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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**

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## 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:<sup>1</sup>

(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;

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

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

(d) 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;

(e) 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;

(f) 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 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.

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<sup>1</sup> In accordance with decision 31/CMP.1, paragraph 11, the secretariat 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.

## **II. Approach**

6. In 2014, 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 2014 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 2014 national inventory report (NIR) differs from the information provided in the 2013 NIR, the complete text as included in the 2014 NIR is presented in this compilation;
- b) In the case that only a small part of the information provided in the 2014 NIR differs from the information provided in the 2013 NIR, only the varied part is presented;
- c) In the case that additional information is provided in the 2014 NIR on top of the information provided in the 2013 NIR, only the additional part is presented;
- d) In the case that no difference was found between the 2013 and 2014 NIRs, it is stated “No additional information was included in the NIR for 2014” 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 2014

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Australia is pleased to provide an update to 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 committed to taking cost-effective and practical steps to reduce emissions consistent with our target to reduce Australia's emissions by five per cent on 2000 levels by 2020. Australia's Emissions Reduction Fund will provide incentives for lowest cost emissions reduction activities within the Australian economy. Australia also supports international initiatives to advance practical climate action consistent with continued economic growth.

It is accepted that the cost of global climate action is lower than the cost of inaction. It follows that curbing emissions and reducing the impact of climate change will have substantial economic, social and environmental benefits, particularly for developing countries that are most vulnerable to climate impacts.

Australia cooperates with our neighbours in the Asia-Pacific region and other developing countries to build economic resilience. Australia is also undergoing efforts to develop and deploy low emissions technologies, including in developing countries. This includes efforts through technology partnerships such as the International Partnership for Geothermal Technology, Carbon Sequestration Leadership Forum, Global Methane Initiative and Australia-China Joint Coordination Group on Clean Coal Technology; as well as through participation in the broad-ranging work programme of the International Renewable Energy Agency which promotes the widespread adoption and sustainable use of all forms of renewable energy.

## 2. Austria

Austria provided the following information in its NIR 2014.

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The following 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 information has been updated. Information concerning para 23 has been taken from Austria's Sixth National Communication. Information concerning para 24 has been updated according to recent developments (especially on fiscal incentives) and slightly abridged.

23. Each Party in Annex I shall provide information relating to how it is striving, under Article 3, paragraph 14, of the Kyoto Protocol, to implement its 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.

The Kyoto Protocol is, in principle and in general, designed to minimize adverse effects on specific sectors, specific industries or specific trade partners of a Party, including effects on international trade, and social, environmental and economic impacts on other Parties. This is due to the fact that it does not limit action to a single gas or sector, that the use of its flexible mechanisms guarantees that possible impacts are distributed on various fields of action, that the Clean Development Mechanism aims at both promoting sustainable development in countries with continuing development needs and at reducing greenhouse gas emissions, and that it requests action to support the least developed countries.

By striving to implement all the features that the Protocol contains, Austria is naturally working to minimize any adverse effects due to the reduction of greenhouse gas emissions.

Austria is acting together with other Parties in the EU to jointly fulfil the commitments under the Protocol. Key climate policies and measures (e.g. the EU Emissions Trading System, EU-ETS) are established at an EU level. While these policies are executed at the national level, they are not monitored and assessed by individual Member States, but by the EU as a whole. The EU reports in detail on how it strives to minimize adverse effects in its annual national inventory report in chapter 15, to which we hereby refer for further information.

Austria also seeks to ensure that response measures designed and implemented entirely at the national level are as targeted and effective as possible. Since 2013, we have compulsory, government- wide impact assessments concerning environmental, economic and social consequences of policies and measures – including, where appropriate, effects on other countries. In addition, there are legally-binding standards for Austrian JI/CDM projects. The stringent social and environmental criteria include favoured project categories, a focus on environmental cobenefits, on social standards and on technology transfer.

Ensuring that any consequences of economic affairs are addressed Austria is improving its policies to eliminate potential negative impacts.

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.**

Austria strives to phase out market imperfections that run counter to the objective of the Convention.

#### ***Market imperfections***

Austria has reformed to a large extent its energy markets. Several Directives and Regulations reflect the continuous EU effort to reduce market imperfections

- Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92EC
- Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30EC

- Council Directive 90/377/EEC of the 29 June 1990 concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial endusers
- Regulation (EC) No 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions of access to the network for cross-border exchanges in electricity
- Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors

On the other hand Austria uses fiscal incentives etc. as important instrument to advance the objectives of the Convention.

#### ***Fiscal incentives***

Energy prices for road transport do not yet sufficiently reflect externalities. In the course of the *Ökologisierungsgesetz* 2007 (*ÖkoG* 2007) the Mineral Oil Tax Act 2013 (*Mineralölsteuergesetz* 2013) and the *Normverbrauchsabgabengesetz* (*NoVA*) were changed.

Since 2011 the air traffic has also to contribute through the introduction of a flight fee (*Flight Fee Law*, December 2010).

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

(1) newly authorized automobiles with a CO<sub>2</sub> emission of at most 120 g/km get a bonus of 360 Euro, (2) alternatively 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 CO<sub>2</sub> emission of more than 160 g/km will have to pay 30 Euro for each gram over the threshold, newly authorized automobiles with a CO<sub>2</sub> emission of more than 180 g/km will have to pay additionally 30 Euro for each gram over the threshold). This threshold was lowered to 160 g/km in January 2010 and to 150 g/km by January 2013.

The incentives have produced significant results insofar as the share of alternative and lowcarbon vehicles has increased up to 40 % of all new cars in 2013, while only 10% of the newly registered cars have CO<sub>2</sub> emissions above the threshold.

- **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 humanitarian 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 has led to slight changes of the fee in 2013.

#### ***Agricultural subsidies***

*ÖPUL* 2007 (*Österreichisches Programm für umweltgerechte Landwirtschaft*) Austria provides subsidies for farms according to the programme for the promotion of agriculture that is extensive, appropriate to the environment, and protective of nature. The subsidised measures also lead to decreasing greenhouse gas emissions. (<http://land.lebensministerium.at/article/articleview/62457/1/21409/>)



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

No subsidies for environmentally unsound technologies have been identified.

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

This technological field is not a high priority in the Austrian research policy.

**(d) Cooperating in the development, diffusion and transfer of less-greenhouse-gasemitting 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**

Regarding the development, diffusion and transfer of technology which causes no or less greenhouse gas emissions Austria puts its focus is on renewable energy sources.

**(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**

No action is taken in this context.

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

Austria is a member of institutions and initiatives that have the exchange of research results and transfer of technology as a main target, e. g. the International Energy Agency and the Climate Technology Initiative. Bilateral assistance projects are another important means for transfer of technology which helps countries reducing their dependence on the consumption of fossil fuels.

- International Energy Agency (IEA)

Austria is a founding member of the International Energy Agency (IEA), which was founded in 1974. A lot of climate change issues are processed in so-called joint Implementation Agreements, where international partners collaborate on different research topics.

- Climate Technology Initiative

Austria is member of the Climate Technology, which was established in 1995 at the Conference of Parties to the UNFCCC and has a new status as an IEA Implementing Agreement since 2003. Its mission is to promote the objectives of the UNFCCC by fostering international cooperation for accelerated development and diffusion of climate friendly technologies and practises for all activities and greenhouse gases. The main principles of CTI are close collaboration with developing countries and economies in transition and partnership with stakeholders, including the private sector, non-government organisations (NGOs), and other international organisations. CTI performs a. o. capacity building and technical assistance for technology needs assessments as well as technology implementation activities and organizes seminars, symposia and training courses. (<http://www.climatetech.net>)

### 3. Belgium

The following information provided in Belgium's 2014 NIR differs from its 2013 NIR.

The Belgian Federal government is supporting the development and validation of a Renewable Energy CDM Programme of Activities in Rwanda (UNFCCC 9847) and is supporting the identification of opportunities for sustainable charcoal production in Rwanda and Mozambique and for the treatment of municipal waste in Mozambique to benefit from climate financing (most probably under the NAMA framework). Under each initiative, workshops for informing and consulting local stakeholders are organised and their comments are taken into account in the further development of these initiatives.

<i>Project Name</i>	<i>Type</i>	<i>Country</i>	<i>UNFCCC reference number</i>
Berlin Binary Cycle Power Plant	CDM	El Salvador	1218
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
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	CDM	India	591

<i>Project Name</i>	<i>Type</i>	<i>Country</i>	<i>UNFCCC reference number</i>
Project			
Torrent Natural Gas Power Plant	CDM	India	1116
Electric Power Co-generation by LDG Recovery – CST - Brasil	CDM	Brazil	184
Comodoro Energy Efficiency Project	CDM	Argentina	1482
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 and 3307
Simbhaoli biomass power project	CDM	India	1112
Qiangling CFL distribution project	CDM	China	3659
Camil Itaquí 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 project (Improvement of Gas Extraction System in Old Cosmito Dump)	CDM	Chile	0096 and 0097

#### 4. Bulgaria

The following additional information was provided in Bulgaria's 2014 NIR.

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The application of the Joint Implementation mechanism in our country aims to renew the old technologies and improves energy efficiency, with no transboundary effects, as well as the implementation in Bulgaria of the European Union Emission Trading Scheme.

Nonetheless Bulgaria is of the view that taking the actions on mitigation, adaptation, development technology and transfer and capacity building in developing countries is very important for international climate change policy.

In this regard, in 2012 completed the project "Bulgarian contribution to the "short-term financing" 2011-2012: Sharing Bulgarian experience of monitoring, reporting and verification of greenhouse gas in the Republic of Macedonia for participation in the European Union Emission Trading Scheme of greenhouse gases". Through this project, Bulgaria has fulfilled its obligation, which made at the summit of the European Union in December 2009, to provide short-term financing of climate activities.

#### 5. Croatia

Croatia provided the following information in its NIR for 2014.

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##### **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 GHG emissions by 5 percent in the period 2008-2012 in comparison to base year emissions and harmonization and implementation of European Union climate and energy legislative framework. It should be emphasized that in the last five years Croatian economy had suffered from recession and that economic stagnation continued in 2014. 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. 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 2013-2017 was prepared and adopted in 2013 (Official Gazette No. 139/2013).

In regard to long-term planning Croatia has adopted framework document for Low-Emission Development Strategy which was sponsored by the UNDP Croatia. This document represents a roadmap for transition to low-carbon society till 2050. Next step is

to prepare Low-Carbon Development Strategy as stipulated by Regulation (EU) No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC.

### **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 fees 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<sub>2</sub> emissions (approximately 21.5 million EUR).

Another market instrument which was implemented in Croatia in 2013 is emissions trading system as part of 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 fully or partially, depending on activity, 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 percent in average in the period 1990-2012 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.<sup>2</sup>

During the six year period from 2007 to 2012 primary energy production in Croatia was decreasing at an average annual rate of 2.1 percent. This trend was recorded in the production of crude oil and natural gas, whereas the production of other primary forms of energy increased. The production of crude oil and natural gas decreased annually on average by 7.2 percent and 7.1 percent respectively. Hydrological conditions in 2012 were such that in the course of a six-year period there was an increase at an average annual rate of 1.5 percent.

The fastest growing production was that of renewable energy with an average annual growth rate of 47 percent in the period 2007-2012.

In 2012, total energy import in Croatia decreased by 3.5 percent compared to the previous year. The import of crude oil, coal, coke and petroleum products decreased, while the import of natural gas, electricity, fuel wood and biomass increased. The import of crude oil fell by 18.1 percent, of coal and coke by 17.6 percent and petroleum products by 0.9 percent. The import of natural gas increased by 55 percent, the import of electricity increased by 5.7 percent, whereas the import of fuel wood and biomass increased by 8.3 percent. During the period from 2007 till 2012, energy import in Croatia decreased at an average annual rate of 4.4 percent.

In the period from 2007 till 2012, the total primary energy supply decreased at an average annual rate of 2.7 percent. In this period, there was a decrease in the consumption of liquid fuels, coal and coke, and natural gas, whereas the share of consumption of other energy forms in the total consumption increased. The consumption of liquid fuels decreased at an

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<sup>2</sup> Source: Annual Energy Report Energy in Croatia 2012, Ministry of Economy.

average annual rate of 6.7 percent, of coal and coke at an average rate of 3.4 percent annually and of natural gas at an average annual rate of 2.3 percent. The consumption of renewable energy sources increased at an average rate of 48.3 percent annually, and of fuel wood and solid biomass at an average rate of 8.9 percent annually. The consumption of heat from heat pumps increased at an average annual rate of 11.2 percent, whereas the consumption of the imported electricity increased at an average rate of 3.7 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 47 percent in the period 2007-2012.

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 331.8 million HRK (approximately 44 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 16.6 percent in the period 1995-2012 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 NAPeU (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. New (third) NAPeU is under preparation.

In the field of energy efficiency in the buildings 2012 brings several changes in regulations directly affecting energy use in buildings trends. Changes in Law on end use energy efficiency (OG 152/08 and 55/12) fully implement Directive 2006/32/EC on energy efficiency and energy services, Directive 2009/125/EC on establishing a framework for setting of ecodesign requirements for energy related products and Directive 2010/31/EU on the energy performance of buildings (recast) in part relating to energy certification of the buildings and regular HVAC systems inspections. New regulation supersedes Ordinance on energy certification of the buildings and Ordinance on energy audits of the buildings with Ordinance on energy audits and energy certification of the buildings (OG 81/2012); Ordinance on requirements and criteria for persons performing energy audits and energy certification of the buildings (OG 113/08 and 89/09) is replaced by new Ordinance on requirements and criteria for persons performing energy audits of the buildings and energy certification of the buildings (OG 81/12).

In general consumption sector, where buildings have single largest energy use - households and services drop in final energy use is 3.8 percent compared to 2011. Final energy consumption in buildings in 2012 is 107.20 PJ, representing 43.3 percent of total energy consumption in 2012 which is 247.53 PJ. Total consumption in general sector in 2012 is 121,95 PJ.

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.

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 2012 the share of transport sector consumption in the final consumption rose from 21% to 34%, 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, in greater capacity utilization (load factor increase) and in implementation of more energy efficient engines and vehicles, as well as appropriate driving regimes.

Since year 2007 when maximum fuel consumption in Croatia amounting 91,07 PJ was achieved, continuous reduction in consumption to 86,6 PJ in 2010, 84,97 PJ in 2011, respectively 84,02 PJ in 2012 has been recorded. The main reason for this negative trend is derived from the global economic - financial crisis which hit Croatia in second half of 2008, which generated lesser need for mobility, and thus lower fuel consumption.

#### **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 which started in 2013.

#### **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 2014.

## **7. Denmark**

No additional information was included in the NIR of Denmark for 2014.

## 8. Estonia

The following information provided in Estonia's 2014 NIR differs from the 2013 NIR.

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**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 civilmovement- 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 Peacebuilding-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.

## 9. The European Union

The European Union provided the following information in its NIR for 2014.

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**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, text from the last year's inventory report was included and additional and new information is 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?

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 6th national communication provides a detailed overview of the European policies and measures to mitigate GHG emissions in all sectors.. 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/smart-regulation/impact/ia\\_carried\\_out/cia\\_2014\\_en.htm](http://ec.europa.eu/smart-regulation/impact/ia_carried_out/cia_2014_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, in particular its relation to biomass and biofuels, 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 strategy 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 liquid 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. To address the risk of potentially negative 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 Commission 2012a). 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 additional market incentives to the existing ones 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 stronger 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 a Directive is analysing social, economic and environmental impacts on third countries in detail. The legislative proposal is now with the legislators in the European Parliament and the Council.

The Directive also ensures that the Commission reports 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 analyses 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<sub>2</sub>eq savings, based on national reporting (22.6 Mt CO<sub>2</sub>eq 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.

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 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 recent Communication from the Commission on voluntary schemes and default values in the EU biofuels and bioliquids sustainability scheme (2010/C 160/01)<sup>3</sup> 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 2014) recognised 15 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), Biograce GHG calculation tool and HVO Renewable Diesel Scheme for Verification of Compliance with the RED sustainability criteria for biofuels<sup>4</sup>.

In line with Article 19(4) of Directive 2009/28/EC on the promotion of the use of energy from renewable sources<sup>5</sup> 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 N2O 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."

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<sup>3</sup> OJ C160, 19.6.2010, p.1.

<sup>4</sup> [http://ec.europa.eu/energy/renewables/biofuels/sustainability\\_schemes\\_en.htm](http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm).

<sup>5</sup> OJ L 140, 5.6.2009, p. 16.



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 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).

As part of the Communication on a policy framework for climate and energy in the period from 2020 to 2030 (European Commission 2014a) it is proposed not to establish new targets for renewable energy specifically for the transport sector, or the greenhouse gas intensity of fuels used in the transport sector or any other sub-sector after 2020. The priority expressed in the communication is a focus of policy development on improving the efficiency of the transport system, further development and deployment of electric vehicles, second and third generation biofuels and other alternative, sustainable fuels as part of a more holistic and integrated approach. A greenhouse gas reduction target of 40% to be shared between the ETS and non-ETS sector is accompanied by a coherent headline target at EU level for renewable energy of at least of at least 27% with flexibility for Member States to set national objectives.

#### ***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.

In April 2013 the EU temporarily suspended enforcement of the EU ETS requirements for flights operated from or to non-European countries, while continuing to apply the legislation to flights within and between countries in Europe. The EU took this initiative to allow time for the International Civil Aviation Organization (ICAO) Assembly in autumn 2013 to reach a global agreement to tackle aviation emissions – something Europe has been seeking for more than 15 years. In October 2013 the EU's hard work paid off when the ICAO Assembly agreed to develop by 2016 a global market-based mechanism (MBM) addressing international aviation emissions and apply it by 2020. Until then countries or groups of countries, such as the EU, can implement interim measures.

In response to the ICAO outcome and to give further momentum to the global discussions, the European Commission has proposed amending the EU ETS<sup>6</sup> so that only the part of a flight that takes place in European regional airspace is covered by the EU ETS. The change would have applied from the beginning of 2014 until the planned global MBM enters into force. In March 2014 the Council of the EU and European Parliament reached an informal agreement on the changes to aviation in the EU ETS.

