Italy

Second Biennial Report

December 2015

1. Introduction

This document is the 2nd Biennial Report (BR) of Italy under decision 2/CP.17 of the Conference of the Parties under the UNFCCC.

As defined in the UNFCCC biennial reporting guidelines for developed country Parties[1], the information is structured into:

- Information on greenhouse gases (GHG) emissions and trends and the GHG inventory including information on Italian national inventory arrangements (section 2);
- Quantified economy wide emission reduction target (section 3);
- Progress in achievement of the quantified economy-wide emission reduction targets (section 3);
- Projections (section 5) and
- Provision of financial, technological and capacity building support to developing countries (section 6, 7).

Tabular information as defined in the common tabular format (CTF) for the UNFCCC biennial reporting guidelines for developed country Parties (UNFCCC decision 19/CP.18) are enclosed in the report and have been officially submitted to the UNFCCC secretariat. For the CTF submission, the electronic reporting facility provided by the UNFCCC Secretariat has been used as required by UNFCCC decision 19/CP.18.

[1] Annex I to UNFCCC decision 2/CP.17

2. Information on GHG emissions and trends[2]

2.1 Summary information on greenhouse gas emissions and trends

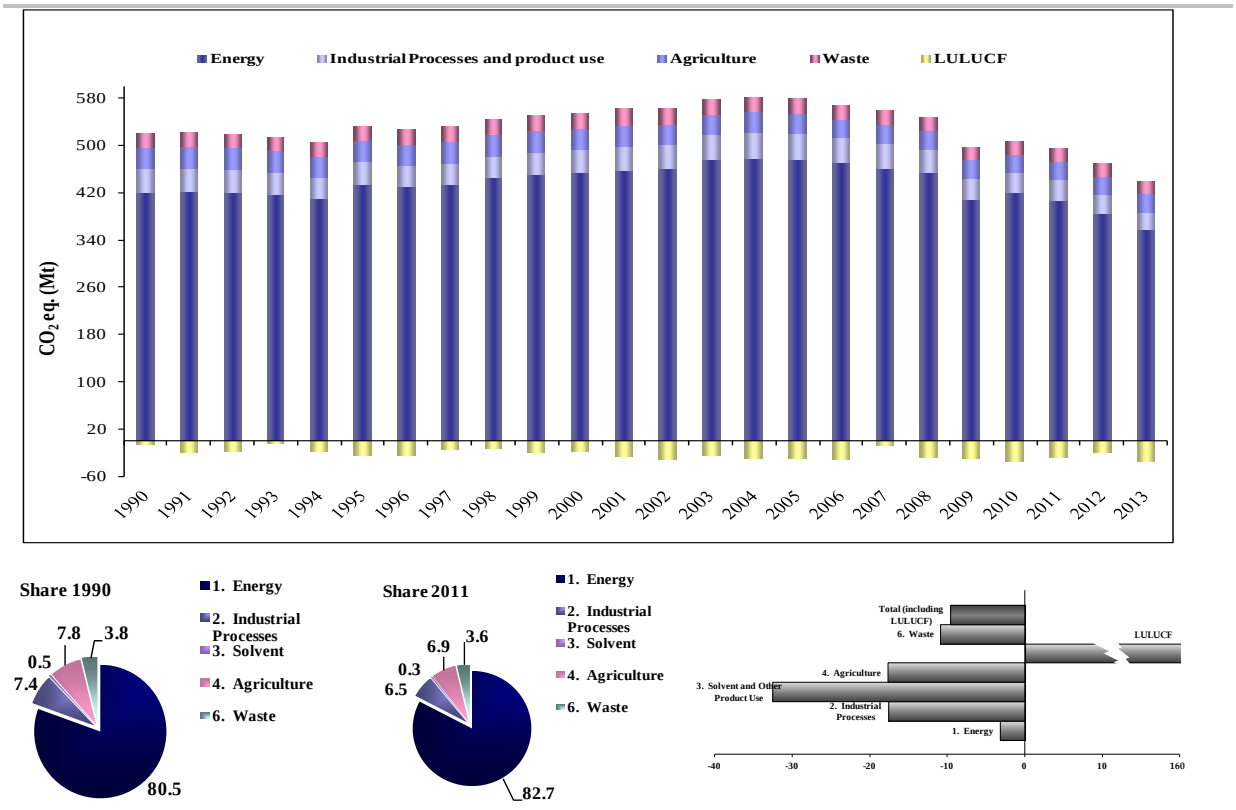
In 2013, Italy's total greenhouse gas emissions, excluding emissions and removals from land use, land use change and forestry (LULUCF) decreased by 16.1% between 1990 and 2013, from 521 million tons (Mt) of CO_2-equivalent to 437 Mt in 1990 (base year set for all greenhouse gases).

The share of the different sectors, in terms of total emissions, remains nearly unvaried over the period 1990-2013. The energy sector is the largest contributor to national total GHG emissions with a share, in 2013, of 81.7%, followed by industrial processes and agriculture, accounting for 7% of total emissions, respectively, and waste contributing with 4.2%.

Considering total GHG emissions with emissions and removals from LULUCF, the energy sector accounts, in 2013, for 75.8% of total emissions and removals, as absolute weight, followed by, industrial processes and agriculture (6.5%, each), LULUCF which contributes with 7.2%, and waste (3.9%).

Figure 1 illustrates the national trend of greenhouse gases for 1990-2013, expressed in CO_2 equivalent terms and by sector.

Figure 1: Trend of total GHG emissions (1990-2013) (Gg CO_2 eq.)



The most important greenhouse gas, CO_2, which accounted for 82.4% of total emissions in CO_2 equivalent in 2013, showed a decrease by 17.4% between 1990 and 2013.

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In the energy sector, in particular, CO_2 emissions, in 2013, are 15.4% lower than in 1990. CH_4 and N_2O emissions were equal to 10.1% and 4.4%, respectively, of the total CO_2 equivalent greenhouse gas emissions in 2013. CH_4 levels have decreased by 18.3% from 1990 to 2013, while N_2O has decreased by 29.6%. As to the other greenhouse gases, HFCs account for 2.6% of total emissions, PFCs and SF_6 are equal to 0.4% and 0.1% of total emissions, respectively; the weight of NF_3 is less than 0.01%.

It should be noted that, from 2008, the economic recession has had a remarkable influence on the production levels affecting the energy and industrial process sectors, but on the other hand an increase of the use of renewable sources (hydro and wind) and advance in energy efficiency was also observed.

As for CO_2, emissions in the 1990s essentially mirrored energy consumption. A decoupling between the curves is observed only in recent years, mainly as a result of the substitution of fuels with high carbon contents by methane gas in the production of electric energy and in industry; in the last years, the increase in the use of renewable sources has led to a notable reduction of CO_2 intensity.

The relevant sectors in terms of emissions are energy production and transport, contributing to about half of total national levels. For the transport sector, GHG emissions show a slight increase in 2013, with respect to 1990, equal to 0.2%, due to an increase in goods and passengers movements; for instance, for road transport, the overall mileage (vehicle per kilometre) for the shipping of goods have increased by 32% and for the transport of passengers by 15%. After a peak in 2007, emissions from the transport sector show a decrease (more than 20% from 2007 to 2013) mainly explained by the economic crisis contributing to the reduction of movements and by the penetration in the market of low energy consumption vehicles.

Emissions from energy industries show a reduction of about 22% in 2013 with respect to 1990, in spite of an increase in the thermoelectric energy production (from 178.6 TWh to 192.9 TWh) and electric energy consumption (from 218.7 TWh to 297.3 TWh).

The time series of electricity production clearly shows that although the specific carbon content of the kWh generated in Italy has constantly improved over the years, total CO2 emissions have raised till 2006 due to the even bigger increase of electricity production. The decreasing trend, from 2006, results from an increase in energy production from renewable sources, combined with a further reduction in the use of oil products for electricity production. In the last years the decrease is even more accentuated because of the economic recession.

In the period 1990-2013, emissions from energy consumption in the residential and commercial sector have increased by 9.4%. A shift from oil products to natural gas is observed along the time series. But it should be also noted that the use of natural gas for energy production and heating was already in place in the first nineties so the increase of emission levels in the nineties is to be attributed to the increasing number of buildings and their heating systems, as well as the occurrence of singular annual climatic features, as observed in 2005 due to exceptionally cold weather conditions. CH_4 and N_2O emissions also increase in the period, due to the growing use of woody biomass and biogas for heating and, in the agriculture sector, for heating and aquaculture plants.

Finally, for the manufacturing industry, emissions have decreased by 42% from 1990 to 2013. The decrease is driven by the shift from the use of fuel oil to natural gas for energy and heat production; in the last years a further decrease is observed due to the reduction of industrial production levels.

For the industrial sector, emissions decreased by 24.1% in 2013 with respect to 1990. The trend is mainly driven by the sharp reduction of N_2O emissions from the chemical industry (-89.3%) due to the installation of abatement technologies in adipic and nitric acid production plants and, in the last years, of CO_2 from mineral products for the economic recession. On the other side, a notable increase of F-gas emissions, is observed especially for the use of HFCs in refrigeration and air conditioning systems.

In the agriculture sector, emissions have decreased by 14.9% from 1990 to 2003. The main reduction is observed in emissions from enteric fermentation (-12%) and manure management (-21.3%) because of a reduction in animal population, specifically cattle and dairy cattle; the reduction is also due to a less extensive use of fertilisers affecting the emissions from agricultural soils (-16.3%). Also, in the last years,

the recovery of biogas from manure management to be used for energy purposes has become a relevant practice.

Finally, emissions from the waste sector have decreased by 20.5% and are supposed to further reduce for the less amount of urban solid waste disposed of in landfills due for the improvement in efficiency of biogas capture systems and the less amount of organic waste material on account of the recyclable waste collection.

If we consider total GHG emissions with emissions and removals from LULUCF, emission and removals levels show a decrease of 21.8% from 1990 to 2013. The energy sector accounts, in 2013, for 75.8% of total emissions and removals, as absolute weight, followed by, industrial processes and agriculture (6.5%, each), LULUCF which contributes with 7.2%, and waste (3.9%). Total removals, in CO_2 equivalent, in the LULUCF sector, show an increase of 526.6% from the base year to 2013 with CO_2 accounting for 99.3% of total emissions and removals of the sector. The key driver for the rise in removals is the increase of carbon stock changes from forest land (the area reported under forest land remaining forest land has increased by 20.3%). The trend is remarkable influenced by the annual area burned by fires.

Further information on greenhouse emissions and trend is detailed in chapter 2 of the National Inventory Report 2015, Italian Greenhouse Gas Inventory 1990-2013.

2.2 National inventory arrangements

The Legislative Decree 51 of March 7th 2008 instituted the National System for the Italian Greenhouse Gas Inventory, following the requirements set in the article 5.1 of the Kyoto Protocol and in according to the Decision n. 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol (replaced in 2013 by the regulation n. 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).

The 'National Registry for Carbon sinks', instituted by a Ministerial Decree on 1st April 2008, is part of the Italian National System and includes information on units of lands subject of activities under Article 3.3 and activities elected under Article 3.4 and related carbon stock changes. In agreement with the Ministerial decree art.4, the Ministry for the Environment, Land and Sea is responsible for the management of the National Registry for Carbon sinks. The Decree also provides that ISPRA and the State Forestry Corps are involved by the Ministry as technical scientific support for specific activities as defined in the relevant protocol. ISPRA is responsible for the preparation of emission and removals estimates for the LULUCF sector and for KP LULUCF supplementary information under art.7.1 of the Kyoto Protocol.

As indicated by art. 14 bis of the Legislative Decree, the Institute for Environmental Protection and Research (ISPRA), former Agency for Environmental Protection and Technical Services (APAT), is the single entity in charge of the preparation and compilation of the national greenhouse gas emission inventory. The Ministry for the Environment, Land and Sea is responsible for the endorsement of the inventory and for the communication to the Secretariat of the Framework Convention on Climate Change and the Kyoto Protocol. The inventory is also submitted to the European Commission in the framework of the Greenhouse Gas Monitoring Mechanism.

The Institute prepares annually a document which describes the national system including all updated information on institutional, legal and procedural arrangements for estimating emissions and removals of greenhouse gases and for reporting and archiving inventory information. The reports are publicly available at http://www.sinanet.isprambiente.it/it/sia-ispra/serie-storiche-emissioni.

The Italian National System, currently in place, is fully described in the document *National Greenhouse Gas Inventory System in Italy*[3].

Since the Sixth National Communication and the first Biannual Report no changes have occurred in the national inventory arrangements.

[3] ISPRA, 2014. National Greenhouse Gas Inventory System in Italy. Year 2014. http://www.sinanet.isprambiente.it/it/sia-ispra/serie-storiche-emissioni

CTF Table 1 Greenhouse Gas Emissions (kt CO_2 eq)

Greenhouse gas emissions	*1990*	*1995*	*2000*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*Change from base to latest reported year*
	kt CO_2 eq												*%*
CO_2 emissions including net CO_2 from LULUCF	436,204	447,201	465,173	491,006	486,870	478,460	467,984	418,887	428,936	416,663	391,067	360,423	-17.37
CO_2 emissions excluding net CO_2 from LULUCF	428,785	423,110	445,744	459,864	455,407	468,582	440,466	389,113	394,255	387,485	368,830	326,105	-23.95
CH_4 emissions including CH_4 from LULUCF	53,966	54,023	55,034	50,337	48,639	48,375	47,500	47,047	46,634	45,880	45,507	44,074	-18.33
CH_4 emissions excluding CH_4 from LULUCF	55,640	54,407	55,981	50,716	48,945	50,188	47,985	47,645	46,992	46,444	46,711	44,273	-20.43
N_2O emissions including N_2O from LULUCF	27,130	28,520	29,463	28,395	23,410	22,721	21,050	20,055	19,263	19,296	19,517	19,105	-29.58
N_2O emissions excluding N_2O from LULUCF	27,435	28,662	29,643	28,489	23,495	23,050	21,185	20,218	19,380	19,446	19,752	19,142	-30.23
HFCs	444	813	2,098	5,998	6,811	7,650	8,379	9,095	9,725	10,326.38	10,856	11,518	2,494.19
PFCs	2,907	1,450	1,388	1,940	1,935	1,886	1,712	1,215	1,520	1,661.28	1,499	1,705	-41.33
SF_6	408	664	561	547	567	450	493	469	391	438.06	442	417	2.18
NF_3	NA, NO	NA, NO	26	33	22	12	19	18	20	27.78	25	26	
Total (including LULUCF)	**521,058**	**532,672**	**553,742**	**578,258**	**568,255**	**559,554**	**547,137**	**496,787**	**506,489**	**494,292**	**468,913**	**437,268**	**-16.08**
Total (excluding LULUCF)	**515,619**	**509,107**	**535,440**	**547,589**	**537,183**	**551,818**	**520,239**	**467,773**	**472,283**	**465,829**	**448,115**	**403,186**	**-21.81**
Total (without LULUCF, with indirect)	**521,058**	**532,672**	**553,742**	**578,258**	**568,255**	**559,554**	**547,137**	**496,787**	**506,489**	**494,292**	**468,913**	**437,268**	**-16.08**
Total (with LULUCF, with indirect)	**515,619**	**509,107**	**535,440**	**547,589**	**537,183**	**551,818**	**520,239**	**467,773**	**472,283**	**465,829**	**448,115**	**403,186**	**-21.81**

CTF Table 1 Greenhouse Gas Source and Sink Categories (kt CO_2 eq)

Greenhouse gas source and sink categories	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
	kt CO_2 eq												%
1. Energy	421,288	434,689	453,536	475,483	470,499	461,592	453,716	409,610	419,575	407,598	384,875	357,387	-15.17
2. Industrial Processes and Product Use	40,313	37,957	38,459	45,434	41,415	41,728	38,856	33,762	34,559	34,504	31,606	30,594	-24.11
3. Agriculture	36,197	36,210	35,625	33,121	32,752	33,419	32,425	31,754	30,959	31,483	31,914	30,790	-14.94
4. Land Use, Land-Use Change and Forestry[b]	-5,440	-23,565	-18,302	-30,669	-31,072	-7,736	-26,898	-29,014	-34,206	-28,464	-20,799	-34,082	526.55
5. Waste	23,259	23,814	26,123	24,220	23,589	22,815	22,140	21,660	21,397	20,707	20,518	18,497	-20.47
6. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Total (including LULUCF)	**515,619**	**509,107**	**535,440**	**547,589**	**537,183**	**551,818**	**520,239**	**467,773**	**472,283**	**465,829**	**448,115**	**403,186**	**-21.81**

1 The common tabular format will be revised, in accordance with relevant decisions of the Conference of the Parties and, where applicable, with decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol."

Notes:

(1) Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends (CO2)", "Emission trends (CH4)", "Emission trends (N_2O)" and "Emission trends (HFCs, PFCs, SF_6 and NF_3)", which is included in an annex to this biennial report.
(2) 2013 is the latest reported inventory year.
(3) 1 kt CO_2 eq equals 1 Gg CO_2 eq.

Abbreviation: LULUCF = land use, land-use change and forestry.

[a] The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.
b Includes net CO_2, CH_4 and N_2O from LULUCF.

CTF Table 1 CO_2 Source and Sink Categories (kt)

Greenhouse gas source and sink categories	*Base year*[a]	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
	kt												%
1. Energy	**406,004**	**419,039**	**438,732**	**461,673**	**457,401**	**448,622**	**440,811**	**397,080**	**406,807**	**394,981**	**372,416**	**343,663**	**-15.35**
A. Fuel combustion (sectoral approach)	401,990	415,068	435,496	459,135	454,830	446,117	438,237	394,640	404,207	392,389	369,910	340,985	-15.18
1. Energy industries	138,145	141,479	152,311	160,137	161,206	160,879	157,445	132,513	133,834	131,775	127,104	107,912	-21.89
2. Manufacturing industries and construction	84,535	84,347	82,101	78,281	77,699	74,410	71,157	54,868	60,353	60,109	55,331	48,725	-42.36
3. Transport	101,307	111,476	121,255	127,057	128,388	128,454	123,245	118,777	118,203	117,200	104,861	102,277	0.96
4. Other sectors	76,933	76,271	78,992	92,429	86,527	81,453	85,632	87,614	91,165	82,789	82,280	81,487	5.92
5. Other	1,070	1,495	837	1,232	1,010	921	759	868	651	515	334	584	-45.4
B. Fugitive emissions from fuels	4,013	3,971	3,236	2,537	2,571	2,505	2,574	2,440	2,600	2,593	2,506	2,678	-33.27
1. Solid fuels	0.12	0.02	0.05	0.04	0.01	0.07	0.05	0.03	0.05	0.04	0.04	0.03	-71.92
2. Oil and natural gas and other emissions from energy production	4,013	3,970	3,236	2,537	2,571	2,505	2,574	2,440	2,600	2,593	2,506	2,678	-33.27

C. CO2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
2. Industrial Processes and Product Use	29,227	27,195	25,712	28,587	28,680	29,079	26,457	21,177	21,616	21,144	17,891	16,102	-44.91
A. Mineral industry	20,714	20,233	20,742	23,298	23,397	23,810	21,525	17,288	17,339	16,729	13,717	12,290	-40.67
B. Chemical industry	2,577	1,632	1,421	1,697	1,662	1,689	1,483	1,141	1,434	1,405	1,342	1,336	-48.17
C. Metal industry	3,878	3,403	1,804	1,922	1,942	1,925	1,875	1,307	1,465	1,610	1,520	1,192	-69.27
D. Non-energy products from fuels and solvent use	2,058	1,927	1,745	1,670	1,679	1,655	1,574	1,441	1,378	1,400	1,311	1,285	-37.57
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
3. Agriculture	**466**	**513**	**527**	**521**	**551**	**552**	**516**	**388**	**353**	**375**	**566**	**464**	**-0.45**
A. Enteric fermentation													
B. Manure management													

C. Rice cultivation													
D. Agricultural soils													
E. Prescribed burning of savannas													
F. Field burning of agricultural residues													
G. Liming	1	1	2	14	11	15	18	17	18	25	15	14	941.31
H. Urea application	465	512	525	507	539	537	498	372	335	351	551	450	-3.1
I. Other carbon-containing fertilizers	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
J. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
4. Land Use, Land-Use Change and Forestry	**-7,419**	**-24,091**	**-19,429**	**-31,142**	**-31,463**	**-9,878**	**-27,519**	**-29,774**	**-34,681**	**-29,178**	**-22,237**	**-34,318**	**362.59**
A. Forest land	-20,749	-33,747	-28,571	-37,577	-37,228	-21,871	-33,809	-36,363	-39,058	-34,994	-30,343	-37,239	79.47
B. Cropland	2,172	1,785	2,014	1,429	1,219	1,253	1,221	1,312	1,305	3,018	2,973	2,934	35.09
C. Grassland	3,997	-1,213	149	-2,848	-3,536	2,627	-3,083	-2,451	-4,465	-4,440	-2,169	-7,203	-280.2
D. Wetlands	NE, NO	5	8	8	8	8	8	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	
E. Settlements	6,641	8,275	6,495	7,316	7,326	7,330	7,370	7,407	7,410	7,415	7,419	7,425	11.8
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

G. Harvested wood products	520	804	476	531	749	775	775	320	128	-178	-117	-235	-145.19
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
5. Waste	**507**	**454**	**202**	**226**	**239**	**207**	**200**	**242**	**160**	**162**	**194**	**194**	**-61.71**
A. Solid waste disposal	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	NO, NA	
B. Biological treatment of solid waste													
C. Incineration and open burning of waste	507	454	202	226	239	207	200	242	160	162	194	194	-61.71
D. Waste water treatment and discharge													
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	
Memo items:													
International bunkers	**8,586**	**9,742**	**12,232**	**16,088**	**17,337**	**18,250**	**18,595**	**16,286**	**16,471**	**16,975**	**15,636**	**14,212**	**65.52**
Aviation	4,161	5,674	8,016	9,111	9,833	10,430	10,087	8,968	9,440	9,726	9,316	9,221	121.61
Navigation	4,426	4,069	4,216	6,977	7,504	7,820	8,507	7,318	7,031	7,250	6,320	4,991	12.78

Multilateral operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
CO2 emissions from biomass	7,272	10,619	12,969	17,317	18,047	20,058	22,745	26,277	26,184	30,146	29,127	43,488	498.01
CO2 captured	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Long-term storage of C in waste disposal sites	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Indirect N2O													
Indirect CO2 (3)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Total CO2 equivalent emissions without land use, land-use change and forestry	521,058	532,672	553,742	578,258	568,255	559,554	547,137	496,787	506,489	494,292	468,913	437,268	-16.08
Total CO2 equivalent emissions with land use, land-use change and forestry	515,619	509,107	535,440	547,589	537,183	551,818	520,239	467,773	472,283	465,829	448,115	403,186	-21.81
Total CO2 equivalent emissions, including indirect CO2, without land use, land-use change and	436,204	447,201	465,173	491,006	486,870	478,460	467,984	418,887	428,936	416,663	391,067	360,423	-17.37

forestry													
Total CO2 equivalent emissions, including indirect CO2, with land use, land-use change and forestry	428,785	423,110	445,744	459,864	455,407	468,582	440,466	389,113	394,255	387,485	368,830	326,105	-23.95

Notes:

a The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

b Fill in net emissions/removals as reported in CRF table Summary 1.A of the latest reported inventory year. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

CTF Table 1 CH_4 Source and Sink Categories (kt)

Greenhouse gas source and sink categories	Base year[a]	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
	kt												%
1. Energy	**433**	**417**	**384**	**346**	**319**	**314**	**317**	**310**	**321**	**318**	**321**	**354**	**-18.41**
A. Fuel combustion (sectoral approach)	79	91	81	73	72	74	74	73	73	75	79	122	55
1. Energy industries	9	8	7	6	6	5	5	5	5	5	5	5	-49.47
2. Manufacturing industries and construction	7	7	6	6	6	7	6	4	6	7	8	10	50.95
3. Transport	39	44	33	21	18	16	14	13	12	11	10	10	-75.51
4. Other sectors	23	32	36	40	42	47	49	52	51	52	56	97	316.86
5. Other	0.17	0.22	0.13	0.16	0.13	0.11	0.07	0.07	0.06	0.05	0.03	0.05	-68.44
B. Fugitive emissions from fuels	355	326	302	273	247	240	242	237	248	243	242	232	-34.67
1. Solid fuels	6	3	4	3	3	4	4	2	3	3	3	2	-64.73
2. Oil and natural gas and other emissions from energy production	349	323	299	270	244	236	239	235	245	240	239	230	-34.15

C. CO2 transport and storage													
2. Industrial Processes and Product Use	**5**	**5**	**3**	**3**	**3**	**3**	**3**	**2**	**2**	**3**	**3**	**2**	**-58.86**
A. Mineral industry													
B. Chemical industry	2	3	0.40	0.33	0.32	0.34	0.30	0.28	0.31	0.27	0.26	0.24	-90.05
C. Metal industry	3	3	3	3	3	3	3	2	2	2	2	2	-30.63
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
3. Agriculture	**863**	**856**	**838**	**772**	**758**	**782**	**771**	**782**	**764**	**763**	**755**	**747**	**-13.43**
A. Enteric fermentation	630	626	622	556	546	566	561	562	548	549	547	554	-12.03
B. Manure management	157	150	149	145	142	144	144	146	142	140	136	126	-19.95

C. Rice cultivation	75	80	66	70	70	72	66	73	73	72	72	66	-11.63
D. Agricultural soils	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	0.60	0.59	0.59	0.64	0.62	0.63	0.67	0.62	0.61	0.60	0.64	0.60	0.55
G. Liming													
H. Urea application													
I. Other carbon-containing fertilizers													
J. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
4. Land Use, Land-Use Change and Forestry	67	15	38	15	12	73	19	24	14	23	48	8	-88.13
A. Forest land	40	8	22	8	6	41	8	10	5	9	25	5	-86.86
B. Cropland	0.22	0.06	0.13	0.06	0.05	0.25	0.08	0.09	0.05	0.10	0.19	0.31	41.34
C. Grassland	27	7	16	7	6	31	11	14	9	13	23	2	-91.01
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

G. Harvested wood products													
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
5. Waste	857	882	977	893	866	836	809	788	778	752	742	660	-22.97
A. Solid waste disposal	726	758	859	778	751	722	698	678	668	644	635	555	-23.60
B. Biological treatment of solid waste	0.09	0.15	1	2	2	2	2	2	2	2	3	3	2894.05
C. Incineration and open burning of waste	2	2	2	2	2	2	2	2	2	2	2	2	10.60
D. Waste water treatment and discharge	129	122	115	111	111	109	107	106	106	103	103	101	-21.93
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Total CH4 emissions without CH4 from LULUCF	2,159	2,161	2,201	2,013	1,946	1,935	1,900	1,882	1,865	1,835	1,820	1,763	-18.33
Total CH4 emissions with CH4 from LULUCF	2,226	2,176	2,239	2,029	1,958	2,008	1,919	1,906	1,880	1,858	1,868	1,771	-20.43
Memo items:													

International bunkers	**0.47**	**0.45**	**0.51**	**0.83**	**0.88**	**0.87**	**0.93**	**0.81**	**0.78**	**0.81**	**0.72**	**0.59**	**26.45**
Aviation	0.05	0.06	0.11	0.17	0.17	0.13	0.12	0.12	0.12	0.12	0.12	0.12	149.94
Navigation	0.42	0.39	0.4	0.66	0.71	0.74	0.81	0.69	0.67	0.69	0.6	0.47	12.73
Multilateral operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
CO2 emissions from biomass													
CO2 captured													
Long-term storage of C in waste disposal sites													
Indirect N2O													
Indirect CO2 (3)													

