточному – с месторождений Вос- точной Сибири,

[10] *Данные по экспорту энергоресурсов за 2011г. приведены в приложении 2 к настоящему докладу.*

Дальнего Востока и Сахалина. Планируемый объем поставок российского газа – около 30 млрд. м3 г-1. Начало поставок запланировано на 2015 год. Поставки природ- ного газа будут способствовать сокращению потребления в КНР угольного топлива и вне- дрению современных технологий в энергетическом секторе. В 2011 году Россия также осу- ществляла экспорт природного газа в Южную Корею и Индию.

Наряду с природным газом, Российская Федерация осуществляет экспорт сырой нефти в развивающиеся страны. Осуществляя поставки сырой нефти в развивающиеся страны, Рос- сийская Федерация содействует устойчивому развитию экономики этих государств. При этом выбросы парниковых газов от операций по добыче и первичной переработке (подго- товке) экспортируемых нефти и природного газа, а также утилизации нефтяного (попутного) газа учитываются на территории России и включены в настоящий доклад о кадастре в соста- ве национальных выбросов Российской Федерации. Снижение выбросов парниковых газов в нефтегазовом секторе выполняется Российской Федерацией в рамках запланированных и осуществляемых национальных политики и мер. В последние годы Президентом РФ и Правительством России принят комплекс мер, реализация которых позволит увеличить использование попутного нефтяного газа и снизит к 2020 году национальные выбросы парниковых газов в атмосферу. Энергетической стратегией России на период до 2030г. пре- дусмотрено увеличение до 95% уровня полезного использования попутного (нефтяного) га- за. В свою очередь, объем попутного (нефтяного) газа, сжигаемого в факелах, не должен превышать 5% объема его добычи уже к 2012 году (Указ Президента Российской Федерации от 4 июня 2008 года №889; Постановление Правительства России от 8 января 2009г. №7, Постановление Правительства России от 8 ноября 2012г. №1148).

В соответствии с долгосрочным соглашением о сотрудничестве между Российской Феде-рацией и КНР, в рамках строительства нефтепроводной системы «Восточная Сибирь – Ти-хий океан» построен отвод в КНР. В 2011 году объем поставок сырой нефти в КНР составил 15 млн. т.31 В целом же в 2011 году экспорт нефти в восточном направлении составил 43,4 млн. т, что на 18 млн. т больше, чем в 2010 году (по данным информационного агентства РИА-Новости32). География экспортных поставок российской нефти включала также Юж-ную Корею, Таиланд, Филиппины, Сингапур и Индию.

Российская Федерация осуществляет укрепление потенциала в области предотвращения изменения климата в развивающихся странах путем подготовки квалифицированных спе-циалистов. Подготовка специалистов и повышение их квалификации (обучение в аспиран-туре) осуществляется в профильных высших учебных заведениях. Помимо обучения спе-циалистов из развивающихся стран Африки, Азии и Латинской Америки, производится обу- чение студентов и аспирантов из стран СНГ, некоторые из которых также являются разви-вающимися странами. В системе высшего профессионального образования разработано 4 учебные программы, в которых осуществляется преподавание основ метеорологии, клима-тологии, систем сбора и обработки климатической информации, методов оценки состояния и прогнозирования изменений окружающей среды и климата. В 2011 году по специальности «Метеорология» и смежным специальностям климатологического и экологического профи-ля в Российской Федерации обучались 124 иностранных студента (в том числе 65 человек из развивающихся стран и 59 человек из стран СНГ, являющихся Сторонами РКИК ООН и Ки-отского протокола). В аспирантуре в 2011 году обучалось 14 человек (в том числе 6 человек из развивающихся стран и 3 человека из стран СНГ). Ежегодно Правительство

Российской Федерации осуществляет оплату обучения иностранных граждан из развивающихся стран и стран СНГ специальностям гидрометеорологического профиля на безвозмездной основе. В 2011 году на безвозмездной основе обучалось 95 студентов из развивающихся стран и стран СНГ, являющихся Сторонами РКИК ООН и Киотского протокола.

31. Slovakia

No additional information was included in the NIR of Slovakia for 2013.

32. Slovenia

No additional information was included in the NIR of Slovenia for 2013.

33. Spain

Spain provided the following information in its NIR for 2013.

Las actuaciones enumeradas en la pasada edición siguen en curso. A continuación se recoge la información adicional de España sobre la minimización de los posibles efectos adversos, del Artículo 3.14 del Protocolo de Kioto.

España continua apoyando y realizando numerosa actividades de cooperación en materia de tecnologías avanzadas poco emisoras de gases de efecto invernadero. Nuestras agencias participan activamente en diversas actividades, con especial atención a las energías renovales y más respetuosas con el medio ambiente. Entre otras agencias con numerosas actividades de colaboración se encuentran el Instituto para la Diversificación y el Ahorro de Energía (IDAE), el Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), el Centro para el Desarrollo Tecnológico Industrial (CDTI) y el Instituto Geológico Minero (IGME). Centrándonos en las acciones cabe destacar a continuación se recogen diversas actividades y proyectos apoyados y/o desarrollados por España.

Red Iberoamericana de Oficinas de Cambio Climatico (RIOCC)

España continúa las actividades de promoción de iniciativas de capacitación y cooperación tecnológica en el contexto de la RIOCC.[11]

Portal Regional para la Transferencia de la Tecnología y la Acción frente al Cambio Climático en América Latina y el Caribe (REGATTA)

España apoya y financia junto con otros donantes el proyecto REGATTA desarrollado por el Programa de Naciones Unidas para el Medio Ambiente (PNUMA). Se han realizado numerosos talleres y apoyado a diversos centros regionales, hay una web[12] oficial con la información más relevante.