The regulation in preparation will limit the aviation coverage of EU ETS to emissions from flights within the European Economic Area (EEA) for the period from 2013 to 2016. This applies to all (also third country) aircraft operators. All options are left open for the EU to react to the developments of the ICAO Assembly in 2016 and to re-adjust the scope of the EU ETS from 2017 onwards. The regulation also includes exemptions for small emitters. The legislative process is expected to be concluded in the spring of 2014.

#### ***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, with cost effective reduction milestones of 40% by 2030 and 60% in 2040.

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<sub>2</sub> 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.

#### ***Communication on a policy framework for climate and energy in the period from 2020 to 2030***

In January 2014, the European Commission published a Communication on a policy framework for climate and energy in the period from 2020 to 2030 (COM(2014)15 final)

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<sup>6</sup> See Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013PC0722>

(European Commission 2014a). This Communication develops a framework for the future EU climate and energy policy and proposes to set a greenhouse gas emission reduction target for domestic EU emissions of 40% in 2030 relative to emissions in 1990. The EU level target will be shared between the EU Emissions Trading System (EU ETS) and what the Member States must achieve collectively in the sectors outside of the ETS. The ETS sector would have to deliver a reduction of 43% in GHG in 2030 and the non-ETS sector a reduction of 30% both compared to 2005.

In addition the Commission proposes an EU-level target for the share of renewable energy in the EU of at least 27% in 2030. While binding at the EU level, there would not be binding renewable targets for Member States individually but the objective would be fulfilled through clear commitments decided by the Member States themselves which should be guided by the need to deliver collectively the EU-level target and build upon what each Member State should deliver in relation to their current targets for 2020. While not foreseeing national-level targets, the 2030 framework proposes a new governance framework based on national plans for competitive, secure and sustainable energy. The plans will be prepared by Member States under a common approach to ensure coherence at the EU level.

The EU Emissions Trading System (ETS) will remain an important instrument to bring about the transition to a low carbon economy. A market stability reserve is proposed for the period after 2020 which provides an automatic adjustment of the supply of auctioned allowances based on a pre-defined set of rules with the aim to avoid a large supply/demand imbalances in the ETS.<sup>7</sup>

A stakeholder consultation was carried out in preparation for the 2030 framework. The Communication on the 2030 policy framework follows the Commission's March 2013 "Green Paper on a 2030 framework for climate and energy policies" which was explained in this section of the NIR in the previous inventory submission. The Green paper launched a broad public stakeholder consultation on the most appropriate range and structure of climate and energy targets for 2030. The public consultation was conducted between March and July 2013 and also addressed relevant stakeholders from outside the EU.

An impact assessment (IA) was conducted for this communication (European Commission 2014b), which gives significant detail on costs and savings achieved on the basis of the proposed policy under different scenarios. All scenarios demonstrate reduced GHG emissions compared to the Reference scenario. All scenarios show reduced energy consumption (both primary and final) compared to the Reference scenario, with more pronounced energy savings and improved energy intensity in scenarios with strong energy efficiency policies, with highest improvements in those scenarios that next to ambitious energy efficiency policies also include a renewables target. Future fuel consumption in the EU will have economic impacts on fuel prices as well as trade effects for fuel exporting countries, therefore the impacts on future fuel use are summarized: With regard to fuel use, the IA analysed that solid fuel consumption declines substantially under all scenarios until 2030. Also oil consumption decreases in all scenarios, but much faster in those with policies that promote transport electrification. Natural gas absolute consumption also declines in all scenarios (in general less sharply than oil) but slightly more under the scenarios that include renewable targets. By 2050 in all scenarios natural gas becomes the main fossil fuel. Net energy imports decrease significantly for all scenarios already in 2030

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<sup>7</sup> See COM/2014/20 Proposal for a Decision of the European Parliament and of the Council concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC, [http://ec.europa.eu/clima/policies/ets/reform/docs/com\\_2014\\_20\\_en.pdf](http://ec.europa.eu/clima/policies/ets/reform/docs/com_2014_20_en.pdf).

between 4% to 22% below 2010 levels in 2030 and by about 50% in most scenarios in 2050<sup>8</sup>.

The Communication was discussed by the European Council (EU Member States' heads of state and governments) on 21-24 March 2014, which requested the Council and the Commission to rapidly develop further policy elements, including mechanisms for fair effort sharing. EU leaders agreed to take a final decision on the framework as soon as possible and in October 2014 at the latest.

### **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.

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<sup>8</sup> For a more detailed analysis and explanation on the scenarios, see the Impact Assessment Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A policy framework for climate and energy in the period from 2020 up to 2030, available: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014SC0015>

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"<sup>9</sup> have been established. The Guidelines foresee in particular the possibility to authorise State aid for particular environmental purposes, such as for renewable energy sources or energy saving. The European Commission published on 9 April 2014 the "Guidelines on State aid for environmental protection and energy 2014-2020" that intend to replace the 2008 Guidelines from 1 July 2014. A public consultation process on these draft guidelines has been conducted between December 2013 and February 2014 (European Commission 2014c). The Guidelines set out the conditions under which state aid measures for environmental

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<sup>9</sup> Official Journal No C 82, 1.4.2008, p.1.

protection or energy objectives may be declared compatible with the internal market. This proposal includes a list of environmental and energy measures for which state aid under certain conditions may be compatible with the EU Treaty, covering the following areas:

- Aid to energy from renewable sources
- Energy efficiency measures, including cogeneration and district heating and district cooling
- Aid for resource efficiency and in particular aid to waste management
- Aid to Carbon Capture and Storage (CCS)
- Aid in the form of reductions in or exemptions from environmental taxes and in the form of reductions in funding support for electricity from renewable sources
- Aid to energy infrastructure
- Aid for generation adequacy
- Aid in the form of tradable permit schemes
- Aid for the relocation of undertakings

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 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. It is foreseen that the final carbon leakage list for 2015-19 will be adopted by the Commission before the end of 2014 and applied to free allocation for the first time in 2015.

#### **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)".<sup>10</sup>

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.

**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 (NSEC) technology through carbon capture and storage (CCS) by 2020. Phase I of this cooperation will be completed in 2009. Phase II of NSEC 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

<sup>10</sup> See [http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001\\_0264en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2001/com2001_0264en01.pdf).

site. Phase III should commence thereafter and will see the construction and operation of a commercial-scale demonstration plant in China.

In 2009 the European Commission published a Communication on CCS in emerging developing countries (European Commission 2009). The Communication sets out the Commission's plans for establishing an investment scheme to co-finance the design and construction of a power plant to demonstrate carbon capture and storage (CCS) technology in China. The Commission has programmed funding of up to €50 million for the construction and operation phase of the project, out of a total of €60 million that has been earmarked for cooperation with emerging economies on cleaner coal technologies and carbon capture and storage. nt progress in identifying options and constraints for CCS in China. At the 2009 Summit, China and EU jointly agreed to finalise the feasibility (phase II) of a demonstration plant, and a Memorandum of Understanding was signed between the European Commission and the Ministry of Science and Technology (MOST). Implementation is on-going. In 2010 Norway joined the initiative. A call for proposals has been launched in 2013 to select the project and conduct pre-feasibility studies to be finalised in 2014.

The EU is cooperating with other Annex I and Non-Annex I Parties (Australia, Brazil, Canada, China, 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<sub>2</sub>) 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 2013 and 2014, such as the 2013 and 2014 CSLF Technical Group Meeting and the 5th CSLF Ministerial Meeting. The CSLF Task Force on Reviewing Best Practices and Standards for Geological Storage and Monitoring of CO<sub>2</sub> published an annual report in 2013 that compiles best practice manuals developed acorss the world, guidelines published related to CCS, and summaries of regulations in place as well as monitoring tools and techniques used in ongoing projects (CSLF 2013). The Task force on Technical Challenges in the Conversion of CO<sub>2</sub>-EOR Projects to CO<sub>2</sub> Storage Projects also provided a report in 2013 that concluded that the main impediment in the adoption and deployment of this technology is the unavailability of CO<sub>2</sub> at economic prices at the CO<sub>2</sub>-EOR operation sites and the absence of infrastructure to both capture the CO<sub>2</sub> and transport it from CO<sub>2</sub> sources to oil fields suitable for CO<sub>2</sub> – EOR.

**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)<sup>11</sup>, 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 Commission has recently started a project with the specific objective to create and facilitate the operation of an EU-GCC Clean Energy Network. 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-cleanenergy.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. In 2013 also a Workshop and training seminar on integration of renewables in the grid and on energy efficiency and demand side management was held in Oman and an event related to CCS took place in London. In December 2013, the EU-GCC Energy Experts Group meeting was reconvened and is planned to continue in a fruitful dialogue beyond, with the next meeting planned in 2014. The dialogue focused on energy efficiency and natural gas, and included EU market regulators and the private sector, as well as representatives of the EU-GCC clean energy network.

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 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.

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<sup>11</sup> The Gulf Cooperation Council covers Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

- 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 the EU's 6th national communication and 1st Biennial Report several support programmes exist in this respect. These include:

- Cooperation with the EU neighboring countries on renewable electricity production

In order to support the implementation of the Renewable Energy Directive, the Commission will in September 2013 issue guidance to Member States and potential third country partners on the implementation of cooperation and trade in the renewable energy sector. Cooperation, for example, in deploying solar energy installations in North Africa for domestic consumption as well as export is supported as part of an overall agenda for sustainable growth in a viable regional renewable energy sector. The EU has already supported this development through the "Paving the Way towards a Mediterranean Solar Plan" project as well as member States substantial input into tech Mediterranean solar Plans Technical Working Groups looking at the details of the implementation of closer cooperation. The Mediterranean Solar Plan Project Preparation Initiative (MSP-PPI), an initiative of the European Investment Bank (EIB), together with the European Commission, AFD, KfW, AECID, EBRD and the Union for the Mediterranean, is financed by the EU-funded Neighbourhood Investment Facility, with the aim to accelerate the implementation

of renewable energy and energy efficiency projects in 7 Mediterranean partner countries: Algeria, Egypt, Gaza/West Bank, Jordan, Lebanon, Morocco and Tunisia.<sup>12</sup>

Currently an additional study "Bringing Europe and Third countries closer together through renewable Energies" (BETTER) financed by the Commission is further preparing the ground for pilot projects to be put into place.

The European Union, alongside 22 of its Member States, is a member of the International Renewable Energy Agency and as such actively supporting its work, inter alia giving substantial input to the implementation of the UN Secretary's General "Sustainable Energy For All" initiative or conducting renewable energy readiness assessment in Africa, Latin America and the Pacific region. Additionally development cooperation in many areas contributes to technology transfer. The Global Energy Efficiency and Renewable Energy Fund (GEEREF), which is managed by the European Investment Fund (EIF), for example facilitates participation in small-scale private ventures that introduce new technology in the area of renewable energy.

- 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 € 220 million. 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. A second Energy Facility (EFII), with a total budget of €200 million, has been established for the period 2009-2013. A €100 million call for proposals, launched in November 2009, resulted in the selection of 65 projects for funding.

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 was 03/06/2013. The second ACP-EU Energy Facility is one of the instruments implementing the Africa-EU Energy Partnership, which is

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<sup>12</sup><http://www.eib.org/infocentre/publications/all/mediterranean-solar-plan-project-preparation-initiative.htm>.

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 primary objective of LAIF is to finance key infrastructure projects in transport, energy, social and environmental sectors as well as to support private sector development in the Latin American region, in particular small- and medium-sized enterprises (SMEs). The main purpose of the LAIF is to mobilise additional financing to support investment in Latin America, encouraging beneficiary governments and public institutions to carry out essential investment in projects and programmes that could not be otherwise financed either by the market or by development Finance Institutions alone.

As part of its efforts to achieve this objective, LAIF pursues three strategic objectives:

- Improving interconnectivity between and within Latin American countries, in particular establishing better energy and transport infrastructure, including energy efficiency, renewable energy systems and the sustainability of transport and communication networks.
- Increasing the protection of the environment and supporting climate change adaptation and mitigation actions.
- Promoting equitable and sustainable socio-economic development through the improvement of social services infrastructure and support for small- and medium-sized enterprises (SMEs).

The 2012 operational annual report of LAIF reported that the grant contributions approved by the LAIF Board amounted to over € 160 million, leveraging total new investments of about € 4.2 billion. Since 2012, the amount allocated to LAIF increased to € 192.15 million.

- 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, aims to accelerate the transfer, development, use and enforcement of environmentally sound technologies for the world's poorer regions, helping to bring secure, clean and affordable energy to local people. 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.
- Emerging Energy Latin America Fund II receives € 12.5 million from GEEREF which is managed by Emerging Energy & Environment Group which is a regional fund dedicated to small and medium size renewable energy infrastructure in Latin America (more information available under <http://www.emergingenergy.com/>).

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, Caribbean 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](http://ec.europa.eu/europeaid/what/development-policies/intervention-areas/epas/epas_en.htm).

## **10. Finland**

Finland explained in its 2014 NIR that the main principles of minimising adverse impacts have not changed since the previous inventory submission. However, the reporting has been updated and complemented. More emphasis has been put to describe how Finland strives to minimise adverse impact in other countries and the areas prioritized in this context.

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### **15 INFORMATION ON MINIMISATION OF ADVERSE IMPACTS IN ACCORDANCE WITH ARTICLE 3, PARAGRAPH 14**

Finland has provided information on minimization of adverse impacts in accordance with Article 3, paragraph 14 in previous national inventory reports and national communications in accordance with the guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol (Decision 15/CMP.1, Section I. H. and in paragraph 36 in Section II. G.). The information was updated in Finland's 6th National Communication and the corresponding changes have been incorporated into this inventory report. The main principles of minimising adverse impacts have not changed since the previous inventory submission. However, in the reporting has been updated and complemented. More emphasis has been put to describe how Finland strives to minimise adverse impact in other countries and the areas prioritized in this context.

Finland strives to implement its commitments under the Kyoto Protocol in such a way that social, environmental and economic impacts on other countries, and on developing countries in particular, are minimised. Applicable notification requirements under international trade conventions are also followed. Finland takes into account knowledge on and understanding of the possible adverse impacts of its measures based on available information received from other Parties.

All major policies and activities undergo environmental impact assessment, including impacts in other countries. Environmental impact assessments have been performed on Finland's national energy and climate strategies. The assessments have identified on a qualitative level the kind of impacts that the measures may have. A lifecycle analysis of fuel import takes into account impacts arising beyond the Finnish borders. Finland has also participated in the work on developing sustainability criteria for biofuels through scientific studies. In line with the most recent energy and climate strategy, the identified potential adverse environmental impacts due to the increased use of bioenergy are addressed as early as possible.

Finland strives to minimise the adverse effects of climate change on developing countries by including in its development policy both climate change mitigation and adaptation in developing countries (see Chapter 7 of Finland's 6th National Communication for more

details). Finland promotes low carbon development and the capacity of its partner countries to adapt to climate change, and it furthers the integration of these goals into partner countries' own development planning. Particular attention is paid to the roles of women, children and indigenous peoples in adapting to and combating climate change. Finland has adopted a climate sustainability tool for assessing the climate change impacts of its development policy and preventing the adverse impacts of climate change, including disaster risk reduction. Thus, climate change has been mainstreamed in Finland's development programming. Finland aims to support programmes and projects that focus on saving energy, increasing energy efficiency and promoting renewable energy production, focusing on poor countries and regions in particular. According to its development policy, Finland supports access to sustainable renewable energy and also promotes energy and overall resource efficiency and research on those issues. In its own development cooperation, Finland aims to achieve carbon neutrality as soon as possible.

Finland's Development Policy Programme has the eradication of extreme poverty as an overarching goal. Regarding the minimisation of adverse social impacts, the Ministry for Foreign Affairs commissioned a study on integrating poverty reduction and climate change response measures in Finland's development cooperation and CDM activities. The results showed that the level of coherence between climate funding and development co-operation objectives has progressed, although there is still room for learning how to focus in particular on CDM activities in such a way that they also contribute to poverty reduction.

Finland supports developing countries by helping them to build their capacities and develop their economic infrastructure, thus helping them diversify their economies and improve energy production. Economic diversification and private sector development are particularly important targets in various Finnish bilateral programmes and Finnish-supported multilateral programmes in Zambia, southern Africa and the Mekong region. Regional programmes that promote the role of the private sector in providing energy services are being promoted in Latin America, Sub-Saharan Africa and parts of Asia (see Chapter 7 of Finland's 6th National Communication for more details).

Among the actions listed in the Annex to Decision 15/CMP.1, Part I.H, 'Minimization of adverse impacts in accordance with Article 3, paragraph 14', Finland gives particular priority to the following actions:

- Action (a): Finland has addressed the progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse-gas-emitting sectors
  - domestically, with a major revision in energy taxation (2011), according to which all fuels are taxed based on their energy and fossil carbon content,
  - in its development policy by including in the support provided to developing countries through multinational development banks criteria that are targeted at removing subsidies for fossil fuels and phasing out support for investments based on fossil fuels by the year 2050.
- Action (d): Finland has cooperated in the development, diffusion, transfer and wider use of less-greenhouse-gas-emitting, advanced fossil-fuel technologies and technologies that capture and store greenhouse gases from fossil fuel use by supporting, at a policy level, methane capture for electricity generation instead of gas flaring, clean coal technologies and carbon capture and storage.
- Action (f): Finland has assisted developing country Parties that are highly dependent on the export and consumption of fossil fuels in diversifying their economies in several projects:

- In Lao PDR, Finland has implemented a policy level programme that aims to diversify the economy and energy mix towards renewable sources that will provide local employment and increase energy and income security.
- Through the Energy and Environment Partnership Programme (EEP), Finland supports the participating developing countries in developing, adopting and scaling-up appropriate and affordable renewable energy and energy efficiency technologies for improved energy access and local employment. Finnish-supported EEP programmes are executed in Central America, the Mekong Region, southern and eastern Africa, the Andean Region and Indonesia.