Notes:

a The column “Base year” should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

CTF Table 1 N_2O Source and Sink Categories (kt)

Greenhouse gas source and sink categories	Base year[a]	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	Change from base to latest reported year
	kt												%
1. Energy	**15**	**18**	**17**	**17**	**17**	**17**	**17**	**16**	**16**	**16**	**15**	**16**	**9.77**
A. Fuel combustion (sectoral approach)	15	17	17	17	17	17	17	16	16	16	15	16	9.84
1. Energy industries	2	2	2	2	2	2	2	2	2	2	2	2	-4.54
2. Manufacturing industries and construction	5	5	5	5	5	5	5	4	4	4	4	3	-32.20
3. Transport	3	6	5	4	4	4	4	4	4	3	3	3	-3.90
4. Other sectors	5	5	6	6	6	6	6	7	7	6	6	8	68.37
5. Other	0.23	0.21	0.14	0.29	0.24	0.23	0.2	0.24	0.13	0.1	0.09	0.13	-40.54
B. Fugitive emissions from fuels	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	-18.98
1. Solid fuels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2. Oil and natural gas and other emissions from energy production	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	-18.98

C. CO2 transport and storage													
2. Industrial Processes and Product Use	**24**	**26**	**29**	**28**	**11**	**9**	**6**	**6**	**4**	**3**	**3**	**3**	**-89.26**
A. Mineral industry													
B. Chemical industry	22	23	26	25	9	6	3	4	2	1	1	1	-96.55
C. Metal industry	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
D. Non-energy products from fuels and solvent use	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Electronic industry													
F. Product uses as ODS substitutes													
G. Other product manufacture and use	3	2	3	3	3	3	2	2	2	2	2	2	-29.37
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
3. Agriculture	**48**	**48**	**47**	**45**	**44**	**45**	**42**	**40**	**39**	**40**	**42**	**39**	**-17.71**
A. Enteric fermentation													
B. Manure management	10	9	9	8	8	8	8	8	8	8	8	7	-23.24

C. Rice cultivation													
D. Agricultural soils	38	39	39	37	37	37	34	31	31	32	34	32	-16.32
E. Prescribed burning of savannas	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Field burning of agricultural residues	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	3.39
G. Liming													
H. Urea application													
I. Other carbon-containing fertilizers													
J. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
4. Land Use, Land-Use Change and Forestry	**1.03**	**0.48**	**0.6**	**0.31**	**0.28**	**1.1**	**0.45**	**0.55**	**0.39**	**0.5**	**0.79**	**0.13**	**-87.75**
A. Forest land	0.01	0	0.01	0	0	0.01	0	0	0	0	0.01	0	-86.86
B. Cropland	0.16	0.25	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.06	0.05	-70.37
C. Grassland	0.85	0.23	0.5	0.22	0.19	0.99	0.36	0.45	0.3	0.42	0.72	0.08	-91.01
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
F. Other land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

G. Harvested wood products													
H. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
5. Waste	**4**	**4**	**5**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**35.99**
A. Solid waste disposal													
B. Biological treatment of solid waste	0.06	0.13	0.57	1.11	1.18	1.21	1.18	1.2	1.41	1.43	1.43	1.48	2,509.73
C. Incineration and open burning of waste	0.12	0.12	0.09	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.08	-38.15
D. Waste water treatment and discharge	4	4	4	4	4	4	4	5	5	4	4	4	5.07
E. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
6. Other (as specified in the summary table in CRF)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Total direct N2O emissions without N2O from LULUCF	**91**	**96**	**99**	**95**	**79**	**76**	**71**	**67**	**65**	**65**	**65**	**64**	**-29.58**
Total direct N2O emissions with N2O from LULUCF	**92**	**96**	**99**	**96**	**79**	**77**	**71**	**68**	**65**	**65**	**66**	**64**	**-30.23**

Memo items:

International bunkers	**0.23**	**0.26**	**0.35**	**0.39**	**0.41**	**0.44**	**0.45**	**0.41**	**0.4**	**0.41**	**0.39**	**0.35**	**50.05**
Aviation	0.12	0.16	0.25	0.21	0.22	0.24	0.24	0.22	0.23	0.23	0.23	0.22	84.89
Navigation	0.11	0.1	0.11	0.18	0.19	0.2	0.21	0.18	0.18	0.18	0.16	0.13	12.73
Multilateral operations	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	
CO2 emissions from biomass													
CO2 captured													
Long-term storage of C in waste disposal sites													
Indirect N2O	10	9	7	6	6	6	5	5	5	5	4	4	-59.79
Indirect CO2 (3)													

Notes:

a The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

CTF Table 1 Emissions of HFCs, PFCs, SF_6, NF_3 ($kt\ CO_2\ eq$)

Greenhouse gas source and sink categories	*Base year*[a]	1995	2000	2005	2006	2007	2008	2009	2010	2011			Change from base to latest reported year
													%
Emissions of HFCsc and PFCs - (kt CO2 eq)	**3,351**	**3,351**	**2,264**	**3,486**	**7,938**	**8,746**	**9,536**	**10,092**	**10,310**	**11,246**	**11,988**	**12,355**	**13,224**
Emissions of HFCs - (kt CO2 equivalent)	**444**	**444**	**813**	**2,098**	**5,998**	**6,811**	**7,650**	**8,379**	**9,095**	**9,725**	**10,326**	**10,856**	**11,518**
HFC-23	0.03	0.03	0.03	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HFC-32	NA, NO	NA, NO	NA, NO	0	0	0	0	0	0	0	0	0	0
HFC-41	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-43-10mee	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-125	NA, NO	NA, NO	0.01	0.10	0.47	0.56	0.64	0.72	0.79	0.86	0.93	1.00	1.07
HFC-134	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134a	NA, NO	NA, NO	0	1	1	1	2	2	2	2	2	2	2
HFC-143	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-143a	NA, NO	NA, NO	0	0	0	1	1	1	1	1	1	1	1
HFC-152	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-152a	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-161	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO

HFC-227ea	NA, NO	NA, NO	NA, NO	0.01	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07
HFC-236cb	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-236ea	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245ca	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245fa	NA, NO	NA, NO	NA, NO	NA, NO	0.14	0.16	0.18	0.19	0.21	0.23	0.25	0.27	0.29
HFC-365mfc	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of HFCs(4) - (kt CO_2 equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of PFCsc - (kt CO2 eq)	**2,907**	**2,907**	**1,450**	**1,388**	**1,940**	**1,935**	**1,886**	**1,712**	**1,215**	**1,520**	**1,661**	**1,499**	**1,705**
CF_4	0.32	0.32	0.17	0.17	0.24	0.25	0.25	0.22	0.16	0.20	0.22	0.20	0.23
C_2F_6	0.05	0.05	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_3F_8	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_4F_{10}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C_4F_8	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C_5F_{12}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_6F_{14}	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C10F18	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C3F6	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO

Unspecified mix of PFCs(4) - (kt CO_2 equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Emissions of SF6(3) - (Gg CO2 equivalent)	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**	**NA, NO**
SF_6	408	408	664	561	547	567	450	493	469	391	438	442	417
Emissions of NF3 - (kt CO2 equivalent)	**0.02**	**0.02**	**0.03**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**
NF3	NA, NO	NA, NO	NA, NO	26	33	22	12	19	18	20	28	25	26

Notes:

a The column “Base year” should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

3. Quantified Economy-wide Emission Reduction Target (QEERT)[4]

3.1 Italy's quantified economy-wide emission reduction target

In 2010, the EU submitted a pledge to reduce its GHG emissions by 2020 by 20 % compared to 1990 levels. This is documented in the UNFCCC document FCCC/SB/2011/INF.1/Rev.1 of 7 June 2011. In the EU submission to the UNFCCC from 20 March 2012 (FCCC/AWGLCA/2012/MISC.1) the EU target is further explained. As this target under the convention has only been submitted by EU-28 and not by each of its Member States (MS), there are no specified convention targets for single MS. Due to this, Italy as part of the EU-28, takes on a quantified economy-wide emission reduction target jointly with all Member States.

CTF Table 2 (a) Description of quantified economy-wide emission reduction target: base year

Party	**Italy**	
Base year /base period	1990	
Emission reduction target	% of base year/base period	% of 1990 20.00
Period for reaching target	BY-2020	

With the 2020 climate and energy package the EU has set internal rules which underpin the implementation of the target under the Convention. The 2020 climate and energy package introduced a clear approach to achieving the 20 % reduction of total GHG emissions from 1990 levels, which is equivalent to a 14 % reduction compared to 2005 levels. This reduction objective is divided between two sub-targets, equivalent to a split of the reduction effort between ETS and non-ETS sectors.

Legally binding target trajectories for the period 2013-2020 are enshrined in both the EU-ETS Directive (Directive 2003/87/EC and respective amendments) and the Effort Sharing Decision (Decision No 406/2009/EC). These legally binding trajectories not only result in a 20% GHG reduction in 2020 compared to 1990 but also define the national annual target pathway to reduce EU GHG emissions from 2013 to 2020. The Effort Sharing Decision sets annual national emission targets for all Member States for the period 2013-2020 for those sectors not covered by the EU emissions trading system (ETS), expressed as percentage changes from 2005 levels. In March 2013, the EU Commission formally adopted the national annual limits throughout the period for each Member State. By 2020, the national targets will collectively deliver a reduction of around 10% in total EU emissions from the sectors covered compared with 2005 levels. The emission reduction to be achieved from the sectors covered by the EU ETS will be 21% below 2005 emission levels. Starting from 2013 aviation is in the scope of the EU-ETS, it's mean that CO2 emissions from all flights falling within the aviation activities listed in Annex I of the EU ETS Directive which depart from an airport situated in the territory of a Member State and those which arrive in such an airport from a third country, excluding small commercial emitters.

In Table 2(b) below gases and sectors covered for the emission reduction are reported; the target covers the gases CO_2, CH_4, N_2O, HFCs, PFCs and SF_6. The global warming potential values considered are those reported in the 4thAR of the IPCC as adopted in the UNFCCC reporting guidelines for national GHG inventories of Annex I Parties (see Table 2(c)).

The EU Convention pledge does not include emissions/removals from Land Use, Land-Use Change and Forestry, but it is estimated, for Italy, to be a net sink over the relevant period. The emission inventory also includes information on emissions and removals from LULUCF in accordance with relevant reporting commitments under the UNFCCC. Accounting for LULUCF activities only takes place under the Kyoto Protocol.

[4] Authors: Chiara Arcarese, Riccardo De Lauretis

CTF Table 2(b) Description of quantified economy-wide emission reduction target: gases and sectors covered

Gases covered		Base year for each gas (year):
CO_2		1990
CH_4		1990
N_2O		1990
HFCs		1990
PFCs		1990
SF_6		1990
NF_3		
Other Gases (specify)		
Sectors covered	Energy	Yes
	Transport[b]	Yes
	Industrial processes[c]	Yes
	Agriculture	Yes
	LULUCF	No
	Waste	Yes
	Other Sectors (specify)	

Notes

Abbreviations: LULUCF = land use, land-use change and forestry.

a Still to be decided.

b Transport is reported as a subsector of the energy sector.

c Industrial processes refer to the industrial processes and solvent and other product use sectors.

CTF Table 2(c) Description of quantified economy-wide emission reduction target: global warming potential values (GWP)

Gases	GWP values
CO_2	4th AR
CH_4	4th AR
N_2O	4th AR
HFCs	4th AR
PFCs	4th AR
SF_6	4th AR
NF_3	4th AR
Other Gases (specify)	

Notes

Abbreviations: GWP = global warming potential

CTF Table 2(d) – Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF sector

Role of LULUCF	LULUCF in base year level and target	Excluded
	Contribution of LULUCF is calculated using	

The Climate and Energy Package allows Certified Emission Reductions (CERs) and Emission Reduction Units (ERUs) to be used for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. In addition, the legislation foresees the possible recognition of units from new market mechanisms provided that the necessary legal arrangements to create such units are in place. Under the EU ETS the limit is up to 50% of the required reduction below 2005 levels. In the sectors not covered by the ETS, annual use shall not exceed to 3% of each Member States' non-ETS greenhouse gas emissions in 2005. A limited number of Member States, including Italy, may use an additional 1%, from projects in LDCs or SIDS subject to conditions. The overall amount of CERs units originated in the second commitment period actually held in Party accounts and possibly available for compliance are reported in the Table below.

AAUs for the period 2013-2020 have not yet been determined. The EU expects to achieve its 20% target for the period 2013-2020 with the implementation of the ETS Directive and the ESD Decision for the non-ETS sectors, which do not allow the use of AAUs from non-EU Parties. Italy does not plan to acquire AAUs for compliance purpose to achieve its target.

The time-period of the Convention target is from 1990-2020, no carry-over units will be used to achieve the 2020 target. In the second commitment period of the Kyoto Protocol the use of carried over units in the PPSR account depend on the extent by which emissions during the second commitment period exceed the assigned amount for that commitment period, which can only be determined at the end of the second commitment period. The overall amount of units carried over from the first commitment period is reported in the Table.

CTF Table 2(e)I Description of quantified economy-wide emission reduction target: market-based mechanisms under the Convention

Market-based mechanisms under the Convention	***Possible scale of contributions (estimated kt CO_2 eq)***
CERs	1,002.625
ERUs	
AAUs[i]	
Carry-over units[j]	2,473.150
Other mechanism units under the Convention (specify)[d]	

Notes

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction, ERU = emission reduction unit.

d As indicated in paragraph 5(e) of the guidelines contained in annex I of decision 2/CP.17 .

i AAUs issued to or purchased by a Party.

j Units carried over from the first to the second commitment periods of the Kyoto Protocol, as described in decision 13/CMP.1 and consistent with decision XX/CMP.8.

Regarding CTF Table 2(e)II there are general provisions in place in the EU legislation that allow for the use of such units. The necessary legal arrangements for the creation of such units have been put in place in the EU which is not the case at the point in time of the provision of this report.

CTF Table 2(e)II Description of quantified economy-wide emission reduction target: other market-based Mechanisms

Other market-based mechanisms (Specify)	**Possible scale of contributions (estimated kt CO_2 eq)**

4. Progress in achievement of QEERT[5]

4.1 Action taken and planned to achieve Italy's QEERT

This chapter describes policies and measures which contribute to reduce the greenhouse gases emissions in Italy. In the chapter are included EU, national and local policies. The policies and measures assessed are the ones reported in official Ministerial documentation by the end of 2014. Quantifications of the PaMs impacts on GHGs emission reduction are reported at the end of each sector affected, at the end of this chapter see Table 4.14 and attached in Table 3 of the Common Tabular Format (CTF) .

EU policies

In 2009 the EU established internal rules under its "2020 climate and energy package"[6]. The package introduced a clear approach to achieving the 20% reduction of total GHG emissions from 1990 levels. For EU Member States this reduction objective is divided between the ETS and ESD sectors:

- ETS sector: the EU single wide cap is determined according to a linear reduction path arriving at a reduction of 21% below reported 2005 emissions in 2020. The starting point of such path is the mid-point of the 2008-12 period, while the starting level is the average annual total quantity of allowances issued by Member States pursuant to Commission Decisions on Member States' national allocation plans for the period 2008-12. This path set implies a decrease of the EU wide cap of 1.74% annually. Among the other significant changes it has to be underlined a more significant role of auctioning as method for allocation, the extension of the trading period from 5 to 8 years the inclusion of some other activities such as the production of nitric, adipic, glyoxal and glyoxylic acid, the production of ammonia, aluminium and some other greenhouse gases (nitrous oxide and perfluorocarbons). For the third trading period (2013-2020) no disaggregation of the objective at Members' State Level has been done. Operators subject to ETS will acquire the emission allowances on the market, through dedicated auctions , an assessment of emissions of operators subject to ETS at national. level will be possible ex post.
- ESD sector : Italy is committed to reduce its greenhouse gas emissions in the non ETS sector of 13% by 2020 with respect to 2005 level under "Decision n. 406/2009/EC of the European Parliament and of the Council of 23th April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020", the so-called "Effort Sharing Decision" (ESD). The emissions from LULUCF sector are excluded from the accounting. The more updated comprehensive national strategy to meet the ESD targets has been approved by the Interministerial Committee for Economic Planning (CIPE) the 8th of March 2013. The resolution provides a list of measures and in particular identifies in Annex 2 the planned ones that should be put in place by Italy to achieve the compliances with the 2020 targets. Moreover the 8th March 2013 the Ministry of Economic Development and the Ministry of Environment, Land and Sea have approved by a decree the new "National Energy Strategy". This strategy identifies a path to achieve the target of the Climate Energy Package. The measures are the same that are reported in the CIPE 2013 resolution.

Cross Sectoral policies

National Action Plan for Renewable Energy 2010 and Legislative decree 28/2011

In January 2007, the Commission published a Renewable Energy Roadmap outlining a long-term strategy and in 2009 the EU adopted Directive 2009/28/EC aiming at increasing the average renewable share across the EU to 20% by 2020. Such Directive sets individual targets for each Member State (the national target for Italy is 17%). EU countries are free to decide their own preferred 'mix' of renewable sources,

[5] Authors: Monica Pantaleoni, Marina Vitullo

[6] http://ec.europa.eu/clima/policies/package/index_en.htm

allowing them to take account of their different potentials. They must present National Action Plans (NAPs) based on the indicative trajectories to the European Commission by 30th June 2010, followed by progress reports submitted every two years. The objective expressed in the form of a share of energy from renewable sources relative to total consumption in transport, electricity, heating and cooling in 2020 takes also into account the effects of other policy measures addressing energy efficiency.

The Directive 2009/28/EU has been transposed by the Legislative Decree N. 28 of 3rd March 2011. The decree defines the mechanisms, the incentives and the institutional, financial and legal tools necessary to achieve the 2020 targets regarding the renewable energy use. The decree also provides for a substantial reorganization of existing incentive schemes in particular in the field of green certificates and white certificates system, both described below.

Decree 28th December 2012 - Conto Termico ("Heating Account")

The 28th December 2012 decree, the so called "Conto Termico" decree, implements the incentive scheme introduced by Legislative Decree 28/2011; in particular encourages small-scale energy efficiency measures in public sector buildings and in the production of thermal energy from renewable sources (in both public and private sector).

The eligible actions are: improving building shells thermal insulation, replacement of heating plants with ones more efficient and replacement or installation of equipment using renewable energy.

The incentives are identified based on the energy saving achievable for the building and on energy production from renewable sources. This measure is now under revision.

Directive 2012/27/EC – Energy Efficiency and Legislative Decree 102/2014

The Directive 2012/27/UE establishes a common framework for the promotion of energy efficiency, doesn't set mandatory targets but in the same time points out measures in the areas of energy-supply and energy end-use.

Each member state by the end of April 2013 has set targets in terms of energy consumption and primary / final energy savings, energy intensity and should notify it to the European Commission.

The most relevant directive articles are ones related to the renovation of the buildings in the public sector, the metering and accounting of energy efficiency, promoting of heating and cooling (the impact on thermal generation), processing, transmission and distribution of energy.

The Directive 2012/72/EU has been transposed by the Legislative Decree N. 102/2014. articles 5 and 6 of the decree envisage that from 2014 to 2020 should be done measures to redevelop the buildings of central administration. The decree establishes a "New fund for the Energy Efficiency". This fund will grant loans with subsidized rate to public and private entities to implement measures of energy efficiency.

Moreover in the July 2014 a energy efficiency plan "PAEE 2014- Piano di Azione per l'Efficienza Energetica" has been approved by the Government. The PAEE 2014 report the energy efficiency objectives and all the measures put in place to achieve them. In particular the plan propose to strengthen the measure just implemented (in particular white certificates). The plan is available on line :http://www.efficienzaenergetica.enea.it/doc/paee/PAEE-2014-definitivo.pdf

The White Certificates system

The White Certificates or Title of Energy Efficiency (TEE) system represents a cross cutting policy aimed at promoting energy efficiency and delivering emissions reductions in all the energy end-use sectors: industrial, residential, service. The system was firstly introduced in July 2001 by two ministerial decrees., later repealed and substituted by two new decrees approved in April 2004. Those decrees set the obligation on electricity and gas distributors to achieve the primary energy saving target of 2.9 Mtoe per year by 2009.

The Decree of the Ministry for the economic development of 21 December 2007[7] set the new targets for the years 2008 and 2009 and the extension of system up to 2012 according to the following table:

Table 4.1 - National target for primary energy savings

REVISED TARGET FOR THE ITALIAN WHITE CERTIFICATE SYSTEM 2005-2012 (Mtoe/Year)		
Year	Electricity distributors	Gas distributors
2005	0.1	0.1
2006	0.2	0.2
2007	0.4	0.4
2008	1.2	1
2009	1.8	1.4
2010	2.4	1.9
2011	3.1	2.2
2012	3.5	2.5

Each gas/electricity distributor gets its own target on the basis of its national market quota. The annual energy saving targets can be achieved through the implementation of energy saving projects in all energy end-use sectors. Projects contribute to the achievement of targets for 5 years; only for specific projects (buildings thermal envelope, bioclimatic design, reduction of cooling needs, etc) the time limit is raised up to 8 years. Projects can be implemented either by distributors - directly or through controlled companies - or by energy saving companies (E.S.Co.). Target-bound distributors can therefore gain their own certificates, or buy them on the market from other parties. Certificates can be traded bilaterally or else through an organized market. Each Certificate testifies the saving of 1 t of oil equivalent

In the December 2012 was issued the so called “White Certificate Decree” concerning the determination of national quantitative targets of energy savings that must be pursued to the distribution companies for electricity and gas from 2013 to 2016 and for the expansion of white certificates mechanism. The new targets are reported in Table 4.2. The decree also defines the criteria, the conditions and the procedures to implement energy efficiency measures in end-use energy and transfers to the GSE (Manager of Energy Services) from 2013 the management, assessment and certification of energy saving projects carried out under white certificates.

[7] Decree of the Ministry of Economic Development of 21 December 2007, on "Revision and updating of the decrees of 20th July 2004 concerning the increase in energy end-use energy efficiency, energy conservation and developing renewable sources, G.U. n 300 of 28th December 2007.

Table 4.2 - National target for primary energy savings

REVISED TARGET FOR THE ITALIAN WHITE CERTIFICATE SYSTEM 2013-2016 (Mtoe/Year)		
Year	Electricity distributors	Gas distributors
2013	3.03	2.48
2014	3.71	3.04
2015	4.26	3.49
2016	5.23	4.28

The certification of the energy savings produced by each project is made via the issuing of Energy Efficiency Titles (EETs). 1 EET is equivalent of 1 Mtoe.

The eligible projects are: re-phasing of electric systems, electric motors and their applications, lighting systems, reduction of electricity leaking, switching from electricity to other fuels when this produces primary energy savings, reduction of electricity consumption for heating purposes, reduction of electricity consumption for air conditioning, high efficient electric appliances, high efficient office equipment, switching from other fuels to electricity when this produces primary energy savings, reduction of primary energy consumption in industrial processes, reduction of primary energy consumption for heating, ventilation and air conditioning system, promotion of end-use technologies fuelled by renewable sources, electric and gas-fuelled vehicles, information campaigns to raise awareness and promote energy savings.

A further extension of the white certificate system objective till 2020 is foreseeable also because the decree 102/2014 highlight that the white certificates are a relevant measure to achieve the energy efficiency target. This extension has been considered as a planned measure.

Ecodesign of energy-using products

The legislative decree 20/2007 has transposed directive 2005/32/CE into the national legal system and has imposed minimum efficiency requirements for energy-using products (excepted in the transport sectors) sold in UE. The Regulatory Committee elaborates regulations containing standard specifications of products.

This policy is actually under revision.

Structural funds 2007-2013

This policy has been described in detail in the "V NC of Italy to UNFCCC" (see paragraph 4.3 and in particular table 4.3). The measure foresee a contribution by EU in investments focused on the improvement of energy efficiency, development of renewable energies and improvement of transport networks and waste management.

Energy sector

Renewable energy sources

In Italy the electricity production by renewable sources has had a very important development in the period 2010-2013: gross production has increase from about 76.9 to 112 GWh. This production has to be

compared with a 2020 national target of 120-130 TWh / year, according to 2013 “National Energy Strategy”. The growth was driven by the financial incentives in the form of feed in tariffs; in particular for photovoltaic production. The incentive for photovoltaic production has now been greatly reduced and increase in production is now much lower. Feed in tariffs are still operative for new biogas production. Also the thermal renewable sources have a relevant role

The heat consumption represents the largest share of Italy’s energy consumption, both in the civil and industrial sectors (approximately 45% of total final consumption). The thermal renewable are generally more efficient and less expensive than the electric ones, in terms of cost per ton of CO2 avoided or cost per kWh of final energy produced and involve significant benefits of saving fossil fuel for the final consumer (e.g. through biomass heating), and for the country as a whole (reducing imports).

The development of renewable thermal energy use over the past five years has occurred in line with the objectives (5.4 Mtoe in 2010) and was driven by measures regarding energy efficiency, tax deductions or white certificates.

The rest of this paragraph presents a overview of main incentives to renewable in last years.

The Green Certificates system

Since the early 90s several different schemes have been introduced to subsidise the diffusion of renewable energy sources in electricity production.

A feed in tariffs system was adopted in 1992 (Cip 6), but its high costs and unsatisfactory results suggested the suspension in the numbers of the new plants qualifying for incentives. Under this decree, only those plants already operating or at least under construction at the time of its entry into force, could still be qualified for the CIP 6 incentives. A new incentive scheme, based on a market oriented mechanism, was later introduced with legislative decree 79/99.

The legislative decree 79/99 introduced the obligation on electricity providers (producers and importers) to feed the grid with a minimum share of electricity produced from renewable energy sources. The obligation started in 2002. The initial share was set at 2% of the overall electricity produced or imported (exceeding 100 GWh), but the increase of this quota over time was already planned in the decree. As reported in the subsequent paragraphs, the law provides for an indirect bonus for cogeneration: in order to calculate the required quantity of renewable electricity, the electricity produced by cogeneration plants is subtracted from the total.

Providers are allowed to fulfill their obligation by different means:

- they can generate the required share of renewable electricity setting up new renewable capacity;
- they can import the required share of renewable electricity from foreign countries where a similar mechanism is in force;
- they can purchase the relative quota, represented by the so called Green Certificates, on the market.

Green Certificates are tradable rights issued for the first eight years of incremental generation of renewable electricity: in order to qualify for the issuance of Green Certificates the plant generating renewable electricity must have started operation after April 1st, 1999. Each certificate represents 50 MWh and its price is determined by market forces. In case of insufficient supply of Green Certificates on the market, the GSE can sell these certificates at a prescribed price that is the difference between the take-up price paid to the generator and the average price paid in the same period to conventional producers. This price has become an upper boundary for the price of the certificates freely sold on the market.

Paragraph 5 of Article 22 of Legislative Decree 28/2011 declares the end of the incentive mechanism of green certificates after 2015, that will be substitutes by other supporting mechanisms outlined below.