El Mecanismo de Desarrollo Limpio (MDL)

Cabe mencionar finalmente la componente de transferencia tecnológica a través de proyectos MDL y programas de colaboración en I+D+i en energías renovables con

[11] www.lariocc.es
[12] http://www.cambioclimatico-regatta.org/index.php/es/

otros países tanto desarrollados como en desarrollo. Todos los proyectos[13] que han sido aprobados hasta la fecha se pueden consultar en la página del Ministerio de Agricultura, Alimentación y Medio Ambiente, apartado de la Autoridad Nacional Designada (AND).

Hasta la fecha (marzo 2013) la AND española ha concedido el informe de participación voluntaria a 254 proyectos. La mayoría de los proyectos aprobados por la AND de España corresponden a proyectos de energías renovables. Con este tipo de proyectos se relacionan en torno a la mitad de los aprobados por la AND, es decir 124 proyectos. El resto de proyectos aprobados hasta ahora, cuentan con las siguientes características: cerca de un 18 % de recuperación de gas de vertedero, un 18 % de proyectos de eficiencia energética, un 9% de sumideros forestales, un 5% de proyectos de sustitución de combustibles, un 2% de proyectos de incineración de HFC23.

Actuaciones y Proyectos singulars

A continuación se recogen los principales proyectos/actuaciones directamente relacionados con tecnologías avanzadas poco emisoras de gases de efecto invernadero, y/o tecnologías que capturen y almacenen gases de efecto invernadero, que incentiven su uso más amplio.

- Proyecto SOST-CO2:"Nuevas utilizaciones industriales sostenibles del CO2" y liderado por Carburos Metálicos, ha supuesto una inversión superior a 26 millones de euros, con una co-financiación del Centro para el Desarrollo Tecnológico Industrial (CDTI) de casi 12 millones de euros, una duración de 4 años (2008-2011) dando lugar a la firma de 46 contratos de investigación. El proyecto tiene una clara vertiente medioambiental, ya que, además de evitar emisiones de CO2 a la atmósfera, ha potenciado su uso en distintos sectores industriales, considerando el impacto medioambiental, y sustituyendo a otros productos o procesos más perjudiciales con el medio ambiente. Entre los logros obtenidos cabe destacar resultados de alto impacto científico y de clara aplicación industrial: el desarrollo de un método que permite la evaluación rápidade catalizadores para la reducción de CO2 y el desarrollo de sensores que determinan la cantidad en cultivos de microalgas; el crecimiento de microalgas como materia prima de biocombustibles renovables y de otros productos de alto valor añadido para la industria farmacéutica; el uso optimizado de CO2 en piscinas sustituyendo a compuestos clorados; y el uso del CO2 para desinsectación de alimentos.
- Proyecto CENIT VERDE: es un proyecto dedicado a la investigación y generación del conocimiento necesario para la futura fabricación y comercialización de vehículos ecológicos a España, básicamente híbridos enchufables (PHEV) y eléctricos (EV). Está subvencionado por el Ministerio dentro del Programa CENIT (Consorcios Estratégicos Nacionales de Investigación Técnica) a través del CDTI. Participan 16 empresas del sector de automoción, infraestructura y energía, se desarrolla en un total de seis comunidades autónomas: Andalucía, Aragón, Cataluña, Madrid, País Vasco y Comunidad Valenciana y su presupuesto total es de 34M€.
- Proyecto ALGECO2: El Instituto Geológico Minero de España (IGME) dentro del Área de Geología del Subsuelo y almacenamiento de CO2, ha desarrollado un programa que se ha plasmado, durante los años 2009-2010 en el denominado "Plan de selección y caracterización de áreas y estructuras favorables para el

[13] http://www.magrama.gob.es/es/cambio-climatico/temas/mecanismos-de-flexibilidad-ysumideros/6._Listado_de_proyectos_aprobados_32_AND_tcm7-161411.pdf

Almacenamiento Geológico de CO2 en España", Plan ALGECO2. El Plan ha recibido el apoyo financiero del Instituto para la Reestructuración de la Minería del Carbón y el Desarrollo Alternativo de las Comarcas Mineras IRMC, dependiente del Ministerio de Industria, Energía y Turismo. Las zonas y estructuras a estudiar se circunscriben a 4 grandes Dominios Geológicos terrestres.

Instalaciones científico-técnicas de referencia

- Centro Nacional de Energías Renovables (CENER): Es un centro tecnológico, ubicado en la Comunidad de Navarra, especializado en la investigación aplicada, el desarrollo y fomento de las energías renovables y cuenta con seis líneas principales de actuación: Eólica, solar térmica, solar fotovoltaica, biomasa, bioclimática e integración en red de tecnologías renovables, abarcando sus actividades todo el proceso de generación: determinación del recurso, desarrollo de la tecnología, evaluación de riesgos tecnológicos y de viabilidad económica de los proyectos, integración en el sistema, etc. Los objetivos de CENER son apoyar la actividad de I+D+i en energías renovables y contribuir a su penetración en el sistema energético mediante la generación de las herramientas y la prestación de los servicios necesarios para solventar los problemas técnicos y de relación entre los diferentes agentes del sistema, combinando la Investigación, el Desarrollo Tecnológico y la transferencia de Tecnología con la prestación de servicios de asistencia técnica y consultoría a las empresas.