More details on the actions being taken by Finland to minimise the adverse impact of response measures in developing countries is provided in Table 15.1-1 below.

Finland is committed to policy coherence for development and promotes its implementation at the national level and in relation to its own partner countries and other donors. Finland also promotes policy coherence actively in the EU. Regarding policy coherence for development, Finland implements the recommendations of the OECD. The OECD's tool for policy coherence will be piloted on the themes of food security and the right to food. Policy coherence on other themes, such as trade and development, tax and development, migration and development, and security and development, will be strengthened both nationally and internationally. The Government will submit a communication to the Parliament on aid effectiveness and policy coherence for development in the first half of 2014.

Table 15.1-1 Summary of specific actions to minimise the adverse impact of response measures in developing countries

Action	Implementation in Finnish policy
(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.	<p>These factors are taken into account for all greenhouse gas emitting sectors, together with consideration of national preferences and circumstances and the need for economic efficiency and feasibility. Various methodologies, including economic modelling, are used in the planning of economic instruments.</p> <p>Starting in January 2011 Finland made a major revision in energy taxation according to which all fuels are taxed based on their energy and fossil carbon content.</p> <p>Finland is supporting the Government of Cambodia to achieve its climate policy goals through developing Cambodian capacity for producing energy statistics and conducting energy planning, taking into account economic, social and environmental sustainability.</p> <p>Finnish development policy guidelines for support to developing countries through multinational development banks include criteria that are targeted at removing subsidies to fossil fuels and phasing out</p>



(b) Removing subsidies associated with the use of environmentally unsound and unsafe technologies.	the support to fossil-fuel-fired investments by year 2050.  Finland does not have any support activities in this field.
(c) Cooperating in the technological development of non-energy uses of fossil fuels and supporting developing country Parties to this end.	Finland 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.	Several actions have been undertaken in the area of promoting technologies that emit less greenhouse gases both at policy and programme/project level, with main focus on increased energy efficiency and promotion of renewable energy, instead of fossil-fuels. At fossil fuel sector, Finland supports methane capture for electricity generation instead of gas-flaring, clean coal technologies and carbon capture and storage at policy level. At programme level, support is given to improving the efficiency in energy distribution, for example, in Tanzania through automated network control systems and in Mozambique, through piloting a rural energy smart grid (back-up powered by diesel generators). Several projects for capturing landfill methane for biogas and electricity generation are also supported both in Nepal, in Southern and Eastern Africa as well as in Mekong Region.
(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.	Finnish development policy supports low carbon development paths in developing countries. Finland has started to prepare guidelines for this purpose. Finland is also supporting Cambodia and Namibia to develop comprehensive energy strategies, data and planning capacity, taking into account sustainability as well as efficiency issues.
(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

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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.

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## 11. France

France provided the following information in its NIR for 2014

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### 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 décidé 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 et de la 6ème communication nationale à venir pour le 1er janvier 2014).

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

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

Tableau 84 : Effets directs et indirects des principales politiques et mesures climatiques de la France

Mesure	Effets directs			Effets indirects		
	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 gaz 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 d'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'affichage environnemental des produits (multicritères dont le CO<sub>2</sub>):

- 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.
- Ces séminaires ont chaque année depuis 2009 été l'occasion pour la France d'expliquer les objectifs et avancées de la politique nationale d'affichage environnemental. La France (MEDDE, CGDD) a également participé à un séminaire équivalent à Séoul (organisé par l'antenne régionale de l'ONU pour l'Asie du sud-est) en octobre 2011. Deux ateliers sur l'affichage environnemental ont été co-organisés avec le PNUE, en 2010 et en 2011, à New York dans le cadre de la Commission de l'ONU sur le développement durable, auxquels ont participé des délégations de pays en développement.
- 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'agrément 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 les impacts sociaux (la création d'emplois et l'accès aux utilités publiques) 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 tCO<sub>2</sub>, soit une réduction moyenne de 66 540 tCO<sub>2</sub> 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 tCO<sub>2</sub>/an et de 490 862 tCO<sub>2</sub> sur la période.

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

Au titre de ses engagements (articles 4.3 et 4.5 de la convention climat), la France s'est engagée à faciliter les transferts de technologies vers les pays émergents et en développement, notamment en fournissant des ressources financières « nouvelles et additionnelles ». Afin d'atteindre cet objectif, la France fournit une aide financière et une coopération technologique par le biais de nombreux canaux, bilatéraux comme multilatéraux, notamment au travers de l'aide au développement. Ainsi, les actions de la France en matière de financement et de transfert de technologies s'opèrent à de nombreux niveaux, et impliquent de nombreux acteurs: institutions multilatérales, collectivités territoriales, entreprises et le secteur privé.

### **15.2.1 L'aide publique au développement - la coopération bilatérale**

La France est un acteur majeur de l'aide bilatérale au développement dans le domaine du climat avec un champ d'intervention très vaste, un niveau d'expertise reconnu et un engagement financier substantiel.

En cumulé, sur la période 2009-2012, plus de 9 milliards d'euros ont été octroyés par la France pour des activités ayant un co-bénéfice positif sur l'enjeu du changement climatique (concourant à l'atténuation des émissions, à l'adaptation ou à la mise en oeuvre de politiques de lutte contre le changement climatique) via l'Agence française de développement (AFD), opérateur pivot de l'aide publique au développement bilatérale française. L'AFD s'est par ailleurs engagée, sur la période 2012-2016 à un objectif de contributions financières à la lutte contre le changement climatique représentant 50 % de ses octrois dans les Etats étrangers et 30 % des octrois de PROPARCO, sa filiale du secteur privé. En outre, en octobre 2012, l'AFD a adopté une nouvelle stratégie énergie qui fixe l'objectif d'atteindre un volume d'engagements de 2 milliards d'euros pour les trois prochaines années pour des projets d'énergies renouvelables et d'efficacité énergétique dans les pays en développement.

Par ailleurs, 45 % des engagements du Fonds pour l'environnement mondial (FFEM) (Fonds français pour l'environnement mondial) qui est fortement inspiré du FEM (Fonds pour l'environnement mondial) et dont l'AFD assure le secrétariat, correspondent à des projets présentant un co-bénéfice positif pour le climat. Ce fonds français a déjà engagé 86 millions d'euros depuis sa création en 1994.

### **15.2.2 L'aide publique au développement - la coopération multilatérale**

Le développement durable et le climat comptent parmi les cinq priorités sectorielles de l'aide publique au développement française. Depuis plusieurs années, la France a renforcé

son action internationale dans ce domaine, et la France mobilise depuis plusieurs années des financements importants et croissants pour lutter contre le changement climatique dans les pays en développement, via les principaux fonds climat (Fonds pour l'environnement mondial, Fonds climatiques de la Banque mondiale, Protocole de Montréal) et se situe parmi les 5 premiers contributeurs mondiaux en faveur du climat.

Les ressources financières dédiées par la France au titre de l'aide publique au développement multilatérale ont représenté 3,2 milliards d'euros 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 4<sup>e</sup> bailleur mondial en termes de volume et se situe au deuxième rang des pays du G7 en termes 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 millions d'euros 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 milliards de dollars. Sur 2011-2014, le FEM a prévu de consacrer un total de 1,35 milliards de dollars à la lutte contre le changement climatique (150 millions de dollars 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 millions d'euros (ce qui la place en 5<sup>e</sup> position sur l'ensemble des bailleurs).

Par ailleurs, la Direction Générale du Trésor finance le FASEP, qui assiste les pays émergents dans leur développement, sous la forme de dons, pour des prestations réalisées par des entreprises françaises (études de faisabilité, assistance technique, projets-pilotes) liées à des projets d'infrastructures. Elle finance également la Réserve Pays Emergents (RPE) qui octroie des prêts concessionnels aux pays émergents pour des projets d'infrastructures également (fourniture de biens et de services français).

### **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. Cette coopération s'entend comme un transfert au sens large de savoir-faire, de méthodes, ou d'outils, nécessaires à la mise en oeuvre des technologies de la transition bas-carbone.

Depuis la cinquième communication nationale, le contexte technologique a fortement évolué. On a vu se développer et se déployer à grande échelle des filières bas-carbone, particulièrement dans le secteur des énergies renouvelables. Les pays sont de plus en plus nombreux à vouloir mettre en oeuvre ces technologies, au Nord comme au Sud, puisqu'on estime à plus de 120 le nombre de pays s'étant dotés d'un objectif de production d'énergie renouvelable<sup>1</sup>, dont la moitié est des pays en développement.

**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.

Au plan bilatéral, la France développe des coopérations stratégiques avec un nombre de plus en plus important de pays producteurs et consommateurs d'énergies fossiles dans le domaine des énergies renouvelables et de l'efficacité énergétique.

Dans cette phase de mise en oeuvre des politiques publiques, Le secteur privé et la coopération décentralisée jouent un rôle particulièrement important en tant qu'acteurs opérationnels développant sur le terrain les capacités nécessaires à porter les projets bas-carbone et portant ces transferts de technologie. Les entreprises et collectivités françaises sont particulièrement actives en la matière et développent des projets aussi bien matures qu'innovants dans un nombre grandissant de pays.

**Sur le plan multilatéral**, la coopération technologique de la France se fait au travers des grands partenariats énergétiques internationaux, comme 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, la CEM (Clean Energy Ministerial) ou encore l'IPEEC (International Partnership for Energy Efficiency Cooperation). Dans un contexte plus large d'opérationnalisation de la démarche SE4All (Sustainable Energy for All), la montée en puissance de l'IRENA (International Renewable Energy Agency), agence récente ayant une vocation forte d'appui aux pays et dans laquelle la France est le 6ème contributeur, mérite d'être saluée. 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) permettant l'appui et l'accélération des transferts de technologie et le partage d'expériences, 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. Les travaux du PNUE (Programme des Nations Unies pour l'Environnement) ou de la FAO (Food and Agriculture Organisation) favorisent aussi le partage d'expérience et d'outils utiles à la transition bas-carbone.

Le spectre thématique du transfert de technologie de la France s'est élargi depuis la dernière communication nationale. Cette sixième communication nationale est l'occasion de mettre en avant les progrès réalisés en matière d'échanges et de partages sur les cadres et outils d'adaptation aux effets du changement climatique, même si beaucoup reste à faire pour réussir à intégrer pleinement cette dimension. La France contribue à partager sa propre expérience dans la planification des politiques d'adaptation. Dans ce cadre, la France a participé à plusieurs projets dont celui portant sur les Îles de l'Océan Indien, au travers notamment du projet (ACClimate) qui vise à renforcer les capacités d'adaptation au changement climatique de ses membres.

## **12. Germany**

No additional information was included in the NIR of Germany for 2014.

## **13. Greece**

No additional information was included in the NIR of Greece for 2014.

## **14. Hungary**

Hungary provided the following additional information in its NIR for 2014.

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The Copenhagen Accord states the following:

“The collective commitment by developed countries is to provide new and additional resources, including forestry and investments through international institutions, approaching USD 30 billion for the period 2010 - 2012 with balanced allocation between



adaptation and mitigation. Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, Small Island developing States and Africa.”

In the spirit of the above, Hungary made a commitment of 6 Million EUR for 2010-2012. (2010: 1 M, 2011: 2 M, 2012: 3 M).

## 15. Iceland

No additional information was included in the NIR of Iceland for 2014.

## 16. Ireland

No additional information was included in the NIR of Ireland for 2014.

## 17. Italy

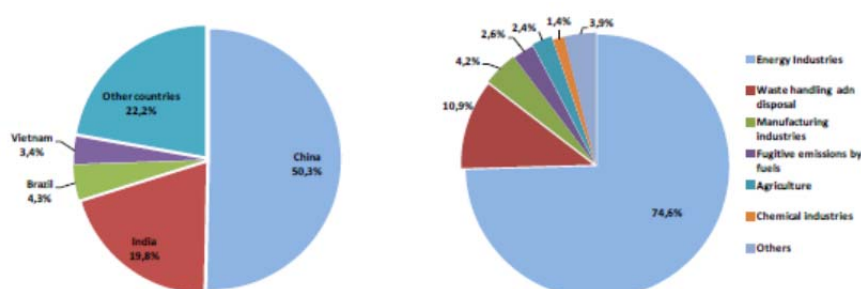
The following information was updated in Italy’s NIR for 2014.

### 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,2014[a]). On 26 February 2014, the UNFCCC CDM Database reported a total of 7,445 registered project activities out of 7,803 projects. With data as of 31 January 2014, 84.2% of CDM projects were registered in Asia and the Pacific Region, 12.8% in Latin America and Caribbean, 2.4% in Africa, and 0.6% in Countries with economies in transition. The distribution of registered projects by scope activity was mainly: energy industries (74.6%), waste handling and disposal (10.9%) and manufacturing industries (4.2%). Registered projects by Host Party were mainly in China (50.3%), India (19.8%), Brazil (4.3%) and Vietnam (3.4%). The distribution of global CDM projects by Host country and scope is presented in Figure 14.1.



Source: UNFCCC (UNFCCC, 2014)

**Figure 14.1 Italian CDM projects by Host country and scope (as for 31/01/2014)**

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 now Italy is involved in 114

CDM registered projects (UNFCCC, 2014[a]), 7.5% more than the beginning of 2013. Projects by dimension are 56.1% large scale and 43.9% small-scale. Italy is the only proposer for 49.1% of the CDM projects. In Annex A8.2.4 a complete list of CDM projects is available. Italian CDM projects by Host country and scope are illustrated in tables 14.2 and 14.3 respectively.

**Table 14.2 Italian CDM projects by Host country**

<i>Country</i>	<i>n°</i>	<i>%</i>
China	49	43.8
India	11	9.8
Nepal	5	4.5
Uganda	5	4.5
Argentina	4	3.6
Brazil	4	3.6
Kenya	4	3.6
Republic of Moldova	4	3.6
Other	26	23.2
<b>Totale</b>	<b>112</b>	<b>100</b>

**Table 14.3 Italian CDM projects by scope**

<i>Scope</i>	<i>n°</i>	<i>%</i>
Energy industries (renewable - / non-renewable)	62.5	55.8
Afforestation and reforestation	15	13.4
Manufacturing industries	11	9.8
Waste handling and disposal	11	9.8
Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	8	7.1
Other	4.5	4.0
<b>Total</b>	<b>112</b>	<b>100</b>

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 approved 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 meet 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 designate 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 GHG emissions fuel switch (IGES, 2014).

Voluntary validation of sustainable development is taking place at international level for CDM and JI projects. The UNEP Risoe Centre database<sup>59</sup> 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 26 February 2014, the UNEP Risoe database reports 761 JI projects (track1+track2) from which 604 projects are registered (91.9% track 1+8.1% track 2). Up to 26 February 2014, the UNEP Risoe database reports 8,750 CDM projects with 7,426 registered from which 4 projects are validated with CCB, and 142 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 14.4 (OECD, 2014). 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 Cooperation 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				
	2001-02	2009	2010	2011	2012
NET DISBURSEMENTS					
	USD million				
I. Official Development Assistance (ODA) (A + B)	1 980	3 297	2 996	4 326	2 737
ODA as % of GNI	0,18	0,16	0,15	0,20	0,14
A. Bilateral Official Development Assistance	724	875	759	1 703	624
of which: General budget support	- 1	9	5	1	6
Core support to national NGOs	64	-	15	-	1
Investment projects	- 107	37	- 34	310	- 17
Administrative costs	34	59	42	53	35
Other in-donor expenditures	10	5	5	526	272
of which: Refugees in donor countries	8	-	3	525	247
B. Contributions to Multilateral Institutions	1 255	2 423	2 237	2 623	2 113
of which: UN	198	205	170	150	188
EU	691	1 862	1 557	1 924	1 516
IDA	183	214	386	179	166
Regional Development Banks	61	24	6	206	105
II. Other Official Flows (OOF) net (C + D)	- 158	- 72	- 151	- 214	196
C. Bilateral Other Official Flows (1 + 2)	- 158	- 72	- 151	- 214	196
1. Official export credits	16	- 28	- 28	117	97
2. Equities and other bilateral assets	- 173	- 44	- 123	- 330	100
D. Multilateral Institutions	-	-	-	-	-
III. Grants by Private Voluntary Agencies	16	162	150	111	91
IV. Private Flows at Market Terms (long-term) (1 to 4)	-1 233	2 181	6 612	7 689	8 161
1. Direct investment	930	129	4 366	7 530	8 016
2. Private export credits	1 271	463	882	1 234	725
3. Bilateral portfolio investment	-3 434	1 590	1 365	-1 074	- 580
4. Securities of multilateral agencies	-	-	-	-	-
V. Total Resource Flows (long-term) (I to IV)	605	5 569	9 608	11 912	11 186
Total Resource Flows as a % of GNI	0,05	0,27	0,47	0,55	0,56

Source: OECD (OECD, 2013) <http://www.oecd.org/dac/stats/statisticsonresourceflowstodevelopingcountries.htm>

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-wide. 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 Sixth National Communication from Italy (MATTM, 2014).

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 OECD DAC 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

The following information provided in Japan's 2014 NIR differs from the 2013 NIR.

### 15.1. Overview

Japan takes actions, taking into account the importance to make effort to minimize adverse impacts in accordance with Article 3, paragraph 14. On the other hand, it should be noted that we have difficulty in accurately assessing specific adverse impacts due to the implementation of response measures to address climate change issues. For example, the fluctuations in crude oil prices are caused by balance between supply and demand as well as numerous other factors (e.g., trend in crude oil futures market or economic fluctuation), and it is uncertain whether there exists a causal link or, if so, to what extent it results from adverse impacts of climate change policy and measures.