The "Omnicomprensiva" Tariff - All-inclusive tariff

The "Omnicomprensiva" (all inclusive) tariff is a support system based on providing fixed charge granted to renewable energy installations in the energy function electric grid (feed in tariff). This rate is applicable only to facilities of less than 1 MW (200 kW for wind) of power and includes both an incentive (differentiated by technology) and the remuneration for the energy fed into the grid. The rate is all-encompassing and is recognized for a variable period depending by technology. This system will substitute all other incentives schemes for small installations.

Ministerial Decree of 6th July 2012

With the Ministerial Decree of 6th July 2012 the incentives for the renewable electrical energy (excluding photovoltaic) has been changed, in particular for new plants starting from the 1st January 2013 the "Green Certificates" and the "all inclusive" tariff have been replaced by a new scheme, less expensive for the end users, people and company. The main changes introduced by the decree concern the way of access to incentives, that are now divided into three parts depending on type and power of plants:

- Direct access to incentives: for new or fully reconstructed or restarted plants below a threshold level; the system is very similar to actual "all inclusive" tariff
- Register enrolment : for new or fully reconstructed or restarted plants that have power bigger than the Direct access level but lesser than the auction level;
- Auction: for new or fully reconstructed or restarted plants with power bigger than a certain threshold value.

In the following table are reported the threshold for the access to the different incentives divided by type of renewable energy sources:

Table 4.3– Ministerial Decree of 6th July 2012 - Incentives scheme

Source	Direct access	Register	Auction
Wind - on shore	1-≤60kW	>60kW-≤5MW	>5MW
Wind - offshore	1-≤60kW		>5W
Hydroelectric	1-≤50kW	>50kW-≤10MW	>10MW
Hydroelectric (art.4, c. 3, b)	1-≤250kW	>250kW-≤10MW	>10MW
Oceanic (sea waves)	1-≤60kW	>60kW-≤5MW	
Geothermal	1kW-≤20MW		>20MW
Geothermal (art.4, c. 3, f)	1kW-≤5MW		
Biomass (art.8,c. 4, a) e b)	1-≤200kW	>200kW-≤5MW	>5MW
Biomass (art.8, c. 4, c) e d) from waste water treatment sludge, biogas and bioliquid		1kW- ≤5MW	>5MW
Biogas	1-≤100kW	>100kW-≤5MW	>5MW

Source: FIRE – Federazione Italiana per l'uso Razionale dell'Energia

The "Conto Energia"

The "Conto Energia" is a support system that provides an incentive for the electricity produced by solar photovoltaic and thermodynamic. The incentive lasts20 years for photovoltaic systems, solar systems and 25 years for thermodynamic, through a tariff for all energy produced by the plants (feed in premium). The system has exhausted the available financial allowances in mid 2013. Photovoltaic generation has

reduced capital costs by about 70% from 2008 to 2012. Actually the incentives for small photovoltaic installations are limited to tax incentives (50% of capital investment recovered as tax deduction).

Thermal renewable energy

The strategy of additional development of thermal renewable energy use is based on a number of specific mechanisms:

- small size technologies (relating primarily to the civilian sector), the Government has recently launched a ministerial decree the so-called "Conto Termico". This mechanism, as explained before, provide the access to the incentive scheme to the most virtuous technologies, with minimum standards established for each type of technologies and greater incentives where also energy efficiency is foreseen.
- For larger size technologies the supporting mechanisms are the White Certificates.

Table 4.4- Summary of policies and measures in the energy sector – Renewable energy sources

Name of mitigation action[a]	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation[d]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Third "Conto Energia" (art.3 paragraph 1, decree 6 august 2010) and Fourth "Conto Energia" (Decree 5 may 2011)	Supporting the expansion of photovoltaic plants through feed in tariffs until a maximum capacity of 8000 MW	CO2	Economic	Implemented	2010	Government - Ministry of economic development	2300
Third "Conto Energia" : photovoltaic (art.3 paragraph 2, decree 6 august 2010)	Supporting the expansion of photovoltaic plants through feed in tariffs until a maximum capacity of 3000 MW	CO2	Economic	Implemented	2010	Government - Ministry of economic development	900
Green Certificate - budget law 2008	Green Certificate increased every year by 0,75% for 2007 - 2012 and establish "omnicomprensiva" rate for plants <1 Mwe	CO2	Economic	Implemented	2009	Government - Ministry of economic development	4000
European regional development fund (ERDF), National Strategic Framework 2008-2013	Supporting system for RES with Regional operative program (POR) and Interregional operative program (POIN)	CO2	Economic	Implemented	2008	Local Authorities - Regions	1400

Name of mitigation action[a]	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation[d]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
New measure of promoting and supporting renewable energy sources for electricity (RES-E)	Supporting the expansion of photovoltaic and concentrated solar power plants (CSP) through feed in tariffs until a maximum capacity of 36 GW	CO2	Economic	Planned	2020	Government - Ministry of economic development	0
New measure of promoting and supporting renewable energy sources for electricity (RES-H)	Supporting the expansion of electricity production from renewable sources FER except photovoltaics (PV) and including high efficiency cogeneration	CO2	Economic	Planned	2015	Government - Ministry of economic development	1700
National Action Plan for Renewable Energy 2010	Reducing energy losses through the modernization of the national electricity transmission and distribution grid	CO2	Regulatory	Planned	2020	Government - Ministry of economic development	0

Name of mitigation action[a]	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation[d]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
National Action Plan for Renewable Energy 2010	Storage systems for the management of production from RES.	CO2	Regulatory	Planned	2015	TERNA - Manager for the electricity transmission grids	25
National Action Plan for Renewable Energy 2010	Development of the national electricity distribution network to allow the increase of the Distributed Generation (DG)	CO2	Regulatory	Planned	2015	TERNA - Manager for the electricity transmission grids	IE

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Domestic and regional programs – Ministerial Decree of 15th March 2012 – Burden Sharing

The Regions and the Autonomous provinces of Trento and Bolzano also contribute separately to the achievement of the national target on renewable sources in gross final consumption of energy at 2020 and energy efficiency. The Decree of the 15th March 2012 the so called "Burden Sharing Decree" defines the regional targets and the methodology to achieve those targets, and also to manage the failure of the achievement. In the decree the targets are set for the electric (FER-E) and thermal (FER-C) use of renewable energy.

In the Table 5 are reported the target for the FER-E and in the Table 6 the targets for the FER-C. The reference years reported in the table are different:

- Reference year FER-E: 2009 calculated in accordance with Directive 2009/28;
- Reference year FER–C: 2005 regional consumption from renewable sources for heating / cooling.
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Table 4.5 – Burden sharing decree - Table 11 - FER–E 2020 targets

Regions	FER-E Consumption Reference year	FER-E Consumption 2020 Targets	Growth	
	ktoe	ktoe	ktoe	%
Abruzzo	116	183	67	58
Basilicata	72	234	162	224
Calabria	185	344	160	86
Campania	187	412	225	120
Emilia Romagna	216	400	185	86
Friuli V. Giulia	149	213	64	43
Lazio	112	317	205	183
Liguria	32	58	26	81
Lombardia	993	1090	97	10
Marche	60	134	75	125
Molise	54	127	73	135
Piemonte	601	732	131	22
Puglia	245	845	599	244
Sardegna	127	419	292	231
Sicilia	153	584	431	282
TAA-Bolzano	407	401	-6	-1
TAA-Trento	370	356	-15	-4
Toscana	556	769	213	38
Umbria	133	183	50	37
Valle d' Aosta	255	240	-15	-6

Veneto	357	463	106	30
Total	*5,380*	*8,504*	*3,124*	*58*

Table 4.6 - Burden sharing decree - Table 12 -FER–C 2020 targets

Regions	FER-C Consumption Reference year	FER-C Consumption 2020 Targets	Growth	
	ktoe	ktoe	ktoe	%
Abruzzo	48	346	298	620
Basilicata	18	138	120	649
Calabria	34	322	287	837
Campania	99	699	600	608
Emilia Romagna	66	828	762	1151
Friuli V. Giulia	36	229	192	532
Lazio	300	876	576	192
Liguria	71	354	283	399
Lombardia	315	1815	1499	476
Marche	34	406	372	1079
Molise	15	92	77	497
Piemonte	487	990	504	103
Puglia	54	513	459	856
Sardegna	19	249	230	1203
Sicilia	55	618	563	1017
TAA-Bolzano	34	81	47	138
TAA-Trento	36	134	98	276
Toscana	46	786	740	1596
Umbria	33	172	139	414
Valle d' Aosta	38	47	8	22
Veneto	75	810	735	979
Total	1,916	10,506	8,590	448

(*) In this table are included 50 ktoe of biogas/biomethane from the transport sector as reported in the National Action Plan for Renewable Energy

Cogeneration

Cogeneration is currently supported by incentive schemes, rewarding both the production of heat and the production of electricity. In particular, all cogeneration plants benefit from the White Certificate system while cogeneration from renewable energy sources are additionally entitled to receive incentive to reward the green electricity produced.

In the field of high-efficiency cogeneration, in accordance with the provisions of the new directive on energy efficiency, will be introduced further measures of a regulatory nature in addition to the incentive scheme in force, in order to facilitate this technology that has significant potential of primary energy savings. In this sector, Italy already has a historically high use of cogeneration in the industrial sector, with many existing plants medium to large size. Public support can point to the development of new facilities, in particular of small dimensions, but especially should aim to the revamping of existing installations, structures and technologies towards higher-yielding processes. In Table 4.7 are reported impacts of policies and measures of this sector.

Table 4.7 – Summary of policies and measures in the energy sector – Cogeneration

Name of mitigation action	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO2 eq)***
White certificates - decree December 2007	Supporting CHP and district heating plants for 2008-2012	CO2	Economic	Implemented	2008	Italian Regulatory Authority for Electricity Gas and Water	970
National Strategic Framework 2007-2013 - ERDF	Supporting CHP and energy savings with POR and POIN	CO2	Economic	Implemented	2007	Local Authorities - Regions	240
Further extend of energy saving targets (White certificates 2020-2030)	Supporting the expansion high efficiency cogeneration plants using fossil fuels through feed in tariffs until a maximum capacity of 9 GW	CO2	Economic	Planned	2020	GSE- Manager forEnergy Service	0

Energy industry

Policies affecting CO_2 emissions in the industry sector are generally designed to improve industrial energy efficiency. All the policies related to this sector are reported in table 4.8.

A main instrument is represented by the White Certificates system which is aimed at promoting energy efficiency in all the energy end-use sectors. The implementation of directive 2006/32/CE on energy end use efficiency and energy services in the industrial sector and the Action Plan 2007 impose new targets for White Certificates to 2016, and it is envisaged the extension of the scheme to 2030.

Another important initiative recently introduced by the Government concerns the replacement of existing inefficient electric motors with high efficient ones. This is a measure that can help achieve substantial CO2 emissions reductions in the industry sector, but the engines high purchase price and the lack of information about their energy saving potential represent a main obstacle to their diffusion. The Budget laws 2007 and 2008 therefore provide for tax credits for high efficiency electric engines and inverters. The European regulations 640/2009 and 641/2009, related to Legislative decree 201/2007 (directive 2005/32/CE) imposed on new electric motors and pumps minimum efficiency requirements with a gradual introduction between 2011 and 2017.

Table 4.8 - Summary of policies and measures in the energy industry sector

Name of mitigation action	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO2 eq)***
White certificates - decree December 2007 - Industry	Supporting electric energy saving for the period 2008-2012	CO2	Economic	Implemented	2008	GSE- Manager for Energy Service	2020
Legislative decree 201/07 (transposition of directive 2005/32/EC- first regulations)	Installation of highly efficient electric motors and inverters through minimum mandatory standards	CO2	Regulatory	Implemented	2008	Italian Regulatory Authority for Electricity Gas and Water	1920
European regional development fund (ERDF), National Strategic Framework 2008-2013 – Eletric energy saving	Supporting electric energy saving with POR and POIN	CO2	Economic	Implemented	2008	Local Authorities - Regions	660
Further extend of energy saving targets (White certificates 2020-2030)	Energy efficiency measures in industry	CO2	Economic	Planned	2020	GSE- Manager for Energy Service	0

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Other sectors (residential and tertiary)

The package of policies deployed in this sector aims at improving energy efficiency through specific actions targeted both at existing and new buildings and appliances. Improving the energy efficiency of buildings and reducing the related emissions has become a priority in the last few years.

The implementation of directive 2002/91/CE was an opportunity to introduce stricter energy requirements and to promote the diffusion of renewable energy sources in the building sector. The Directive lays down requirements on the application of minimum standards for the energy performance of new buildings and on the performance of large existing buildings undergoing major renovation. The directive also requires the provision of energy performance certificates when buildings are constructed, sold or rented out. The legislative decree 192/2005 transposed the directive into national law and has required the adoption of further ministerial decrees to become fully implemented.

At the end of 2006, legislative decree 192/2005 was amended by legislative decree 311/2006 to strengthen the buildings thermal demand requirements. The new law applies to new buildings and to existing buildings subject to major renovation[8] and provides for some important measures. Amongst the main provisions, the following obligations are worth citing:

- Installation of technical blinds for solar protection and insulation of new buildings and buildings subject to overall renovation (limited to buildings over 1000 m^2);
- laying down of all the necessary works to allow the connection of new buildings (and buildings subject to major renovation) to district heating systems, when existing (and not further than 1 km) or planned;
- installation of solar thermal systems that cover at least 50% of hot water demand for all new buildings and in case of replacement or renovation of the existing heating system;
- Installation of PV systems (with a power capacity to be defined in a subsequent ministerial decree) in all new buildings and in existing buildings with a total floor area over 1000m^2;

Dir. 2010/31/EC recasts the European Energy Performance of Buildings Directive (EPBD) (transposed into national law with the decree 63/2013). This measure defines mandatory standards for new buildings with net zero energy. The transposition of this directive will raise the requirement on new buildings and in the same time will be important to strengthen the control system, making it consistent in all regions.

There are also minimal efficiency requirements on new domestic appliances (TV, refrigerator, lamps, etc.), with a gradual introduction between 2009 and 2015. Those standards take into account the European regulations 644/2009, 278/2009 242/2009 243/2009 and 1275/2008 and are put into practice by the Legislative decree 201/2007 (directive 2006/32/CE). The Decree 21 December 2007 included energy efficiency in the civil sector to comply the White Certificate system target to 2012.

Consistent reductions are also expected from the introduction of other regulations for energy efficiency standards for new energy-consuming products introduced by law 201/2007 (transposition of directive 2005/32/CE).

As regards tax rebates system, it actually allows the recovery in 10 year time of up to 55%/65% of capital expenses for high efficiency appliances or building shell improvements. It is extended and modified on an annual basis with the annual state budget law. The most significant improvements concern: a differentiation between the percentage of deductible expenditure and/or the duration of the refund, in proportion to the actual saving produced by the intervention; the introduction of maximum specific cost parameters for each type of intervention, to prevent part of the incentive being transferred to product prices. Additionally the Heating account is going to be extended including public buildings. The

[8] As regards the minimum energy performance requirements of existing buildings subject to major renovation, the decree applies only in case of large buildings of over 1000 m2 and in case of expansion of existing buildings (over 20%). The decree applies only partially to existing buildings under the 1000m2 threshold.

time frame of “Fondo rotativo di Kyoto”[9] has been extended and redirected to improve energy efficiency in the public schools and university buildings.

[9] The “Fondo Rotativo di Kyoto” is a plan designed to promote public and private investment for energy efficiency in the building sector and in the industrial sector, and to promote small high-efficiency systems for the production of electricity, heating and cooling, use of renewable sources in small plants, the sustainable forest management and the promotion of innovative technologies in the energy sector. The Fondo provide long term lending at low interest rate: the loans reimbursed by the operator are reused in other project.

In June 2012, the Fondo Rotativo di Kyoto has been re-oriented to finance private corporate “green” investment with a minimum size of 0,5 M€. An eligibility criteria to access the Fund is to create new jobs hiring young people under 35y.

Table 4.9 - Summary of policies and measures in the Other sector

Name of mitigation action	*Brief description*	*GHG affected*	*Type of instrument*	*Status of implementation*	*Start year of implementation*	*Implementing entity or entities*	*Estimate of mitigation impact at 2020 (not cumulative, in kt CO2 eq)*
Building Regulation (Legislative decree 192/05 as amended by legislative decree 311/06)	Minimum mandatory standards on new and existing buildings (Energy Efficiency)	CO2	Regulatory	Implemented	2006	Local Authorities - Municipalities	3610
Budget law 2007 and budget law 2008	Supporting of energy saving in existing buildings through tax deduction of 55%	CO2	Fiscal	Implemented	2008	Government - Ministry of Ministry of Finance	610
Budget law 2009	Supporting of energy saving in existing buildings through tax deduction of 55%	CO2	Fiscal	Implemented	2010	Government - Ministry of Ministry of Finance	440
White certificates - decree December 2007 - Commercial	Supporting of energy saving 2008-2012 (Energy Efficiency)		Economic	Implemented	2008	GSE- Manager for Energy Service	3120
Legislative decree 201/07 (trasposition of directive 2005/32/EC) - Residential	First regulation on mandatory energy efficiency standards for energy-using products	CO2	Regulatory	Implemented	2008	Government - Ministry of economic development	2600

Name of mitigation action	*Brief description*	*GHG affected*	*Type of instrument*	*Status of implementation*	*Start year of implementation*	*Implementing entity or entities*	*Estimate of mitigation impact at 2020 (not cumulative, in kt CO2 eq)*
National Strategic Framework 2007-2013 - ERDF - Residential energy saving	Supporting electric energy saving with POR and POIN	CO2	Economic	Implemented	2007	Local Authorities - Regions	420
Supporting of energy saving in existing buildings through tax deduction of 55%	Restructuring for thermal insulation in residential buildings: 25% of the national building stock. The measure will apply in years after 2020.	CO2	Fiscal	Planned	2020	Government - Ministry of Finance	0
Legislative decree 28/2011 (Promoting energy saving in the residential sector (public, domestic, tertiary): insulation, replacement windows and boilers, installation of heat pumps and solar thermal panels	Investments of air conditioning systems (cooling and heating) in the residential sector Restructuring of the service sector's buildings	CO2	Economic	Planned	2012	GSE- Manager forEnergy Service	4060
Further extend of energy saving targets (White certificates 2020-2030)	Energy efficiency measures for electrical uses in the residential and tertiary sectors	CO2	Economic	Planned	2020	GSE- Manager forEnergy Service	0

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Transport sector

The policies and measure considered in the transport sector are:

- Infrastructural measures: high capacity and high speed networks and tuning of regional networks for commuting and goods. Management measures regarding enhancement of road urban public transport network.
- Intermodal measures regarding shifting from private road traffic to public road traffic and shifting goods transport from the road to the sea and management measures regarding supporting efficiency in private road transport and improving road circulation in the urban areas.
- Fleet update measures regarding further subsidy to change older cars with new ones with average emissions of 120 CO2/km (130 gCO2/km engines efficiency plus -10 gCO2/km from additional reduction tools);
- Mandatory requirement of the Directive 2009/28/EC: 10% of use of biofuel for transport at 2020.

The Budget laws 2007, following the European directive CE30/2003 prescribes that the minimum quota of bio fuel in 2009 is a 3% of total sold and 5.75% by 2010. Recently the second objective date has been moved to 2013.

Table 4.10 - Summary of policies and measures in the transport sector

Name of mitigation action	*Brief description*	*GHG affected*	*Type of instrument*	*Status of implementation*	*Start year of implementation*	*Implementing entity or entities*	*Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)*
Infrastructural measures	High Capacity and High Speed road. Regional networks for passengers and freight, subway	CO2	Planning	Implemented	2008	Government - Ministry of transport	5700
National Strategic Framework 2007-2013 – FESR	Intermodal infrastructure projects: metropolitan railways	CO2	Planning	Implemented	2008	Government - Ministry of transport	1280
Emission standard for new car (Regulation (EC) No 443/2009)	Fleet update at 120 g CO2/km in 2015 and 95 g CO2/km in 2020	CO2	Regulatory	Implemented	2008	Government - Ministry of economic development	10200
Legislative decree 128/05(traspositio n of directive 2003/30/EC)*	Mandatory use biofuels (target 4.5% to 2012)	CO2	Regulatory	Implemented	2008	Government - Ministry of economic development	1490
Legislative Decree 28/2011 (transposition of directive 2009/28/EC)*	Mandatory use biofuels (target 10% to 2020)	CO2	Regulatory	Implemented	2014	Government - Ministry of economic development	1580

Name of mitigation action	Brief description	GHG affected	Type of instrument	Status of implementation	Start year of implementation	Implementing entity or entities	Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)
Measure of promoting and supporting the development of charging infrastructure	Development of refueling infrastructure to allow a wider use of electric transport: - incentives to install a target of 3500 fast charging points - promotion for 3 mln residential charging units	CO2	Planning	Planned	2020	Government - Ministry of Transport	0
Modal shift	Modal shift of 3.5% of car/motobike transportation demand to the public transport	CO2	Planning	Planned	2016	Government - Ministry of Transport	453
Promoting and supporting renewal of car fleet with a promotion of electrical vehicles	Incentives to speed up replacement of vehicle fleet with new vehicles, including special incentive for electric cars. The effect of an eventual expansion of mandatory biofuels quota is included in the CO2 target.	CO2	Economic	Planned	2018	Government - Ministry of economic development	1640

Industrial Processes

For the industrial processes sector has been taken into account the reduction of N2O emissions in plants for the production of nitric acid. This measure can result in significant reductions in process emissions from the industrial sector, with a relatively small cost.

In the production of nitric acid, the most advanced technology is provided by SCR (Selective Catalytic Reduction) systems for the treatment of process gases, which has been installed by the main production plants in Italy. This activity has been included in the emission trading scheme starting from 2012. Therefore, this measure has been included in the WEM scenario.

Table 4.11 – Summary of policies and measures in the industrial processes sector

Name of mitigation action	*Brief description*	*GHG affected*	*Type of instrument*	*Status of implementation*	*Start year of implementation*	*Implementing entity or entities*	*Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)*
Nitric acid	Reduction of N2O emissions in nitric acid production plants	N2O	Voluntary Agreement	Implemented	2010	Companies - Plants	740

Agriculture

In the last years, the role of agriculture in climate change mitigation has been emphasized. In this context, the reform of the Common Agricultural Policy (CAP) has a relevant contribution. In 2008 the CAP has been reinforced by the Health Check, which strengthens the gradual shift from a financial support linked to production towards decoupled direct aids, by the strengthening of rural development policy, and by the increasing integration of environmental considerations, including climate change.

Therefore, the payments for farmers consider their respect of environmental laws and other types of legislation. Thus, the incentives for intensive production have reduced. On the other hand main emission reduction activities are predominantly or exclusively supported by two rural development measures: farm modernisation (code 121) and agri-environment (code 214). Some activities support the modernization of farms through energy efficient equipment and buildings, and promoting biogas production[10]. This picture has been also assessed by ISPRA in the 21 regional Rural Development Plans (RDPs), where measure code 214 is most likely to contribute with N_2O emission reductions. In 2008, a report[11] prepared by the Ministry of Agriculture (MIPAAF) in the framework of the Rural Development Network has assessed qualitatively the contribution of Rural Development Plans (RDPs) in terms of the mitigation potential. Moreover, in 2009, the CAP Health Check targets have been included in the RDPs[12]. In 2010, some general information on the number of RDPs that have considered climate change targets (15 RDPs) or all 6 Health Check targets (3 RDPs), is available[13].

[10] European Commission (2009), Commission staff working document. The role of European agriculture in climate change mitigation. SEC(2009) 1093 final (http://ec.europa.eu/agriculture/climate_change/sec2009_1093_en.pdf)

[11] MIPAAF (2008), "Il contributo dei piani di sviluppo rurale e della condizionalità alla mitigazione dei cambiamenti climatici e al loro adattamento. Rete Rurale Nazionale 2007-2013 Italia", November 2008

[12] See the publication "The Contribution of Rural Development Programmes in Mitigating Greenhouse Gas Emissions in Italy" Climate Change and the Sustainable Use of Water Resources - Climate Change Management 2012, pp 367-387

[13] MIPAAF (2010), "Le nuove sfide della PAC e le misure di rilancio dell'economia nei programmi di sviluppo rurale 2007-2013 – Aprile 2010. Rete Rurale Nazionale 2007-2013" (www.reterurale.it)

The reduction measures which are presented below have also been considered in CAP reforms, characterized by a progressive reinforcement for integrating environmental legislation. A special attention is given for example to the Nitrates Directive (monitoring of water quality; designation of nitrate vulnerable zones; and, establishment of codes of good agricultural practice).

In 2013 has been reached political agreement on the reform of the CAP 2014-2020. The agreement provides for an amendment to the payment ecological (greening). Between 2014 and 2020, over EUR 100 billion will be invested to help farming meet the challenges of soil and water quality, biodiversity and climate change:

- 30% of direct payments will be linked to three agricultural practices beneficial for the climate and environment: crop diversification (there is no obligation for diversification of crops for arable land less than 10 hectares), maintaining permanent grassland (there is no obligation for arable land less than 15 hectares and for permanent crops) and conserving 5%, and later 7%, of areas of ecological interest as from 2018 or measures considered to have at least equivalent environmental benefits.
- At least 30% of the rural developments programs' budget will have to be allocated to agri-environmental measures, support for organic farming or projects associated with environmentally friendly investment or innovation measures.
- Agri-environmental measures will become agri-environment-climate payments and will be stepped up to complement greening practices. These programs will have to set and meet higher environmental protection targets (guarantee against double funding).

Emissions of nitrous oxide from agricultural soil: emission reduction from the Agricultural soil source is mainly related to the rationalization in the use of fertilizers. RDPs 2007-2013 are contributing with this emission reduction measure (code 214). In order to achieve the objective is essential to consider ongoing efforts to raise awareness on the code of agricultural practice (such as fertilizer application limits and spreading conditions, manure storage methods, livestock density limits and crop rotation requirements), and the integrated production of agricultural property and organic farming. However, when considering organic farming[14] as an instrument for climate change mitigation, both the amount of emission per hectare and per unit of production needs to be considered[15].

Emissions of methane from manure management: electricity generation from animal waste has increased in Italy up to 361.6 GWh in 2011, an increase of 64% respect to 2010 (14 times the value of 2005), thanks to the support provided by the feed-in prices granted by Resolution no. 6/92 of the Inter-ministerial Price Committee (CIP 6/92) and the renewable quota obligation for electricity producers/importers established by the Legislative Decree of March 16, 1999, No. 79, and subsequent legislations. Currently, incentives for biogas production are available in the RDPs 2007-2013 (code 121 for modernization and 311 for diversification).

Moreover, as established by Ministerial Decree of 18 December 2008, the Ministry of Economic Development has approved incentives for the production of electric power from renewable energy. A special tariff (called "*tariffa omnicomprensiva"*) for small agro-energetic facilities (in operation after 31/12/2007) of less than 1 MW feed with biogas, biomass or vegetal oil, has been fixed. Instead, for facilities of more than 1 MW a multiplying factor of 1.8 for estimating green certificates is contemplated, specifically for facilities using agricultural biomass. In section 4.4 Renewable energy sources the recent legislation on these issues is described. In 2011, methane from biogas recovery has contributed to reduce methane emissions from manure management by 36%. Further intervention may be required for the coming years in order to sustain this trend, and to extend the covering of animal waste storage

[14] Some studies show contrasting results of emissions per unit of product in organic farming, particularly regarding methane. A German study (referenced by PICCMAT final report) shows lower GHG emissions per unit of product in organic farming than conventional methods for wheat, pig and milk production, while results for beef production are more ambiguous due to the variety of production system.