- Plataforma Solar de Almeria: La Plataforma Solar de Almería (PSA), perteneciente al Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), es el mayor centro europeo de I+D en tecnología solar de concentración. La PSA está reconocida como Instalación Científica y Tecnológica Singular (ICTS) por el Ministerio de Ciencia e Innovación y como "Large-Scale Research Facility" por parte de la Comisión Europea. Además es integrante del Laboratorio Asociado Europeo de Energía Solar (SolLAB). En la actualidad se estudian otras aplicaciones térmicas aparte de la producción de electricidad.

- Plataforma de Investigación en Recursos Hídricos: Su objetivo será la promoción y el apoyo al desarrollo de la I+D+i en el uso y gestión de los recursos hídricos y tecnología del agua, con especial énfasis en los problemas relacionados con la escasez del agua. Complementará la labor de otros organismos de investigación de la zona en materia de optimización y uso sostenible de este recurso. Los estudios tratarán acerca de la reutilización y minimización de vertidos y obtención de agua dulce, con el objeto de aminorar el impacto de fenómenos como la erosión, la desertificación y la sequía.

Plataformas Tecnológicas

En las Plataformas Tecnológicas Europeas (European Technology Platforms–ETP), se dan cita todas las partes interesadas, dirigidas por la industria, para definir los objetivos de investigación y de desarrollo tecnológico a medio y largo plazo. Las Plataformas Tecnológicas Españolas suponen un interesante y exitoso instrumento de refuerzo y complemento de las europeas e intrnacionales y permiten encaminar esfuerzos hacia un escenario más comprometido, planificado y estructurado de la innovación. En ámbito de la energía, hay 10 Plataformas Tecnológicas Españolas:

- Plataforma Tecnológica Española del Hidrógeno y de las Pilas de Combustible www.ptehpc.org

- Plataforma Española de Redes Eléctricas. FUTURED www.futured.es

- Plataforma Tecnológica del Sector Eólico - REOLTEC www.reoltec.net
- Plataforma Tecnológica Española de la Biomasa. BIOPLAT www.bioplat.org
- Plataforma Tecnológica Española del CO2 www.pteco2.es
- Plataforma Tecnológica Española de Eficiencia Energética www.pte-ee.org
- Plataforma Tecnológica Española de Geotermia. GEOPLAT www.geoplat.org
- Plataforma Tecnológica de Energía Solar de Concentración www.solarconcentra.org
- Plataforma Tecnológica de Energía Nuclear de Fisión – CEIDEN
- Plataforma Tecnológica Española Fotovoltaica

Séptimo Programa Marco (7º FP)

La participación española en actividades o iniciativas incluye la participación en el SET PLAN.

En 2007 se lanza el SET Plan (Strategic Energy Technology Plan) como pilar tecnológico de las políticas climáticas y energéticas, cuyo máximo objetivo es acelerar el despliegue comercial de las tecnologías de bajo carbono y afianzar el liderazgo de la UE en el sector de tecnologías limpias. El SET PLAN trabaja a dos niveles: industria (a través de las European Industrial Initiatives, EIIs) y comunidad científica (a través de la European Energy Research Alliance, EERA).

A las tecnologías identificadas en un primer momento: Energía solar de concentración; Energía eólica; Energía fotovoltaica; Biocombustibles; Captura y almacenamiento de CO2; Pilas de Hidrógeno; Redes Inteligentes de energía y Eficiencia Energética, se añaden nuevas tecnologías como por ejemplo energía oceánica o energía geotérmica. que empiezan a desarrollar planes de implementación. El marco de financiación del SET Plan es el 7FP (7º Programa Marco) además de CIP-EIE, EEPR y NER 300).

La Participación española en SET Plan incluye la presencia de España en el Steering Group y la coordinación con representantes del Comité de Programa FP7 (CDTI), además de la presencia de expertos españoles en los EII Teams, la creación del Grupo Nacional de trabajo de SET Plan con representantes de MICINN, CDTI.

CIUDEN (Fundación Ciudad de la Energía)

Iniciativa en colaboración con el CIEMAT, organismo dependiente del Ministerio de Industria, Energía y Turismo, ha puesto en marcha un Programa de Captura de CO2, en su centro experimental de Desarrollo de Tecnologías de Captura de CO2 (es.CO2), ubicado en Cubillos del Sil (León), completando con éxito el proceso completo de captura de CO2, vía oxicombustión en caldera de lecho fluido circulante (LFC), tras poner en marcha el sistema de purificación y compresión de CO2 (CPU). Proyecto Compostilla, iniciativa de investigación, desarrollo tecnológico e innovación sobre tecnologías de captura y almacenamiento de CO2 (CAC) más importante de España, tanto por cuantía como por las entidades implicadas. Lo ejecutan la Fundación, Endesa y Foster Wheeler.