In addition, it is necessary to change the perception of response measures in order to address climate change issues effectively, and sustainable development could be the one of the key options. For instance, the introduction of renewable energy leads to improve energy access, prepare for a disaster and create employment through development of a new

industry, as well as contributes to reducing GHG emissions. As discussed in Rio+20 and COP, the transition to green economy and the attainment of low-carbon growth are the key elements in order to address climate change and to achieve the sustainable development which strikes a balance between environment and economy. Efforts toward the establishment of low-carbon society should be accelerated throughout the world. Japan proposed “East Asia Low Carbon Growth Partnership” with the aim of promoting low-carbon growth through regional cooperation among the participating countries of the East Asia Summit. Japan also announced its proactive diplomatic strategy for countering global warming, “Actions for Cool Earth (ACE)”, which contributes to the world with its outstanding environmental and energy technologies. In addition, promoting further measures to mitigation as well as to adaptation taking into account the needs of vulnerable countries leads to maximize the positive impacts of response measures.

#### **15.2 Actions to minimize adverse impacts in accordance with Article 3, paragraph 14**

##### ***Development of carbon capture and storage (CCS) technologies***

Recognizing that CCS is an innovative technology that may achieve highly efficient carbon emissions reductions, Japan has been implementing large-scale demonstration projects toward practical use of CCS by 2020, as well as researches and developments on cost reductions and safety improvements. Also, Japan actively exchanged information on CCS technologies with other countries such as the United States of America and European countries. In addition, from 2014FY, Japan plans to launch survey to identify potential CO2 storage sites in waters surrounding Japan, study an integrated transportation and storage system based on shuttle shipping, and assess environmental impact of CO2 absorbent.

In terms of institutions regarding the sub-seabed geological storage of CO2 (offshore CCS), Japan amended the Marine Pollution Prevention Law in 2007 and built up the system of permission by the Minister of the Environment with the point of view of preserving the marine environment. It examined the methods of the potential environmental impact assessment and monitoring technology. The research for sea water and ecosystem in the sea off Japan was conducted to judge the application of the sub-seabed geological storage of CO2. The way of the long-term monitoring for the sub-seabed geological storage of CO2 was also examined.

## **19. Latvia**

Latvia provided the following information in its NIR 2014.

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Latvia is Annex 1 country and within limits collaborates with developing countries to minimize adverse, social, environmental, and economic impacts on the Parties.

Information about actions specified in Decision 15./CMP.1, paragraph 24 how Latvia gives priority to minimize the adverse impact of response measures in developing countries are presented below.

In 2012 Latvia launched a comprehensive energy policy reform – elaborated project “Energy long-term strategy 2030 - competitive economy for community”, approved amendments of laws and regulations, continuing market opening of electric energy and determining that November 1, 2012, regulated tariffs are applied only to households. As well as offered a vision for sustainable production of the electric energy from renewable energy sources (RES), for production of electric energy in the cogeneration and for field of biofuel further development. Within the framework of the reform, has been launched electric energy net settlement system in Latvia.

In 2012 Latvia implemented project “Support to the Moldova’s North Regional Development Agency and Regional Development Council with the Updating of Regional Development Strategy”. Within the framework of the project, updated Moldova’s Northern Region Development Strategy 2010-2016; organized a five-day training for Moldova’s Construction and Regional Development and the Ministry of Northern RAA employees; experts of Ministry of Environmental Protection and Regional Development (hereafter – MEPRD) provided methodological support for Moldova’s northern region development program improvement, including energy efficiency, monitoring and business matters; cooperating with experts of MEPRD, including consulting with Latvia’s region and local experience, learning from experts of MEPRD, employees of Moldova’s North Regional Development Agency significantly increased their planning capacity. Total cost of the project was EUR 9960.

### 15.1 REFERENCES

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- [http://www.am.gov.lv/data/file/atbalsts\\_moldovas\\_ziemelu\\_reģionālas\\_attīstības\\_āģentūrai.pdf](http://www.am.gov.lv/data/file/atbalsts_moldovas_ziemelu_reģionālas_attīstības_āģentūrai.pdf).

## 20. Liechtenstein

The following additional information was provided in Liechtenstein’s NIR 2014.

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The issue of adverse impacts of climate related policies and measures (in Liechtenstein) have been addressed by “The Energy Strategy 2020”, adopted by the Government in 2012. The strategy provides future-oriented impulses for the national energy policy. The focus areas of the concept are the promotion of efficient energy use, the use of renewable energies, and energy conservation:

- Increase the share of renewable energy in total energy use from 8% to 20% by 2020,
- Increase the energy efficiency to 20% to stabilize the energy consumption on the level of 2008 by 2020, and
- A 20% reduction of the CO<sub>2</sub> emission by 2020.

The Energy Strategy 2020 also reflects the need to minimize adverse effects of its proposed measures as required by Art. 3 paragraph 14 of the Convention and Art. 2 paragraph 3 of the Kyoto Protocol. The proposed set of measures has been checked against its compatibility with economic as well as social requirements.

## 21. Lithuania

Lithuania provided the following information in its NIR 2014.

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Lithuania continues to finance various projects which minimize the adverse social, environmental and economic impacts of the developing countries. In 2013, Lithuania has provided full and final information on its funding for the Fast Start Finance period, which contributed to the EU’s overall objective.

In 2012 Lithuania has adopted the Strategy for National Climate Change Management Policy by 2050, following which the Inter-institutional Action Plan on the Implementation of the Goals and Objectives for 2013-2020 of the Strategy for the National Climate Change Management Policy was adopted by the Government on 23rd of April, 2013. The Action Plan contains an objective to identify possible public and private financing sources, including alternative sources (such as flexible mechanisms), which would contribute to financing and implementation of climate change mitigation and adaptation projects in the developing and third countries.

Furthermore, on 21st of October, 2013, Lithuania has pledged to contribute a total of 100 000 EUR to the Eastern European Energy Efficiency and Environment Fund, which is administered by European Bank for Reconstruction and Development (EBRD). The aim is to finance climate change mitigation and adaptation projects in such countries as Moldova, Georgia and other strategic Eastern European partners. A total amount of 32 000 LTL was allocated to bilateral project in Ukraine, through Official Development Assistance (ODA) Programme in 2013. Furthermore, some 4 000 EUR were made as a voluntary contribution (offset) to the fund, which in total adds up to 114 000 EUR of climate finance committed to the developing countries in 2013, which has increased compared to the 2012 levels. The Contribution Agreement with EBRD is planned to be signed in the first half of 2014, after which funds shall be disbursed to different climate change mitigation and adaptation projects. More detailed information on project types financed would be available next year.

Disbursements of the funds committed in 2012 (a total of 100 000 LTL to Energy Sector Management Assistance Programme, operated by the World Bank) were made in 3rd quarter of 2013. Those proceeds were disbursed to both mitigation and adaption projects (cross-cutting), more detailed information on the project type is reported in Lithuania's 6th National Communication and 1st Biennial report under the UNFCCC.

Lithuania plans to increase its bilateral project assistance through the ODA and additional contributions from its Special Programme for Climate Change. Climate change is set as one of the priorities areas for areas in the Development cooperation and democracy promotion guidelines for 2014, approved by the Order of the Minister of Foreign Affairs. The guidelines set the priorities for projects financed in developing and third countries.

## **22. Luxembourg**

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

## **23. Monaco**

The following information provided in Monaco's 2014 NIR differs from the 2013 NIR.

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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 l'ordre de 349 m3 entre 1990 et 2012  
(soit environ 1,15% de la consommation initiale)
- Variation de la consommation de gaz:

Augmentation de 13,5 GWh



## 24. Netherlands

The Netherlands provided the following information in its NIR for 2014.

The Netherlands has reported information on the minimization of adverse impacts in its 6th National Communication and its 1st Biennial Report, both submitted to the UNFCCC in December 2013. Since the submission of the NIR 2013, there have been limited changes in the activities on minimizing 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. 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. During COP 19 in Warsaw, the Netherlands has actively contributed to reaching a timetable with agreements aimed at arriving at a new climate agreement in 2015, which will go into effect after 2020. Among other things, all countries have agreed to make their contribution to reducing greenhouse gasses known well in advance to the next COP, to be held in December 2015.

In addition to mitigation, the Netherlands attaches great importance to the effort to adapt to climate change. For some time now it has been assisting other countries financially or with knowledge provided by the business community to make them more resilient to the consequences of climate change. Recent Dutch efforts to minimize adverse impacts include active engagement for a full operationalization of the Green Climate Fund and New Market Mechanisms.

### **Green Climate Fund**

The Netherlands actively contributes to the full and timely operationalization of the Green Climate Fund and is committed to providing climate finance to support developing countries in their mitigation and adaptation activities. This Fund will, among other things, seek to use public funds to attract private finance for both mitigation and adaptation investments. On the Board of the Green Climate Fund, the Netherlands again shares a chair with Denmark, as it did in the Transitional Committee. Full operationalization of the Green Climate Fund is crucial to support developing countries in their transformation to low-carbon and climate-resilient development. In doing so, the GCF should try to maximize development benefits by linking climate change to poverty reduction and gender. Enhancing the role of the private sector is a Dutch priority to which the Netherlands has actively contributed through the operationalization of the private sector facility.

### **Collaboration between authorities, business and knowledge institutions**

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 security, 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 customization 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. The Netherlands provided € 300 million in Fast Start Finance over the period 2010-2012. In 2013, € 200 million was contributed. In the context of meaningful mitigation actions and transparency of implementation and collective action, the Netherlands stands ready to continue scaling up its climate finance action in order to contribute its share to the developed countries' goal to jointly mobilize 100 billion dollars per year by 2020. The Netherlands has also contributed to enhancing transparency regarding the Fast Start Financing initiative. On the initiative of the Netherlands, a special module on fast start finance has been established on the financial portal of the UNFCCC website, <http://www3.unfccc.int/pls/apex/f?p=116:13:601354855187581>. With the establishment of this module on the UNFCCC website, the Netherlands is confident this transparency of fast start finance will be safeguarded.

### **Market Mechanisms**

The flexible mechanisms under the Protocol – (1) International Emissions Trading (i.e. the European Union Emissions Trading Scheme EU ETS), (2) Joint Implementation and (3) Clean Development Mechanism – are all tools incorporated into the Protocol in order to share efforts aimed at reducing greenhouse gases, ensuring that investments are made where the money has optimal greenhouse gas reducing effects, and thus ensuring a minimum impact on the world economy. The Netherlands has made use of each of the flexible mechanisms. It has also signed MoUs regarding CDM and JI projects with several countries worldwide. The Netherlands is supporting the World Bank's "Partnership for Market Readiness", which will help countries to make use of the benefits and advantages of the carbon market. The PMR promotes collective innovation and piloting of market-based instruments for GHG emissions reduction. In addition, the PMR also provides a platform for technical discussions of such instruments to spur innovation and support implementation. 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'. Work continues on developing the modalities and procedures for the use of this new market-based mechanism, which will actually allow different approaches, including sectoral ones, to accommodate the differing needs of countries. The Netherlands also intends, however, to actively participate in the further discussions on the development and implementation of the Framework for Various Approaches in order, on the one hand, to allow flexibility in the use of market instruments and, on the other, to ensure that environmental integrity is safeguarded. Through this approach, fragmentation of the carbon market can be minimized. 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.

### **Minimizing adverse effects regarding biofuels production**

All biofuels on the market in Europe and the Netherlands must comply with the sustainability criteria laid down by the Renewable Energy Directive (2009/28/EG). Only if the biofuels are sustainable, are they allowed to be used for fulfilling the blending target. Compliance with these criteria must be demonstrated through one of the adopted certification systems. These certification systems are controlled by an independent audit. All biofuels produced in the Netherlands fulfil these requirements.

## 25. New Zealand

New Zealand provided the following information in its NIR for 2014.

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 2013 submission.

However, some revised information is provided for the following:

- information on a capacity-building workshop around fossil fuel subsidy reform (see section 15.2).
- further information on energy projects in the Cook Islands, Tokelau, Tonga and Tuvalu (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 members of the public. Policy advice is coordinated between Ministries and involves analysis of all relevant parameters. The Ministry of Foreign Affairs and Trade provides advice to the Government on international aspects of proposed policies. Through this process decision-makers in New Zealand can and frequently do consider the social and economic impacts of our policies on other countries, whether informed by bilateral engagement or other forms of analysis. During the public consultation phase, concerns and issues about the proposed measure can be raised by any person or organisation.

There is no pre-prescribed process for analysis of impacts across all policies. This allows for flexibility in policy making, and enables the most relevant advice to be put before decision-makers.

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 adverse 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 impacts of New Zealand's climate change response policies.

The New Zealand Government, through the New Zealand Aid Programme ([www.aid.govt.nz](http://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.

The New Zealand Aid Programme also works with partner countries to strengthen governance and improve their ability to respond to changing circumstances. 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 2014 year has been designated as the first International Year of Small Island Developing States by the United Nations General Assembly and will mark a renewed focus by the United Nations on the particular challenges these countries face. Small Island Developing States are increasing their uptake of renewable energy, which is a critical element of their long-term sustainable development efforts.

New Zealand will support Samoa as it hosts the third International Conference on Small Island Developing States (SIDS III) in September 2014.

### **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 inefficient market imperfections, fiscal incentives, tax and duty exemptions or subsidies in greenhouse-gas-emitting sectors of this nature.

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.

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. In March 2013, New Zealand, along with the United States, co-hosted a capacity-building workshop on building support for reform through effective communication and consultation strategies. New Zealand also supported development of the G20 fossil fuel subsidy reform peer review mechanism. Associated outreach activities included, with the United States, co-hosting in a G20 roundtable on recent progress and peer review of a fossil fuel subsidy reform in April 2013.

New Zealand also made a presentation to the G20's Energy Sustainability Working Group on how the G20 might best structure its proposed voluntary peer reviews for fossil fuel subsidy reform in July 2013.

New Zealand was 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). All policy measures that directly or indirectly support fossil fuels were reported. 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 achieving relevant policy objectives efficiently.

In line with New Zealand's commitment to transparency and information sharing, New Zealand was also the first APEC economy to volunteer for fossil fuel subsidy reform peer review under guidelines finalised by the APEC Energy Working Group in December 2013. New Zealand is seeking to progress the peer review in 2014. Consistent with New

Zealand's approach under APEC's fossil fuel subsidy reform voluntary reporting mechanism, New Zealand intends to put forward for peer review all policy measures that directly or indirectly support fossil fuels.

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 participated actively 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](http://www.cslforum.org)), Global Carbon Capture and Storage Institute ([www.globalccsinstitute.com](http://www.globalccsinstitute.com)) and the International Energy Agency Greenhouse Gas Research and Development Programme ([www.ieaghg.org](http://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.

The New Zealand Aid Programme maintains a focus on energy efficiency, and the transition away from fossil fuel dependency to clean energy generation, for sustainable economic development. One example is New Zealand's commitment to a major energy programme in Tonga. Working closely alongside development partners, New Zealand is supporting the practical implementation of Tonga's Energy Roadmap, an ambitious 10-year sector-wide plan to improve Tonga's energy efficiency and energy self-reliance. Part of New Zealand's NZ\$22.5 million support commitment is focused on upgrading Tonga's power distribution network, as well as investigating the feasibility of using wind as a renewable energy resource.

A further example is New Zealand's support to Tokelau, which was 100 per cent dependent upon diesel for electricity generation until 2013, with heavy economic and environmental costs. A New Zealand-funded project to construct solar-based mini-grids on three atolls now provides more than 90 per cent of Tokelau's electricity needs through solar generation. Projects to harness solar energy for remote atoll communities are also in progress in the

Cook Islands and Tuvalu, scheduled to deliver in 2014/15, alongside wider regional projects focusing on capacity building, asset management and energy sector reform.

#### **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.

The New Zealand Aid Programme provides support to a number of non-Annex I Parties for purposes of economic diversification and renewable energy generation (refer to section 15.6).

For example, 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, developing the aquaculture sector and providing capacity and capability building for small business in rural areas, particularly those run by women. 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. A key focus for New Zealand's development assistance in Timor-Leste is to support sustainable economic development through private sector investment.

Introducing clean and affordable energy technologies is a high priority for the Pacific region. On average, 10 per cent of the region's gross domestic product (GDP) is expended on imported fossil fuel and 80 per cent of electricity generation depends on the combustion of diesel. New Zealand is a member of the International Renewable Energy Agency (IRENA), an intergovernmental organisation that aims to promote the widespread use of all forms of renewable energy. New Zealand is involved with a number of IRENA's work streams in the Pacific and further afield.

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.

In March 2013, the New Zealand Government and the European Union co-hosted the Pacific Energy Summit. The Summit aimed to connect Pacific Island leaders with the finance and expertise to accelerate their countries' energy plans. The Summit secured donor commitments of NZ\$635 million (US\$525 million). This includes NZ\$255 million in grant funding and NZ\$380 million in concessional loans sufficient to support over 40 of the proposed projects over the next three years.

New Zealand is committed to providing long-term assistance to non-Annex I Parties in achieving economic diversification that is independent of fossil fuels and that includes the provision of secure, sustainable energy.

## **26. Norway**

Norway provided the following information in its NIR for 2014.

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Norway is 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 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 CO<sub>2</sub> 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 sixth National Communication (NC 6).

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, which is reflected in a new authorization by The Norwegian Parliament. 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 6 chapter 5.4 and [www.carbonneutralnorway.no](http://www.carbonneutralnorway.no).

#### Changes in 2013:

The Government decided in 2012 to increase the CO<sub>2</sub> tax by NOK 200 per tonne of CO<sub>2</sub> 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 CO<sub>2</sub> 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, OECD, International Institute for Sustainable Development (IISD) and the Friends of Fossil Fuel Subsidy Reform group.

#### Changes in 2013:

There have been no significant changes to the policy implementation of unsafe and unsound technologies in 2013.

#### 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 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 Clean Energy Ministerial, 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 CO<sub>2</sub> 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 has co-funded The World Bank CCS Trust Fund for Capacity Building with NOK 83 million since 2009 and is co-funding The Carbon Sequestration Leadership Forum's Capacity Building Trust Fund for CCS. Norway has also supported the South African CCS center over the last five years.

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 CO<sub>2</sub> capture (Technology Centre Mongstad, please view NC 6 chapters 4.3.1.9 and 7.4).