[15] European Commission (2009), Commission staff working document. The role of European agriculture in climate change mitigation. SEC(2009) 1093 final (http://ec.europa.eu/agriculture/climate_change/sec2009_1093_en.pdf)

systems, equipped with devices allowing collection and use of biogas, not only in new farms but also in major existing ones.

Table 4.12 – Summary of policies and measures in the agriculture sector

Name of mitigation action	***Brief description[e]***	***GHG affected***	***Type of instrument***	***Status of implementation[d]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Nitrogen fertilizer	Rationalization in the use of nitrogen fertilizer	N2O	Regulatory	Implemented	2007	Government - Ministry of Agriculture	790
Animal storage	Recovery of biogas from animal storage system	CH4	Regulatory	Implemented	2007	Government - Ministry of Agriculture	400

Waste

Emission reduction in waste sector is mainly related the improvement of waste management regarding the composition of waste disposed into landfills. In fact, the Landfill European Directive 1999/31/EC has been transposed in national decree in 2003 by the Legislative Decree 13 January 2003 n. 36 and applied to the Italian landfills since July 2005, but the effectiveness of the policies will be significant in the future. Moreover, a recent legislative decree (Legislative Decree 30 December 2008, n.208) shifts to December 2009 the end of the temporary condition regarding waste acceptance criteria, thus the composition of waste accepted in landfills is hardly changing and the amount of biodegradable waste disposed of into landfills is not complying with the target of landfill directive.

For the waste sector two measures are proposed:

- Compliance with separate collection targets and biodegradable waste disposed of into landfills:
    - fulfilment of the deadlines set for MSW separate collection;
    - fulfilment of the deadlines set for biodegradable waste sent to landfill.
- Only bio-stabilized waste disposed of into landfills: a further measure regard the pre-treatment of all the biodegradable wastes which will be disposed into landfills, encouraging the anaerobic digestion of MSW also in co-digestion with other type of waste such as sludge from municipal waste water treatment plants and animal waste. This practice will increase also the energy recovery from the biogas production.

Table 4.13- Summary of policies and measures in the waste sector

Name of mitigation action	***Brief description***	***GHG affected***	***Type of instrument***	***Status of implementation***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Separate collection	Compliance with separate collection targets and reduction of biodegradable waste disposed of into landfills	CH4	Regulatory	Implemented	2008	Local Authorities - Regions	3700

Table 4.14 - Table 3 of the Common Tabular Format (CTF) - Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of mitigation action[a]	*Sector(s) affected*[b]	*GHG(s) affected*	*Objective and/or activity affected*	*Type of instrument*[c]	*Status of implementation*[d]	*Brief description*[e]	*Start year of implementation*	*Implementing entity or entities*	*Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)*
Third "Conto Energia" (art.3 paragraph 1, decree 6 august 2010) and Fourth "Conto Energia" (Decree 5 may 2011)	Energy	CO_2	Increase in renewable energy	Economic	Implemented	Supporting the expansion of photovoltaic plants through feed in tariffs until a maximum capacity of 8000 MW	2010	Government - Ministry of economic development	2300
Third "Conto Energia" : photovoltaic (art.3 paragraph 2, decree 6 august 2010)	Energy	CO_2	Increase in renewable energy	Economic	Implemented	Supporting the expansion of photovoltaic plants through feed in tariffs until a maximum capacity of 3000 MW	2010	Government - Ministry of economic development	900
Green Certificate - budget law 2008	Energy	CO_2	Increase in renewable energy	Economic	Implemented	Green Certificate increased every year by 0,75% for 2007-2012 and establish "omnicomprensiva " rate for plants	2009	Government - Ministry of economic development	4000
European regional development fund (ERDF), National Strategic Framework 2008-2013 - RES	Energy	CO_2	Increase in renewable energy	Economic	Implemented	Supporting system for RES whit Regional operative program (POR) and Interregional operative program (POIN)	2008	Local Authorities - Regions	1400

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
White certificates - decree december 2007 - CHP	Energy	CO_2	Efficiency improvement in the energy and transformation sector	Economic	Implemented	Governament - Supporting CHP and district heating plants for 2008-2012	2008	Italian Regulatory Authority for Electricity Gas and Water	970
National Strategic Framework 2007-2013 - ERDF - CHP	Energy	CO_2	Efficiency improvement in the energy and transformation sector	Economic	Implemented	Supporting CHP and energy savings with POR and POIN	2007	Local Authorities - Regions	240
White certificates - decree december 2007 - Industry	Energy	CO_2	Efficiency improvement in industrial end-use sectors	Economic	Implemented	Supporting electric energy saving for the period 2008-2012	2008	GSE- Manager for Energy Service	2020
Legislative decree 201/07 (trasposition of directive 2005/32/EC) - Industry	Energy	CO_2	Efficiency improvement in industrial end-use sectors	Economic	Implemented	Installation of highly efficient electric motors and inverters through minimum mandatory standards	2008	Italian Regulatory Authority for Electricity Gas and Water	1920
European regional development fund (ERDF), National Strategic Framework 2008-2013 - Electric energy saving	Energy	CO_2	Efficiency improvement in industrial end-use sectors	Economic	Implemented	Supporting electric energy saving with POR and POIN	2008	Local Authorities - Regions	660

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Nitric acid	Industry/industrial processes	N_2O	Installation of abatement technologies	Voluntary Agreement	Implemented	Reduction of N2O emissions in nitric acid production plants	2010	Companies - Plants	740
Building Regulation (Legislative decree 192/05 as amended by legislative decree 311/06)	Energy	CO_2	Efficiency improvements of buildings	Regulatory	Implemented	Minimum mandatory standards on new and existing buildings (Energy Efficency)	2006	Local Authorities - Municipalities	3610
Budget law 2007 and budget law 2008	Energy	CO_2	Efficiency improvements of buildings	Fiscal	Implemented	Supporting of energy saving in existing buildings through tax deduction of 55%.	2008	Government - Ministry of Ministry of Finance	610
Budget law 2009	Energy	CO_2	Efficiency improvements of buildings	Fiscal	Implemented	Supporting of energy saving in existing buildings through tax deduction of 55%	2010	Government - Ministry of Ministry of Finance	440
White certificates - decree december 2007 - Commercial	Energy	CO_2	Efficiency improvement in services/ tertiary sector	Economic	Implemented	Supporting of energy saving 2008-2012 (Energy Efficency)	2008	GSE- Manager for Energy Service	3120
Legislative decree 201/07 (trasposition of directive 2005/32/EC) - Residential	Energy	CO_2	Efficiency improvement of appliances	Regulatory	Implemented	First regulation on mandatory energy efficiency standards for energy-using	2008	Government - Ministry of economic development	2600

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
						products			
National Strategic Framework 2007-2013 - ERDF - Residential energy saving*	Energy	CO_2	Efficiency improvement of appliances	Economic	Implemented	Supporting electric energy saving with POR and POIN	2007	Local Authorities - Regions	420
Infrastructural measures	Transport	CO_2	Improved transport infrastructure	Other (Planning)	Implemented	High Capacity and High Speed road. Regional networks for passengers and freight, subway	2008	Government - Ministry of transport	5700
National Strategic Framework 2007-2013 - FESR	Transport	CO_2	Modal shift to public transport or non-motorized transport	Other (Planning)	Implemented	Intermodal infrastructure projects: metropolitan railways	2008	Government - Ministry of transport	1280
Emission standard for new car (Regulation (EC) No 443/2009)	Transport	CO_2	Efficiency improvements of vehicles	Regulatory	Implemented	Fleet update at 120 g CO2/km in 2015 and 95 g CO2/km in 2020	2008	Government - Ministry of economic development	10200
Legislative decree 128/05(trasposition of directive 2003/30/EC)	Transport	CO_2	Low carbon fuels/electric cars	Regulatory	Implemented	Mandatory use biofuels (target 4.5% to 2012)	2008	Government - Ministry of economic development	1490

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Legislative Decree 28/2011 (transposition of directive 2009/28/EC)	Transport	CO_2	Low carbon fuels/electric cars	Regulatory	Implemented	Mandatory use biofuels (target 10% to 2020)	2014	Government - Ministry of economic development	1580
Nitrogen fertilizer	Agriculture	N_2O	Reduction of fertilizer/manure use on cropland	Regulatory	Implemented	Rationalisation in the use of nitrogen fertilizer	2007	Government - Ministry of Agriculture	790
Animal storage	Agriculture	CH_4	Improved animal waste management systems	Regulatory	Implemented	Recovery of biogas from animal storage system	2007	Government - Ministry of Agriculture	400
Separate collection	Waste management/waste	CH_4	Reduced landfilling	Regulatory	Implemented	Compliance with separate collection targets and reduction of biodegradable waste disposed into landfills	2008	Local Authorities - Regions	3700
New measure of promoting and supporting renewable energy sources for electricity (RES-E)	Energy	CO_2	Increase in renewable energy	Economic	Planned	Supporting the expansion of photovoltaic and concentrated solar power plants (CSP) through feed in tariffs until a maximum capacity of 36 GW	2020	Government - Ministry of economic development	0

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
New measure of promoting and supporting renewable energy sources for electricity	Energy	CO_2	Increase in renewable energy	Economic	Planned	Supporting the expansion of electricity production from renewable sources (excluding photovoltaics) and including high efficiency cogeneration	2015	Government - Ministry of economic development	1700
National Action Plan for Renewable Energy 2010	Energy	CO_2	Reduction of losses	Regulatory	Planned	Reducing energy losses through the modernization of the national electricity transmission and distribution grid	2020	Government - Ministry of economic development	0
National Action Plan for Renewable Energy 2010	Energy	CO_2	Increase in renewable energy - Storage system	Regulatory	Planned	Storage systems for the management of production from RES	2015	TERNA - Manager for the electricity transmission grids	25
National Action Plan for Renewable Energy 2010	Energy	CO_2	Other energy supply - Development of the national electricity distribution network	Regulatory	Planned	Development of the national electricity distribution network to allow the increase of the Distributed Generation (DG)	2015	TERNA - Manager for the electricity transmission grids	IE

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Further extend of energy saving targets (White certificates 2020-2030)	Energy	CO_2	Efficiency improvement in the energy and transformation sector	Economic	Planned	Supporting the expansion high efficiency cogeneration plants using fossil fuels through feed in tariffs until a maximum capacity of 9 GW	2020	GSE- Manager forEnergy Service	0
Further extend of energy saving targets (White certificates 2020-2030)	Energy	CO_2	Efficiency improvement in industrial end-use sectors	Economic	Planned	Energy efficiency measures in industry	2020	GSE- Manager forEnergy Service	0
Supporting of energy saving in existing buildings through tax deduction of 55%	Energy	CO_2	Efficiency improvements of buildings	Fiscal	Planned	Restructuring for thermal insulation in residential buildings: 25% of the national building stock. The measure will apply in years after 2020.	2020	Government - Ministry of Finance	0
Legislative decree 28/2011 (Promoting energy saving in the residential sector (public, domestic, tertiary): insulation, replacement windows and boilers, installation of heat pumps and solar	Energy	CO_2	Efficiency improvements of buildings	Economic	Planned	Investments of air conditioning systems (cooling and heating) in the residential sector Restructuring of the service sector's buildings	2012	GSE- Manager forEnergy Service	4060

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
thermal panels									
Further extend of energy saving targets (White certificates 2020-2030)	Energy	CO_2	Efficiency improvement of appliances	Economic	Planned	Energy efficiency measures for electrical uses in the residential and tertiary sectors	2020	GSE- Manager forEnergy Service	0
Measure of promoting and supporting the development of charging infrastructure	Transport	CO_2	Low carbon fuels/electric cars	Other (Planning)	Planned	Development of refueling infrastructure to allow a wider use of electric transport: - incentives to install a target of 3500 fast charging points - promotion for 3 mln residential charging units	2020	Government - Ministry of Transport	0
Modal shift	Transport	CO_2	Modal shift to public transport or non-motorized transport	Other (Planning)	Planned	Modal shift of 3.5% of car/motobike transportation demand to the public transport	2016	Government - Ministry of Transport	453

Name of mitigation action[a]	***Sector(s) affected[b]***	***GHG(s) affected***	***Objective and/or activity affected***	***Type of instrument[c]***	***Status of implementation[d]***	***Brief description[e]***	***Start year of implementation***	***Implementing entity or entities***	***Estimate of mitigation impact at 2020 (not cumulative, in kt CO_2 eq)***
Promoting and supporting renewal of car fleet with a promotion of electrical vehicles	Transport	CO_2	Low carbon fuels/electric cars	Economic	Planned	Incentives to speed up replacement of vehicle fleet with new vehicles, including special incentive for electric cars. The effect of an eventual expansion of mandatory biofuels quota is included in the CO2 target.	2018	Government - Ministry of economic development	1640

4.2 Estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use changes and forestry activities

The relevant information is provided in CTF Table 4. The CTF Table 4(a)II has not be reported as no official submission under the Kyoto Protocol for the year 2015 has been finalized, due to the not proper functionality of the CRF Reporter 5.0.0 and according to the Decision 13/CP.20 of the Conference of the Parties to the UNFCCC.

In Table 4 total emissions excluding LULUCF, as reported in 2015 submission to the UNFCCC, in the framework of the Convention and the Kyoto Protocol, are included. Provisional data for 2014 are also included. The contribution from LULUCF has been not included to maintain consistency with the table 4(a)II.

CTF Table 4 - Reporting on progress

	Total emissions excluding LULUCF	***Contribution from LULUCF[d]***	***Quantity of units from market based mechanisms under the Convention***		***Quantity of units from other market based mechanisms***	
Year[c]	*(kt CO_2 eq)*	*(kt CO_2 eq)*	*(number of units)*	*(kt CO_2 eq)*	*(number of units)*	*(kt CO_2 eq)*
1990	521,058.31	NA	NA	NA	NO	NO
2010	506,489.19	NA	NA	NA	NO	NO
2011	494,292.22	NA	NA	NA	NO	NO
2012	468,913.36	NA	NA	NA	NO	NO
2013	437,267.50	NA	NA	NA	NO	NO
2014	417,254.86	NA	NA	NA	NO	NO

Notes:
Abbreviation: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

Italy has elected cropland management (CM) and grazing land management (GM) as additional activities under Article 3.4 for the second commitment period of the Kyoto Protocol (2013-2020). Italy has decided to account for Article 3.3 and 3.4 LULUCF activities at the end of the commitment period. Following the Decision 2/CMP.7, the forest management (FM) has to be compulsorily accounted as an activity under Article 3.4. The supplementary information required under article 7, paragraph 1 of the Kyoto Protocol have not official submitted in 2015. Nevertheless in the following table 4.15, information on reporting for the KP-LULUCF activities based on the reporting for the base year (1990) and 2013 are given. The forest management reference level (FMRL[16]) for Italy, inscribed in the appendix to the annex to decision 2/CMP.7, is equal to –21.182 Mt CO2 eq. per year assuming instantaneous oxidation of HWP, and –22.166 Mt CO2 eq. applying a first-order decay function for HWP.

[16] Submission of information on forest management reference levels by Italy:
http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_italy_2011.pdf

Communication of 11 May 2011 regarding harvested wood products value by Italy:
http://unfccc.int/files/meetings/ad_hoc_working_groups/kp/application/pdf/awgkp_italy_corr.pdf

Table 4.15 Information on reporting of emissions and removals from the land use, land-use change and forestry sector in relation to activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

Greenhouse gas source and sink categories	*Base year*	*Net emissions/removals* 2013 *kt CO_2 eq*
A. Article 3.3 activities		
A.1. Afforestation/reforestation		-8379.96
Excluded emissions from natural disturbances[5]		NO
Excluded subsequent removals from land subject to natural disturbances[6]		NO
A.2. Deforestation		-1942.46
B. Article 3.4 activities		
B.1. Forest management		
Net emissions/removals		31057.82
Excluded emissions from natural disturbances[5]		NO
Excluded subsequent removals from land subject to natural disturbances[6]		NO
Any debits from newly established forest (CEF-ne)[7],[8]		NO
B.2. Cropland management	1645.70	2813.42
B.3. Grazing land management	-4.77	-604.82
B.4. Revegetation (if elected)	NA	NA
B.5. Wetland drainage and rewetting (if elected)	NA	NA

The use of flexible mechanisms takes place on the one hand by operators in the EU ETS, on the other hand by governments for the achievement of ESD targets (see section 2.2.2.3). Under the EU ETS, since 2013 it is no longer possible to track the use of flexible mechanisms directly via information on EUTL public website because CERs and ERUs are no longer surrendered directly rather they are exchanged into EUAs. These exchanges will become public on installation level after three years, with the first information reflecting the use in 2013 available in 2016. The use of flexible mechanisms can neither be quantified under the ESD at present. As the compliance assessment for the first year 2013 under the ESD will only take place in 2016, any potential use of CER and ERU units for the first year will only take place in 2016.

Thus, for the second Biennial Report, Italy can only report that no units have been used under the ESD so far and no quantitative information can be given for the use of flexible mechanisms in CTF Tables 4 and 4b.

5. Projections[17]

The latest legally binding energy emission scenario is reported in the National Energy Strategy (SEN), approved in March 2013. The SEN scenario was used for projections reported in the sixth NC. The scenario used for this submission has been elaborated by an interministerial committee that considered the effect of the ongoing economic downturn, updated population estimates and evaluated the national implications of the EU Commission Impact Assessment "A policy framework for climate and energy in the period from 2020 up to 2030" (SWD(2014)15 final). In that Impact Assessment, in the case of a medium range decarbonization objective of 40% for EU with reference to 1990 emissions, the Italian objective should be in the range of 36 – 40%, with reference to 2005 emissions.

The interministerial working group has been set up to assess the national implication of those objectives. The working group has been appointed by the Interministerial Committee on European Union Affairs (Italian initials CIAE) office of the European Affairs Department of the Head of Government Offices. Representatives from the Ministries of Economic Development, Environment, Finance, Transport and Agriculture attended the working group. The scenario work has been developed by ENEA and RSE (Electric System Research) using the following tools:

- a optimization model of Times family set up by ENEA for energy and emissions projections
- a model from RSE for the electric system and the electric market called SMTSIM developed by RSE to assess the impact of those scenarios on the electricity distribution framework
- an evaluation of the macroeconomic impact, performed by ENEA with dedicated tools.

With the above mentioned tools a reference scenario and a scenario aiming to the reduction of CO2 emissions of 36% with reference to 2005 have been elaborated. Those scenarios did not include mandatory quota for renewable after 2020 and in the first phase of the work did not consider total GHG emissions and the distinction between ETS and non–ETS sectors. The reference scenario was developed with assumption similar to those used by Primes 2013 for Italy. The projections of greenhouse gas emissions from the combustion of energy sources have been produced with an optimization model.

The model is a partial equilibrium model and represents the domestic energy system. The outcome indicates the mix of technologies and primary emission sources necessary to reach the reduction objective with same energy services of the reference scenario. The model finds the lower possible cost to reach the objective. The scenario elaborated by ENEA and RSE have been approved by the CIAE working group in April 2014.

To estimate the overall GHGs emission reduction and the division between ETS and non-ETS sectors those two scenarios have been, later, implemented in the ISPRA's family of models upon request from Ministry of environment.

The methodology and model used by ISPRA to elaborate the projections are essentially the same used for VI NC and BR1. The energy system model implemented is based on the same Times software of the model used by ENEA. The model tool used for projections does not consider the effect of average temperature changes. The emissions from non energy sources and other energy related GHGs different form CO_2 have been evaluated by the family of models used by ISPRA to prepare the VI NCs to UNFCCC. The outcome of sectorial, including sub sectorial level where available, energy consumption of WM and WAM scenarios approved by CIAE working group have been reproduced in the ISPRA model.

The emission results reported in the following paragraphs are the outcomes of ISPRA models.

Description of scenarios

The scenarios was elaborated in the 2014 and projections start from actual data of 2013. Due to the lengthening of the economic crisis the actual emissions of 2013 are much lower than foreseen in the VI NC submission and BR1. The new starting point lowers the emissions for the entire period. Table 5 submitted with CTF of BR reports the summary of key variables and assumptions used in the projections analysis.

[17] Author: Antonio Caputo

CTF Table 5

Summary of key variables and assumptions used in the projections analysis[a]

Key underlying assumptions		*Historical*[b]							Projected		
Assumption	*Unit*	*1990*	*1995*	2000	2005	2010	2011	2015[c]	2020	2025	2030
Gross Domestic Product	*constant 2010 € (billion)*		1,409.62	1,556.22	1,630.72	1,605.69	1,615.12	1,584.93	1,669.90	1,800.73	1,936.08
GDP growth rate	%			2.00	0.94	-0.31	0.59	-0.47	1.05	1.52	1.46
Population	million	56.72	56.84	56.94	58.06	59.71	59.95	61.64	62.50	63.08	63.68
Population growth rate	%		0.04	0.03	0.39	0.56	0.41	1.41	0.28	0.18	0.19
Total gross inland consumption - 'with measures' scenario	PJ	6,422.90	6,768.22	7,289.32	7,843.79	7,311.99	7,197.73	6,113.02	6,167.71	6,013.68	5,852.83
Total gross inland consumption - 'with additional measures' scenario	PJ	6,422.90	6,768.22	7,289.32	7,843.79	7,311.99	7,197.73	6,076.39	6,033.12	5,803.72	5,612.11
International coal price	2010 € / boe					16.00		22.00	22.60	23.70	24.00
International oil price	2010 € / boe					60.00		86.00	88.50	89.20	93.10
International gas price	2010 € / boe					37.90		53.80	61.50	58.90	64.50
Carbon price	2010 € / t CO2				0.00	10.70	12.89	14.10	17.40	24.10	30.80
Gross value-added total industry	2010 € (billion)		351.48	368.91	382.49	351.79	350.65	347.41	365.13	387.57	411.39
Share of the industrial sector in GDP	%		24.93	23.71	23.46	21.91	21.71	21.92	21.87	21.52	21.25
Gross value-added services	2010 € (billion)		904.91	1,002.66	1,054.68	1,064.22	1,073.43	1,056.04	1,112.07	1,203.99	1,309.77

Key underlying assumptions		*Historical*[b]							Projected		
Assumption	*Unit*	*1990*	*1995*	2000	2005	2010	2011	2015[c]	2020	2025	2030
Share of the services sector in GDP	%		64.20	64.43	64.68	66.28	66.46	66.63	66.59	66.86	67.65
Passenger person kilometres (all transport modes in absolute figures)	billion pass-km, excluding civil aviation		823.69	919.85	900.54	916.58	885.72	831.30	862.23	895.96	926.39
Freight ton-km (all transport modes in absolute figures)	billion tonn-km		290.00	297.10	317.80	279.90	255.60	230.06	249.86	269.24	302.03
Livestock:-Dairy cattle	1000 heads					1,746.14	1,754.98	1,729.69	1,653.39	1,641.77	1,630.96
Livestock:-Non-dairy cattle	1000 heads					4,086.32	4,142.54	4,194.32	4,089.73	4,056.92	3,970.24
Livestock:-Sheep	1000 heads					7,900.02	7,942.64	7,752.43	7,860.62	7,934.10	7,984.61
Livestock:-Pig	1000 heads					9,321.12	9,350.78	9,463.09	9,526.06	9,595.74	9,692.83
Livestock:-Poultry	1000 heads					198,346.72	200,718.16	199,646.44	201,310.18	204,378.06	205,589.80
Nitrogen input from application of synthetic fertilizers	kt nitrogen					496.64	515.97	558.45	610.21	610.21	610.21
Nitrogen input from application of manure	kt nitrogen					535.66	537.84	546.40	540.68	544.70	545.62
Nitrogen fixed by N-fixing crops	kt nitrogen					170.14	167.39	153.11	143.02	132.68	123.19
Nitrogen in crop residues returned to soils	kt nitrogen					189.60	189.38	114.08	99.07	91.56	88.92
Area of cultivated organic soils	Ha (hectares)					24,690.00	24,690.00	24,690.00	24,690.00	24,690.00	24,690.00
Municipal solid waste (MSW) generation	tonne MSW					32,479,112.00	31,386,220.10	30,562,732.74	30,989,238.28	31,278,924.05	31,478,056.96

Key underlying assumptions		*Historical*[b]							Projected		
Assumption	*Unit*	*1990*	*1995*	2000	2005	2010	2011	2015[c]	2020	2025	2030
Municipal solid waste (MSW) going to landfills	tonne MSW					18,523,519.00	16,088,435.00	12,312,278.22	8,648,847.95	7,946,406.43	7,208,995.13
Share of CH4 recovery in total CH4 generation from landfills	%					0.36	0.38	0.46	0.52	0.56	0.58

[a] Parties should include key underlying assumptions as appropriate.

[b] Parties should include historical data used to develop the greenhouse gas projections reported.

[c] – 2015 data are projections notwithstanding the format of on line table format

The main assumptions in the scenario are:

- For the GDP is assumed an economic growth from 2015 with an annual average rate of +1.05% up to 2020. For the period 2020-2025 an average rate of +1.52% and for period 2025-2035 +1.46% as indicated by Ministry of Economic Development.
- Volumes and energy mix: reduce energy consumption and evolution of the mix towards renewable sources.
- Population: the population grew significantly from 2005 to 2010, due to immigration. It is estimated, see table 5.1, to further increase up to 2015 considering the input of immigrants, and a slower growth rate up to 2030. The last Census by National Statistical Institute, published at the end of 2012 has pointed out that population has gone down from previous estimates to about 59,952 in year 2011. In the last row of table 5.1 it is reported the population projection proposed by EU Commission in the "Recommended parameters for reporting on GHG projections in 2015 (*Final after consultation, 17 June 2014*)". This population has been used to run the "Sensitivity Analysis" scenario.

Table 5.1 - Population

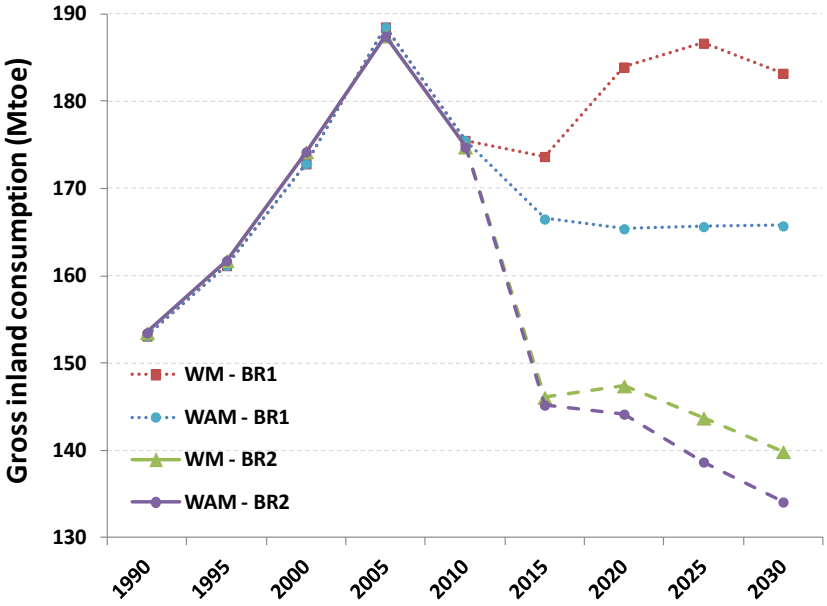
	2005	2010	2015	2020	2025	2030
2007 IV NC	58,462	58,531	58,471	58,123		
2009 V NC	58,462	60,190	61,130	61,160		
2013 VI NC (BR1)	58,462	60,340	61,138	61,634	61,986	62,129
2015 BR2 / Actual developments	58,065	59,707	61,640	62,500	63,080	63,680
2015 BR2 / Sensitivity analysis	-	-	60,945	61,961	63,011	64,115

Consumption of primary energy

The total primary energy supply (TPES), estimated according to Eurostat methodology, will be about 137.5 in 2030 with an average yearly decrease rate of -0.3%. The average growth rate in 2000-2008 was 0.6%, a decrease of 3.7% was observed between 2008 and 2014. The weight of natural gas will exceed the oil one around year 2015.