La Fundación tiene en estos momentos contratos con la Comisión Europea en el ámbito del 7º Programa Marco de Investigación y el Plan Energético para la Recuperación Económica para un conjunto de proyectos de desarrollo de gran importancia entre los que destacan: el Proyecto Flexiburn CFB; incluido en el Séptimo Programa Marco de la Unión Europea. La Fundación trabaja en la validación de la tecnología por oxicombustión en lecho fluido circulante (LFC), una tecnología de alto

rendimiento y flexibilidad de operación. El proyecto MACPLUS,Incluido en el Séptimo Programa Marco de la Unión Europea para la mejora tecnológica de los components de las calderas oxicombustión. ECCSEL, infraestructura Europea para Captura y Almacenamiento de Dióxido de Carbono para reducir los niveles de emisión de CO2. RELCOM, incluido en el Séptimo Programa Marco de la Unión Europea para la mejora tecnológica de los componentes de las calderas de carbón pulverizado en oxicombustión. La Fundación colabora con aproximadamente 13 instituciones y empresas europeas de primer nivel. R&DIALOGUE, tiene como objetivo la puesta en práctica de un conjunto de acciones a nivel nacional y europeo para establecer los mecanismos de participación y diálogo entre organizaciones de I+D y la sociedad civil, en relación a las opciones tecnológicas para avanzar hacia una economía baja en carbono, que implique una reducción de las emisiones de CO2. DOTGe, Demostración y Optimización de la Tecnología de Gasificación de Biomasa en Lecho Fluido Burbujeante para la generación de energía eléctrica.

La Alianza por la Investigación y la Innovación Energéticas (ALINNE)

Alinne es un gran pacto nacional público-privado, que nace con el reto de reforzar el liderazgo internacional de España en energía. Con el objetivo de estimular y coordinar la participación española en la Alianza Europea de Investigación en Energía (EERA), impulsada inicialmente por los centros públicos de I+D europeos más relevantes en este campo. Esta iniciativa agrupa a gran parte del sector privado y público europeo y se ha convertido en un instrumento esencial para la puesta en marcha del Plan Estratégico en Tecnologías Energéticas (SET-Plan); así como el de favorecer la coordinación y participación en iniciativas internacionales, especialmente a nivel europeo, por ejemplo, los Programas Marco, las Iniciativas Industriales Europeas (EII), las Iniciativas Tecnológicas Conjuntas (JTI), las Plataformas Tecnológicas Europeas (ETP) o las Knowledge and Innovation Communities (KIC). También busca estimular y coordinar la participación española en la Alianza Europea de Investigación en Energía (EERA).

NER 300

Financiación de proyectos de demostración de captura y almacenamiento geológico de carbono y de renovables innovadoras (NER300)

La Directiva 2009/29/CE prevé que 300 millones de derechos de emisión se destinen a financiar proyectos de demostración de captura y almacenamiento geológico decarbono y de renovables innovadoras.

Las reglas básicas que rigen este mecanismo de financiación quedan establecidas enla Decisión de la Comisión 2010/670, de 3 de noviembre. Es un programa de character comunitario, en el que no obstante se permite que los Estados Miembros que impongan criterios de selección adicionales para los proyectos ubicados en su territorio.

Con fecha 9 de noviembre de 2010 la Comisión lanzó la convocatoria correspondiente al primer tramo de ayudas, que se financiarán con los fondos que se obtengan con la venta de 200 millones de derechos de emisión. La convocatoria establecía un plazo de tres meses para que los promotores interesados presentaran las solicitudes de financiación a las autoridades competentes del Estado miembro donde se ubicara el proyecto. Seguidamente cada Estado miembro debía evaluar el cumplimiento de los criterios establecidos en la convocatoria y decidir qué proyectos apoyaba.

En el caso de España se constituyó una comisión de evaluación con representación de los Departamentos con competencias en materia de Medio Ambiente, Energía e Innovación Tecnológica, Economía así como de Presidencia del Gobierno. Asimismo,

se establecieron criterios de valoración para determinar qué solicitudes recibirían el apoyo del Estado y, en consecuencia, serían remitidos al Banco Europeo de Inversiones para que allí continuara la tramitación para la selección de los proyectos elegidos. Finalmente, mediante resolución de 9 de mayo de 2011 de la entonces Secretaria de Estado de Cambio Climático se acordó apoyar tres proyectos, que fueron transmitidos al Banco Europeo de Inversiones para ser sometidos a la siguiente fase del proceso de selección. Estos tres proyectos fueron: "ZEFIR", promovido por IREC: energía eólica marina con sistema eólico flotante en alta mar; "PTC50-Alvarado", promovido por Acciona Energía, S.A.: energía solar de concentración con sistema de torre y "LignoBiohol", promovido por Abengoa Bioenergía Nuevas Tecnologías, S.A.: biocombustibles de segunda generación.

El 18 de diciembre de 2012 la Comisión adoptó una Decisión determinando los proyectos ganadores en la primera convocatoria de ayudas. Entre los proyectos adjudicatarios está el promovido por Acciona Energía, S.A.

Cooperación internación en materia de eficiencia energética y energías renovables

España a través del Instituto de Diversificación y Ahorro Energético (IDAE) desarrolla numerosas actividades de cooperación internacional.

Parte de las actividades se centran en la participación en las iniciativas internacionales y multilaterales y las organizaciones en representación del Gobierno español y, por otra parte, en otras actividades tales como la cooperación y la asistencia técnica en diferentes áreas geográficas. En cuanto a la participación en las iniciativas y organizaciones internacionales, IDEA realiza un seguimiento y participa en las reuniones de la Agencia Internacional de Energías Renovables (IRENA) (www.irena.org), que fue fundada en 2009 en Bonn (Alemania). Su origen está en una iniciativa alemana apoyada por Dinamarca y España. IRENA aspira a convertirse en la principal fuerza motriz en la promoción de una transición hacia el uso de energías renovables a escala global.