The Technology Centre Mongstad started operation in May 2012. Two different capture technologies - amine- and the ammonia-based CO<sub>2</sub> capture, are being tested. The technology centre is designed to have a capture capacity of 100,000 tonnes of CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> capture plants. In addition, the facility is able to adjust the concentration of CO<sub>2</sub> in the flue gas by enriching exhaust gas from the thermal power station with captured CO<sub>2</sub>. This allows testing of the CO<sub>2</sub> captured from flue gases with different concentrations of CO<sub>2</sub>. The technology centre is therefore able to test CO<sub>2</sub> 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.

#### Changes in 2013

The full scale CO<sub>2</sub>-project at Mongstad was discontinued in 2013, but this does not affect the Technology Center or other parts of our international efforts.

In 2013 Norway supported the South African work on a pilot for CO<sub>2</sub> storage with NOK 32 million.

#### **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 sound way. A description of the OfD programme can be found at [www.norad.no](http://www.norad.no).



The operative goal of the programme is "economically, environmentally and socially responsible management of petroleum resources which safeguards the needs of future generations."

Petroleum plays an important role in an increasing number of developing countries. Oil and gas hold the promise of becoming vital resources for economic and social development. Unfortunately, in many cases it proves difficult to translate petroleum resources into welfare for the people. Hence, many developing countries, rich in natural resources, still score low on international development performance indices and are caught in the so-called "resource curse". 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 can be useful for developing countries with proven 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 the end of 2012, Norway was primarily working with; Angola, Ghana, Tanzania, Mozambique, Sudan, South-Sudan, and Uganda, while Bolivia, Cuba, Iraq, Ivory Coast, Kenya, Lebanon, Liberia, Nicaragua, Myanmar, São Tomé and Príncipe, Sierra Leone and Uruguay receive limited assistance.

The OfD initiative was launched in 2005. However, through the Norwegian Petroleum Directorate and other agencies, Norway 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 coordination and implementation of the initiative. 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 254million in 2011/2012. Key implementing agencies are the Norwegian Petroleum Directorate, the Norwegian Environment Agency, the Norwegian Tax Administration, The Norwegian Coastal Administration and the Petroleum Safety Authority. Petrad (International programme for petroleum management and administration) and a range of consultancies and research institutions are also involved.

Several national and international NGOs are contributing in the OfD initiative. These organizations are involved in building civil society 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 supports and cooperates with the World Bank, the International Monetary Fund, the African Development Bank and the UNDP.

#### Changes in 2013:

A ten years cooperation with Timor-Leste has been completed and a final review is ongoing. A request from Timor-Leste for continuation of the program has been sent to the Norwegian government and the decision for a possible continuation will be settled in 2014.

(T). Requests for cooperation are also received from some other countries. An agreement between the International Monetary Fund and Norad has strengthened the linkage for cooperation.

**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 2013 Norwegian assistance to clean energy for development amounted to approximately NOK 2 billion. Seven core countries receive most of the funding (Ethiopia, Liberia, Mozambique, Nepal, Tanzania, South Sudan and Uganda), but the Initiative is also engaged on a smaller scale in around 12 other countries.

Increased focus on energy issues and their importance in the climate agenda, coupled with a significant increase of funds allocated to energy related activities within Norwegian development assistance, 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 various types of rural electrification like hydro power plants, solar power, transmission lines and through support of more 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 2013:

There have been no significant changes to the Clean Energy for Development program in 2013.

#### *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 in October 2011 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 the private sector have been 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 has been established. Currently, about 55 countries and institutions have signed up to 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:** In June 2012, Norway entered into a five-year Partnership Agreement with Ethiopia to support efforts to increase access to sustainable energy. Norway pledged NOK 500 million to support Ethiopia in these efforts.
- **Kenya:** In June 2012, Norway entered into a five-year MOU 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. Norway pledged NOK 250 million for this support.
- **Liberia:** In June 2012, Norway entered into a five-year MOU with Liberia to support increased access to sustainable energy. Norway pledged NOK 100 million for this purpose. In June 2013 Liberia and Norway signed a Framework for Energy+ Cooperation. The implementation of Energy+ in Liberia will initially be carried out in cooperation with the Scaling-up Renewable Energy Program, the World Bank and the African Development Bank.
- **Bhutan:** In February 2013, Norway entered into a five-year Framework for Energy+ Cooperation with Bhutan to increase access to energy services and reduce emissions

of greenhouse gases from the energy sector in Bhutan. Norway pledged NOK 100 million for this purpose. The Asian Development Bank cooperates in these efforts.

See [http://www.regjeringen.no/en/dep/ud/campaigns/energy\\_plus.html?id=672635](http://www.regjeringen.no/en/dep/ud/campaigns/energy_plus.html?id=672635) for more information.

Changes in 2013:

In February 2013, Norway entered into a five-year 100 million NOK agreement with Bhutan to increase access to energy services and reduce emissions of greenhouse gases from the energy sector in Bhutan.

## **27. Poland**

Poland provided the following information in its NIR for 2014.

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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.

In the frames of project GreenEvo - Green Technology Accelerator, run by the Ministry of Environment, aiming at increasing the efficiency of technology transfer from Poland through good identification of the developing countries' needs in this regard, the fifth application stage is under way. On the other hand in frames of programme called GEKON (Ecological Concepts Generator) aimed at developing financial support for scientific and industrial consortia related to the search and implementation of environmentally friendly technologies, the second stage of competition is under development. The areas where financial support is available cover: environmental aspects of attaining the unconventional gas, energy efficiency and energy storage, water protection and its rational use, clean sources of energy, inventive methods of getting fuel, energy and materials from waste as well as waste recycling.

In 2013 the Polish climate development support amounted to 4.9 million EUR. The activities in frames of bilateral co-operation were realised covering 1.339 million EUR. About 67% of the climate support was assigned to adaptation projects, the remaining part supported activities aimed at climate change mitigation and capacity building. These projects were realised among others in: Afghanistan Armenia, Azerbaijan, Burkina Faso, Ethiopia, Georgia, Kirgizstan, Moldova, Nigeria, Sudan, Tanzania and Palestine.

In frames of bilateral development assistance in 2013, including small grants system, activities were performed covering 2.803 million EUR. In Moldova projects supported by the Ministry of Foreign Affairs are going to serve the local communities contending with lack of fresh water. Model solutions will be implemented in relation to sewage treatment in rural areas. In total 6 projects will be performed with cost of 832 thousand EUR. On the areas of Palestine, Armenia, Tajikistan, Kirgizstan and Uzbekistan, construction of irrigation and sewage treatment systems, as well as mitigation of fresh water contamination have been supported. In Georgia and Azerbaijan the projects amounted for 225 thousand EUR covered soil protection, waste reduction and mitigation of natural disasters impact. In Ethiopia the projects have been introduced, amounted for 22.3 thousand EUR, aiming at green areas protection, education on environmental protection and limitation of deforestation. In the North Korea the plans for construction of sea walls against oil

improving the state of marine environment in Chogjin have been financed with amount of 13.8 thousand EUR.

In frames of multilateral co-operation, in 2013, the Ministry of Environment has planned to support financially international organisations acting in climate change combat with 1.537 million EUR. Republic of Poland, acting the Presidency of 19th Conference of the Parties of the UNFCCC, supported with 3.34 million EUR the participation of delegates from non-Annex I ParFes amending the sessions as well as the additional contributions to the UNFCCC Secretariat.

## 28. Portugal

The following additional information was provided in Portugal's 2014 NIR.

In recent years the Portuguese Cooperation has been following closely the international negotiations on environmental issues and especially climate change at the United Nations, OECD and CPLP level.

Portugal, through the Portuguese Carbon Fund and the collaboration between the Portuguese Environment agency and Instituto Camões have been responsible for approving projects in the field of climate change in partner countries, particularly Portuguese's speaking countries in Africa.

The approach for the approval of projects follows – amongst other criteria - the need for creating capacity to develop measures as well as planning on adaptation to climate change, on one hand, and to maintain the balance between mitigation and adaptation support , on the other.

Most of these countries are LDC's and some (Cape Verde, São Tome e Príncipe and Timor-Leste) are small Island developing states that are quite vulnerable to climate change and therefore adaptation takes on a significantly important role.

We take into account not only the national circumstances of the countries in the project approval process but also the institutional support of the beneficiary country towards the project itself. The process and the actors involved ensure continuity on the main priorities and value added of the Portuguese Development Cooperation as well as the achievement of the commitments made at international level.

Portugal has included an extended description of it cooperation activities in Chapter 6 of its National communication and also in tables 7-9 of the biannual report.

## 29. Romania

No additional information was included in the NIR of Romania for 2014.

## 30. Russian Federation

The Russian Federation provided the following information in its NIR for 2014.

При выполнении принятых национальных обязательств по ограничению антропогенных выбросов и повышению абсорбции парниковых газов Российская Федерация учитывает положения пункта 14 статьи 3 Киотского протокола о сведении к минимуму неблагоприятных социальных, экологических и экономических

последствий для Сторон, являющихся развивающимися странами. Основными направлениями деятельности по сведению к минимуму неблагоприятных социальных, экологических и экономических последствий для развивающихся стран являются:

- смягчение антропогенного воздействия на климатическую систему благодаря разработке и осуществлению целенаправленных национальных политики и мер;
- экспорт в развивающиеся страны энергетических ресурсов с меньшей углеродоемкостью и компенсация выбросов парниковых газов, связанных с производством или добычей, подготовкой и транспортировкой экспортируемых энергоресурсов;
- укрепление потенциала в развивающихся странах благодаря подготовке и переподготовке специалистов в области метеорологии, климатологии и охраны окружающей среды.

В целях смягчения антропогенного воздействия на климат в 2012 году Правительством РФ принят ряд постановлений по оптимизации деятельности энергетического сектора. С 1 января 2012 г. вступило в силу Постановление Правительства РФ от 08.01.2009 г. № 7 «О мерах по стимулированию сокращения загрязнения атмосферного воздуха продуктами сжигания попутного нефтяного газа на факельных установках». Постановление устанавливает повышенную плату за выброс вредных веществ, сверхлимитное сжигание попутного нефтяного газа и вводит дополнительный повышающий коэффициент к этой плате при отсутствии средств измерения и учета, подтверждающих фактический объем образования, использования и сжигания на факельных установках попутного газа. В целях оптимизации использования попутного нефтяного газа Правительство РФ приняло Постановление от 08.11.2012 г. № 1148 «Об особенностях исчисления платы за выбросы загрязняющих веществ, образующихся при сжигании на факельных установках и (или) рассеивании попутного нефтяного газа». Этим постановлением устанавливается предельно допустимое значение показателя сжигания и (или) рассеивания попутного нефтяного газа в размере не более 5% объема добытого попутного нефтяного газа. В соответствии с указанными постановлениями, с 1 января 2013 года плата за выбросы загрязняющих веществ, образующихся при сжигании на факельных установках и (или) рассеивании попутного нефтяного газа свыше 5% производится в пятикратном размере.

Российская Федерация практически полностью обеспечивает себя энергоресурсами за счет внутренней добычи. Часть добытых энергоресурсов экспортируется<sup>13</sup>. При этом выбросы парниковых газов от операций по добыче, подготовке и транспортировке экспортируемых нефти и природного газа, а также утилизации нефтяного (попутного) газа учитываются в национальном кадастре и, соответственно, их сокращение является обязательством Российской Федерации.

Российский природный газ замещает в странах-импортерах более карбооемкие виды топлива, снижая, таким образом, выбросы в атмосферу парниковых газов, в первую очередь, CO<sub>2</sub>. Экспорт природного газа осуществляется в развитые и развивающиеся страны. Доставка природного газа будет производиться по двум направлениям: западному – из Западной Сибири и восточному – с месторождений Восточной Сибири, Дальнего Востока и Сахалина. В 2011 году введен в эксплуатацию

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<sup>13</sup> Данные по экспорту энергоресурсов за 2011г. приведены в приложении 2 к настоящему докладу.

магистральный газопровод Сахалин — Хабаровск — Владивосток, который предполагается использовать и для экспортных поставок газа в Китайскую народную республику (КНР) и Республику Корея. Наряду с экспортом природного газа, увеличивается поставка в КНР сжиженного природного газа. Так, в 2012 году импорт СПГ в эту страну составил 14,68 млн. т, что на 20,3% выше, чем в 2011 году<sup>14</sup>. В перспективе объем поставок газа из Российской Федерации в страны Азиатско-Тихоокеанского региона может сравниться с размером экспорта российского газа в Европу или даже превысить его. В настоящее время с КНР обсуждаются поставки газа в объеме 68 млрд. м<sup>3</sup> в год, с Республикой Корея — 10 млрд. м<sup>3</sup> в год. Начало поставок запланировано на 2015 год. Поставки природного газа будут способствовать сокращению потребления в странах-импортерах угольного топлива и внедрению современных технологий в энергетическом секторе.

Наряду с природным газом, Российская Федерация осуществляет экспорт сырой нефти в развивающиеся страны. Осуществляя поставки сырой нефти в развивающиеся страны, Российская Федерация содействует устойчивому развитию экономики этих государств. В соответствии с долгосрочным соглашением о сотрудничестве между Российской Федерацией и КНР, в рамках строительства нефтепроводной системы «Восточная Сибирь – Тихий океан» (ВСТО) построен отвод в КНР. Объем экспорта нефти по ВСТО по итогам 2012 года увеличится на 1,1 млн тонн, или 7,2% к прошлогоднему показателю, и достигнет 16,3 млн тонн. Кроме КНР, импортерами российской нефти являются Республика Корея, Таиланд, Филиппины, Сингапур, Индонезия, Тайвань и Малайзия<sup>15</sup>.

Российская Федерация также осуществляет поставки электроэнергии в страны Азиатско-Тихоокеанского региона. В 2012 году поставки электроэнергии в КНР составили 2,63 млрд. кВт·ч<sup>16</sup>. В свою очередь, эмиссия парниковых газов, связанная с выработкой электроэнергии, включена в главу «Энергетика» настоящего кадастра.

Российская Федерация осуществляет укрепление потенциала в области предотвращения изменения климата в развивающихся странах путем подготовки квалифицированных специалистов. Ежегодно Правительство Российской Федерации осуществляет оплату обучения иностранных граждан из развивающихся стран и стран СНГ специальностям гидрометеорологического профиля на безвозмездной основе. Подготовка специалистов и повышение их квалификации (обучение в аспирантуре) осуществляется в профильных высших учебных заведениях. В системе высшего профессионального образования разработаны учебные программы, в которых осуществляется преподавание основ метеорологии, климатологии, систем сбора и обработки климатической информации, методов оценки состояния и прогнозирования изменений окружающей среды и климата. Координацию образовательной деятельности осуществляет Учебно-методическое объединение в области гидрометеорологического образования (далее УМО), созданное Минобрнауки России на базе Российского государственного гидрометеорологического Университета<sup>17</sup>. В настоящее время в Российской Федерации обучаются студенты из Бенина, Бутана, Вьетнама, Ирака, Йемена, Кении, Киргизии, Конго, Кот-Д'Ивуара, Молдовы, Монголии, Таджикистана, Танзании, Туркменистана, Узбекистана, Чада и других развивающихся стран.

#### **Литература и источники данных**

<sup>14</sup> <http://www.gazprom.ru/press/reports/2013/china-suffocates;>  
[http://www.tomsktransgaz.ru/news/?id=5259.](http://www.tomsktransgaz.ru/news/?id=5259)

<sup>15</sup> [http://www.ati.su/en/Media/News.aspx?HeadingID=1&ID=11756.](http://www.ati.su/en/Media/News.aspx?HeadingID=1&ID=11756)

<sup>16</sup> [http://itar-tass.com/opinions/interviews/1960.](http://itar-tass.com/opinions/interviews/1960)

<sup>17</sup> [http://umo.rshu.ru/content/group.](http://umo.rshu.ru/content/group)

1. Шестое национальное сообщение Российской Федерации, представленное в соответствии со статьями 4 и 12 Рамочной Конвенции Организации Объединенных Наций об изменении климата и статьей 7 Киотского протокола. –М., 2013, –277 с.

## 31. Slovakia

Slovakia provided the following information in its NIR for 2014.

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### 15.1 Legislative Background

Kyoto Protocol - Article 3.14 requires Annex I countries to implement their GHG emission reduction commitments in a way to minimize the adverse social, environmental and economic impacts on developing country Parties, particularly those listed in Article 4.8 and 4.9 of the Convention.

Decision 15/CMP.1 – paragraphs 23 – 26 in Article 3.14 and Article 7.1 provide further guidelines and focus the reporting commitments towards the following points:

- 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, in pursuit of the objective of the Convention.
- b) Removing subsidies associated with the use of environmentally unsound and unsafe technologies.
- c) Cooperating in the technological development of non-energy uses of fossil fuels, and supporting developing country Parties to this end.
- 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 Parties not included in Annex I of the UNFCCC in this effort.
- 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.
- f) Assisting developing country Parties which are highly dependent on the export and consumption of fossil fuels in diversifying their economies.

Decision 22/CMP.1 – paragraphs 121 – 126 provides guidelines for review under Article 8 of the Kyoto Protocol, some of it relevant for Article 3.14.

Decision 31/CMP.1 – provides a mandate to implement the commitments from the Article 3.14.

### 15.2 Introduction and Methodological Guidelines

Implementation of increasingly stringent environmental regulations and economic policies which penalize further use of environmentally harmful substances, technologies and so on might be associated with a range of side effects. It is not excluded that some of possible adverse economic effects will affect some developing and least developed countries having less means for adequate remedial response measures. The magnitudes of these potential impacts are typically given by the stringency of adopted measures, selection of the



particular policy instrument, size and strength of the implementing economy relative to the world markets and also the actual macroeconomic set up of the affected developing countries.

In this chapter there are identified potential channels of how domestically implemented environmental policies in the Slovak Republic might have exercised any impact on third countries. Furthermore, any existing evidence about the potential magnitudes of these effects is highlighted. Similarly, the activities in particular those related to the development aid of the Slovak Republic implemented in order to minimize the negative consequences caused by these policies are described in this chapter. The aim is to meet our commitments under the Kyoto Protocol in respect with transparent reporting on potential adverse social, environmental and economic impacts particularly on developing countries.