There are relevant changes in the estimated total energy consumption between the previous energy scenario from SEN (reported hereinafter as "WAM – BR1") and the updated ones, identified as "WM - BR2" , and "WAM – BR2", due to the ongoing economic crisis and the adoption/planning of new measures (Figure 5.1).

Figure 5.1 - Projection of gross inland consumption, Mtoe



Emissions of greenhouse gases

In Tables 6(a) and 6(c) submitted with CTF of BR report the updated greenhouse gas projections under a 'with measures' and 'with additional measures' scenarios, respectively. In the following paragraphs are described the underlying reasons of the projected trend for energy and no energy sectors.

CTF Table 6(a)

Information on updated greenhouse gas projections under a 'with measures' scenario[a]

	GHG emissions and removals[b] *(kt CO_2 eq)*							GHG emission projections (kt CO_2 eq)	
	Base year (1990)	1990	1995	2000	2005	2010	2013	2020	2030
Sector[d,e]									
Energy	231,872.02	231,872.02	234,579.44	246,246.55	266,848.84	238,328.67	203,974.53	198,646.10	198,519.76
Transport	103,241.48	103,241.48	114,240.82	123,655.32	128,700.08	119,560.29	103,434.15	106,436.36	115,608.00
Industry/industrial processes	126,488.02	126,488.02	123,826.55	122,092.78	125,368.13	96,244.22	80,572.03	89,699.11	92,463.29
Agriculture	36,197.40	36,197.40	36,210.27	35,624.79	33,121.20	30,959.49	30,789.74	31,002.95	31,201.94
Forestry/LULUCF	-5,439.56	-5,439.56	-23,564.82	-18,301.92	-30,669.00	-34,205.89	-34,081.57	-25,453.32	-40,349.17
Waste management/waste	23,259.39	23,259.39	23,814.43	26,122.93	24,219.53	21,396.52	18,497.07	14,663.80	11,704.02
Other (specify)									
Gas									
CO_2 emissions including net CO_2 from LULUCF	428,785.26	428,785.26	423,109.96	445,744.18	459,864.49	394,255.00	326,105.06	340,722.93	339,929.01
CO_2 emissions excluding net CO_2 from LULUCF	436,203.83	436,203.83	447,200.96	465,172.78	491,006.31	428,935.59	360,422.65	366,764.35	380,670.87
CH_4 emissions including CH_4 from LULUCF	55,639.66	55,639.66	54,406.81	55,980.63	50,716.43	46,992.16	44,272.79	40,815.23	36,898.92
CH_4 emissions excluding CH_4 from LULUCF	53,966.26	53,966.26	54,022.53	55,034.07	50,337.24	46,634.30	44,074.19	40,311.13	36,542.47
N_2O emissions including N_2O from LULUCF	27,435.37	27,435.37	28,662.36	29,642.84	28,489.12	19,379.78	19,142.25	19,893.63	20,184.19

N_2O emissions excluding N_2O from LULUCF	27,129.76	27,129.76	28,520.46	29,462.72	28,395.49	19,262.92	19,104.83	19,809.62	20,147.94
HFCs	444.00	444.00	813.44	2,098.16	5,998.32	9,725.27	11,518.21	11,605.51	10,176.86
PFCs	2,906.86	2,906.86	1,450.33	1,388.29	1,939.95	1,520.39	1,705.41	1,609.34	1,609.34
SF_6	407.61	407.61	663.78	560.73	547.10	390.55	416.51	322.66	323.81
Other (specify)	0.00	0.00	0.00	25.63	33.38	20.17	25.70	25.70	25.70
NF3	0.00	0.00	0.00	25.63	33.38	20.17	25.70	25.70	25.70
Total with LULUCF[f]	515,618.76	515,618.76	509,106.68	535,440.46	547,588.79	472,283.32	403,185.93	414,995.00	409,147.83
Total without LULUCF	521,058.32	521,058.32	532,671.50	553,742.38	578,257.79	506,489.19	437,267.50	440,448.31	449,496.99

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

[a] In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and/or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

[b] Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

[c] 20XX is the reporting due-date year (i.e. 2014 for the first biennial report).

[d] In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

[e] To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

[f] Parties may choose to report total emissions with or without LULUCF, as appropriate.

CTF Table 6(c)

Information on updated greenhouse gas projections under a 'with additional measures' scenario[a]

	GHG emissions and removals[b]							GHG emission projections	
	(kt CO_2 eq)							(kt CO_2 eq)	
	Base year (1990)	1990	1995	2000	2005	2010	2013	2020	2030
Sector[d,e]									
Energy	231,872.02	231,872.02	234,579.44	246,246.55	266,848.84	238,328.67	203,974.53	192,411.23	175,429.54
Transport	103,241.48	103,241.48	114,240.82	123,655.32	128,700.08	119,560.29	103,434.15	101,295.96	104,185.11
Industry/industrial processes	126,488.02	126,488.02	123,826.55	122,092.78	125,368.13	96,244.22	80,572.03	84,973.61	81,962.19
Agriculture	36,197.40	36,197.40	36,210.27	35,624.79	33,121.20	30,959.49	30,789.74	31,002.95	31,201.94
Forestry/LULUCF	-5,439.56	-5,439.56	-23,564.82	-18,301.92	-30,669.00	-34,205.89	-34,081.57	-25,453.32	-40,349.17
Waste management/waste	23,259.39	23,259.39	23,814.43	26,122.93	24,219.53	21,396.52	18,497.07	14,663.80	11,704.02
Other (specify)									
Gas									
CO_2 emissions including net CO_2 from LULUCF	428,785.26	428,785.26	423,109.96	445,744.18	459,864.49	394,255.00	326,105.06	325,222.93	296,429.01
CO_2 emissions excluding net CO_2 from LULUCF	436,203.83	436,203.83	447,200.96	465,172.78	491,006.31	428,935.59	360,422.65	351,264.35	337,170.87
CH_4 emissions including CH_4 from LULUCF	55,639.66	55,639.66	54,406.81	55,980.63	50,716.43	46,992.16	44,272.79	40,591.63	36,318.14
CH_4 emissions excluding CH_4 from LULUCF	53,966.26	53,966.26	54,022.53	55,034.07	50,337.24	46,634.30	44,074.19	40,087.53	35,961.69
N_2O emissions including N_2O from LULUCF	27,435.37	27,435.37	28,662.36	29,642.84	28,489.12	19,379.78	19,142.25	19,516.46	19,250.77

N_2O emissions excluding N_2O from LULUCF	27,129.76	27,129.76	28,520.46	29,462.72	28,395.49	19,262.92	19,104.83	19,432.45	19,214.51
HFCs	444.00	444.00	813.44	2,098.16	5,998.32	9,725.27	11,518.21	11,605.51	10,176.86
PFCs	2,906.86	2,906.86	1,450.33	1,388.29	1,939.95	1,520.39	1,705.41	1,609.34	1,609.34
SF_6	407.61	407.61	663.78	560.73	547.10	390.55	416.51	322.66	323.81
Other (specify)	0.00	0.00	0.00	25.63	33.38	20.17	25.70	25.70	25.70
NF3	0.00	0.00	0.00	25.63	33.38	20.17	25.70	25.70	25.70
Total with LULUCF[f]	515,618.76	515,618.76	509,106.68	535,440.46	547,588.79	472,283.32	403,185.93	398,894.23	364,133.63
Total without LULUCF	521,058.32	521,058.32	532,671.50	553,742.38	578,257.79	506,489.19	437,267.50	424,347.54	404,482.78

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

[a] In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and/or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

[b] Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

[c] 20XX is the reporting due-date year (i.e. 2014 for the first biennial report).

[d] In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

[e] To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

[f] Parties may choose to report total emissions with or without LULUCF, as appropriate.

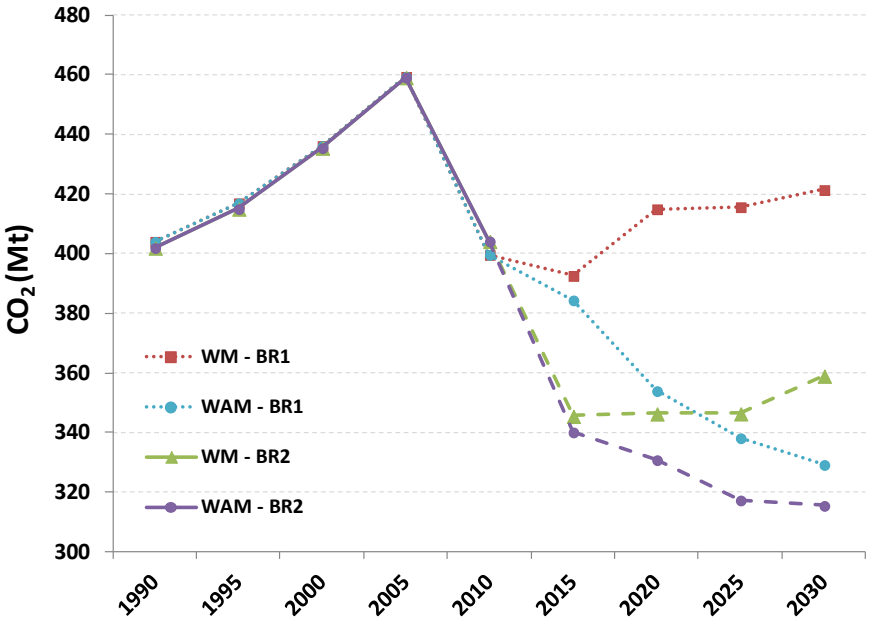
Energy CO2 emissions

Based on above mentioned scenarios the model computes directly the CO_2 emissions from energy use, while other GHGs and non energy GHG emissions are estimated on the basis of estimated evolution of activity data and average emission factors. Emissions up to 2013 are final data, 2014 is preliminary esteems, while figures between 2015 and 2030 are projections.

Energy CO_2 emissions show a remarkable reduction in 2010 that go on and in 2015, and then a further slight decrease is foreseen (Figure 5.2). The reduction in emissions is due to many factors, some of them structural and other only temporary. The most important are:

- higher than expected share of renewable in TPES, due to anticipated development of photovoltaic production and diffusion of biomass for heating;
- increased efficiency of electricity generation, with the entry in service of many combined cycle plants;
- reduced fuel consumption in transport due to high fuel prices and low activity levels;
- sharp reduction of energy consumption in industrial sector due to crisis and structural changes in production;
- increase in efficiency of final end use devices, also due to high electricity prices.

Figure 5.2 - Actual and projected CO_2 emissions from energy sector, Mt CO_2



With reference to sectoral data the analysis for the period 2013-2030 shows:

- the increase of CO_2 emissions in the **energy industry** sector between 2013 and 2030 is +10.9% for WM scenario and 2.7% for WAM scenario. As for historical years 2000–2008 the increase (+2.8%) was followed by sharp reduction of 30% from 2008 to 2013, due to a reduction of electricity generation and transport fuels production. In this sector the emissions growth is directly linked to the increase in electricity generation by fossil fuels combustion, that outpaced the efficiency improvements up to 2008. The relevant expansion of electricity generation by renewable sources from 2009 to 2013 contribute significantly to the emissions reduction. As for projection years only a limited increase in thermoelectric efficiency is expected, electricity import should be reduced and renewable production is limited in WEM scenario. In WAM scenario the planned expansion of renewable production, the limited increase of electricity consumption, and reduction of refineries activity due to the efficiency increase of vehicles will keep the emissions quite stable;

- in the **transport** sector the CO_2 emissions increase of 11.5% is foreseen between 2013 and 2030 for WM scenario. Between 2000 and 2010 there was a decrease in emissions of -2.5%, followed by a sharp reduction of 13.5% between 2010 and 2013. In WAM scenario the emissions from 2013 to 2030 show a slight increase (0.4%). Such result is due to the reduced road demand growth (moved to other modes) and the effect of additional national efforts to increase efficiency of cars beyond objectives of EU regulation on CO_2 emissions by cars and further expansion of natural gas use.
- the CO_2 emissions in **civil sector** increased in historical years 2000–2010 by +15.4% followed by a reduction of 10.6% between 2010 and 2013. It is projected a sizeable reduction of 18.6% in WM scenario between 2013 and 2030. The past emissions increase was mainly due to the expansion of the services sector and residential building stock (second and third houses). Moreover wider house size and higher internal temperature play important role. Planned policies have a significant effect in curbing emissions in projection years. The projectons between 2013 and 2030 in WAM scenario show CO_2 emissions reduction by 34.7% due to very high efficiencies planned for building stocks and expansion of renewable use (biomass, solar thermal and geothermal).
- **manufacturing industry** shows a deep decrease of CO_2 emissions (-26.5%) between 2000 and 2010, followed by a further reduction (-19.3%) between 2010 and 2013. The past trends includes the effect of economic crisis. The emissions should increase, +20.2%, between 2013 and 2030 according to WM scenario. The main driving force for such increase is the recovery of activity data. In the WAM scenario a slight decrease is projected, -0.7% between 2010 and 2030 mainly due to increase in efficiency and cogeneration use.

The emissions computed by the model do not match exactly with the inventory figures for the base modeling year, currently 2010, because of the unavoidable simplifications in the modeling of the energy system. The discrepancies are reduced to about 1% or 2% in total and up to 4% in the single sectors. Those estimates are the best available for emission projections.

Other GHG emissions

In figure 5.3 the emissions of GHG from no energy sectors are reported. There is a sharp reduction of emissions between 2005 and 2013. The reduction is due to the effect of such measures, in order of importance:

- implementation on N_2O emission control in the adipic acid and nitric acid production;
- reduction of emissions from landfills due to increased recovery of methane;
- reduction of other process emissions due to reduction of related industrial production;
- increase recovery of animal wastes for biogas production and reduced/modified fertilizer use.

According to the scenario the emissions are projected to drop 6.1% from 2013 up to 2030. The overall trend represents the combination of different factors of underling sectors and gasses, in particular:

- a stable trend in emissions for industrial process emissions, solvent, and agriculture;
- a sizeable reduction of greenhouse gasses emissions in the waste sector, fugitive emissions and GHGs other than CO_2 in energy combustion, due to technology improvements.

Emission projections for **agriculture sector** were estimated with the same model used for the preparation of the national emission inventory submitted in 2015[18], moreover the same model was used for VI NC and BR1 submissions.

[18] Currently the NIR (National Inventory Report) 2015 is not available therefore the reference document is the NIR 2014, Chapter 6 - ISPRA, 2014. The report is available at the link http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/8108.php

Activity data used for emission projections is consistent with information utilized for GAINS/RAINS Italy projections (communicated to the UNECE/Gothenburg Protocol). To estimate the number of the different animal categories, a model has been developed by ENEA[19] and information is updated every year[20]. For the use of fertilizers, ENEA has based assumptions on the European Fertilizer Manufacturers Association (EFMA) forecast. For the surface and agricultural production, a trend has been estimated on the basis of the 1990-2013 time series.

Emission projections to 2020 and 2030 for most **industrial processes** have been calculated using the growth rates shown in the Table 5.2 to estimate the expected activity production levels. They are consistent with those used for the energy sector in the WAM scenario. Information directly communicated from industry has been used for aluminium production and for F-gases production and consumption. For F-gases consumption, as well as for SF_6 used in magnesium and aluminium foundries, future trends have been estimated taking into account the implementation of the new European Regulation n. 517/2014 on fluorinated gases which has replaced the European Regulation n. 842/2006. For solvent and other product use, future trends have been estimated by means of an extrapolation of most recent data and taking into account the implementation of the European Directive 1999/13/EC regarding the reduction of VOC emissions due to the use of solvent (Solvent Directive) and the European Directive 2004/42/EC to reduce VOC emissions due to the organic solvent use in decorative paint (Deco Paint Directive).

Table 5.2 - Growth rates for the industrial processes 2013-2030

	2013	2014 2015	2016 2020	2021 2025	2026 2030
A. Mineral Products					
1. Cement Production	-11.99%	2.23%	2.57%	1.32%	0.86%
2. Lime Production	-8.92%	2.23%	2.57%	1.32%	0.86%
3. Limestone and Dolomite Use	-8.09%	1.15%	1.15%	0.86%	0.86%
4. Soda Ash Production and Use	-5.26%	0.18%	0.18%	0.18%	0.18%
5. Glass Production (decarbonising)	-2.22%	1.15%	1.15%	0.86%	0.86%
B. Chemical Industry					
1. Ammonia Production	-3.68%	0.18%	0.18%	0.18%	0.18%
2. Nitric Acid Production	0.40%	0.18%	0.18%	0.18%	0.18%
3. Adipic Acid Production	1.92%	0.18%	0.18%	0.18%	0.18%
5. Other					
Carbon Black	2.11%	0.18%	0.18%	0.18%	0.18%
Ethylene	-4.24%	0.18%	0.18%	0.18%	0.18%

[19] ENEA, 2006. Valutazione del potenziale di riduzione delle emissioni di ammoniaca. Rapporto Finale. ENEA UTS- PROT, Unità Inquinamento Atmosferico. Settembre 2006. Personal communication – Activity data: number of animals and fertilizers consumption (13/02/2015)

[20] D'Elia et al., 2008. Nitrogen related research and policy activities in Italy: The Ammonia experience in Italy. Presentation Task-force on Reactive Nitrogen, Wageningen, 21 – 23 May 2008. Updated scenarios are available at the link http://gains-it.bologna.enea.it/gains/IT/index.login

Styrene	-4.62%	0.18%	0.18%	0.18%	0.18%
Titanium dioxide	0.00%	0.18%	0.18%	0.18%	0.18%
Propylene	-14.69%	0.18%	0.18%	0.18%	0.18%
C. Metal Production					
1. Iron and Steel Production					
Steel	-11.66%	0.18%	0.18%	0.16%	0.32%
Pig Iron	-26.43%	0.18%	0.18%	0.16%	0.32%
Sinter	-22.36%	0.18%	0.18%	0.16%	0.32%
2. Ferroalloys Production	-50.49%	0.28%	0.28%	0.29%	0.29%
3. Aluminium Production	-100.00%				

Source: ISPRA

The "with measures" scenario includes the reduction of N_2O emissions from the nitric acid production due to the installation of SCR (selective catalytic reduction) systems for the treatment of process gases with the adoption of the most advanced technologies to be applied to the main existing nitric acid production plants by 2015.

For the other categories emission factors have been considered constant for the whole time series assuming that no further additional measures will be implemented.

As for emissions from **waste sector** the projections have been prepared in conformity with most recent inventories and evaluations on the implementation of the mitigation measures. The main driving forces for projections are activity data linked to the whole waste sector and the reduction of biodegradable waste in landfills. In particular, the municipal waste cycle has been studied, analyzing its evolution through the years on the basis of actions that have already been put into effect.

In the reference scenario the total amount of waste has been estimated on the basis of official population forecasts provided by the National Institute of Statistics (ISTAT). Starting from the production, waste fluxes have been analyzed on the basis of the following waste management options: recycling, landfilling, incineration, mechanical biological treatments and composting.

Focusing on recycling and not only, national circumstances are very different from northern to southern regions. The southern regions are late with the complying of national targets for separate collection, whereas some northern cities have already reached and exceeded the fixed target. Despite in 2013 the percentage of waste separation is 42.3%, efforts of the government in the improvement of waste management lead to an optimistic outlook of the fulfilment of the deadlines set up by the current legislation.

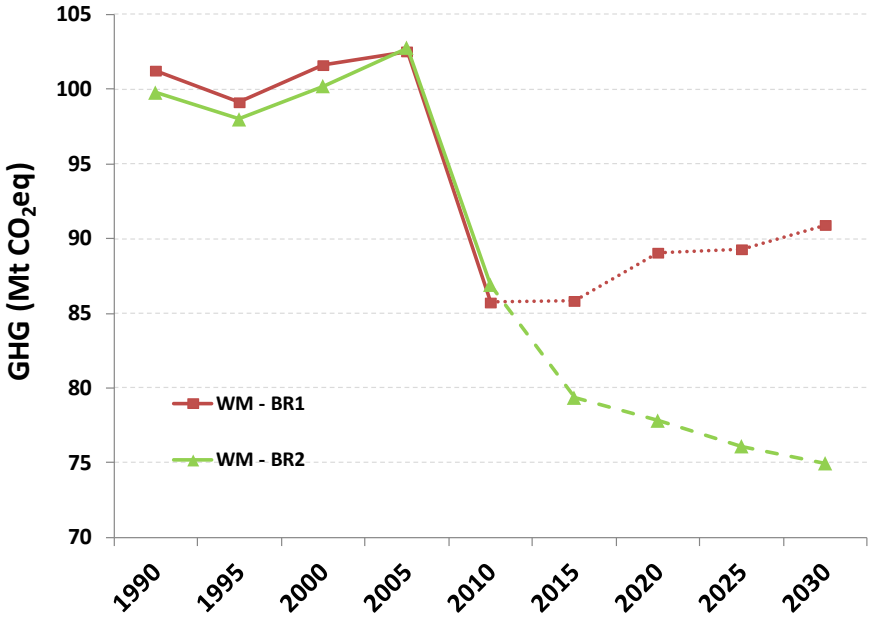
Regarding the landfills, the total amount of waste disposed into landfills will increase in line with the actual trend, whereas the composition of waste has varied as a consequence of the compliance with the separate collection. Notwithstanding, the amount of biodegradable waste disposed of into landfills is not totally complying with the target of landfill directive (D.lgs. 36/2003). The share of landfill gas collected has been estimated equal to 67% in 2013 and will reach 70% in 2030. Furthermore, from 2010, each municipal waste incinerator is equipped with an energy recovery system: thus, only industrial waste could still be treated without energy recovery. The total amount of waste incinerated, 23% in 2013 with respect to waste production, will increase in line with the actual trend to reach 37% in 2030. Finally, the amount of waste treated in MBT plants will increase up to 2020 (45%) but will decrease in the following years because of the growth in separate collection and recycling. As a consequence of this waste cycle projection, also biological waste treated in composting plants will increase following the trend up to 2020 (20%). According to these projections a reduction of 31.5% by 2020 and 45.3% by 2030 with regard to

2010 can be expected in overall greenhouse gas emissions from the waste sector, expressed in terms of CO_2 equivalent, essentially as a result of a reduction in methane emissions from landfills.

There are no differences between WM and WAM scenario emissions in Industrial processes, Solvent, Agriculture and Waste sector because no additional measures are actually planned in those sectors. The stability of industrial processes emissions is connected to increasing industrial production in mineral industry and decreasing use of substitutes of ozone depleting substances, the other emissions being stable. The difference concerning BR1 and BR2 trend for historical years is mainly due to the different methodology adopted passing from 1996 IPPC guidelines GWPs to 2006 IPPC guidelines GWPs.

The trend inversion between previous and current BR is due to lower projected growth rate of emissions by industrial processes, mainly following the implementation of the European Regulation n. 517/2014 on fluorinated gases, and faster emissions reduction by waste sector.

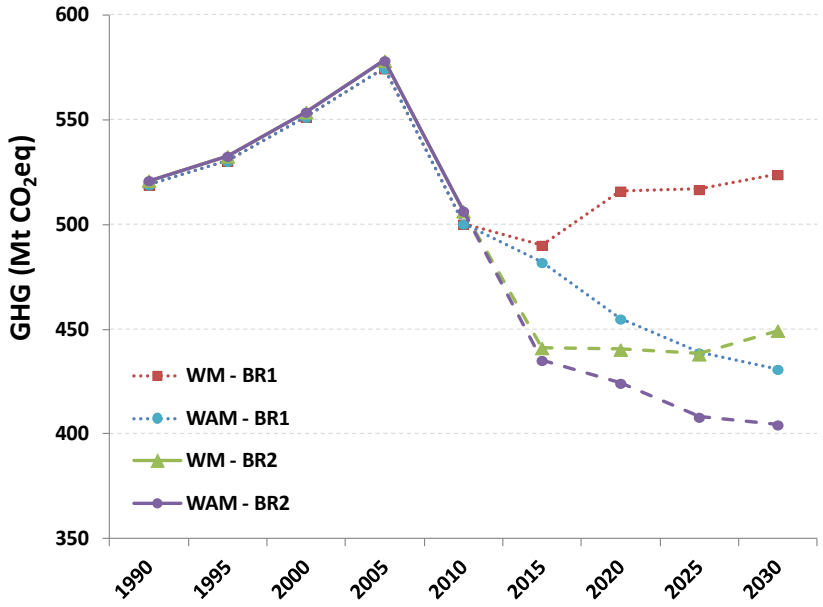
Figure 5.3 - Actual and projected net GHG emissions, Mt CO2 eq



Total emissions of greenhouse gases

The resulting trend in total GHG emissions is reported in the Figure 5.4. Results from current scenario are compared with the results of previous national scenario submitted with VI NC and BR1. The trend of current projections is consistently lower from the previous one for the reasons explained in the previous paragraph.

Figure 5.4 - Actual and projected GHG emissions, Mt CO_2 eq



LULUCF

LULUCF sector is excluded from ESD and other EU agreements for the year 2013-2020. In 2013, the European Parliament and the Council have adopted the Decision n. 529/2013/EU on accounting rules on greenhouse gas emissions and removals resulting from activities relating to land use, land-use change and forestry (LULUCF) and on information concerning actions relating to those activities, with the aim of a future inclusion of those activities in the Union's emission reduction commitment. This Decision provides for accounting rules applicable on a mandatory basis to the activities of afforestation, reforestation, deforestation and forest management, as well as to the activities of grazing land management and cropland management. In this framework, Italy has submitted the information[21] on LULUCF actions under Article 10(2) of Decision 529/2013/EU; Italy has also submitted the preliminary and non-binding annual estimates[22] of emissions and removals from cropland management and grazing land management.

Furthermore Italy has elected cropland management (CM) and grazing land management (GM) as additional activities under Article 3.4 of the Kyoto Protocol for the second commitment period (2013-2020). Following the Decision 2/CMP.7, the forest management (FM) has to be compulsorily accounted as an activity under Article 3.4.

In the following a description of the LULUCF sector in Italy is given.

Definition of forest and national circumstances

The forest definition adopted by Italy is in line with the definitions of the Food and Agriculture Organization of the United Nations for its Global Forest Resource assessment (FAO FRA 2000). This definition is consistent with definition given in Decision 16/CMP.1. Forest is a land with following threshold values for tree crown cover, land area and tree height:

a. a minimum area of land of 0.5 hectares;

b. tree crown cover of 10 per cent;

c. minimum tree height of 5 meters.

Forest roads, cleared tracts, firebreaks and other open areas within the forest as well as protected forest areas are included in forest.

Total forest area, in 2013, was equal to 9,196 kha, about the 30% of national territory. It has to be noted a steady increase since the 70's: forest expansion rate was about 78 kha y^{-1} in 2000 and it was 53.8 kha y^{-1} in 2013.