IDAE también trabaja en tres de las trece iniciativas enmarcadas bajo el Clean Energy Ministerial (CEM) (www.cleanenergyministerial.org). España lidera, junto con Alemania y Dinamarca la iniciativa denominada Grupo de Trabajo Multilateral sobre las energías solar y eólica. El atlas solar y eólico, así como las actividades de creación de capacidades se están desarrollando dentro de esta iniciativa.

Otros foros donde IDAE participa como representante nacional son la Agencia Internacional de Energía (AIE), la Alianza para la Electrificación Rural (ARE), la Asociación Mundial de la Bioenergía (GBEP) y la Red de Políticas de Energía Renovable para el siglo 21 (REN21), entre otros.

Regiones prioritarias de colaboración IDAE son América Latina y el Mediterráneo. Se han llevado a cabo varios proyectos de cooperación tecnológica en América Latina, como el proyecto Tech4CDM (www.tech4cdm.com), ha mantenido colaboraciones bilaterales con la mayoría de los países líderes de la región y tiene contacto con las organizaciones pertinentes, como es el caso de la Organización Latinoamericana de Energía (OLADE).

España participa activamente en el Plan Solar Mediterráneo, siendo uno de los seis proyectos prioritarios de la Unión por el Mediterráneo (UpM). El Plan Solar Mediterráneo tiene como objetivo la implementación de 20 GW de producción adicional de electricidad renovable para 2020 en la costa sur, así como las infraestructuras necesarias para la interconexión con Europa. El Plan también contempla medidas de ahorro de energía y eficiencia, junto con la transferencia de

tecnología. Además, el IDAE participa en proyectos de la Cooperación Española o cofinanciados con fondos de la UE, así como las actividades de cooperación bilateral con los países de la región del Mediterráneo como Argelia, Egipto, Libia, Siria, Túnez y Marruecos en particular. IDAE es también miembro fundador de la Asociación Mediterránea de Agencias Nacionales de Conservación de Energía (MEDENER) (www.medener.net).

En cuanto a Asia, también se mantiene una importante colaboración con varios países, entre ellos China, Corea e India. Diferentes actividades se llevan a cabo durante el 2011 y 2012 en el marco de cada uno de los Memorando de Entendimiento (MoU) que el Gobierno español ha firmado con los países respectivos.

En África, además de los países mediterráneos, se ha estado colaborando desde 2010 en la puesta en marcha del Centro Regional de Energía Renovable y Eficiencia Energética (ECREEE) (www.ecreee.org) de la Comunidad Económica de los Estados del África Occidental (CEDEAO), que tiene como objetivo promover las energías renovables y la eficiencia energética en los quince países de la CEDEAO agrupación. ECREEE ha recibido el apoyo financiero e institucional de la Agencia Española de Cooperación Internacional para el Desarrollo (AECID).

Por último, es importante destacar la interacción entre el IDAE y otros países a través de las Oficinas Económicas y Comerciales de las Embajadas de España.

34. Sweden

No additional information was included in the NIR of Sweden for 2013.

35. Switzerland

No additional information was included in the NIR of Switzerland for 2013.

36. Ukraine

Ukraine provided the following information in its NIR for 2013.

Свой вклад в дело укрепления потенциала в области предотвращения изменения климата в развивающихся странах Украина осуществляет путем подготовки квалифицированных специалистов в области экологии, климатологии, метеорологии и энергоэффективности. Обучение проводится в высших учебных заведениях и в аспирантуре в рамках соответствующих международных соглашений. Помимо обучения специалистов из развивающихся стран осуществляется обучение студентов и аспирантов из стран СНГ. Ведущую роль в этом процессе играют перечисленные ниже университеты Украины:

- Одесский государственный экологический университет (специализированный)
- Киевский национальный университет имени Тараса Шевченко
- Харьковский национальный университет имени В.Н. Каразина
- Национальный авиационный университет (г. Киев)
- Донецкий национальный технический университет

- Национальный технический университет Украины «КПИ»
- Сумской государственный университет
- Национальный университет биоресурсов и природопользования Украины (г. Киев)
- Черновицкий национальный университет имени Ю. Федьковича
- Национальный лесотехнический университет Украины (г. Львов)
- Национальный университет «Львовская политехника»
- Таврический национальный университет имени В.И. Вернадского
- Национальный университет водного хозяйства и природопользования (г. Ровно)
- Херсонский государственный аграрный университет

Одесский государственный экологический университет, в структуру которого входит Гидрометеорологический институт, эколого-экономический и природоохранный факультеты.

Это высшее учебное заведение осуществляет подготовку специалистов в областях гидрометеорологии, экологии, мониторинга состояния окружающей среды, организации природоохранной деятельности, водных биоресурсов, менеджмента природопользования, компьютерных технологий и др. в соответствии с современными требованиями и на уровне лучших европейских и мировых стандартов. Среди его выпускников немало крупных ученых, исследователей окружающей среды, руководителей гидрометеорологических подразделений Украины и стран СНГ, различных развивающихся государств. В 2011г. ВУЗ выпустил подготовленных магистров для стран: Россия, Армения, Молдова, Китай. Продолжают образование студенты из Молдовы, Азербайджана и России по специальности «Экология и охрана окружающей среды», студенты из Молдовы по специальности «Гидрометеорология», студенты из России, Молдовы, Азербайджана, Казахстана, Грузии, Вьетнама и Китая по специальности «Менеджмент организаций природохранной деятельности». Проходит подготовку аспирант из Китая.

Киевский Национальный Университет имени Тараса Шевченко, Географический факультет которого готовит специалистов по рациональному использованию природных ресурсов и охране природы, аэрокосмическому мониторингу окружающей среды, географовгеоэкологов, геоморфологов, метеорологов.