### **15.3 Adopted Legislative Measures**

#### **15.3.1 Fiscal Policy Instruments**

Fiscal policy instruments are increasingly being referred to as an efficient instrument to correct existing environmentally related price distortions. The Slovak Republic maintains excise taxes on fossil fuels, electricity and mineral oils. The actual fiscal policy drivers, however, still remain much more linked to the current governmental budgetary situation rather than to provide fiscal incentives for environmentally sound behaviour. Since 2009 only minor changes occurred such as a decrease of the excise tax on diesel, removal of existing exemptions of coal tax payers and increase of excise tax on LPG, CNG and electricity. No impact on any third countries is expected from already implemented fiscal policies and therefore no specific policies to offset any negative effects have been considered.

#### **15.3.2 Biofuels Policy**

Biofuels policy discussed in more details in chapter 4.4.5 has been in place to meet the targets required by EU legislation. Increased demand and subsequently also the production of biofuels has not only been reflected by rising commodity prices but also induced land use changes resulting from the reduction of the supply of commodities in direct competition with those used for biofuels world-wide. Therefore, international trade represents the key channel through which the potential negative economic, social and environmental impacts<sup>18</sup> might be transmitted towards developing countries. Taking into account the low quantities of biofuels in use in the Slovak Republic, we do not expect any negative effects neither on forests destruction nor contribution to the rising world prices of agricultural commodities<sup>19</sup>. Despite its rather low contribution to these developments, the Slovak Republic actively contributes to shaping the international sustainability standards either within its own (and EU internal) legislation process or within the framework of international institutions, such as WTO, FAO, etc. Furthermore, the Slovak Republic has been actively engaged in strengthening the know-how on improving food security and agriculture, land and water management in Kenya. Moreover, scholarships for students from developing countries were offered with preference to those applying to pursue their studies in environmental sciences.

#### **15.3.3 GHG Reduction Policies**

The key policy option was a development of emerging carbon market with resulting carbon price. Among the complementary policies, targets have been adopted to increase the share

<sup>18</sup> Implied excessive land use changes, food shortages or compromised food security.

<sup>19</sup> Please note that the different conclusion might be drawn when considering the implications of the overall EU biofuel policies. Similarly this would also apply in considering the existing agricultural policies within the EU Common Agricultural policy.

of renewable energy resources, increase energy efficiency as well as the new legislation which sets more stringent quality standards for fuels and personal cars.

Adopted policies could have had some implications for third countries either through the underlying carbon market price mechanisms or requirements to comply with new and tighter environmental regulations. CO<sub>2</sub> emission trading (either EU ETS or Kyoto Protocol emission trading) and increasingly stringent fuel quality standards might have some impact. The major example of its direct impact on the third countries is the integration of aviation sector into the trading scheme. Among indirect effects, the major example is the concern about a possible carbon leakage. Most of the impacts of carbon leakage (shifts of industrial activity to the countries without any GHG emission reduction commitments, potential downward pressure on oil prices, etc.) on the third countries would in fact be rather positive for them<sup>20</sup>. Measures in place to minimize a potential carbon leakage include the provision to enlist economic sectors facing immediate threat of carbon leakage, which will under given conditions continue receiving their CO<sub>2</sub> allowances for free.

Furthermore, increasingly stringent fuel quality standards in Europe might in fact turn out to be positive impact because it might trigger increase of investments in the fuel processing industries in third countries. Rising fuel prices in Europe due to the carbon price (or tax) and quality increase might counter play the rising oil prices particularly due to increasing scarcity of this commodity. Such effects might on the one hand negatively affect revenues of the oil exporting countries, which can be on the other hand still balanced by rising demand from the rest of the world. The final net impact will depend on the benefits derived from expansion of industrial production and costs needed to clean up higher levels of pollution including addressing its consequences.

Apart to emission trading, no other Kyoto Protocol flexible instruments have been used to meet the GHG emission reduction targets by the Slovak Republic, therefore no impact on third countries in this respect is reported.

Activities considered within the preparation of the adaptation strategy to climate change have a local character without any implications for third countries.

## **32. Slovenia**

No additional information was included in the NIR of Slovenia for 2014.

## **33. Spain**

Spain provided the following information in its NIR for 2014.

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A continuación se recoge la información adicional a la remitida en la pasada edición del NIR.

Es importante destacar que España como integrante de la Unión Europea (UE) participa en numerosos diálogos políticos internacionales donde mantiene a terceros países plenamente informados de las las iniciativas y propuestas en relación con Cambio Climático que se detalla a continuación, y promueve el intercambio de información, datos y resultados de los estudios preparatorios con otras partes interesadas externas.

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<sup>20</sup> In some specific cases, where the polluting entity seeking a location in developing country causing an increase of local pollution, increased environmental damage might outweigh economic benefits.

En diciembre del año 2013, España ha presentado a la CMNUCC la Sexta Comunicación Nacional y el Primer Informe Bienal donde se recogen numerosa información relevante sobre I+D+i, capacitación, financiación y desarrollo y transferencia de tecnología para países en desarrollo. Son numerosas las actividades de cooperación en materia de tecnologías avanzadas poco emisoras de gases de efecto invernadero impulsadas por España. Especialmente en la promoción de energías renovables, España lidera numerosas actividades de colaboración donde el Instituto para la Diversificación y el Ahorro de Energía de España (IDAE) es un centro de referencia internacional.

#### **- Red Iberoamericana de Oficinas de Cambio Climático (RIOCC)**

España promueve numerosas iniciativas de capacitación y cooperación tecnológica en el contexto de cooperación regional de la RIOCC. Así, desde la creación de la Red hace ya diez años, se han llevado a cabo 10 Encuentros Anuales, más de 20 actividades de capacitación regional entre cursos y talleres, y diversos estudios y proyectos regionales. Todas estas acciones han sido en su gran mayoría apoyadas con fondos de España y también con el apoyo de numerosos organismos internacionales y regionales.

En materia de capacitación, en los años 2012 y 2013 destacan los siguientes talleres regionales: “Impactos y adaptación al cambio climático en las zonas costeras de América Latina y el Caribe (2012)” y “Herramientas y Metodologías para la toma decisiones en el ámbito de la mitigación, con especial énfasis en agricultura y energía (2013)”. Para más información se puede consultar la página web de la RIOCC: [www.lariocc.es](http://www.lariocc.es), así como el documento “Diez años de la RIOCC” publicado recientemente.

Además de las actividades de capacitación, cabe destacar el proyecto regional denominado “Evaluación de los impactos del cambio climático en zonas marinocosteras de la región de América Latina y Caribe” desarrollado por el Instituto de.

Hidráulica Ambiental de la Universidad de Cantabria y financiado por España en el marco de los Estudios Regionales de la Economía del Cambio Climático en América Latina y el Caribe (ERECC) que ha llevado a cabo la Comisión Económica para América Latina y el Caribe (CEPAL). El proyecto incluye el desarrollo de un visor web de los resultados para la máxima difusión de los mismos en los países de la región.

Este proyecto ha sido muy bien recibido por todos los países de la RIOCC, por el potencial que presentan los resultados obtenidos para 72.000 km de costa para la toma de decisiones en la ordenación del litoral, que incluye sectores tales como la conservación de ecosistemas costeros así como las infraestructuras portuarias, turísticas y urbanísticas. Áreas todas ellas identificadas como prioritarias en los foros y reuniones de la Red. Se trata sin duda de una experiencia muy exitosa sobre transferencia de tecnología.

#### **- 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). El Proyecto promueve numerosos talleres y actividades y se apoya en diversos centros regionales. Los últimos avances tanto en adaptación como en mitigación pueden ser encontrados en su página web<sup>21</sup>. Las actividades más relevantes en las que REGATTA ha trabajado en el campo de energía renovable y eficiencia energética son:

- Energías Renovables

Los trabajos han sido desarrollados en colaboración el Instituto de Investigaciones Eléctricas (IIE) y se han llevado a cabo talleres sobre energía eólica y solar; asistencia

<sup>21</sup> <http://www.cambioclimatico-regatta.org/index.php/es/>.

técnica prestada a Guatemala y Honduras en energía eólica, y a Nicaragua en energía solar fotovoltaica; Comunidades de Prácticas sobre energía solar fotovoltaica; Propuestas de proyecto (en fase de búsqueda de financiamiento) para la promoción de la energía solar (Nicaragua) y eólica (Guatemala).

· Eficiencia Energética

Uno de los trabajos más destacados es el apoyo de REGATTA junto con otros organismos e iniciativas regionales al desarrollo de la estrategia centroamericana de iluminación eficiente que fue aprobada en diciembre de 2013.

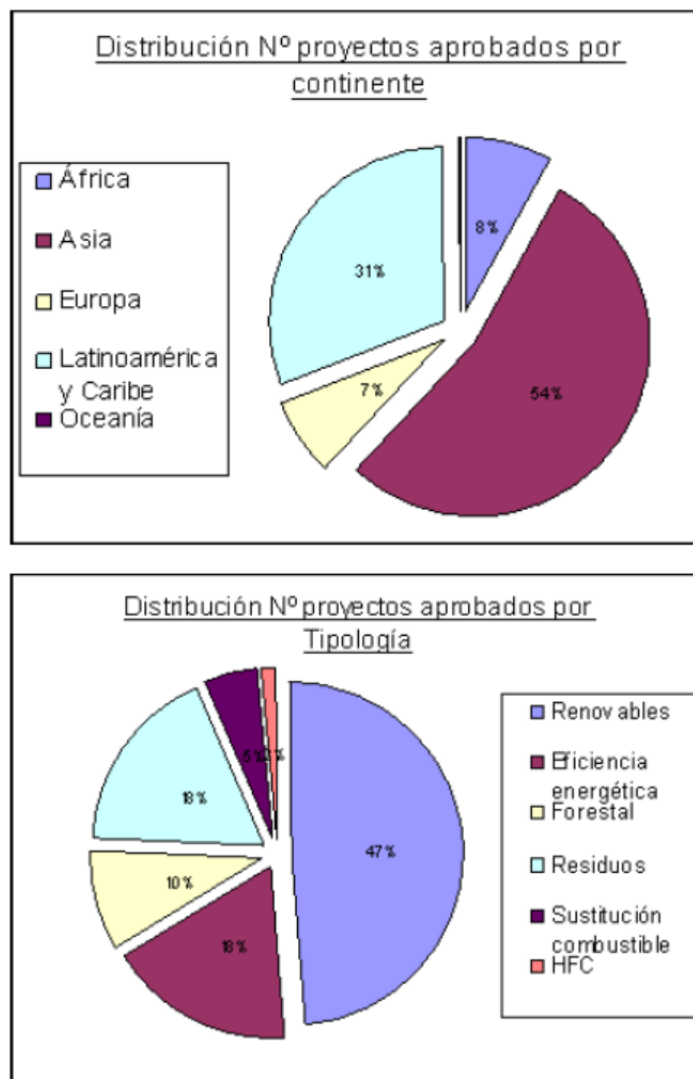
**- Los mecanismos de flexibilidad basados en proyectos del Protocolo de Kioto:**

Cabe mencionar la componente de transferencia tecnológica a través de proyectos del Mecanismo de Desarrollo Limpio (MDL) y del Mecanismo de Aplicación Conjunta (AC) así como de los programas de colaboración en I+D+i en energías renovables con otros países tanto desarrollados como en desarrollo. Todos los proyectos MDL y AC que han sido aprobados hasta la fecha en España se pueden consultar en la página Web del Ministerio de Agricultura, Alimentación y Medio Ambiente<sup>22</sup>, Autoridad Nacional Designada (AND).

Hasta la fecha (1 de marzo 2013) la AND española ha concedido el informe de participación voluntaria a 262 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 (un 47%). 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 10% de sumideros forestales, un 5% de proyectos de sustitución de combustibles, un 2% de proyectos de incineración de HFC23. En las siguientes gráficas se observa la distribución geográfica y por tipología de proyecto.

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<sup>22</sup> <http://www.magrama.gob.es/es/cambio-climatico/temas/mecanismos-de-flexibilidad-y-sumideros/autoridad-nacional-designada-and/>.



**- Actividades lideradas por el Instituto para la Diversificación y Ahorro Energético (IDAE) del Ministerio de Industria, Energía y Turismo**

España participa en las diferentes reuniones de la Agencia Internacional de Energías renovables (IRENA) con el objetivo de promover el uso de las energías renovables en todo el mundo. En este contexto, se trabaja en las actividades enmarcadas en la Clean Energy Ministerial (CEM) donde España lidera junto con Alemania y Dinamarca el grupo de trabajo multilateral solar y eólico. Dentro de esta iniciativa se ha presentado ya un Atlas Global Solar y Eólico, que se quiere ampliar a otras tecnologías. El IDAE también participa en otras iniciativas tales como: la Asociación para el Conocimiento en Energías Renovables (IRENA Renewable Energy Learning Partnership-IRELP); el Diagnóstico de Necesidades de Desarrollo de Capacidades en Energías Renovables en los sectores solar y eólico (CaDRE); y una iniciativa para el Análisis de la creación de valor económico a través de las energías renovables (Eco-Value).

En relación con la Agencia Internacional de la Energía (AIE), el IDAE participa en los llamados Implementing Agreements (IA's), que consisten en más de 40 proyectos de investigación, desarrollo y demostración en el campo de la energía, así como en diferentes grupos de trabajo: tecnologías energéticas de uso final; y tecnologías de energías renovables y de eficiencia energética. El IDAE lidera el grupo de trabajo sobre tecnologías

energéticas de uso final. Otros foros en los que el IDAE contribuye como representación nacional son, la Alliance for Rural Electrification (ARE), el Global Bioenergy Partnership (GBEP) y la Renewable Energy Policy Network for the 21<sup>st</sup> Century (REN21), entre otros.

Dos zonas prioritarias de colaboración para el IDAE son la región de América Latina y la del Mediterráneo. En América Latina se han llevado a cabo varios proyectos de cooperación tecnológica, como por ejemplo el proyecto Tech4CDM. Además, se ha mantenido colaboraciones bilaterales con prácticamente todos los países más destacados de la región y se tiene contacto con organismos relevantes, como es el caso de la Organización Latinoamericana de la Energía (OLADE). En la región del Mediterráneo, se participa activamente en el Plan Solar Mediterráneo, que es uno de los seis proyectos prioritarios de la Unión por el Mediterráneo (UpM). Además se participa en numerosas actividades de capacitación y el IDAE es miembro fundador de la Asociación Mediterránea de Agencias Nacionales de Energía (MEDENER).

Por lo que respecta a Asia, se mantiene una importante colaboración con varios países, entre ellos China y Corea. Se están llevando a cabo acciones de trabajo con el fin de desarrollar los Memorando de Entendimiento (MoU) en el campo energético que el Gobierno Español firmó con los respectivos países.

En África, además de con los países mediterráneos, se colabora desde 2010 en la puesta en marcha del Centro Regional para las Energías Renovables y la Eficiencia Energética (ECREEE) de la Comunidad Económica de Estados de África Occidental (CEDEAO). Este Centro tiene como objetivo promover las energías renovables y la eficiencia energética en los quince países de África occidental agrupados en la CEDEAO y cuenta con el apoyo financiero de España a través de la Agencia Española de Cooperación Internacional para el Desarrollo (AECID).

#### **- CIUDEN (Fundación Ciudad de la Energía) en colaboración con el CIEMAT**

Se ha puesto en marcha el Centro de Desarrollo de Tecnologías de Captura de CO<sub>2</sub> (es.CO<sub>2</sub>), aglutinando todas las partes de la cadena completa de Captura, Transporte y Almacenamiento de CO<sub>2</sub> (CAC) a través de sus plantas industriales situadas en Cubillos del Sil - León (Captura y Transporte) y, Hontomín - Burgos (Almacenamiento), postulándose como planta europea de tamaño industrial en operación continua con el ciclo completo CAC y abierta al desarrollo tecnológico. La Planta de Captura cuenta con el proceso completo desde la recepción de las materias primas hasta la etapa de captura de CO<sub>2</sub>, contando con una caldera de Carbón Pulverizado (20 MWt), una de Lecho Fluido Circulante (30 MWt) y un gasificador de biomasa (3 MWt).

Las instalaciones de es.CO<sub>2</sub> son únicas en el mundo, con una configuración flexible, modular y versátil, que proporciona una plataforma óptima para la experimentación en distintas condiciones de operación con diferentes combustibles y tecnologías de combustión. El mantenimiento de su explotación puede situar a Europa a la cabeza del desarrollo de las tecnologías CAC.

CIUDEN participa en los proyectos europeos más relevantes relacionados con las tecnologías CAC, entre ellos destaca el Proyecto Compostilla OXYCFB300. Asimismo, CIUDEN participa activamente en los foros más importantes tanto a nivel nacional como internacional y forma parte de los comités nacionales e internacionales de normalización.

#### **- 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). Esta alianza permite mejorar la participación en iniciativas internacionales, 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) donde España participa activamente.

#### **- NER 300**

Se trata de la financiación de proyectos de demostración de captura y almacenamiento geológico de carbono y de renovables innovadoras. 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 de carbono y de energías renovables innovadoras.

Las reglas básicas que rigen este mecanismo de financiación quedan establecidas en la Decisión de la Comisión 2010/670, de 3 de noviembre. Es un programa de carácter comunitario, en el que se permite que los EEMM 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 financian con los fondos obtenidos 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. Cada Estado Miembro debía entonces 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 (BEI) 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 BEI para ser sometidos a la siguiente fase del proceso de selección. 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 proyecto apoyado por España y promovido por Acciona Energía, S.A., de energía solar de concentración con sistema de torre.

En el año 2013 se ha lanzado la segunda convocatoria del programa y se han preseleccionado tres proyectos españoles que actualmente compiten con los presentados por el resto de EEMM.

#### **- Tabla resumen con otras Iniciativas relevantes**

En la Tabla siguiente se recogen algunos ejemplos de iniciativas, fondos, programas y organismos que España viene apoyando entre 2008 y 2012 relacionados con acciones tecnológicas (Fuente: 6ª Comunicación Nacional).