Concerning the ownership, the following table shows the amount of public and private forest land.

[21] Available at http://groupware.sinanet.isprambiente.it/reportnet/library/lulucf-reporting-under-decision-529-2013-eu
[22] Available at http://groupware.sinanet.isprambiente.it/reportnet/library/ae2sunfcccsandsghgsdata/dec-529-2013-lulucf

Table 5.3 - Amount of public and private forest land

	Forest area (1000 hectares)			
FRA 2015 Categories[23]	**1990**	**2000**	**2005**	**2010**
Public ownership	2,549	2,811	2,942	3,032
Private ownership	5,041	5,558	5,817	5,996
...of which owned by individuals	*4,442*	*4,898*	*5,126*	*5,284*
...of which owned by private business entities and institutions	*599*	*660*	*691*	*712*
...of which owned by local communities	*0*	*0*	*0*	*0*
...of which owned by indigenous / tribal communities	*0*	*0*	*0*	*0*
Other types of ownership	0	0	0	0
TOTAL	7,590	8,369	8,759	9,028

Activities under Article 3.3 and 3.4 of the Kyoto Protocol

For the second Commitment Period (2013-2020), Annex I Party are required to continue the reporting of supplementary information on emissions and removals resulting from Article 3.3 and 3.4 activities. These include activities for which reporting is mandatory under Article 3.3 (Afforestation, Reforestation and Deforestation) and Forest Management under Article 3.4. The same parameters of the forest definition, selected by the Party, are required to be applied in the second commitment period. Italy has elected cropland management (CM) and grazing land management (GM) as additional activities under Article 3.4 of the Kyoto Protocol for the second commitment period (2013-2020).

Italy has submitted information on Forest Management Reference Level (FMRL), as required by the Decision 2/CMP.6. The FMRL is the averages of the projected forest management (FM) data series for the period 2013-2020, taking account of policies implemented before mid-2009, with emissions/removals from harvested wood product (HWP) using the first order decay functions (A), and assuming instant oxidation (B). The FMRL has been subjected to a technical assessment[24] (TA) carried out by UNFCCC expert, and the FMRL value, inscribed in the Appendix to Decision 2/CMP.7, is equal to –21.182 Mt CO_2 eq. per year assuming instantaneous oxidation of HWP, and –22.166 Mt CO_2 eq. applying a first-order decay function for HWP. According to Decision 2/CMP.7, methodological consistency between the FMRL and reporting for forest management during the second commitment period has to be ensured, applying technical correction if necessary. The changes related to the methodological elements listed in the table 5.4 are triggering a methodological inconsistency between the FMRL and FM reporting, to be addressed through a technical correction (TC), consistently with the requirements of decision 2/CMP.7, annex, paragraph 14 and guidance of the 2013 KP Supplement (IPCC, 2014, par. 2.7.6.3).

[23] Based on the Italy's communication under the FAO - Forest Resource Assesment - FRA2015 reporting http://www.fao.org/forestry/fra/83059/en/

[24] Available at http://unfccc.int/resource/docs/2011/tar/ita01.pdf

Table 5.4 - Methodological elements triggering a methodological inconsistency between the FMRL and FM reporting

Criteria	Description	Timing
The method used for GHG reporting (for Forest land remaining forest land or Forest Management) changed after the adoption of FMRL	The FMRL has been calculated with the EU models G4M (IIASA) and EFISCEN (EFI). Estimates of emissions and removals under FM activities have been carried out with the growth model For-est, used to estimate the net change of carbon in the five reporting pools.	2016-2017
Forest characteristics and related management[25]	Availability of new data resulting from the ongoing NFI and consequent recalculations of the reported data under FM and *Forest Land Remaining Forest Land used* to establish the reference level	2016-2017
Harvested wood products	The estimates have been carried out on the basis of the 2013 KP Supplement (IPCC 2014) methodology	2016-2017

Article 3.3

Changes in forest area were detected on the basis of national forest inventories data.

The following afforestation/reforestation activities that occurred or could have occurred on or after 1990 are included in the reporting of these activities:

- Planted or seeded croplands;
- Planted or seeded grasslands;
- Abandoned arable lands which are naturally forested, through planting, seeding and/or the human-induced promotion of natural seed sources.

In Italy all land use categories (cropland, grazing land, forest) are to be considered managed. Afforested/reforested areas are to be considered legally bound by national legislation.

Extensive forest disturbances have been rare in Italy, except for wildfires. Land-use changes after damage do not occur; concerning wildfires, national legislation (Law n. 353 of 2000, art.10.1) doesn't allow any land use change after a fire event for 15 years. Harvesting is regulated through regional rules, which establish procedures to follow in case of harvesting. Although different rules exist at regional level, a common denominator is the requirement of an explicit written communication with the localization and the extent of area to be harvested, existing forest typologies and forestry treatment. Concerning deforestation activities, in Italy land use changes from forest to other land use categories (i.e. in construction of railways the last years) are allowed in very limited circumstances, as stated in art. 4.2 of the Law Decree n. 227 of 2001, and has to follow several administrative steps before being legally permitted. In addition, clear-cutting is a not allowed practice (Law Decree n. 227 of 2001, art. 6.2).

Article 3.4

Forests in 1 January 1990 were under forest management, since Italy considers all forest land managed, and, therefore, human-induced.

Italian forest resources are totally legally bound; the two main constraints, provided by the laws n. 3267 of 1923 and n. 431 of 1985, compel private and public owners to strictly respect limitations concerning use of their forest resources. As a matter of fact, each exploitation of forest resources must not compromise their perpetuation and therefore, any change of land use, for hydro-geological, landscape and environmental protection in general (the same limitations apply also to burnt areas, following the law

[25] This includes, among others: age-class structure, increment, species composition, rotation lengths, management practices, etc.

n. 353 on forest fires approved in 2000). Consequently unplanned cuttings are always forbidden and local prescriptions fix strict rules to be observed for forestry.

Methods for carbon stock change and GHG emission and removal estimates

Carbon stock changes in forests (for Article 3.3 *afforestation/reforestation* and Article 3.4 *forest management*) have been estimated through the use of a growth model, For-est[26], used to assess data concerning the growing stock and the related carbon, estimating the evolution in time of the Italian forest carbon pools, according to the IPCC classification and definition: living biomass, both aboveground and belowground, dead organic matter, including dead wood and litter, and soils as soil organic matter; it was conceived on an eco-physiological basis since it uses growing stock as drive variable, growth relationships and measured forest parameters.

The model has been applied at regional scale (NUTS2); input data for the forest area, per region and inventory typologies, were Italian forest inventories (NFI1985, INFC2005), while the results of the first phase of the INFC2015 were used in forest area assessment.

Italy has decided not to account for the soil carbon stock changes from activities under Article 3.4, providing transparent and verifiable information to demonstrate that soils pool is not a source in Italy, as required by par. 21 of the annex to decision 16/CMP.1. Concerning carbon stock changes resulting from *deforestation* activities, due to a lack of detailed information on the land use of the deforested area, since the activities planned in the framework of the registry for carbon sinks are still in progress, a conservative approach was applied, hypothesising that the total deforested area is converted into settlements. Carbon stock changes related to the forest land areas, before deforestation activities, have been estimated, for each year and for each pool (living biomass, dead organic matter and soils), on the basis of forest land carbon stocks deduced from the model For-est. In addition, it should be noted that land use changes due to wildfires are not allowed by national legislation (Law Decree 21 November 2000, n. 353, art.10, comma 1). The loss, in terms of carbon, due to deforested area is computed assuming that the total amount of carbon, existing in the different pools before deforestation, is lost.

Methods for estimating carbon stock changes for lands subject to *cropland management* activity are the same as those used for the UNFCCC greenhouse gas inventory: carbon stock changes have been estimated only for the living biomass of perennial woody crops, on the basis of carbon gains and losses, computed applying a value of biomass C stock at maturity. Tier 1 method has been followed for dead wood and litter, assuming that the abovementioned pools are at equilibrium, and no carbon stock changes are occurring. Soils carbon stock changes have been assessed to be not occurring, as no management changes can be documented. CO_2 emissions from cultivated organic soils subject to CM activity have been estimated.

Carbon stock changes related to land subject to *grazing land management* have been estimated on the basis of the guidance of 2013 KP Supplement (IPCC, 2014). In particular changes in carbon stocks in mineral soils have been estimated on the basis of country specific SOC_{ref}.

GHG emissions from biomass burning in land subject to art 3.3 and art. 3.4 activities have been estimated on the basis of a country specific methodology; in particular, for art. 3.3 activities and for land subject to FM, a detailed database, provided by the Italian National Forest Service (CFS - Ministry of Agriculture, Food and Forest Policies), reporting, for each fire event, the following information: burned area, forest typology (27 classes in line with the NFI nomenclature), scorch height, fire's type (crown, surface or ground fire), has been used to estimate the related emissions.

Total effect of policies

Table 5.5 summarizes the effects of the measures described for the WM and WAM scenario. The emissions according to the WM scenario are 440.5 $MtCO_2eq$ in 2020 and 449.5 $MtCO_2eq$ in 2020. The

[26] Federici S, Vitullo M, Tulipano S, De Lauretis R, Seufert G, 2008. An approach to estimate carbon stocks change in forest carbon pools under the UNFCCC: the Italian case. iForest 1: 86-95 URL: http://www.sisef.it/iforest/

WAM scenario results show that the implementation of all additional measures will reduce the emissions by 16.1 MtCOeq and 45 MtCOeq, respectively in 2020 and 2030.

Table 5.5 – WM (a) and WAM (b) scenario for the 2013-2030 period ($MtCO_2eq.$)

a)

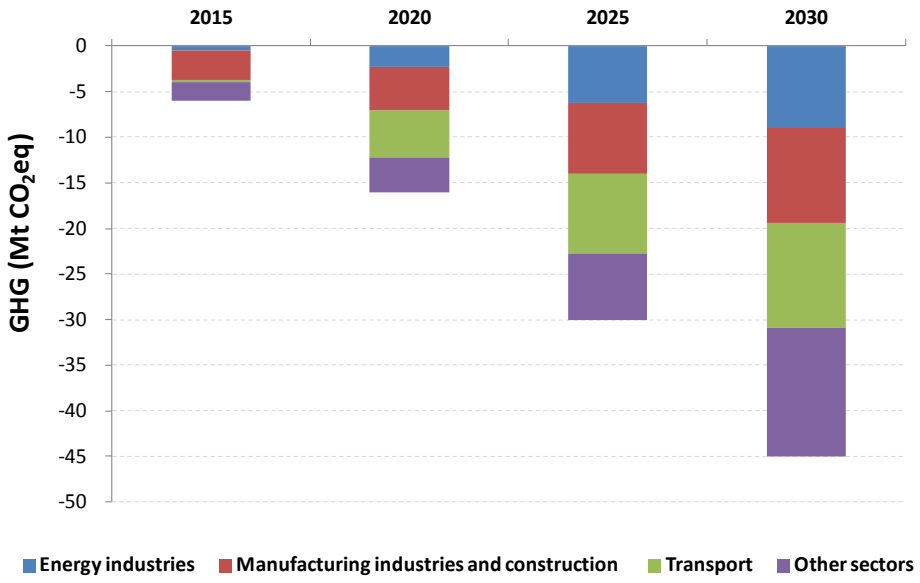
	2013	2015	2020	2025	2030
Energy industries	108.49	111.60	104.52	111.30	120.28
Manufacturing industries and construction	49.98	52.98	57.54	58.46	60.40
Transport	104.06	104.95	106.96	108.53	116.14
Other sectors	86.37	84.31	85.82	76.40	70.53
Fugitive emissions from fuels	8.48	7.99	7.78	7.41	7.18
Industrial processes	30.59	31.33	32.16	32.36	32.07
Agriculture	30.79	30.93	31.00	31.14	31.20
Waste	18.50	17.10	14.66	12.61	11.70
Land Use, Land-Use Change and Forestry	-33.68	-24.50	-25.45	-38.10	-40.35
Total excluding LULUCF	**437.27**	**441.18**	**440.45**	**438.20**	**449.50**
Total including LULUCF	**403.59**	**416.68**	**414.99**	**400.10**	**409.15**

b)

	2013	2015	2020	2025	2030
Energy industries	108.49	111.11	102.20	105.07	111.34
Manufacturing industries and construction	49.98	49.80	52.82	50.64	49.90
Transport	104.06	104.71	101.82	99.82	104.71
Other sectors	86.37	82.27	81.90	69.09	56.38
Fugitive emissions from fuels	8.48	7.99	7.78	7.41	7.18
Industrial processes	30.59	31.33	32.16	32.36	32.07
Agriculture	30.79	30.93	31.00	31.14	31.20
Waste	18.50	17.10	14.66	12.61	11.70
Land Use, Land-Use Change and Forestry	-33.68	-24.50	-25.45	-38.10	-40.35
Total excluding LULUCF	**437.27**	**435.23**	**424.35**	**408.13**	**404.48**
Total including LULUCF	**403.59**	**410.73**	**398.89**	**370.04**	**364.13**

The effect of policies by sector is summarized in Figure 5.5. The reductions in 2030 will occur, in decreasing order, in civil sector (14.1 MtCO2eq), transport (11.4 MtCO2eq), manufacturing industries (10.5 MtCO2eq), and energy industries (8.9 MtCO2eq).

Figure 5.5 – Effect of additional measures for sectors, kt CO2eq



Sensitivity analysis

A sensitivity analysis has been performed for the energy sector emissions concerning the WM scenario. The main exogenous parameters suggested by the European Commission in the "Recommended parameters for reporting on GHG projections in 2015 (*Final after consultation, 17 June 2014*)" has been used for sensitivity analysis. All other variables of the model have not been changed with one remarkable exception: the update of biomass use in the residential sector, for the reason reported after. With reference to non energy GHGs emissions and energy GHGs emissions other than CO_2 no changes have been implemented, even if the required changes in GDP and population projections would probably have some minor effects. This because such exercise is the first with IPCC 2006 Guidelines rules and a huge amount of resources has been necessary to implement them.

The parameters that changes between the two WM scenarios are:

- Population; in table 5.1 both projections of population are reported (actual development and sensitivity analysis). The proposed projection for sensitivity scenario, although starting from lower level in 2015, shows higher growth rate with about 435 thousand more people in 2030;
- GDP – the proposed GDP growth is lower, 1.2% per year on average from 2015 to 2030;
- International prices of primary sources and carbon price; the parameters used in the national projections and those proposed by EU are reported in table 5.6;
- Achieve national RES and efficiency target as per 2009 climate energy package, EU 2020 strategy: 20% cut in GHG emissions from 1990 levels (-13% for Italy wrt 2005, non ETS and -1.2% yearly for ETS), 20% of energy from renewable (17% mandatory for Italy wrt 2005, National strategy propose a target of 21%), and 20% improvement in energy efficiency (national energy strategy plan to achieve 24% wrt 2005).

Table 5.6 - International energy prices and carbon prices: difference between national and Commission parameters

	Fuel import prices (in constant €2010/boe)				
	2010	**2015**	**2020**	**2025**	**2030**
EU Oil price	60.0	77.0	88.5	89.2	93.1
National Oil price	60.0		88.5		93.1
EU Coal price	16.0	15.0	(19.0-)22.6	(19.7-)23.7	(20.0-)24.0
National Coal price	16.0		22.6		24.0
EU Gas price	37.9	50.0	61.5	58.9	64.5
National Gas price	37.9		61.5		64.5
EU ETS carbon price	-	7	10	14	35
National carbon price	10.7	14.1	17.4	24.1	30.8

The Total GHGs emissions resulting from WM scenarios are reported in Table 5.7, while Table 5.8 shows the differences between the WM scenarios with national's and Commission's parameters.

Table 5.7 - Total GHGs emissions kt CO2eq – WM scenario with Commission's parameters

Sectors	**2013**	**2015**	**2020**	**2025**	**2030**
	MtCO2eq				
Energy industries	108.49	104.68	109.07	114.50	115.88
Manufacturing industries and construction	49.98	49.98	51.65	51.32	51.80
Transport	104.06	107.63	107.30	102.14	95.75
Other sectors	86.37	81.64	79.79	75.34	71.77
Fugitive emissions from fuels	8.48	7.99	7.78	7.41	7.18
Industrial processes	30.59	31.33	32.16	32.36	32.07
Agriculture	30.79	30.93	31.00	31.14	31.20
Waste	18.50	17.10	14.66	12.61	11.70
Total	**437.27**	**431.28**	**433.41**	**426.83**	**417.35**

Table 5.8 – Percentage difference of WM scenario emissions with the Commission parameters wrt WM scenario emissions with the national parameters

Sectors	2013	2015	2020	2025	2030
Energy industries	0.0%	-6.2%	4.4%	2.9%	-3.7%
Manufacturing industries and construction	0.0%	-5.7%	-10.2%	-12.2%	-14.2%
Transport	0.0%	2.6%	0.3%	-5.9%	-17.6%
Other sectors	0.0%	-3.2%	-7.0%	-1.4%	1.8%
Fugitive emissions from fuels	0.0%	0.0%	0.0%	0.0%	0.0%
Industrial processes	0.0%	0.0%	0.0%	0.0%	0.0%
Agriculture	0.0%	0.0%	0.0%	0.0%	0.0%
Waste	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**0.0%**	**-2.2%**	**-1.6%**	**-2.6%**	**-7.2%**

The greatest differences of emissions are discussed below:

- Energy industries: the difference for the 2020 is related to the overachievement of the RES target at 2020 in national scenario with a less intensive development of RES for the period 2025-2030.
- Manufacturing industries and construction: for national WM scenario a greater growth of industry VA is foreseen than that one projected with Commission's parameters, with a rebound of production after the deep economic crisis.
- Transport: from 2025 the growth of this sector is affected by the higher growth in good transportation due to higher turnaround of the manufacturing industries and because of the lower carbon prices in national scenario; the optimization model chooses to use less efficient vehicles.
- Other sector: the results show reduction of natural gas use in 2020 and higher consumption in 2030 in the scenario with Commission parameters. These results include the effect of huge increase of biomass consumption in historical years that is part of the sensitivity analysis. At the end of 2014 ISTAT (National Institute of Statistic) has published a detailed and comprehensive research concerning the energy consumptions of the households. New data show diffuse use of wood in the domestic sector with a total value much bigger (about two times) than estimated before. Those results have been incorporated in national statistic for the years 2012 and 2013 and a revision of the time series is ongoing. The sensitivity analysis scenario gave us the possibility to explore the possible outcome in the future of the updated consumption data. The lower emissions in sensitivity analysis at the 2020 horizon are due to the availability in huge quantities of a low cost resource as biomass. On the contrary at the 2030 horizon there is a slightly increase of natural gas consumption due to the limiting effect of PM emissions ceiling on biomass use.

6. Provision of financial, technological support to developing country Parties[27]

The tables below represent the financial resources devoted by the Italian government to the multilateral and bilateral activities in the years 2013 and 2014.

Based on the assistance to developing countries, it is provided a selection of projects that can be directly considered financial resources and technological support to developing country Parties.

The Italian activities are mostly addressed to sustain multilateral funds dedicated to reduce the impact of climate change and support mitigation and adaptation measures in developing countries.

In total, the Italian government provided in 2013 and 2014 about 400 million USD in multilateral and bilateral activities.

As an integral part of our country's foreign policy, the Italian support to developing country parties aims to ensure the protection of life and human dignity to all the planet's inhabitants and fosters relations aimed at economic and, most importantly, at social and human growth respectful of the environment and cultural variety and capable of protecting common assets such as environment, water, food and energy, so as to ensure the greater prosperity of populations and peace among people.

In particular, the commitment of Italy to tackle climate change and related support to developing countries is strongly expressed in Decree 30 (DLGS n.30 13/03/2013).

In fact, this latter defines the criteria for the allocation of the proceeds from auctioning of greenhouse gas emission allowances. In particular, it is established that at least the 50% of those proceeds should be used to reduce greenhouse gas emissions; to adapt to the impacts of climate change; to fund research and development for reducing emissions and adaptation; to develop renewable energies and increase energy efficiency; to contribute to the Global Energy Efficiency and Renewable Energy Fund and to the Adaptation Fund as made operational by the Poznan Conference on Climate Change (COP 14 and COP/MOP 4), to provide for measures to avoid deforestation and facilitate adaptation in developing countries.

The proceeds from auctioning of greenhouse gas emission allowances of the year 2013 and 2014 will be allocated starting from 2015 and will be additional financial resources to developing country Parties.

Multilateral cooperation on climate change

Between 2013 and 2014, the Italian multilateral environmental activities were characterized as the following: supply of financial resources, design and implementation of programmes and projects, promotion of transfer of environmentally-sound technologies aiming at reducing the impacts of human activities on climate change and support to adaptation measures.

Italy in the period 2013-2014 contributed to the operating entities of the financial mechanism of the Convention, to other multilateral institutions and to international financial institutions (IFIs) and other multilateral development banks (MDBs). The climate relevant component of these contributions has been determined based on the climate relevant share of the portfolio of those institutions.

In particular multilateral performances were carried out with several relevant organizations or programmes, such as: the Food and Agriculture Organisation (FAO), the Global Environment Facility (GEF), International Development Association (IDA), the United Nations Development Programme (UNEP), Green Climate Fund (GCF), Global Environment Facility (GEF) United Nations Industrial Development Organization (UNIDO).

Italy already pledge 250 million euro to the GCF, of which 50 million have been already disbursed in 2015. In addition Italy for 2015 pledged additional funding to the Adaptation Fund (AF) and Least Developed Countries Fund (LDCF).

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Bilateral cooperation

Bilateral activities are dedicated to foster the use and the exploitation of renewable energies (21%), to protect and conserve natural resources, water management (17%), waste (2%), sustainable agriculture and forest management (27%), biodiversity protection (2%) as well as to protect from vulnerability to extreme climate change and enhancing the capacities of the relevant national institutions dealing with natural disaster and risk reduction management (7%).

Many activities are also committed to foster a social and human growth respectful of the environment, to promote sustainable development and to improve the scientific expertise of the institution responsible on climate change (23%).

The support is well balanced between mitigation and adaptation measures in developing countries particularly: Africa (60%), Asia (20%), Balkan region (4%), South America (9%) and Small Islands (2%).

In order to ensure the efficient implementation of the activities foreseen by bilateral cooperation, each Memorandum of Understanding establishes a Joint Committee, composed by representatives of both involved Governments, which provides general direction and advise of cooperation, approves work programs and budget, supervises and supports the cooperation activities, takes financial decision for the activities.

Many efforts are dedicated to track the implementation of the activities, though different channels such as bilateral, multilateral, implementing agencies, monitoring of calls for tender for NGOs and project developers. The evaluation is developed according to the best methodologies and practices, such as OECD/DAC, in order to achieve a result based management system for support provided.

Technology development and transfer support

The deployment of low carbon energy technologies for both adaptation and mitigation actions and increase energy efficiency is crucial for addressing the global challenges of energy security, climate change and economic development. As a matter of fact, technology development and transfer will play an important role in order to improve resilience to climate change and to reduce GHG emissions.

In order to contribute actively to this process, Italy is involved in numerous bilateral cooperation activities mainly focused on the energy sector with many developing countries in Africa and in Small Islands States as well as in large emerging countries such as China and Brazil.

CTF Table 7_2013 Provision of public financial support summary 2013

Table 7

Provision of public financial support: summary information in 2013[a]

Allocation channels	*Year*									
	European euro - EUR					*USD[b]*				
	Core/ general[c]	*Climate-specific[d]*				*Core/ general[c]*	*Climate-specific[d]*			
		Mitigation	*Adaptation*	*Cross-cutting[e]*	*Other[f]*		*Mitigation*	*Adaptation*	*Cross-cutting[e]*	*Other[f]*
Total contributions through multilateral channels:		2.80	0.60	10.95		537.43			134.80	
Multilateral climate change funds[g]						20.70			11.40	
Other multilateral climate change funds[h]										
Multilateral financial institutions, including regional development banks						516.73			123.40	
Specialized United Nations bodies		2.80	0.60	10.95						
Total contributions through bilateral, regional and other channels		6.87	13.40	26.08						
Total		9.67	14.00	37.03		537.43			134.80	

Abbreviation: USD = United States dollars.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.

[c] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[d] Parties should explain in their biennial reports how they define funds as being climate-specific.

[e] This refers to funding for activities which are cross-cutting across mitigation and adaptation.

[f] Please specify.

[g] Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

[h] Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

Table 7

Provision of public financial support: summary information in 2014[a]

Allocation channels	*Year*									
	European euro - EUR					*USD[b]*				
	Core/ general[c]	*Climate-specific[d]*				*Core/ general[c]*	*Climate-specific[d]*			
		Mitigation	*Adaptation*	*Cross-cutting[e]*	*Other[f]*		*Mitigation*	*Adaptation*	*Cross-cutting[e]*	*Other[f]*
Total contributions through multilateral channels:		0.20		20.96		494.30			157.76	
Multilateral climate change funds[g]									18.10	
Other multilateral climate change funds[h]										
Multilateral financial institutions, including regional development banks						494.30			123.88	
Specialized United Nations bodies		0.20		20.96					15.78	
Total contributions through bilateral, regional and other channels		12.55	1.91	11.08						
Total		12.75	1.91	32.04		494.30			157.76	

Abbreviation: USD = United States dollars.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.

[c] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[d] Parties should explain in their biennial reports how they define funds as being climate-specific.

[e] This refers to funding for activities which are cross-cutting across mitigation and adaptation.

[f] Please specify.

[g] Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

[h] Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

CTF Table 7a_2013 Provision of public financial support: multilateral 2013

Donor funding	*Total amount*				*Status*[b]	*Funding source*[f]	*Financial instrument*[f]	*Type of support*[f, g]	*Sector*[c]
	Core/general[d]		*Climate-specific*[e]						
	European euro - EUR	*USD*	*European euro - EUR*	*USD*					
Total contributions through multilateral channels		537.43	14.35	134.80					
Multilateral climate change funds [g]		20.70		11.40					
1. Global Environment Facility		20.70		11.40	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund									
6. UNFCCC Trust Fund for Supplementary Activities									
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks		516.73		123.40					
1. World Bank									
2. International Finance Corporation									
3. African Development Bank		138.82		45.80	Provided	ODA	Grant	Cross-cutting	Cross-cutting
4. Asian Development Bank		53.10		13.30	Provided	ODA	Grant	Cross-cutting	Cross-cutting
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank									
7. Other		324.81		64.30					
International Development Association		324.81		64.30	Provided	ODA	Grant	Cross-cutting	Cross-cutting
Specialized United Nations bodies			14.35						
1. United Nations Development Programme			0.28						
UNDP			0.28		Provided	ODA	Grant	Cross-cutting	Agriculture
2. United Nations Environment Programme			6.65						
UNEP			6.65		Provided	ODA	Grant	Cross-cutting	Cross-cutting
3. Other			7.42						
UNDESA			2.00		Provided	ODA	Grant	Mitigation	
UNCCD			0.80		Provided	ODA	Grant	Mitigation	Cross-cutting
UNIDO			0.60		Provided	ODA	Grant	Adaptation	Cross-cutting
FAO			3.90		Provided	ODA	Grant	Cross-cutting	Cross-cutting
UNECE			0.12		Provided	ODA	Grant	Cross-cutting	Cross-cutting

Abbreviations: ODA = official development assistance, OOF = other official flows.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

[c] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

[d] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[e] Parties should explain in their biennial reports how they define funds as being climate-specific.