Национальный технический университет Украины «Киевский политехнический институт» в таких структурных подразделениях как «Институт энергосбережения и энергоменеджмента» и теплоэнергетический факультет, готовит специалистов для электроэнергетического и топливно-энергетического комплексов, строительства городских подземных сооружений и охраны окружающей среды, которые способны разрабатывать, проектировать и эксплуатировать энергетические комплексы и системы, создавать современные системы экоэнергетического менеджмента, работающие по современным энергосберегающим технологиям, подземные объекты и комплексы городов, проводить мониторинг экологического состояния промышленных предприятий на основе широкого применения информационных и компьютерных технологий. Выпускники работают экспертами по вопросам эффективного использования энергоресурсов, предоставляют консалтинговые и инжиниринговые услуги,

энергоаудиторами и инспекторами в энергетическом секторе, руководителями, ведущими специалистами структурных подразделений на предприятиях и в организациях электроэнергетики, топливно-энергетического комплекса, горнодобывающей промышленности, строительства и эксплуатации городских подземных сооружений, в учреждениях для проведения экологического мониторинга.

Только в данный момент обучение в этом вузе по перечисленным специальностям проходят 700 иностранных студентов из развивающихся стран, являющихся Сторонами РКИК ООН.

Сумской государственный университет плотно сотрудничает с ВУЗами Китайской народной республики. Кроме того, на соответствующих специальностях учатся студенты из России. В 2011г. подготовлен аспирант из Ирана.

По данным Национального авиационного университета (г. Киев), подготовку в нем в 2008-2011 гг. прошли 1 275 иностранных студентов:

Страны Азии – 53%;

Страны СНГ – 40%;

Страны Африки – 4%.

Национальный университет «Львовская политехника» в 2011г. подготовил для развивающихся стран 2 специалистов. Становится заметной роль украинских инжениринговых компаний по распространению в других странах технологий использования альтернативных источников энергии, в частности, применения биотоплива. Например, ООО НТЦ Биомасса осуществляет проекты в Молдове и Турции: «Разработка технических решений по реконструкции котла SELNIKEL (Турция), который работает на лузге подсолнуха», Проект Механизма чистого развития «Замещение природного газа биомассой на предприятии ―Orhei-Vit‖ SA, Молдова», Проект Механизма чистого развития «Строительство ТЭЦ на ОАО «Тиротекс», г. Тирасполь, Молдова». Последний из проектов является наиболее масштабным в Республике Молдова электрогенерирующим проектом из альтернативных источников энергии. Предусматривает отказ от раздельного производства тепловой и электрической энергии из ископаемых топлив путем сооружения 8 когенерационных модулей, работающих на газовом цикле двигателей внутреннего сгорания.

Проект полностью обеспечивает собственные потребности в тепловой энергии текстильного предприятия ГП «Тиротекс», выработанная электроэнергия – продается в объединенную энергосеть Республики Молдова, замещая более углеродоемкую электроэнергию, вырабатываемую тепловыми электростанциями. Среднегодовые сокращения выбросов по проекту составляют 100 тыс. тСО2-экв./год, общие сокращения – 400 тыс. тСО2.

ООО "Зорг Биогаз Украина" строит биогазовые станции в Росии, Литве, Словакии и Индонезии. Сырьем для получения биогаза являются навозные стоки КРС и свиней.

Также необходимо подчеркнуть значительную роль Украины, представленной Украинским научно-исследовательским гидрометеорологическим институтом МЧС Украины и НАН Украины (УкрНИГМИ), в глобальной сети системы наблюдения за изменением климата.

37. United Kingdom of Great Britain and Northern Ireland

The United Kingdom updated the following information in its NIR for 2013.

15.3.1 The International Climate Fund

The ICF is intended to demonstrate that building low carbon, climate resilient growth at scale is feasible and desirable. Additionally, it is intended to support climate negotiations, particularly through providing support for adaptation in poor countries and building an effective international architecture. The fund also aims to recognise that climate change offers real opportunities to drive innovation and new ideas for action, and create new partnerships with the private sector to support low carbon climate resilient growth. Detailed information on the fund, including on the projects that it is supporting, can be found on our website[14]. Some examples of the types of projects that are supported by the fund follow.

The UK is investing £130 million in the Climate Public Private Partnership (CP3) from the ICF. CP3 will support projects delivering renewable and efficient energy, new technology and protect natural resources in emerging and developing countries including Africa and Asia. The funds will be run on a strict commercial basis by professional fund managers, demonstrating that developing country climate projects offer real investor opportunities. By investing in new renewable installations and technologies the initiative is expected to contribute to deploying approximately 7,000 Megawatts of clean, reliable energy and create up to 40,000 jobs. Across a range of investments CP3 is expected to contribute to GHG emission savings of at least 265 million tonnes of CO2 over the lifetime of the projects in which CP3 funds are invested.

ICF funds of £98million over 2012 to 2015 will support the Green Africa Power (GAP) project, to tackle specific constraints to private sector investment in renewable power generation in Africa. The UK will provide £95 million to capitalise GAP - a new company that will be established under the Private Infrastructure Development Group (PIDG) Trust. GAP will invest in renewable energy projects to demonstrate the viability of renewable energy in Africa so that future projects are more likely to happen and attract private developers and investors. A further £3 million will be used to set up the project, monitor and evaluate these impacts and capture and disseminate this knowledge. GAP aims to support projects that will install ~270MW of renewable energy in Africa in 4 years, avoiding an estimated 2.3m tonnes of CO2 emissions.