Organismo	*	Tipo de Cooperación	Países receptores	Tipo de Tecnologías
Banco Mundial - Unidad de Finanzas del Carbono: Bio Carbon Fund/Community Development Carbon Fund/Spanish Carbon Fund/Carbon Partnership Facility	M	Fondos Carbono de	Países en desarrollo y Economías en transición	Energías renovables, eficiencia energética, gestión de residuos, sumideros, transportes, etc
Corporación Andina de Fomento (Iniciativa Iberoamericana de Carbono)	M	Fondos Carbono de	Países latinoamericanos	Energías renovables y eficiencia energética
Banco Europeo de Reconstrucción y Desarrollo y Banco Europeo de Inversiones (Multilateral Credit Carbon Fund)	M	Fondos carbono de	Países en desarrollo y Economías en transición	Energías renovables y eficiencia energética
Banco Asiático de Desarrollo (Asian Pacific Carbon Fund)	M	Fondos carbono de	Países en desarrollo en la región asiática	Energías renovables, eficiencia energética, gestión de residuos, sumideros, transportes, etc
Fondo de Tecnologías Limpias (Climate Investment Funds)	M	Demostración, desarrollo y transferencia de tecnologías bajas en carbono	Criterios elegibilidad: potencial de reducción de emisiones, impacto en el desarrollo, capacidad de implementación, etc.	Tecnologías bajas en carbono con un potencial importante de reducción de emisiones de GEI en el largo plazo
Fondo Fiduciario de la Organización Meteorológica Mundial	M	Transferencia de tecnología	África y Latinoamérica	Observación sistemática y herramientas y modelos climáticos
Banco Europeo de Reconstrucción y Desarrollo (Sustainable Energy Initiative)	M	Transferencia de tecnología	Países en Desarrollo y Economías en Transición	Eficiencia energética y Energías renovables
Banco Asiático de Desarrollo (Clean Energy Financing Partnership Facility)	M	Transferencia de tecnología	Países en Desarrollo en la región Asiática	Eficiencia energética, Energías renovables
Banco Interamericano de Desarrollo Sustainable Energy and Climate Change Initiative	M	Transferencia de tecnología / capacitación	Países latinoamericanos	Eficiencia energética, Energías renovables, Biocombustibles, Financiación del Carbono



Organismo	*	Tipo de Cooperación	Países receptores	Tipo de Tecnologías
Estrategia Internacional de Reducción de Desastres (EIRD), Unidad Regional de las Américas	M	Transferencia de tecnología / capacitación	Países latinoamericanos	Integración de la adaptación al cambio climático en la reducción de riesgos de desastres naturales.
Fondo Especial de Cambio Climático (Contribución enfocada a transferencia de tecnología)	M	Transferencia de tecnología	Países en Desarrollo	Energías renovables y eficiencia energética
Apoyo Bilateral por parte del Gobierno de España a proyectos de Energías renovables y eficiencia energética	B	Transferencia de tecnología / capacitación	Países en desarrollo en Latinoamérica, Asia, África y economías en transición	Energías renovables y tecnologías para mejorar la eficiencia energética.
Apoyo a la Agencia Internacional de Energías Renovables (IRENA)	B	Promoción de la difusión, desarrollo y puesta en marcha de todas las formas de energías renovables	Más de 160 países (incluyendo países en desarrollo y desarrollados)	Todo tipo de energías producidas de fuentes renovables de una forma sostenible. Grupo Solar y Eólico
MARINMET. Transferencia de tecnología meteorológica marina para la mejora de las capacidades de pesca y la seguridad en la Nación	B	Transferencia de tecnología	Países de oeste de África (Cabo Verde, Gambia, Mauritania y Senegal)	Tecnologías para la adaptación meteorológica
CENTRO VIRTUAL DE ALERTA TEMPRANA: Coordinación on line de sistemas de alerta en las Agencias Meteorológicas de Sudamérica	B	Transferencia de tecnología	Sudamérica	Sistemas de alerta temprana
REGATTA: Portal regional para transferencia de tecnología y la acción en Cambio Climático en Latinoamérica y Caribe. Proyecto PNUMA	M	Transferencia de tecnología / capacitación	Latinoamérica y Caribe	Adaptación y Mitigación
Programa de Cooperación CDTI y el Ministerio de Energía Renovables de la India (MNRE)	B	I+D	India	Energías Renovables
ECREE. Centro Regional de Energías Renovables en CEDAO (AECID-MINETUR)	M	Transferencia de tecnología / capacitación	CEDAO: Comunidad Económica de Estados de África Occidental	Energías Renovables Y Eficiencia Energética
Programa Iberoamericano para Ciencia, Tecnología y Desarrollo(CYTED)- CIEMAT	M	Transferencia de tecnología / capacitación- I+D+i	Latinoamérica y Caribe	Todos los sectores
CEM- Ministerial de Energía Limpia. Grupo de trabajo solar y eólicos (IDAE)	M	Transferencia de tecnología / capacitación- I+D+i	Todos los países	Energías Renovables
LATIPAT- Base de datos de Patentes (OEPM-WIPO-EPO)	M	Transferencia de Tecnología	Latinoamérica y Caribe	

\* Tipo de acuerdo: M (Multilateral), B (Bilateral)

**- Asistencia a países en desarrollo, que sean dependientes de la exportación y consumo de combustibles fósiles, en diversificar sus economías**

España apoya diversos programas de colaboración y proyectos con un alto componente tecnológico en distintos países productores de petróleo. En concreto, dentro de las áreas geográficas definidas como prioritarias en el Plan Director de la Cooperación Española para el periodo 2009-2012, destacan los siguientes países dependientes exportadores de combustibles fósiles considerados como países prioritarios y en donde todavía se siguen ejecutando proyectos de cooperación bilateral: Angola, Argelia, Argentina, Bolivia, Brasil, Colombia, Ecuador Egipto, Guinea Ecuatorial, Irak, México y Venezuela. En el posterior Plan Director de la Cooperación Española para el periodo 2013-2016 se indica que en el medio plazo España apostará por una concentración regional de sus actuaciones y en las

regiones de América Latina y Caribe, Norte de África Oriente Próximo, África Subsahariana Occidental, y Afrecha Central, Oriental y Austral, y en concreto en 23 países destacándose los siguientes como exportadores de combustibles fósiles: Bolivia, Colombia, Ecuador, Guinea Ecuatorial.

En relación con las contribuciones hechas a países en desarrollo en materia de cambio climático, tal y como queda recogido en el Primer Informe Bienal de España a la CMNUCC, España ha contabilizado contribuciones tanto de Ayuda Oficial al Desarrollo (AOD) como de Otros Flujos Oficiales (OFO). En relación con la AOD, muchas de estas contribuciones de los años 2011 y 2012 han ido destinadas a proyectos prioritarios de la cooperación española en el ámbito de la mitigación a proyectos de generación y suministro de energía eléctrica, proyectos de energías renovables y de eficiencia energética y actuaciones de educación, formación e investigación energética. En relación con el apoyo a través de OFO, habría también que destacar el apoyo a proyectos en países como Colombia, Brasil, México.

### **34. Sweden**

The following information provided in Sweden's 2014 NIR differs from the 2013 NIR.

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Further, under Sweden's policy for global development (PGD), all policy areas are to interact in a coherent way so that the country can make an effective contribution to equitable and sustainable global development. When decisions in a given policy area are judged to affect this goal of equitable and sustainable global development, an impact assessment has to be carried out. The policy's two perspectives – a rights perspective and the perspective of poor people on development – are to serve as a guide. In the framework of the PGD, coordination and collaboration take place, for example, through a reference group on trade policy at the Ministry for Foreign Affairs. Regular meetings of this group, which includes representatives of business, the Swedish International Development Cooperation Agency (Sida) and civil society organizations have created a basis for broad consultation on trade policy.

In addition, over the period 2009-2012 the Government's Special Climate Change Initiative channelled resources through multilateral climate funds and initiatives as well as bilaterally to countries exposed to a high climate risk combined with high vulnerability.

Sweden assists developing countries which are dependent on imports for its fossil fuel consumption with the transfer of more energy-efficient technologies, renewable energy technologies and capacity-building which enhances diversification of the economy in these countries (see chapter 7 of NC 5). Inter alia, through;

- support for research programmes on renewable energy technologies coordinated by Asian Institute of technology,
- education on sustainable energy technology in partnership with universities in Uganda, Mozambique, Ethiopia and Tanzania,
- support for photovoltaic technologies for energy services to rural areas in Zambia.

### 35. Switzerland

Switzerland provided the following information in its NIR for 2014.

The Convention (Art. 4 §8 and §10) and its Kyoto Protocol (Art. 2 §3 and Art. 3 §14) commit Parties to strive to implement climate policies and measures in such a way as to minimize adverse economic, social and environmental impacts on developing countries when responding to climate change.

#### Context

Switzerland strives to design climate change policies and measures in a way as to ensure a balanced distribution of mitigation efforts by implementing climate change response measures in all sectors and for different gases. Indirectly, this approach is deemed to minimize also the scope of potential adverse impacts on concerned actors (including developing countries). Though, due to Switzerland's size and share related to international trade – mainly concentrated on the EU – and greenhouse gas emissions, it is not assumed that Swiss climate change policies have any significant adverse economic, social and environmental impacts in developing countries. Additionally, the policies and measures are very much compatible and consistent with those of the European Union in order to avoid trade distortion, non-tariff barriers to trade and to set similar incentives. All major projects of law in Switzerland are accompanied by impact assessments, inter alia including evaluation of trade-related issues. In accordance with international law, this approach strives at ensuring that Switzerland is implementing those climate change response measures, which are least trade distortive and do not create unnecessary barriers to trade. Consistently, Switzerland notifies all proposed non-tariff measures having a potential impact on trade to the WTO, where specific concerns can be raised by other parties. Moreover, Switzerland belongs to the most important donors in the area of Aid for Trade.

The impact assessment is accompanied by a broad internal and external consultation process, inter alia inviting competent actors to provide advice on international economic, social and environmental aspects of proposed policies and measures. The open public consultation process, together with regular policy dialogues with other countries guarantee that all domestic and foreign stakeholders can raise concerns and issues about new policy initiatives, i.e. including those concerns about possible adverse impacts on other countries.

#### **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**

Environmental policy in Switzerland, including climate change policies, are guided by the "polluter pays" principles, as enshrined in the Federal Law on the Protection of the Environment. Accordingly, the internalization of external costs and adequate price signals are key aspects of Switzerland's climate change policy. Regarding greenhouse gas emissions, market-based instruments, such as the Swiss Emissions Trading Scheme, the supplemental use of Certified Emission Reductions from the Clean Development Mechanism or the levy for heating and process fuels are important measures to put a price on emissions of greenhouse gases (see Sixth National Communication for more details), that are then reflected in market prices and thus internalizing externalities.

#### **Fiscal incentives, tax and duty exemptions and subsidies**

Price-based measures are recognized as essential instruments for promoting the efficient use of resources and to reduce market imperfections. In 2001 Switzerland introduced a heavy vehicle fee (HVF). It is applied to passenger and freight transport vehicles of more

than 3.5 tonnes gross weight. The impact of the HVF introduction was most clearly reflected by changes in traffic volume (truck-kilometres) but also in reduced air pollution, a renewal of the heavy vehicle fleet and an increase of load per vehicle, fewer trucks having transported more goods. Two thirds of the revenues are used to finance major railway infrastructure projects (such as the two base tunnels through the Alps), and one third is transferred to the cantons.

In 2008 Switzerland introduced a CO<sub>2</sub> levy on heating and process fuel to set an incentive for a more efficient use of fossil fuels, promote investment in energy-efficient technologies and the use of low-carbon or carbon-free energy sources. The 2013 amendment to the CO<sub>2</sub> act (Swiss Confederation 2012) still encompasses the imposition of a CO<sub>2</sub> levy on heating and process fuel. Companies, especially those industries with substantial CO<sub>2</sub> emissions from use of heating fuels, may apply for exemption from the CO<sub>2</sub> levy, provided the company commits to emission reductions. The company has to elaborate an emission reduction target, based on the technological potential and economic viability of various measures within the company. While the proceeds from the CO<sub>2</sub> levy were initially to be fully and equally refunded to the Swiss population and to the business community in proportion of wages paid, a parliamentary decision of June 2009 earmarked a third of the revenues from the CO<sub>2</sub> levy to CO<sub>2</sub> relevant measures in the building sector (Building refurbishment programme). The partial earmarking of revenues from the CO<sub>2</sub> tax is limited in the revised CO<sub>2</sub> act to a maximum of 300 million Swiss francs per year.

The economic impact of the Swiss climate policy was analysed in two studies<sup>23</sup>. The impact is considered to be very small.

Switzerland does not subsidize fossil fuels in general. There are some minor schemes in place though that may be regarded as fossil fuel subsidies. In international comparison, however, these schemes are limited: At the federal level, a few tax exemptions and reductions provide some form of support to users of fossil fuels. Farmers, foresters, fishermen and the fuel use of snow cats are exempt from the mineral oil tax that is normally levied on sales of mineral oils, while public transport companies benefit from a reduced rate. Some vehicles are also exempt from the performance-related Heavy Vehicle Fee (HFV), e.g. agricultural vehicles, vehicles used for the concessionary transport of persons or vehicles for police, fire brigade, oil and chemical emergency unit, civil protection and ambulances.

### **The need for energy prices reforms**

World-wide subsidies for fossil fuels are estimated at 300-500 billion USD per annum, depending on the level of energy prices. This huge market distortion does not only produce severe fiscal problems for the countries concerned, it is also a major obstacle for enhanced investments in energy efficiency measures and renewable energies.

Switzerland as a member of the Friends of Fossil Fuels Subsidies Reform group supports the gradual and sustained reduction of unnecessary market-distortions. Switzerland under its Economic Development Cooperation supports partner countries in the design and implementation of energy tariff reforms, as an element of infrastructure financing programs. Switzerland has been an initiator of specialized international programs, including the World Bank's

Energy Sector Management Program ESMAP. The Energy Efficiency Governance Handbook has been produced with Swiss financing (IEA/EBRD 2010).

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<sup>23</sup> Ecoplan (2009): Volkswirtschaftliche Auswirkungen der Schweizer Post-Kyoto-Politik, im Auftrag des BAFU. BAFU (2010): Synthesebericht zur Volkswirtschaftlichen Beurteilung der Schweizer Klimapolitik nach 2012.

### **Removing subsidies associated with the use of environmentally unsound and unsafe technologies**

Switzerland doesn't subsidize the use of environmentally unsound and unsafe technologies.

### **Strengthening the capacity of developing country Parties 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**

Switzerland supports through different projects the enhancement of efficiency in industrial production, i.e. "cleaner production". These cleaner production projects promote eco-efficient means of production and better working conditions attained through technical improvements and behavioural changes in both management and staff in industrial companies and services. The resulting rise of economic and environmental efficiency and improved competitiveness is gained through the systematic optimisation of energy use, processing of raw material, more efficient use of resources and thus better protection of the environment.

Furthermore, there is a rising awareness and demand by consumers for environmentally sound products. In order to alleviate potential adverse economic impacts of corresponding national measures Switzerland promotes and supports the development of international standards, especially with regard to the sustainable use of natural resources (including agricultural commodities), e.g. through the creation of sustainability standards, financial incentives and favourable framework conditions in developing countries by consultancy services and technology transfer. Further information is contained in Chapter 7 of Switzerland's Sixth National Communication (FOEN 2014d).

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

Most developing and transition countries have, in recent years, taken important steps towards trade liberalisation, in order to align their trade policies with multilateral trade agreements. The Swiss State Secretariat for Economic Affairs (SECO) supports these efforts, because a multilaterally acknowledged and respected set of regulations for international transactions not only strengthens trade as such, but also creates more potent and legally secure markets to the benefit of all players.

The measures taken by SECO are aimed at creating the necessary conditions for earning additional income in the beneficiary countries and thereby contribute directly to the alleviation of poverty. SECO is focusing on three areas of intervention along the value chain: (i) International competitiveness (ii) Enabling framework conditions for trade (iii) Improving market access.

For example market access: Trade between developing and industrial countries is still insufficiently developed respectively not diversified enough. On one hand, the developing countries lack the necessary production capacities, transport infrastructure and know-how; on the other hand, tariff and non-tariff barriers to trade make direct access to markets more difficult.

Switzerland promotes access to Swiss markets by granting preferential tariffs on products from developing and emerging countries. In addition, SECO runs programmes for promoting imports to Switzerland and the rest of Europe. The easing of market entry for products from disadvantaged countries is an important contribution to the promotion and diversification of trade, the increase of export revenues and thus to the economic development of the partner countries. Switzerland supports developing and transition countries in the following areas:

- Generalized system of preferences (GSP)

- Swiss Import Promotion Program ([www.sippo.ch](http://www.sippo.ch))
- Development of new private voluntary social and environmental standards based on international multi-stakeholder approaches: private sustainability standards Better Cotton, 4C (Common Code for the Coffee Community), Roundtable for Sustainable Biofuels, etc.

Finally, Switzerland is a strong supporter of the EITI (Extractive Industries Transparency Initiative). We share a belief that the rational use of natural resource wealth is an important driving force for sustainable economic growth that contributes to sustainable development and poverty reduction. The sustainable management of natural resource wealth – as supported by EITI principle and criteria incl. regular publication and audit of revenues – is key to mobilize the funds for diversification strategies.

#### **Changes compared to the latest submission**

The reference regarding capacity-building and technology transfer has been updated and refers now to the 6th National Communication. Some minor editorial changes and clarifications have been done.

### **36. Ukraine**

Ukraine provided the following information in its NIR for 2014.

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Украина, как Страна, которая не включена в Приложение 2 к Рамочной конвенции ООН об изменении климата, и как страна с переходной экономикой, не имеет соответствующих финансовых обязательств в соответствии с пунктами 3-5 статьи 4 Конвенции. Понимая необходимость стабилизации и улучшения экологического состояния Земли, обеспечения устойчивого развития и помощи странам, которые развиваются, Украина, по мере своих возможностей, стремится помочь странам, которые являются особенно уязвимыми к последствиям изменения климата.