[f] Please specify.

[g] Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 7a_2014 Provision of public financial support: multilateral 2014

Table 7(a) ITA_BR2_v0.1

Provision of public financial support: contribution through multilateral channels in 2014[a]

Donor funding	*Total amount*				*Status*[b]	*Funding source*[f]	*Financial instrument*[f]	*Type of support*[f, g]	*Sector*[c]
	Core/general[d]		*Climate-specific*[e]						
	European euro - EUR	*USD*	*European euro - EUR*	*USD*					
Total contributions through multilateral channels		494.30	21.16	157.76					
Multilateral climate change funds[g]				18.10					
1. Global Environment Facility				17.60	Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. Least Developed Countries Fund									
3. Special Climate Change Fund									
4. Adaptation Fund									
5. Green Climate Fund				0.50	Provided		Grant	Cross-cutting	
6. UNFCCC Trust Fund for Supplementary Activities									
7. Other multilateral climate change funds									
Multilateral financial institutions, including regional development banks		494.30		123.88					
1. World Bank									
2. International Finance Corporation									
3. African Development Bank		78.00		29.90	Provided	ODA	Grant	Cross-cutting	Cross-cutting
4. Asian Development Bank		45.10		13.20	Provided	ODA	Grant	Cross-cutting	Cross-cutting
5. European Bank for Reconstruction and Development									
6. Inter-American Development Bank				0.75	Provided	ODA	Grant	Cross-cutting	Cross-cutting
7. Other		371.20		80.03					
International Bank for Reconstruction and Development				4.85	Provided	ODA		Cross-cutting	Cross-cutting
International Development Association		371.20		75.18	Provided	ODA	Grant	Cross-cutting	Cross-cutting
Specialized United Nations bodies			21.16	15.78					
1. United Nations Development Programme			0.26						
UNDP			0.26		Provided	ODA	Grant	Cross-cutting	Cross-cutting
2. United Nations Environment Programme			18.00						
UNEP			18.00		Provided	ODA	Grant	Cross-cutting	Cross-cutting
3. Other			2.90	15.78					
International Fund for Agricultural Development				15.78	Provided	ODA	Grant	Cross-cutting	Cross-cutting
UNIDO			0.55		Provided	ODA		Cross-cutting	Cross-cutting
WFP			0.20		Provided	ODA		Mitigation	Energy
FAO			2.15		Provided	ODA		Cross-cutting	Cross-cutting

Abbreviations: ODA = official development assistance, OOF = other official flows.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

[c] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

[d] This refers to support to multilateral institutions that Parties cannot specify as climate-specific.

[e] Parties should explain in their biennial reports how they define funds as being climate-specific.

[f] Please specify.

[g] Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 7b_2013 Provision of public financial support: bilateral and other 2013

Table 7(b)

Provision of public financial support: contribution through bilateral, regional and other channels in 2013[a]

Recipient country/ region/project/programme[b]	*Total amount*		*Status[c]*	*Funding source[g]*	*Financial instrument[g]*	*Type of support[g, h]*	*Sector[d]*	*Additional information[e]*
	Climate-specific[f]							
	European euro - EUR	*USD*						
Total contributions through bilateral, regional and other channels	46.35							
China / Sino- Italian Climate Change Cooperation Programme	8.11		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	
Iraq /	2.07		Provided	OOF	Grant	Cross-cutting	Agriculture, Water and sanitation, Forestry	
SIDS / SIDS / Cooperation on Climate Change	0.38		Provided	OOF	Grant	Adaptation	Energy	
Serbia, Montenegro, Albania, The former Yugoslav Republic of Macedonia / Balkanic area / Balkanic Climate Initiatives: Serbia, Montenegro, Macedonia, Albania	2.88		Provided	OOF	Grant	Cross-cutting	Energy, Agriculture, Cross-cutting	
Brazil /	3.02		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	
Argentina, Brazil, Mexico / Latin America	0.08		Provided	OOF	Grant	Cross-cutting	Energy	
Mediterranean area /	0.36		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	

Mexico /	0.10	Provided	OOF	Grant	Mitigation	Energy, Water and sanitation, Cross-cutting	
Afghanistan /	0.73	Committed	ODA	Grant	Adaptation	Agriculture	Support agriculture and rural development - expert fund
Albania / Cooperation activities with the Republic of Albania aiming to the implementation of a prediction and prevention system of forest fires and floods	0.18	Committed	ODA	Grant	Adaptation	Agriculture, Other (Disaster prevention and preparedness)	CIMA research Foundation International Center of Environment Monitoring/Forecasting, prevention and mitigation programme against the flood risk and forest fires in Albania through staff training, technical assistance and implementation of information technology
Zimbabwe /	0.01	Committed	ODA	Grant	Adaptation	Other (Site preservation)	Sustainable development of the communities in the Limpopo park - social charges and insurance
Ethiopia / Technical Assistance Project for Up-Grading the Ethiopian leather and Leather Products Industry -New Phase. Local Fund	0.04	Committed	ODA	Grant	Adaptation	Other (Textiles, leather and substitutes)	ADDIS ABEBA /Increase of competitiveness and turnover of clusters of micro small and medium enterprises in leather sector.
Honduras /	0.02	Committed	ODA	Grant	Adaptation	Water and sanitation	The project aims to improve the living standards of the population of Marcala, Honduras, in a context of integrated water management and environmental protection. it plans to rehabilitate and extend the urban water supply system of Marcala;
Haiti / Building a solidarity filiera for small coffee producers	0.01	Committed	ODA	Grant	Adaptation	Other (Rural	The income of 2,000 producers / manufacturers organized in

in the south of Haiti - social security charges and insurance for volunteers						development)	five communities of the south region of Haiti will be increased and diversified by this project
Middle East and North Africa / Poverty reduction project in Palestinian rural areas through the protection and development of biodiversity in local biological areas	0.77	Committed	ODA	Grant	Adaptation	Agriculture	The project aims at reducing poverty in rural areas increasing the income of 250 families in 9 villages, encouraging, protecting and developing local crops, and promoting at the same time food security, biological principles and biodiversity protection.
El Salvador / Sustainable urban settlements in Sonsonate	0.54	Committed	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	Improving the life quality and expectancy of the inhabitants living in the marginal areas on the river banks in the city of Sonsonate, concentrating the efforts in reducing risk disasters connected with natural and anthropic causes
Ghana /	0.71	Committed	ODA	Grant	Adaptation	Other (Environmental policy and administrative management)	The aim of the project is to promote the sustainable development of the mole national park, reducing poverty of the communities living within and the neighbouring areas.
Viet Nam / Higher education scholarships	0.06	Committed	ODA	Grant	Adaptation	Other (Advanced technical and managerial training)	Scholarship for two Vietnamese graduates to attend a Doctoral Program in hydraulic Engineering at Brescia University
Africa, South Sudan / Emergency initiative in support of the population of Lakes State, South Sudan. - Local fund	1.24	Committed	ODA	Grant	Adaptation	Other (Multisector aid for basic social services)	The initiative will benefit in particular women and children in vulnerable areas of Lakes State through promotion of agriculture, food security, basic

							services (health, water and sanitation, basic education).
Africa, Senegal / Support of small scale rural activities in the valley of the river Senegal	0.63	Committed	ODA	Grant	Adaptation	Other (COMUNITA' IMPEGNO SERVIZIO VOLONTA RIO /The project aims at enhancing the development of small scale activities in the rural areas, in particular for women and young people), Agriculture	The project aims at enhancing the development of small scale activities in the rural areas, in particular for women and young people
Middle East and North Africa, Gaza Strip /	1.21	Committed	ODA	Grant	Adaptation	Other (Waste management/disposal)	The project aims at improving the level of waste recycling in the Governatorate of Tulkarem
Mozambique / PROSIGRU-Strengthening of Integrated Management System of Urban Waste Project	0.59	Committed	ODA	Grant	Adaptation	Other (Waste management/disposal)	The project aims to promote environmental sustainability of urban reality in Mozambique
Cameroon, Africa / strengthening self-management abilities and local development	0.73	Committed	ODA	Grant	Adaptation	Other (Basic drinking water supply)	The project aims at improving the supply of basic drinking water for the population of Bankondji, as well as the management of water resources
Mozambique / Conservation of Natural Resources in the National Reserve of Gile	1.39	Committed	ODA	Grant	Adaptation	Other (Bio-diversity)	The project has the aim to consolidate the participation of the Managing Committees and communities in the responsible use of natural resources of the Gile park
Cuba /	1.77	Committed	ODA	Grant	Adaptation	Other (Agricultural policy and administrative	Re-launching of coffee production in the cooperative

						management)	and peasant sector
Lebanon / Activities of international cooperation for civil protection	0.02	Committed	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	CIMA research Foundation International Center of Environment Monitoring/Support and maintenance of the RISICO system for prediction and prevention of forest fire in Lebanon. Design of an early warning system for the flood risk
Senegal / Training Workshop on Management of Flood Risk	0.01	Committed	ODA	Grant	Adaptation	Other (Flood prevention/control)	CIMA research Foundation International Center of Environment Monitoring/Participation at the Atelier de Formation sur la Gestion des Risques d'Inondation. During the workshop CIMA Foundation has given a seminar titled: "Non structural measures and early warning systems for the real time prediction of flood risk scenarios". The training workshop on Flood Risk Management represented one of the initial efforts of the SESRIC and the IDB towards enhancing the capacities of the relevant national institutions dealing with natural disaster risk reduction management.
Morocco / 3rd African Water Cycle Coordination Initiative (AfWCCI) Workshop	0.01	Committed	ODA	Grant	Adaptation	Other (Water resources conservation (including data collection))	CIMA research Foundation International Center of Environment Monitoring/Participation to the workshop that aims to develop the AfWCCI Implementation plan. The Plan will serve as the

							basis for coordination among agency activities and for setting priorities for project proposals that will be developed in advance of the AfWCCI symposium planned for Tokyo in April, 2013. The Implementation Plan will include action plans for specific basin-scale projects and build on activities that have recently been approved and advanced.
Cameroon / Women for palm kernel oil production	0.02	Committed	ODA	Grant	Adaptation	Agriculture	Promotion of women employment and rural development
Argentina / Mbya Argentina - Biodiversity and food self-help - II Phase	0.01	Committed	ODA	Grant	Adaptation	Other (Bio-diversity)	The project aims to run natural resources in order to allow community of Mbya to get food self-help
Ethiopia / Agricultural Development project of Gombora District	0.02	Committed	ODA	Grant	Adaptation	Other (Agricultural education/training)	The project aims to improve the socio-economic conditions of the communities through agricultural training
Niger / Vegetables and Fruits drying Process in Makalondi	0.02	Committed	ODA	Grant	Adaptation	Other (Training in agricultural techniques and products trade), Agriculture	Training in agricultural techniques and products trade
Mauritania / Basic services for Hodh El Chargui community	0.01	Committed	ODA	Grant	Adaptation	Agriculture	Increase of agricultural production through watermills and improvement of domestic economy
Uganda /	0.02	Committed	ODA	Grant	Adaptation	Other (Solar energy)	Solar energy for Karamoja

Africa / Planning, managing and assessing the Environment Locally in Sub-Saharan Africa	0.02	Committed	ODA	Grant	Adaptation	Other (Environmental research)	The Project assess emerging environmental problems and local environment action planning tools in different African countries. Methodologies for assessing climate change vulnerability and risk are developed for Dar es Salaam, Louga, Maputo, and Niamey.
Turkmenistan / Promoting Disaster Risk Reduction and Communities Resilience in Turkmenistan	0.05	Committed	ODA	Grant	Adaptation	Other (Disaster prevention and preparedness)	The project contributes to the reduction of the vulnerability of population towards fires through implementation of training and awareness raising activities on disaster risk reduction, adaptation to climate change and disaster response.
Ecuador / Sustainable economic development project under a new set of planning wetland "Humedal Abras de Mantequilla". 3nd year	0.03	Committed	ODA	Grant	Adaptation	Other (Bio-diversity)	The overall objective is to contribute to sustainable economic development of the families of the "Recintos" of the wet area of Mantequilla. In accordance with UNDP / Quito ART program, the second year of the project is particularly aimed at verifying and supporting the definition of development plans by local municipalities of the area of interest, at contributing to the definition of the plan for the environmental management and economic development of the area, at continuing the training of local technicians (also in Italy) for the implementation of the new structural set-up.

Ecuador / Protection of health and prevention of risks from anthropogenic pollution. 3nd year	0.03	Committed	ODA	Grant	Adaptation	Other (Bio-diversity)	The overall objective of the project is the promotion of the sustainable development of the Galapagos archipelago, with a particular focus on the island of Santa Cruz, protecting the sanitary conditions, the conditions of public health and the preservation of the natural environment.
Eritrea / ADI ARADA: sustainable development for Eritrea	0.04	Committed	ODA	Grant	Adaptation	Other (Water supply and sanitation - large systems)	The initiative is part of a wider program "Sustainable Development for Eritrea" and proposes a series of integrated interventions in favour of the rural village of Adi Arada in order to allow priority access to drinking water and sanitation according to Ecological Sanitation type, as well as a proper sustainable waste management. Photovoltaic kits will also be provided to the inhabitants in order to meet the high costs of electricity connection. The project is based on the active participation of the beneficiaries in all project activities, with training and educational activities, with the convening of community assemblies, with the establishment of a committee of management and the provision of labour.
Ethiopia / Water, food and health: the three keys to the development of Adwa	0.04	Committed	ODA	Grant	Adaptation	Other (Basic drinking water supply and basic sanitation)	The overall objective of the project is to contribute to increase in the city of Adua the possibility of access to drinking

							water and / or reduce its rate
Ethiopia / MDG 7: water and sanitation in the woreda Soddo Zuria	0.04	Committed	ODA	Grant	Adaptation	Other (Basic drinking water supply and basic sanitation)	The project , to be held in the village of Bughe Ghennet, province of Soddo Zuria, aims to increase the rate of access to drinking water, promote the use of sanitation health , a sustainable waste management , use of renewable energy resources and enhance the economic role of women. The planned activities are : development of 8 toilets for the school, the establishment of a school of Water Club , raising awareness within the school and for people in order to give them the possibility to understand the importance of drinking water and hygiene standards, realization of an enlargement of the water network with pipes of galvanized iron and the creation of 3 water distribution points, the construction of showers, installation of four filters for water purification, realization of a plant for production of biogas used as natural fuel, specific training in horticulture and good practices of hygiene for 50 women.
Albania /	2.00	Committed	ODA	Grant	Adaptation	Other (Agricultural policy and administrative management)	Supporting Albanian Agricultural sector through the creation of a subsidized insurance scheme against adverse weather condition

China /	0.02	Committed	ODA	Grant	Mitigation	Other (Biosphere protection)	CREDIT LINE IN ENVIRONMENT IN WESTERN PROVINCES OF CHINA - LOCAL FUND
Pakistan /	0.08	Committed	ODA	Grant	Mitigation	Other (Public finance management)	EXPERTS FUND-CONTRIBUTION FOR THE SET UP THE TECHNICAL SUPPORT UNIT FOR THE DEBT CONVERSION
Lebanon /	0.08	Committed	ODA	Grant	Mitigation	Other (Waste management/disposal)	INTEGRATED WASTE MANAGEMENT IN BAALBEK CAZA
Kenya /	0.02	Committed	ODA	Grant	Mitigation	Water and sanitation	KENYA - WATER AND SANITATION TO UTILIZE THE KIRANDICH AND KIAMBERE DAM WATER RESERVOIRS - EXPERT FUND
Viet Nam /	0.13	Committed	ODA	Grant	Mitigation	Other (Water sector policy and administrative management)	INTEGRATED AND SUSTAINABLE WATER MANAGEMENT OF RED-THAI BINH RIVER SYSTEM IN A CHANGING CLIMATE
Africa /	0.06	Committed	ODA	Grant	Mitigation	Other (Agricultural policy and administrative management)	Innovating through learning:poverty alleviation in rural areas-Agrinovia 2.0
South Africa /	0.13	Committed	ODA	Grant	Mitigation	Other (Democratic participation and civil society)	INTEGRATED ACTION FOR A SUSTAINABLE COMMUNITY ENFORCEMENT IN THE INFORMAL SETTLEMENTS OF BUFFALO CITY MUNICIPALITY
Viet Nam /	0.19	Committed	ODA	Grant	Mitigation	Other (Water sector policy and administrative management)	SUPPORT TO BALANCE PAYMENTS AND WATER SECTOR PROGRAM AID - Financing to recipient government institutions

Senegal /	0.41	Committed	ODA	Grant	Mitigation	Other (Solar energy)	FREDDAS RENEWABLE SOURCES OF ENERGY FOR SUSTAINABLE DEVELOPMENT OF SENEGAL RIVER VALLEY
Senegal /	0.73	Committed	ODA	Grant	Mitigation	Other (Solar energy)	IMPLEMENTATION OF THE ECO-SYSTEM SERVICES AND GREEN ECONOMY FOR ECONOMIC AND SOCIAL DEVELOPMENT IN THE REGION OF MATAM, SENEGAL
Senegal /	0.01	Committed	ODA	Grant	Mitigation	Other (Solar energy)	IMPLEMENTATION ECO-SYSTEM SERVICES AND GREEN ECONOMY FOR ECONOMIC-SOCIAL DEVELOPMENT REGION MATAM - INSURANCE AND SOCIAL CHARGES.
Africa /	0.49	Committed	ODA	Grant	Mitigation	Other (Advanced technical and managerial training)	CONSERVATION AND EQUITABLE USE OF BIOLOGICAL DIVERSITY IN THE SADC REGION: FROM GEOGRAPHIC INFORMATION SYSTEM (GIS) TO SPATIAL SY
Philippines /	0.02	Committed	ODA	Grant	Mitigation	Other (Public sector policy and administrative management)	Debt swap - Local funds
Philippines /	0.01	Committed	ODA	Grant	Mitigation	Other (Public sector policy and administrative management)	Debt swap. Experts funds
Ethiopia /	0.02	Committed	ODA	Grant	Mitigation	Other (Industrial development)	The project aims to support the Government in the investment sector. - local fund
Middle East and North Africa /	0.40	Committed	ODA	Grant	Mitigation	Other (Advanced technical and managerial training)	Science for diplomacy: a multidisciplinary course.

Ethiopia /	2.40	Committed	ODA	Grant	Mitigation	Agriculture	Italian Contribution to the Agricultural Growth Program (AGP) - Financing to recipient government institutions
Ethiopia /	0.02	Committed	ODA	Grant	Mitigation	Agriculture	Italian Contribution to the agricoltural growth Program (AGP) - Local fund
Republic of Korea /	0.10	Committed	ODA	Grant	Mitigation	Other (Environmental research)	Improvement of Earthquake Administration/Institute of Volcanology of DPRK in its Activities in training and Research
Sudan /	0.01	Committed	ODA	Grant	Mitigation	Other (Primary education)	Evaluation activities of the initiatives funded by the DGCS on channel Multilateral - Expert fund
Kenya /	0.15	Committed	ODA	Grant	Mitigation	Other (Biosphere protection)	local economy and protection of the environment
Bolivia /	0.49	Committed	ODA	Grant	Mitigation	Other (Water resources conservation (including data collection))	PROJECT FOR SUSTAINING THE INTEGRATED MANAGEMENT OF RIO GRANDE , SANTA CRUZ, BOLIVIA (ANGIRG)
Angola /	0.16	Committed	ODA	Grant	Mitigation	Other (Environmental policy and administrative management)	Integrated program for the protection and development of coastal forests of Angola
Tunisia /	0.53	Committed	ODA	Grant	Mitigation	Agriculture	Fighting poverty through the enhancement of the sheep breeding sector in the Governorate of Tataouine - Financing to recipient government institutions

Lebanon /	0.01	Committed	ODA	Grant	Mitigation	Other (Solar energy)	Supply of public lightining
Afghanistan /	0.02	Committed	ODA	Grant	Mitigation	Other (Solar energy)	Supply of material for public lighting
Brazil /	0.05	Committed	ODA	Grant	Mitigation	Other (Multisector aid for basic social services)	Life water rivers: from aloneness to building an ethical community
Guinea, India /	0.01	Committed	ODA	Grant	Mitigation	Other (Business support services and institutions)	European Business and Technology Centre in India (EBTC)
Mozambique /	0.02	Committed	ODA	Grant	Mitigation	Other (Basic drinking water supply and basic sanitation)	Renovation of two interships for students and installation of a solar-powered water pump
SIDS / ENERGY ECOSYSTEM AND LIVELIHOODS INITIATIVES IN PACIFIC ISLANDS - II PHASE	0.90	Committed	ODA	Grant	Cross-cutting		MANAGEMENT OF ENVIRONMENTAL AND SOCIAL IMPLICATIONS ON ENERGY POLICIES IN PACIFIC ISLANDS
Bolivia / TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE - EXPERT FUND	0.01	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE
Senegal / ACCESS TO WATER AND SANITATION FOR THE RURAL COMMUNITY OF NIAMONE - SOCIAL SECURITY CHARGES AND INSURANCE FOR VOLUNTEERS	0.01	Committed	ODA	Grant	Cross-cutting	Water and sanitation	SERIES OF INTERVENTIONS TO SUPPLY DRINKABLE WATER, ACCORDING TO WHO STANDARDS, AND SANITATION SERVICES, ACCORDING TO UNICEF STANDARDS, TO THE 8.476 INHABITANTS OF THE 11 VILLAGES PART OF THE RURAL COMMUNITY
Kenya / SUSTAINABLE DEVELOPMENT OF IRRIGATION AND LAND RECLAMATION IN KENYA - EXPERT FUND	0.02	Committed	ODA	Grant	Cross-cutting	Other (Agricultural water resources)	THE PROGRAM IS CONTRIBUTING TO THE DEVELOPMENT OF IRRIGATION AND LAND RECLAMATION SUBSECTORS WITHIN THE

							WATER SECTOR. TO THIS END, THE PROGRAM WILL PROVIDE FOR THE PARTICIPATION OF ITALIAN COOPERATION TO THE AID EFFECTIVENESS STRUCTURE OPERATING IN KENYA
Senegal / SENEGAL SUPPORT TO THE NATIONAL PROGRAMME FOR INVESTMENTS IN AGRICULTURE	0.20	Committed	ODA	Grant	Cross-cutting	Other (Agricultural inputs)	IMPROVEMENT FOR LOCAL ECONOMIC DEVELOPMENT
Viet Nam /	0.02	Committed	ODA	Grant	Cross-cutting	Other (Bio-diversity)	Local Fund - Vietnamese Debt Swap Programme
Mauritania / Increase of Agricultural Production in the Mauritanian Central- Eastern regions - Financing to recipient government institutions	0.59	Committed	ODA	Grant	Cross-cutting	Agriculture	The project will contribute to reduce vulnerability and food insecurity of the Central-Eastern Mauritanian regions through the improvement of the agricultural productivity
Middle East and North Africa, Gaza Strip and West Bank / ECOSUSTAINABLE ACTION TO PROMOTE AGRICULTURAL PASTORAL PRODUCTIVITY IN SEMIDESERTIC AREA IN HEBRON DISCTRICT	0.32	Committed	ODA	Grant	Cross-cutting	Agriculture	THE AIM IS TO CONTRIBUTE TO MITIGATE THE CLIMATE CHANGE EFFECTS IN AGRICOLTURAL PASTORAL AREA IN ORDER TO PROMOTE FOOD SECURITY AND TO ENHANCE LAND ECOSUSTAINABLE
Bolivia / Small hydroelectric plants for the adaptation to climate change	0.31	Committed	ODA	Grant	Cross-cutting	Other (Hydro-electric power plants)	The project aims at improving the quality of life and the access to electricity from renewable energy sources of the inhabitants of the Bolivian rural population
Ecuador /	0.06	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative	Trilateral cooperation programme for forest fires reduction and the alternative use of fire in regions of

						management)	Ecuador
Montenegro / Memorandum of Understanding between the Government of Italy and the Republic of Montenegro	2.85	Committed	ODA	Grant	Cross-cutting	Other (Biosphere protection)	Cooperation activities in the field of climate change, mitigation and the National Strategy for Sustainable Develpment in Montenegro
Eastern Europe / Work Programme on environmental matters	0.18	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	The biennal work programme foresees projects on implementation and monitoring of children's health and air quality, capacity development on sustainability, awareness raising and training on sustainable development, climate change and energy
China / Sino-Italian Cooperation Programme for Environmental Protection	2.00	Committed	ODA	Grant	Cross-cutting	Other (Biosphere protection)	The programme aims to develop projects on heavy metal pollution control, waste water tratment, biodiverssity conservation, environmental monitoring and emergency management, waste management and capacity building
China / Clean Air Action Cooperation	0.24	Committed	ODA	Grant	Cross-cutting	Other (Energy policy and administrative management)	Technical assistance for implementation of study projects on vehicle emissions policies and emissions inventory, monitoring laboratory and capacity building activities, technologies for remediation of disused industrial sites
China / 2013 work plan	0.08	Committed	ODA	Grant	Cross-cutting	Other (Environmental research)	The initiative aims to conduct policy research on environmental management and institutional

							innovation in order to realize Ecological Civilization through a sustainable and coordinated development of the environment, the economy, and society.
Haiti, Dominican Republic / "Pull Down The Line"	0.01	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	Bulding a territorial alliance between the cross-border areas from Haiti and Dominican Republic for the local development, social inclusion in both territorial contexts and the interethnic discriminations
Senegal /	0.03	Committed	ODA	Grant	Cross-cutting	Other (Education facilities and training)	The project is about the building of a 40 KW photovoltaic power station on the renewed roof in order to make the school energetically independent. Moreover, the power station is a technical laboratory for students from the Lamamoulaye High School and from Politecnico di Milano who will have the chance to study the station's efficiency at a different latitude
Burundi / FOOD PRODUCTION RATIONALISATION	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	DEVELOPMENT OF NEW TECHNOLOGIES FOR BEAN PRODUCTION AND FOOD PROCESSING
Democratic Republic of the Congo / KINTAROUND	0.04	Committed	ODA	Grant	Cross-cutting	Other (Basic life skills for youth and adults)	All around Kinta land plot: Knowledge, Integration, Energy, Training and Health
Argentina / RE.AR	0.02	Committed	ODA	Grant	Cross-	Other (Environmental policy and administrative	Waste management

					cutting	management)	
Brazil / LEITENERGIA	0.02	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	DEVELOPMENT AND PROMOTION OF RENEWABLE ENERGY RESOURCES
Benin /	0.01	Committed	ODA	Grant	Cross-cutting	Other (Basic drinking water supply)	Solar energy to improve access to safe drinking water in Northern Benin - Sahel region
Benin / Construction of wells and drinking water systems for use in food, agricultural, and to limit the advance of desertification	0.02	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Construction of wells and drinking water systems for use in food, agricultural, and to limit the advance of desertification
Africa /	0.03	Committed	ODA	Grant	Cross-cutting	Other (Rural development)	Euregio/Euregio Program
Burundi /	0.03	Committed	ODA	Grant	Cross-cutting	Other (Democratic participation and civil society)	Development of the twinning between the Municupality of Brentonico and the Municipality of Muyinga
Mozambique /	0.16	Committed	ODA	Grant	Cross-cutting	Other (Democratic participation and civil society)	Trentino in Mozambique and Mozambique in Trentino
Africa, Tanzania / Construction of a Training Center of rural development	0.03	Committed	ODA	Grant	Cross-cutting	Other (Agricultural education/training)	GAV/Construction of a Training Center of rural development
Niger /	0.02	Committed	ODA	Grant	Cross-cutting	Other (Rural development)	Enviromental, social and economic rehabilitation of the Tin Telloust's oasis
Morocco /	0.03	Committed	ODA	Grant	Cross-cutting	Other (Water supply - large systems)	Sunwater

Timor-Leste /	0.02	Committed	ODA	Grant	Cross-cutting	Agriculture	Emprovement of the storage's system and creation of a new professional role for the population of Ili Timur
Nicaragua / Strengthening Nicaragua Red Cross capacity to cope with disaster and emergency situations.	0.04	Committed	ODA	Grant	Cross-cutting	Other (Disaster prevention and preparedness)	The project aims at: a) improving the performance of the National Society's response action to emergencies and/or disasters; b) promoting the use of community tools in the preparation and response to disasters and crisis.
Africa / Missions to participate to international meetings in Sub Saharian Africa	0.04	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	Missions to participate to international meetings about climate changes and security system management in Sub Saharian Africa
Peru /	0.01	Committed	ODA	Grant	Cross-cutting	Other (Forestry education/training)	Training and organization of campesinos in forestry
Albania /	1.20	Committed	ODA	Concessional Loan	Cross-cutting	Other (Agricultural policy and administrative management)	Supporting Albanian Agricultural sector through improving the Olive Oil sector in Albania

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should report, to the extent possible, on details contained in this table.