A £15m grant will support the growth of silvopastoral systems (SPS) in Colombia to reduce greenhouse gas emissions, improve the livelihood of farmers, protect local forests and increase biodiversity. Agriculture is one of the biggest sources of greenhouse gas emissions in Colombia and many other developing countries, and a key driver of deforestation. Addressing this fact, the UK and partners are working with cattle ranchers to improve degraded grazing land by using SPS. This means managing the land in a different way: planting trees, shrubs, fodder crops and living fences and conserving existing forest. Participating small farmers, the majority of whom are living in conditions of rural poverty, are able to raise more, healthier cattle on their existing land using SPS, increasing their income and reducing the need to clear forest. This project aims to convert 28,000 hectares of grazing land to SPS, saving around 2MtCO2e over the next 8 years, and create a strategy for increasing the use of SPS in Colombia and beyond.

[14] https://www.gov.uk/government/policies/taking-international-action-to-mitigate-climate-change/supporting-pages/international-climate-fund-icf

Through the ICF, the UK is also providing £6m to help kick start solar energy projects in India. This funding will offset part of the financing cost of using ADB political and commercial risk guarantees on commercial loans for small-scale (2-25 MW) solar plants. These guarantees on private sector loans are available under ADB's Solar Power Generation Guarantee Facility. This will help India make the shift to a low carbon economy, and will reduce the risks for investors, generating an estimated £265m in private sector investment. This should lead to around 130 MW of solar power capacity, avoiding 4.9 million tonnes of carbon dioxide going into the atmosphere over the next 25 years.

The UK has also contributed £7m and technical support to the World Bank's Partnership for Market Readiness to help developing countries design market-based mechanisms for reducing their greenhouse gas emissions. This will foster increased investment in green technologies across the world and help stimulate private sector low carbon investment opportunities. The Partnership aims to increase the number of experts in 16 developing countries to design and implement market-based schemes, and create a knowledge sharing forum.

Low carbon technology needs to be accessible to all and the UK will promote growth and prosperity by stimulating investment in clean energy, and increasing energy access for the poor. Through our ICF funding to the Scaling up Renewable Energy Program (SREP), we will help to support 3.4 million people in securing access to clean energy including in Ethiopia, Honduras, Kenya, Mali and Nepal. For example, in Kenya, SREP investment in increased renewable energy services will facilitate the construction of a geothermal plant and enable this to be connected to the grid to increase Kenya's renewable energy supply by 32%. In addition, by connecting this 200MW power plant to the grid by 2015, it will demonstrate a model for replication to enable a potential 5000MW to be generated by geothermal power in Kenya by 2030.

The UK has committed up to £60 million of finance from the ICF to support developing countries to develop both the technical and institutional knowledge necessary to enable the deployment of CCS technologies. The UK has agreed to fund £35m and £25m respectively to Asian Development Bank and World Bank Trust Funds to support CCS capacity building projects. Financial support would be channelled toward a range of projects in China, South Africa and Indonesia with the aim of ensuring sufficient political support is created to pave the way for full scale demonstration and ultimately the deployment of CCS.

The Nationally Appropriate Mitigation Actions (NAMA) Facility was launched by the UK and German governments in December 2012. The UK has committed £25 million (approximately €30 million) to the NAMA Facility with Germany committing another €40 million. The Facility will fund the most transformational parts of NAMA plans. NAMAs are concrete projects, policies, or programmes that shift a technology or sector in a country onto a low-carbon development trajectory. This project will focus on those parts of the projects that are stretching and aspirational, that are pushing to do much more than business as usual to mitigate the impacts of climate change.

15.3.2 Knowledge transfer

Knowledge transfer can help accelerate the development and deployment of low-carbon and climate resilient technologies to help developing countries mitigate and adapt to climate change.

The UK cooperates in the development, diffusion and transfer of less greenhouse-gas emitting advanced fossil-fuel technologies, and/or technologies relating to fossil fuels that capture and store greenhouse gases, and encouraging their wider use. The UK supports the establishment of a Technology Mechanism (TM), as agreed at COP16 in

Cancun 2010, and is already involved with several knowledge transfer initiatives. In addition to the UK's long standing involvement in initiatives such as the Climate Technology Initiative recent actions in this area include:

- In 2010 the UK established the Climate and Development Knowledge Network (CDKN) to provide developing countries access to the latest research, knowledge, technical assistance and capacity building on climate change. In response to requests from developing countries themselves, CDKN helps policy-makers and practitioners plan and implement strategies that meet the climate challenges of their country.
- The UK has been supporting the concept of Climate Innovation Centres (CICs) in developing countries. These centres will provide a national focal point for innovation in climate-friendly technologies, providing business development support; R&D grants and links to local universities; links to local financiers; and market analysis within that country. CICs will be linked to other CICs by InfoDev (the implementing partner) to encourage cross-border learning and knowledge sharing. The first centre has opened in Kenya in September 2012, with Ethiopia closely following. Scoping work is also underway in other countries.

15.3.3 Research collaboration

Enhancing global collaboration on research, development and demonstration (RD&D) will be essential to ensure innovation and take-up of climate technologies in developing countries. The UK is cooperating in the technological development of non-energy uses of fossil fuels, and doing so in partnership and supporting developing countries. We are exploring opportunities to support RD&D 'gap-filling' activity on climate technologies (both for mitigation/low carbon development and adaptation activities).