Украина является страной, состояние экономики которой в значительной степени зависит от экспорта, импорта и потребления ископаемых видов топлива и связанных с ним энерго-емких продуктов. Принимая во внимание выше изложенное Распоряжением Кабинета Министров Украины от 24.07.2013 № 1071 была одобрена Энергетическая стратегия Украины на период до 2030 г. (далее Энергетическая стратегия), согласно которой были определены ключевые цели развития энергетического сектора Украины:

- Создание условий для надежного и качественного удовлетворения предложения на энергетические продукты при наименьших совокупных затратах, при этом экономически обосновано;
- Повышение энергетической безопасности страны;
- Повышение эффективности потребления и использования энергопродуктов;
- Снижение техногенной нагрузки на окружающую среду и обеспечение гражданской защиты в области техногенной безопасности топливно-энергетического комплекса (ТЭК).

Исходя из указанных целей, основными заданиями и направлениями реализации Энергетической стратегии Украины являются:

1. Формирование целостной и действующей системы управления и регулирования в топливно-энергетическом секторе, развитие конкурентных отношений на рынках энергоносителей;
2. Постепенная либерализация и развитие конкурентных отношений на рынках энергоносителей и рынках связанных услуг;
3. Создание предпосылок для существенного уменьшения энергоемкости экономики за счет внедрения новых технологий, прогрессивных стандартов, современных систем контроля, управления и учета, транспортировки и потребления энергетических продуктов и развития рыночных механизмов стимулирования энергосбережения;
4. Увеличение добычи и производства собственных энергоресурсов с учетом экономики производства, а также увеличение объемов энергии и энергоресурсов, добытых из нетрадиционных и возобновляемых источников энергии;
5. Диверсификация внешних источников поставок энергетических продуктов;
6. Достижение сбалансированности экономически обоснованной ценовой политики касательно энергетических продуктов, которая должна обеспечить покрытие издержек на их производство и доставку до конечного потребителя, а также создание соответствующих условий для надежного функционирования и стабильного развития предприятий ТЭК;
7. Создание условий для привлечения в ТЭК частных инвестиций, новых технологий и современного опыта эффективной работы;
8. Нормативно-правовое обеспечение реализации целей развития ТЭК Украины с учетом существующего внутреннего законодательного поля, численных обязательств, предусмотренных международными договорами, а также требований европейского энергетического законодательства.

При учете фактического развития макроэкономических показателей на горизонте до 2030 г. реализация мероприятий Энергостратегии позволит за период 2010-2030 гг.: сократить общий объем потребления энергии, разделенный на ВВП в гривнах 2010 г. на 54 % – с 0,21 до 0,10 т у.т./1000 грн. ВВП; снизить электроемкость ВВП на 43 % – с 0,18 до 0,11 Твт·год/млрд. грн. (в ценах 2010 г.); снизить газоемкость ВВП на 68 % – с 0,06 до 0,02 млрд. м<sup>3</sup>/млрд. грн. (в ценах 2010 г.).

В соответствии с Постановлением Кабинета Министров Украины от 01.03.2010 № 243 была утверждена Государственная экономическая программа энергоэффективности и развития сферы производства энергоносителей из возобновляемых источников энергии и альтернативных видов топлива на 2010-2015 года, запланированный эффект от реализации которой составит от 19 до 50 млн. т сокращения выбросов ПГ в СО<sub>2</sub>-экв. Также Приказом Министерства промышленной политики Украины от 25.02.2009 № 152 была утверждена Отраслевая программа энергоэффективности и энергосбережения на период до 2017 года с планируемым эффектом по сокращению выбросов ПГ в стране от 7 до 19 млн. т в СО<sub>2</sub>-экв.

Для повышения эффективности сотрудничества в области сохранения климата по инициативе Европарламента в октябре 2012 года дала старт специальная программа «Clima East»: Поддержка усилий по смягчению последствий изменения климата и адаптации к ним в Российской Федерации и странах региона ЕПД Восток». Программа будет действовать до октября 2017 года, за этот период предлагается повысить компетентность специальных государственных органов в России, Украине, Молдове, Беларуси, Армении, Азербайджане и Грузии. В Украине реализацией политики в сфере сохранения климата занимается Государственное

агентство экологических инвестиций (ГАЭИ). В первую очередь, предполагается создание ясной системы учёта выбросов парниковых газов и их поглотителей, стимулирование энергосбережения и возобновляемой энергетики, создание углеродного рынка (сокращение/продажа выбросов).

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 природо-охранной 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 2011 г. 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 природоохранной 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, географов, геоэкологов, 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 2011 г. 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 2011 г. подготовил для развивающихся стран 2 специалистов.

Становится заметной роль украинских инжиниринговых 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. т CO<sub>2</sub>-экв./год, общие сокращения – 400 тыс. т CO<sub>2</sub>-экв.

ООО "Зорг Биогаз Украина" строит биогазовые станции в России, 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 of Great Britain and Northern Ireland updated the following information in its NIR for 2014.

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#### **15.1 GENERAL OVERVIEW**

The UK believes that a comprehensive and global post-2012 regime with broad coverage of sectors offers the best option to address the issue of response measures. Response measures is not a stand-alone issue and has strong links to technology and capacity building.

Both positive and negative effects must be taken into account. A global transition to a low carbon economy will provide parties with social, economic and sustainable development opportunities, but we acknowledge that it should address vulnerabilities. We need to ensure that transition to a low carbon economy supports sustainable development processes in all countries, and that effort to assess potential effects of such response measures does not constrain efforts to develop and implement ambitious policies and measures to mitigate climate change.

There is a need for better evidence based information exchange in order to get a better understanding of the actual impacts felt, recognising the need to strengthen and support capacities to compile, analyse and use socio-economic data in assessing potential spill-over effects/response measures.

The UK continues to pursue initiatives that have been mentioned in previous inventory reports and national communications, such as considering food miles, sustainability of the EU Common Agricultural Policy and Trade for Aid. This chapter is not an exhaustive list but instead outlines recent examples of what the UK is doing to understand impacts of response measures on developing countries and actions it is taking to minimize adverse impacts. This chapter has been updated for the 2014 NIR submission.

#### **15.2 UNDERSTANDING IMPACTS OF RESPONSE MEASURES**

Understanding the impacts of response measures is a key step to be able to minimize the adverse impacts. The UK continues to undertake assessments, reviews and analysis projects to better understand the impacts its policies could have on developing countries, and how they could be addressed. Consequently, the UK takes these findings and seeks to apply them in UK and within the EU community in order to minimize adverse impacts in accordance with article 3, paragraph 14. Recent examples of areas where ongoing research and action is taking place are outlined below.

### 15.2.1 UK research, reports and analysis

The UK has undertaken research to determine the extent of impacts of response measures and uses this information to implement policies in a way that takes into account the impacts of response measures on all developing countries. Examples of ongoing work include:

To support the UK 2050 Pathways Analysis DECC developed a 2050 Energy and Emissions Calculator model. The Calculator is a tool that helps strengthen the level of debate on energy issues in the UK. DECC is now supporting countries around the world to develop their own calculators to explore their options to reduce greenhouse gas emissions and help tackle energy challenges.

- The DECC 2050 team works with teams in India, Indonesia, Brazil, Mexico, Colombia, Nigeria, South Africa, Algeria, Vietnam, Thailand and Bangladesh. In February 2014 a team from the Indian Government Planning Commissions published their version of the 2050 tool (<http://www.indiaenergy.gov.in/>).
- DECC is also working in collaboration with a number of other organisations to build a Global Calculator, which will enable users to explore the options for reducing global emissions, and the impact of climate change associated with them. Please see the Global Calculator website for more information on the project (<https://www.gov.uk/government/publications/the-global-calculator/the-global-calculator>).

The UK Department of Transport has and continues to lead work into understanding Indirect Land Use Change (ILUC) impacts from biofuels. Examples include:

- A study in 2011 which considered the potential for regional (i.e. sub-national, national and supranational) approaches to avoid ILUC from biofuels production. This work highlighted potential actions that may reduce ILUC, and assessed the potential to measure and monitor any such regional level actions to avoid ILUC.<sup>24</sup>
- In 2013 the Department of Transport published a report on the sustainability of feedstock.<sup>25</sup>

The UK Department for the Environment, Food and Rural affairs has funded and continues to fund research looking at embedded emissions and sustainable production and consumption, in particular:

- The development of an embedded carbon emissions indicator. The aim of this project is to monitor greenhouse gas emissions associated with UK consumption, including those relating to trade flows. This work will provide a high level analysis of the UK national “carbon footprint”, and in particular will assess the emissions which are embedded in products which the UK imports and exports.<sup>26</sup>

This year’s output from the monitoring, which is published in the Official Statistics Release, can be found online.<sup>27</sup>

### 15.2.2 Within the EU Community

The UK is an active participant within the EU community and we continue to minimize the adverse effect of our policies and measures through activities such as:

<sup>24</sup> <http://www.dft.gov.uk/publications/regional-level-actions-to-avoid-iluc>.

<sup>25</sup> <https://www.gov.uk/government/publications/biofuel-research>.

<sup>26</sup> <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17729&FromSearch=Y&Publisher=1&SearchText=emissions&GridPage=7&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>.

<sup>27</sup> <http://www.defra.gov.uk/statistics/environment/green-economy/scptb01-ems/>.

- The EU Emissions Trading System (EU ETS) is the EU's main policy mechanism for reducing CO<sub>2</sub> emissions from energy intensive sectors. Through the EU ETS and the linking directive, which allows European participants in the EU ETS to engage in the CDM as a way of meeting their commitments, the EU has increased investments in renewable energy and energy efficiency in developing countries making an important contribution to diversifying the energy mix in those countries.
- Aviation has been included in the EU ETS from 1 January 2012, the most significant expansion of the scope of the System since its inception.
- A Greenhouse Gas Effort Sharing Decision sets targets for emissions reductions or growth limits in those sectors of Member States' economies not covered by the EU ETS (excluding Land Use, Land Use Change and Forestry). For the UK, the target to reduce emissions in the non-ETS is 16% below 2005 levels by 2020. For the EU as whole, the reduction target is approximately 10%. The Decision promotes domestic action and limits the use of international project credits, such as the Clean Development Mechanism (CDM), to meet targets. They are limited (annually) to 3% of Member States' 2005 emissions in the non-ETS.
- A Renewables Directive sets targets for each member state for the proportion of renewable energy generation by 2020. The EU has a 20% renewables target by 2020. The UK's legally binding target is 15%. The Renewables Directive also set every Member State a target of supplying 10% of transport fuel from renewable sources by 2020.
- The Directive on the geological storage of CO<sub>2</sub> outlines a regulatory framework for the safe capture, transport and storage of carbon dioxide in the EU. Up to 300 million allowances from the new entrants reserve of the EU ETS will be used to support the demonstration of carbon capture and storage (CCS) and innovative renewable technologies. The UK's actions on CCS are expanded in the sections below.

Further information can be found in the 1990-2009 EU inventory report.

#### **15.2.3 Actions to minimize adverse impacts in accordance with Article 3, paragraph 14**

The UK Government is committed to achieving an ambitious, effective and equitable global deal which will limit global temperature rise to 2°C, and to helping countries adapt to the inevitable impacts of climate change. The transition to a low carbon world requires support to developing countries in their domestic efforts to mitigate and adapt to climate change and to develop their own low carbon economies.

The UK has taken action to minimize adverse impacts in accordance with article 3, paragraph 14 through fast start finance. Additionally, the UK's International Climate Fund (ICF) will provide £3.87bn of climate finance from 2011 to 2016. This funding will be focused on helping the poorest people adapt to the effects of climate change, helping to encourage low carbon development, and protecting the world's forests and the livelihoods of the people who depend on them. The ICF also demonstrates the UK's commitment to scaling up climate finance beyond the fast start period to meet its fair share of \$100bn of public and private international finance per year from 2020.

#### **15.2.4 The International Climate Fund (ICF)**

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<sup>28</sup>. 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 2MtCO<sub>2</sub>e over the next 8 years, and create a strategy for increasing the use of SPS in Colombia and beyond.

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.

To date the UK has contributed an estimated \$1.4 billion to the Climate Investment Funds. These funds include 4 key programmes that help 48 developing countries pilot low-emission and climate resilient development. Scaling up Renewable Energy Program (SREP) is an example if one of these programmes, which aims to help to support securing access to clean energy including in Ethiopia, Honduras, Kenya, Mali, Liberia, Maldives, Nepal, and Tanzania. For example, in Kenya, SREP investment in increased renewable

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<sup>28</sup> <https://www.gov.uk/government/policies/taking-international-action-to-mitigate-climate-change/supporting-pages/international-climate-fund-icf>.

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 £50 million (approximately €60 million) to the NAMA Facility with Germany committing another €60 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.

#### **15.2.5 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 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, including in Kenya, Ethiopia and Vietnam. These centres will provide a national focal point for innovation in and deployment of climate-friendly technologies, providing business development support to SMEs through mentoring and training; the provision of technological and office facilities, R&D grants and seed capital investments; links to local universities; links to local financiers establishing links to government and conducting market analysis and research within that country. The Global Network of Climate Technology Innovation Centres, funded through the ICF, supports the design and establishment of 9 new CICs will be linked to other CICs by InfoDev (the implementing partner) and the coordination of the growing network of the CICs 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.

#### **15.2.6 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 supported. 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.

The Department for Energy and Climate Change (DECC) in collaboration with Department for International Development (DFID) and the Engineering and Physical Sciences Research Council (EPSRC), on behalf of the Research Councils UK (RCUK) are jointly funding a programme of research in the field of energy and international development. Understanding Sustainable Energy Solutions in Developing Countries (USES) is the first major joint call between DFID, DECC and EPSRC. With a focus on research that will improve our understanding of the opportunities and challenges associated with scaling up sustainable access to modern energy services in developing countries, the Programme has been established to help build the evidence base that supports how the UK will spend its International Climate Fund (ICF).

The programme is supporting 12 projects between UK and developing country institutions. It is hoped that this will deliver high quality research that addresses key development challenges in one or more of the following five areas: bioenergy; solar; decentralised generation; urban and transport; and energy efficiency.

International engagement is a significant part of the Avoiding Dangerous Climate Change Research Programme (AVOID). For example the first phase of the programme investigated technology options for reducing CO<sub>2</sub> emissions from the energy sector in India and China in order to meet a national 2050 emissions target consistent with limiting global temperature rise to below 2°C, and shared these results with Indian and Chinese officials at international workshops. The second phase of AVOID was commissioned in early 2014 and will involve a 2-year work programme including extensive engagement with international researchers and officials on a range of issues including regional climate impacts, feasibility of energy sector decarbonisation and the potential role of land-use in both mitigating and contributing to climate change.

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 Korea in May 2014 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 April 2013 the UK co-hosted the third 4 Kingdoms Initiative workshop with the government of Norway, bringing together representatives of four oil-producing countries to drive efforts to reduce the economic losses of CCS through alternative uses for CO<sub>2</sub>.

#### **15.2.7 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 £385m 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 Cooperation (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.

#### **15.2.8 Capacity Building Projects on Adapting to Climate Change**

The UK Government is working to address 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.

As a consequence 50% of ICF funding is allocated for adaptation which is being used for practical on-the-ground support for the climate vulnerable, building climate knowledge and developing capacity in climate vulnerable countries. By 2015 the UK aims to have provided support to over 20m climate vulnerable people.

Examples include:

- £100m 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.



- £50m in 2013 to the least developed countries fund to support concrete adaptation activities that reduce vulnerability and increase the adaptive capacity of over 860,000 of the most climate vulnerable people.
- The UK is also providing up to £140m to the Building Resilience and Adapting to Climate Extremes and Disasters (BRACED) programme, which will help up to 5 million climate vulnerable people cope better with extreme weather events, building their capacity to cope so that shocks do not force them to resort to humanitarian relief. It focuses mainly on the Sahel region of Africa but also works in other highly climate vulnerable countries around the world such as Nepal and Pakistan.
- Adaptation for Smallholder Agriculture Programme (ASAP). DFID's support of £150 million from the International Climate Fund (ICF) will help up to 6 million smallholder farmers in 30 countries cope with the impacts of climate change. ASAP won a 2013 Momentum for Change Lighthouse award at this year's climate change conference in Warsaw for its innovative work in delivering social and economic benefits to smallholder farmers while helping them adapt to climate change.

### 15.2.9 Electricity Market Reform: Responding to Energy Market Imperfections

Electricity Market Reform (EMR) is the biggest change to the UK electricity market since privatisation. Although the current market has been effective, a number of unprecedented challenges require us to transform the UK's electricity sector. It is expected that a fifth of our current capacity is due to close over the next decade and the amount of intermittent and less flexible generation will increase. In addition, there are ambitious climate and renewable targets that we need to meet.

The UK Government's vision is for low-carbon generation to compete fairly on cost and EMR is a set of arrangements that will take the UK through this transition.

The Energy Act 2013 received Royal Assent in December 2013. The Energy Act includes the provisions for EMR:

- Contracts for Difference (CfDs) – long-term contracts to provide stable and predictable incentives for companies to invest in low-carbon electricity generation.
- Capacity Market – to provide security of electricity supply, by ensuring sufficient reliable capacity is available, including provisions to allow Electricity Demand Reduction to be delivered.
- Conflicts of interest and contingency arrangements – to ensure the institutions which deliver these schemes are fit for purpose.
- Investment Contracts – a form of early CfD entered into by the Secretary of State, designed to enable early investment in advance of the CfD regime coming into force.
- Transitional arrangements for renewables – to ensure that existing investments under the Renewables Obligation (RO) remain stable.
- An Emissions Performance Standard (EPS) – to limit the carbon emissions from the most polluting fossil fuel power stations, i.e. unabated coal.

EMR is due for implementation in 2014, with the first capacity auction and allocation under contracts for difference taking place before the end of the year.