Recent examples of this commitment to collaborative research are 2010-2011 projects on low carbon technology transfer to China and India that the Department of Energy and Climate Change has supports. The main focus of the studies is to provide new empirical evidence to low carbon innovation in developing countries to inform international policy development. Both studies feature a range of low carbon technologies and examine the factors that influence innovation and technology transfer, including technological capacity, access to intellectual property rights and the role of policy frameworks.

International engagement is a significant part of the AVOIDing dangerous climate change (AVOID) programme and there have been a number of international activities to build links and explore understanding of the issues. The programme has investigated China's technology options for reducing CO2 emissions from the energy sector in order to meet a national 2050 emissions target that is consistent with the international goal of limiting global temperature rise to below 2°C. The initial findings of the project were reviewed by Chinese researchers who subsequently provided input to the final report. The final report was followed by a workshop in Beijing involving UK and Chinese researcher and officials to share and compare thoughts on potential technology pathways for China. The AVOID programme is also currently considering options for working with Indian research institutes to conduct a similar analysis on India's technology options for meeting the 2°C target.

The UK has recently signed a Memorandum of Understanding (MoU) on energy research with the government of Bangladesh. Under the MoU, collaborative research projects on renewable energy as well as research related to energy technologies,

systems, services and policies will be developed. It will involve UK universities and institutes partnering with colleagues in Bangladesh.

The UK is playing a key role on promoting knowledge sharing and capacity building in developing countries on Carbon Capture & Storage (CCS). The UK has committed up to £60 million of finance from the International Climate Fund (ICF) to support developing countries to develop both the technical and institutional knowledge necessary to enable the deployment of CCS technologies. The UK continues to jointly lead with Australia the CCUS initiative under the Clean Energy Ministerial, the next meeting of which will be held in Delhi in April 2013 involving governments of both developed and developing nations. The UK is active in a number of multilateral organisations such as the Carbon Sequestration Leadership Forum (CSLF) which aims to promote the deployment of CCS worldwide in both developed and developing countries. In addition, in March 2013 the UK will co-host the third 4 Kingdoms Initiative workshop with the government of Norway, which brings together representatives of four oil-producing countries to drive efforts to reduce the economic losses of CCS through alternative uses for CO_2.

15.3.4 Capacity Building projects on Renewable Energy & Energy Efficiency

The UK is cooperating in the development, diffusion and transfer of less greenhouse-gas emitting advanced fossil-fuel technologies, and/or technologies relating to fossil fuels that capture and store greenhouse gases, and encouraging their wider use; and through capacity building projects is facilitating the participation of the least developed countries.

The UK is supporting the development of low carbon technology and the increased use of renewable energy to ensure that developing countries can move to a low carbon future that supports economic growth. The UK is a signatory to the International Renewable Energy Agency (IRENA) which is an intergovernmental treaty organisation set up in 2009 to promote a rapid transition to the widespread and sustainable use of renewable energy technologies internationally. The UK has been playing an active part in IRENA by chairing its Policy and Strategy Committee to help develop the agency's work programme for 2012 (which includes activities on Policy Advisory Services and Capacity Building) and its mid-term strategy. Similarly, the UK (both DFID and DECC) continues to contribute to the Clean Technology Fund (CTF), one of the Climate Investment Funds; at the Durban COP in 2011, the UK announced a further contribution of £150m to the CTF, in addition to £385 already provided (2008-2011).

It is important to tackle both the supply and the demand side to achieve sustainable low carbon energy. In the 5th National Communication the UK illustrated its continued involvement with multi-lateral partnerships such as the Renewable Energy and Energy Efficiency Partnership, which has the objective of accelerating the deployment of renewable energy and energy efficiency technologies in developing countries as a means of reducing carbon emissions, increasing energy security, and improving access to sustainable energy. It does so primarily through funding small scale capacity building projects, and to date it has funded 150 projects. The UK has also been recently active in energy efficiency capacity building, such as:

- The UK is working within the International Partnership for Energy Efficiency Co-operation (IPEEC) with key developed and developing countries to share experience and learn from each other's policy successes and failures, and identify opportunities for collaborative work to address issues of mutual interest or concern, where such international action can add value to domestic efforts/expertise. A

work programme has been developed encompassing a range of activities covering appliance standards and labels, sustainable buildings, financing mechanisms, data collection and indicators, energy management, the role of utilities (UK_led) and capacity building activities.

15.3.5 Capacity building projects on adapting to climate change

The UK Government is working to ensure that aid addresses both the causes and likely effects of climate change so that current and future progress in tackling poverty continues. The world's poorest people are hit hardest by the impacts of climate change with their crops lost to floods and drought, their homes damaged by floods and threatened by rising sea levels, and lives lost to extreme weather events. They are the most vulnerable and least able to adapt.

The UK is supporting developing countries to adapt to climate change through practical on-the-ground support, by building climate knowledge and capacity in vulnerable countries and by helping to ensure countries get access to sufficient finance.

Examples include:

- Since Durban the UK has committed £100m from DFID and DECC to the Pilot Programme for Climate Resilience (PPCR) in addition to the UK's earlier £225m contribution. This support is designed to deliver transformational outcomes in a small number of pilot countries through supporting the integration of climate resilience into development planning and budgeting.
- The UK also announced £10m support from DFID for the Adaptation Fund to support concrete adaptation activities that reduce vulnerability and increase adaptive capacity to respond to the impacts of climate change, including variability at local and national levels.