[c] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

[d] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under “Other”.

[e] Parties should report, as appropriate, on project details and the implementing agency.

[f] Parties should explain in their biennial reports how they define funds as being climate-specific.

[g] Please specify.

[h] Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 7b_2014 Provision of public financial support: bilateral and other 2014

Table 7(b)

Provision of public financial support: contribution through bilateral, regional and other channels in 2014[a]

Recipient country/ region/project/programme[b]	*Total amount*		*Status[c]*	*Funding source[g]*	*Financial instrument[g]*	*Type of support[g, h]*	*Sector[d]*	*Additional information[e]*
	Climate-specific[f]							
	European euro - EUR	*USD*						
Total contributions through bilateral, regional and other channels	25.54							
/ China / Sino- Italian Climate Change Cooperation Programme	0.67		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	
/ Pacific SIDS / Cooperation on Climate Change	0.39		Provided	OOF	Grant	Adaptation	Energy	
Montenegro /	2.04		Provided	OOF	Grant	Cross-cutting	Energy, Agriculture, Cross-cutting	
Brazil /	0.65		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	
Tunisia, Libya /	0.79		Provided	OOF	Grant	Cross-cutting	Energy, Cross-cutting	
Afghanistan /	0.01		Committed	ODA	Grant	Adaptation	Other (Rural development)	Italian contribution to the national solidarity programme - expert fund
Albania /	0.06		Committed	ODA	Grant	Mitigation	Other (Agricultural development)	Celim / Strengthening food and agriculture supply chains of the Mountain Communities and

							Rural Puke
Algeria /	0.01	Committed	ODA	Grant	Cross-cutting	Water and sanitation	TEMPORA / Sun Water project: purchase of water for Saharawi people in the deserted area of Tifariti
Angola / PIPDEFA (Integrated program for the protection and development of coastal forests of Angola)	0.25	Committed	ODA	Grant	Cross-cutting	Other (Environmental policy and administrative management)	COSPE - COOPERAZIONE PER LO SVILUPPO DEI PAESI EMERGENTI / Participatory and sustainable management of forest resources
Benin / Waste management in Natitingou	0.02	Committed	ODA	Grant	Mitigation	Other (Waste management / disposal)	POZZO DI GIACOBBE-JAKOBSBRUNNEN ONLUS / Waste management in Natitingou, Benin
Bolivia / Project for sustaining the integrated management of RIO GRANDE , SANTA CRUZ, BOLIVIA (ANGIRG)	0.39	Committed	ODA	Grant	Mitigation	Water and sanitation	ISTITUTO PER LA COOPERAZIONE UNIVERSITARIA - ICU / The project aims at improving the capacity of the population of Santa Cruz valleys to adapt to climate change as well as to its impact on the hydrological cycle.
Bolivia / Quinoa , the gold of the Andes . An integral chain for food security in Bolivia	0.06	Committed	ODA	Grant	Cross-cutting	Other (Agricultural development)	Chico Mendes Onlus / Quinoa , the gold of the Andes . An integral chain for food security in Bolivia
Bolivia / Small hydroelectric plants for the adaptation to climate change	0.43	Committed	ODA	Grant	Mitigation	Energy	FONDAZIONE DI COOPERAZIONE RURALE IN AFRICA E AMERICA LATINA / The project aims at improving the quality of life and the access to electricity from renewable energy sources of the inhabitants of the Bolivian

							rural population
Bolivia / Small seeds , great opportunities ! " BOLIVIA . Contribution CDM	0.01	Committed	ODA	Grant	Adaptation	Agriculture	ASPEM / Small seeds , great opportunities ! " BOLIVIA . Contribution CDM
Bolivia / TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE - EXPERT FUND	0.01	Committed	ODA	Grant	Cross-cutting	Forestry	TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE
Bolivia / TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE - LOCAL FUND	0.46	Committed	ODA	Grant	Cross-cutting	Forestry	Italian Embassy in LA PAZ / TRILATERAL DEVELOPMENT PROGRAM AMAZON WITHOUT FIRE
Bosnia and Herzegovina /	1.20	Committed	ODA	Grant	Mitigation		SARAJEVO / Reconstruction and development following the floods of May 2014. FL
Brazil / Food security and energy independence : strengthening the chain of family farming in peri - urban Mozambique and Brazil	0.01	Committed	ODA	Grant	Mitigation	Agriculture	Deafal / Food security and energy independence : strengthening the chain of family farming in peri - urban Mozambique and Brazil
Burkina Faso / Contribution to the non-profit organization Planet Finance Italy for the realization of microfinance projects in Burkina Faso	0.05	Committed	ODA	Grant	Cross-cutting	Agriculture	Planet Finance / Contribution to the non-profit organization Planet Finance Italy for the realization of microfinance projects in Burkina Faso
Burkina Faso / Table Agriculture Piemonte & Sahel. Production, processing and marketing of local rice in support of some realities of producers	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Regione Piemonte / The project aims to support the rice growers of the four countries to further develop the cooperation between them , start a process aiming to improve the chain of rice production in each country , to preserve soil fertility through the organic farming and the selection local seeds

							and to consolidate the dialogue between Italian and local actors on the issue of rice
Burkina Faso / Women and inclusive rural development as a means of achieving food security in Burkina Faso	0.19	Committed	ODA	Grant	Adaptation	Agriculture	FONDAZIONE DI COOPERAZIONE RURALE IN AFRICA E AMERICA LATINA / The proposal consists of an intervention in the following areas: 1) agriculture and food security, 4) development of the private sector including endogenous 5) empowerment of women
Cameroon / stregthening self-management abilities and local development	0.05	Committed	ODA	Grant	Adaptation	Water and sanitation	ARCS - ARCI CULTURA E SVILUPPO ARCS - ARCI CULTURA E SVILUPPO / the project aims at improving the supply of basic drinking water for the population of Bankondji, as well as the management of water resources
China / 2014 work plan	0.12	Committed	ODA	Grant	Cross-cutting	Cross-cutting	CCICED / The initiative aims to conduct policy research on environmental management and institutional innovation in order to realize Ecological Civilization through a sustainable and coordinated development of the environment, the economy, and society.
China / CREDIT LINE IN ENVIRONMENT IN WESTERN PROVINCES OF CHINA - LOCAL FUND	0.02	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Italian Embassy in Beijin / CREDIT LINE IN ENVIRONMENT IN WESTERN PROVINCES OF CHINA - LOCAL FUND

China / SINOITALIAN ENVIRONMENTAL PROGRAMME	0.02	Committed	ODA	Grant	Cross-cutting	Cross-cutting	SINOITALIAN ENVIRONMENTAL PROGRAMME - Expert fund
Congo / Completion of a micro-power plant in M'bau	0.03	Committed	ODA	Grant	Cross-cutting	Energy	CEI/Completion of a micro-power plant in M'bau
Democratic Republic of the Congo / Organic agriculture in South Kivu	0.04	Committed	ODA	Grant	Cross-cutting	Agriculture	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Organic agriculture project to mitigate the consequences of climate change in South Kivu
Ecuador / Pachamama - Support for improved food security	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Acea Onlus / Pachamama "Support for improved food security - through a diversified agribusiness, increasing productivity and marketing association of small producers in the chain of Nacional Cacao Fino de Aroma and sugar cane certified organic and fair trade delel provinces of Guayas , Los Rios , Manabi , Bolivar and Cotopaxi - Ecuador State
Egypt / Socio-economic Development of the North West Coast of Egypt	0.40	Committed	ODA	Grant	Cross-cutting	Agriculture	Egyptian Authorities / The project intends to contribute to the socio-economic development of the North-west coast of Egypt
Eritrea / Construction of a water main for the Keren city	0.03	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Il Tucul / Construction of a water main for the Keren city
Ethiopia / Drought Resilience and Sustainable Livelihoods Programme (DRSLP) - Local fund	0.30	Committed	ODA	Grant	Cross-cutting	Agriculture	Italian Embassy in ADDIS ABEBA / Within the framework of the IDDRSI and the Ethiopia CPP , this initiative aims at enhancing drought resilience and improving sustainable livelihoods of the pastoral and

							agro-pastoral communities in 4 selected weredas of Afar
Ethiopia / EMERGENCY INITIATIVE TO REDUCE THE RISK IN THE FIELDS OF WATER, HYGIENE AND ENVIRONMENTAL HEALTH - EXPERT FUND	0.01	Committed	ODA	Grant	Adaptation	Cross-cutting, Other (Disaster prevention and preparedness)	EMERGENCY INITIATIVE TO REDUCE THE RISK IN THE FIELDS OF WATER, HYGIENE AND ENVIRONMENTAL HEALTH.
Ethiopia / Italian Contribution to the agricultural growth Program (AGP). Local fund	0.03	Committed	ODA	Grant	Cross-cutting	Agriculture	Italian Embassy in ADDIS ABEBA / The AGP is the main government programme to address agricultural growth in Ethiopia
Ethiopia / MDG 7: water and sanitation in the woreda Soddo Zuria	0.02	Committed	ODA	Grant	Adaptation	Water and sanitation	Gruppo Missioni Africa Onlus / The project , to be held in the village of Bughe Ghennet, province of Soddo Zuria, aims to increase the rate of access to drinking water, promote the use of sanitation health , a sustainable waste management , use of renewable
Ethiopia / Supporting growth and trasformation in Ethiopia through Investment Climate Improvements - Expert Fund	0.05	Committed	ODA	Grant	Cross-cutting	Industry	CARLSON WAGONLIT ITALIA SRL / The project aims to support the Government in the investment sector
Ethiopia / Water, food and health: the three keys to the development of Adwa	0.01	Committed	ODA	Grant	Adaptation	Water and sanitation	Delegaz regionale del Veneto V.I.D.E.S. (Volontariato internazionale Donna Educazione allo Sviluppo) / The overall objective of the project is to contribute to increase in the city of Adua the possibility of access to drinking water and / or reduce the rate of malnutrition of the population, in particular in pregnant women. The planned activities

							are: remake of n . 2 water access points consist of 20 taps, 9 baths and 1 shower with installation of filters for waste water; campaign in favor of adults and youth, health education including sustainable waste management and the proper use of water aimed at the prevention of infectious diseases, parasitic diseases and the improvement of sanitary conditions; 12 meetings with children and young people to prevent and / or rduce the rate of spread of diseases related to dirty water; nutritional support program for about 200 children and 100 women and quarterly meetings for about 100 mothers on proper nutrition .
Ethiopia / WATER, SANITATION AND EDUCATION IN KAFFA ZONE, SNNPR. SOCIAL SECURITY CHARGES AND INSURANCE FOR VOLUNTEERS	0.01	Committed	ODA	Grant	Adaptation	Water and sanitation	THE PROJECT CONCERNS THE WATER SUPPLY AND ENVIRONMENTAL HYGIENE OF THE COMMUNITIES IN THE REGION OF KAFFA, IN SIX WOREDA, ETHIOPIA WITH THE AIM OF IMPROVING THE LIVING CONDITIONS OF INCREASING THE AVAILABILITY OF CLEAN WATER.
Eastern Europe / Work Programme on environmental matters	0.74	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Regional Environmental Center for Central and Eastern Europe / The biennal work programme foresees projects on implementation and monitoring of children's health and air quality, capacity development on sustainability, awareness

							raising and training
Guinea-Bissau / Bambaran pa no ambienti de bubaque (protection of our environment of Bubaque). 2nd Annuity	0.20	Committed	ODA	Grant	Mitigation	Energy	Università degli Studi di Venezia - Ca' Foscari / The Project, in this second annuity, aims to improving the hygienic situation of the population of the city of Bubaque, in the archipelago of Bijagos also in order to develop and improve tourist activities. Training interventions for teachers and students and Operators of Ecocentro are continuing. It is envisaged the realization of presses for glass, plastic and other waste treatment, as well as the realization of an informative video on Waste Management . The activities aimed at identifying environmental and touristic routes as well as the related ecoguide realization, keep on being developed. The project brings to a study on replicability of the activity in other islands of the archipelago.
Guinea-Bissau / Construction of a well in Caio, Cacheu region	0.02	Committed	ODA	Grant	Adaptation	Water and sanitation	Associazione mano a mano Africa (M.A.M.A.) / Construction of a well in Caio , Cacheu region
Guinea-Bissau / Mangrove: improvement of rice growing from mangrove and protection of the mangrove trees in the region of Cacheu, Oio, Tombali	0.13	Committed	ODA	Grant	Mitigation	Agriculture	COMUNITA' INTERNAZIONALE VOLONTARI LAICI / The project aims at protecting the biodiversity and promoting the food sovereignty in Guinea Bissau

Honduras / City clean , sustainable agriculture and food security in the Trifinio " Honduras El Salvador Guatemala	0.06	Committed	ODA	Grant	Cross-cutting	Agriculture	Oxfam Italia / City clean , sustainable agriculture and food security in the Trifinio " Honduras El Salvador Guatemala
Honduras / Preparing communities to adapt to climate change through integrated processes that enable sustainable development in 27 communities	0.12	Committed	ODA	Grant	Cross-cutting	Cross-cutting, Other (Disaster prevention and preparedness)	Honduras Red Cross / Contribute to strengthening the capacity of the Honduran population against the effects of climate change, disasters caused by floods and their consequences with respect to vulnerable groups in the health sector.
Honduras / United in Building Resilience in Central Honduras	0.02	Committed	ODA	Grant	Cross-cutting	Cross-cutting, Other (Disaster prevention and preparedness)	Honduras Red Cross / To contribute to building resilience in Honduras through increased preparedness of vulnerable communities, strengthened authorities, and the promotion
Kenya / KENYA - SUSTAINABLE DEVELOPMENT OF IRRIGATION AND LAND RECLAMATION IN KENYA	0.39	Committed	ODA	Grant	Cross-cutting	Water and sanitation, Agriculture	Italian Embassy in NAIROBI / THE PROGRAM IS CONTRIBUTING TO THE DEVELOPMENT OF IRRIGATION AND LAND RECLAMATION SUBSECTORS WITHIN THE WATER SECTOR. TO THIS END, THE PROGRAM WILL PROVIDE FOR THE PARTICIPATION OF ITALIAN COOPERATION TO THE AID EFFECTIVENESS STRUCTURE OPERATING IN KENYA
Kenya / KENYA - WATER AND SANITATION TO UTILIZE THE KIRANDICH AND KIAMBERE DAM WATER RESERVOIRS	0.01	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Italian Embassy in NAIROBI / INTERVENTION TO FINALIZE THE EXISTING HYDRAULIC STRUCTURE, INCREASE THE WATER SUPPLY AND

							IMPLEMENT THE SANITATION SYSTEM OF SOME SELECTED TOWNS
Kenya / KENYA - WATER AND SANITATION TO UTILIZE THE KIRANDICH AND KIAMBERE DAM WATER RESERVOIRS - EXPERT FUND	0.03	Committed	ODA	Grant	Cross-cutting	Water and sanitation	INTERVENTION TO FINALIZE THE EXISTING HYDRAULIC STRUCTURE, INCREASE THE WATER SUPPLY AND IMPLEMENT THE SANITATION SYSTEM OF SOME SELECTED TOWNS - EXPERT FUND
Kenya / local economy and protection of the environment	0.12	Committed	ODA	Grant	Mitigation	Cross-cutting	MANI TESE 76 / The project aims to combat poverty by improving land management
Lebanon / Activities of international cooperation for civil protection	0.18	Committed	ODA	Grant	Adaptation	Cross-cutting, Other (Disaster prevention and preparedness)	CIMA reasearch Foundation International center of Environment Monitoring / Support and maintenance of the RISICO system for prediction and prevention of forest fire in Lebanon. Design of an early warning system for the flood risk
Lebanon / INTEGRATED SYSTEM FOR THE MANAGEMENT OF THE JOUZ RIVER RESOURCES AIMED AT INSTALLATION OF HYDRO POWER PLANT	0.76	Committed	ODA	Grant	Mitigation	Energy	Lebanon Authorities / CONTRIBUTING TO THE CAPACITY DEVELOPMENT OF THE LEBANESE GOVERNMENTAL STRATEGY FOR THE MITIGATION OF CLIMATE CHANGE
Lebanon / Technical Assistance under the Lebanon Environmental Pollution Abatement Project. - Expert Fund	0.03	Provided	ODA	Grant	Mitigation	Cross-cutting	CARLSON WAGONLIT ITALIA SRL / The program aims at strengthening the capacities of the Lebanese Ministry of Environment (MOE) in the field of industrial pollution management

Lebanon / Supply and installation of 20 solar street lights	0.03	Committed	ODA	Grant	Mitigation	Energy	MINISTERO DIFESA - CIMIC/Supply and installation of 20 solar street lights
Lebanon / Supply and installation of 20 solar street lights	0.02	Committed	ODA	Grant	Mitigation	Energy	MINISTERO DIFESA - CIMIC/Supply and installation of 20 solar street lights
Lebanon / Supply and installation of 30 solar street lights	0.03	Committed	ODA	Grant	Mitigation	Energy	MINISTERO DIFESA - CIMIC/Supply and installation of 30 solar street lights
Malawi / Extension of the irrigation project	0.02	Committed	ODA	Grant	Adaptation	Water and sanitation	Associazione Regionale Trentina di Cooperazione Internazionale - COOPI / Extension of the irrigation and electricity supply for the irrigation system and other social activities in the regions and Kasungu Likoma Island
Maldives / Training nature guides for the Maldives (University Course) and Environmental Education in Primary School (MALDIVE)	0.03	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Università Milano Bicocca - Relazioni internazionali / Training nature guides for the Maldives (University Course) and Environmental Education in Primary School (MALDIVE)
Mali / A smile for Mali children - II edition	0.01	Committed	ODA	Grant	Cross-cutting	Energy	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Improving living conditions of neglected children by building solar energy stations for an orphanage
Mali / Potable Water Supply of Bamako from the Kabala Station	0.06	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Italian Embassy in DAKAR / The Kabala project will supply the Bamako town, serving 1.200,000 new users and improving the service for 350,000 old users.

Mexico / CREO	0.01	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Supporting under-priviledged families living close to rubbish dumps and teaching them recycling-composting innovative and effective techniques
Morocco / IMPROVING ACCESS TO WATER AND SANITATION IN THE SETTAT PRIVINCE - MOROCCO PROJECT	0.02	Committed	ODA	Grant	Cross-cutting	Water and sanitation	Italian Embassy in RABAT / THE INITIATIVE, IN LINE WITH THE MOROCCAN GOVERNMENT'S STRATEGIC PLAN, AIMS AT IMPROVING HYGIENIC AND ENVIRONMENTAL CONDITIONS AND THE ACCESS TO DRINKING WATER, AS A PRIORITY FOR THE ACHIEVEMENT OF THE MDGS
Morocco / IMPROVING ACCESS TO WATER AND SANITATION IN THE SETTAT PRIVINCE - MOROCCO PROJECT. EXPERT FUND	0.01	Committed	ODA	Grant	Cross-cutting	Water and sanitation	THE INITIATIVE, IN LINE WITH THE MOROCCAN GOVERNMENT'S STRATEGIC PLAN, AIMS AT IMPROVING HYGIENIC AND ENVIRONMENTAL CONDITIONS AND THE ACCESS TO DRINKING WATER, AS A PRIORITY FOR THE ACHIEVEMENT OF THE MDGS
Morocco / OLIVO - SUPPORTING LOCAL FARMERS OF TADLA-AZILAL IMPROVING THE OLIVE OIL PRODUCTION COMMERCIALIZATION-INSURANCE AND SOCIAL CHARGE	0.01	Committed	ODA	Grant	Adaptation	Agriculture	THE PROJECT AIMS TO COMBAT THE PHENOMENON OF ABANDONMENT OF THE COUNTRYSIDE AND PRODUCTIVE SUBURBS BY YOUNG PEOPLE, THROUGH INTEGRATED AND COORDINATED ACTIONS THAT ARE ABLE TO ADDRESS THE ISSUE BOTH ECONOMICALLY AND SOCIALLY.

Morocco / Vocational training and start-up of young entrepreneurs in the solar sector in the Province of Tata	0.03	Committed	ODA	Grant	Cross-cutting	Energy	Regione Emilia-Romagna/Aims:to set up a small enterpise in the solar energy sector. To create a solar panels pilot plant for oasi irrigation
Mozambique / A supply chain for sustainable economic growth	0.21	Committed	ODA	Grant	Adaptation	Water and sanitation	FONDAZIONE DI COOPERAZIONE RURALE IN AFRICA E AMERICA LATINA / The needy populations of the areas involved have access to services through a sustainable economic growth.
Mozambique / Empowering conditions for good water governance – a financial and economically sustainable model in Vilanculo, Mozambico	0.01	Committed	ODA	Grant	Adaptation	Water and sanitation	CeTAmb (Centro di doc.e ricerca sulle tecnologie appropriate per la gestione dell'ambiente nei PVS) / Monitoring of the water access in the city of Vilanculo with a special focus on the quality of water resources available
Mozambique / Enlight the Future	0.01	Committed	ODA	Grant	Cross-cutting	Energy	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Solar powered energy supply to 820 families in Namaacha district and start-up of income-generating activities involving a solar lantern rental system
Mozambique / FORTUR - vocational training and educational programs to increase the rate of employment in the hotel and tourism sector in Cabo D	0.04	Committed	ODA	Grant	Mitigation	Cross-cutting	ISTITUTO OIKOS / The project aims to align vocational training programs with the needs of the emerging tourism industry, helping to reduce disparities in access to education for women and vulnerable groups.
Mozambique / Transformações para alimentar or planet . Dies	0.01	Committed	ODA	Grant	Adaptation	Agriculture	SVI / Transformações para alimentar or planet . Dies

cashew , mango , citrus and vegetables in the province of Inhambane - Mozambique							cashew , mango , citrus and vegetables in the province of Inhambane - Mozambique
Myanmar / Agriculture, Reforestation and Education	0.07	Committed	ODA	Grant	Adaptation	Agriculture, Forestry	C.E.I. - 8XMILLE / Promotion of a sustainable development model in the Kyang Tong: Agriculture, Reforestation and Education
Myanmar / Integrated development plan for tourism enhancement: antique cities of Upper Myanmar	0.19	Committed	ODA	Grant	Cross-cutting	Cross-cutting	UNIVERSITA' DEGLI STUDI DI FIRENZE / Integrated development plan for tourism enhancement: antique cities of Upper Myanmar
Myanmar / Reforestation project	0.01	Committed	ODA	Grant	Adaptation	Forestry	C.E.I. - 8XMILLE / Reforestation project
Nepal / The Fruits of the Garden : the Home Gardens for sustainable agriculture in Nepal and Lombardy	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Asia / The Fruits of the Garden : the Home Gardens for sustainable agriculture in Nepal and Lombardy
Nicaragua / Reforestation of land in the region of Wamblan	0.02	Committed	ODA	Grant	Adaptation	Agriculture, Forestry	C.E.I. - 8XMILLE / Cultivation of 35 hectares of maize, beans and 17.5 hectares of reforestation of 35 hectares of land in the region of Wamblan
Nicaragua / Strengthening Nicaragua Red Cross capacity to cope with disaster and emergency situations.	0.04	Committed	ODA	Grant	Cross-cutting	Cross-cutting, Other (Disaster prevention and preparedness)	Nicaragua Red Cross / The project aims at: a) improving the performance of the National Society's response action to emergencies and / or disasters; b) promoting the use of community tools in the preparation and response to disasters and crisis.
Niger / ANADIA Niger - Climate Change Adaptation,	0.01	Committed	ODA	Grant	Adaptation	Cross-cutting	Ibimet CNR / Politecnico di Torino Dip. Interateneo

Disaster Prevention and Agricultural Development for Food Safety							Scienze, Progetto e Politiche del Territorio / This project aims to strengthen the capacities of stakeholders at national, regional, municipal and village level to assess flood and drought risk and to identify adaptation measures at local level. Anadia-Niger operate in the Tillabéri region (2.7 million people, 97,200 km2), in the 3 rural municipalities where the flood risk is higher (Gothèye, Imanan and Ouro Gueladjio) and in 6 among the most flood and drought prone villages. The Projet is co-funded by the Italian Ministry of Foreign Affairs, by Ibimet CNR, Directorate National of Meteorology of Niger and DIST-Politecnico di Torino.
Niger / Projet d'accès aux marchés et d'infrastructures rurales dans la région de Tahoua (PAMIRTA)	8.00	Committed	ODA	Concessional Loan	Mitigation	Cross-cutting, Agriculture	Projet d'accès aux marchés et d'infrastructures rurales dans la région de Tahoua (PAMIRTA)
SIDS / "Climate change assessment in small Pacific islands states" (III YEARS 'OF 3)	0.05	Committed	ODA	Grant	Cross-cutting	Water and sanitation	CMCC / Contribution to the CMCC - Euro Mediterranean Centre for Climate Change, "Climate change assessment in small Pacific islands states" (III YEARS 'OF 3)
Pakistan / EXPERTS FUND-CONTRIBUTION FOR THE SET UP THE TECHNICAL SUPPORT UNIT FOR THE DEBT CONVERSION - EXPERT FUND	0.04	Committed	ODA	Grant	Cross-cutting	Cross-cutting	ASSISTANCE TO THE JOINT TECHICAL UNIT FOR THE IMPLEMENTATION OF THE DEBT CONVERSION INITIATIVE

Peru / Indigenous communities and amazonian natural resources	0.17	Committed	ODA	Grant	Mitigation	Agriculture, Forestry	C.E.I. - 8XMILLE / Indigenous communities and amazonian natural resources: strengthening of the producers organized in cooperative Achuar Shakaim as an example of human and sustainable development for the marginalized peoples of the Peruvian jungle
Peru / Installation of 12 windmill blade in Pomabamba district, Perù	0.02	Committed	ODA	Grant	Mitigation	Energy	Regione Autonoma Trentino Alto Adige/Installation of 12 windmill blade in Pomabamba district, Perù
Senegal / A PHOTOVOLTAIC POWER STATION AT THE LIMAMOULAYE SECONDARY HIGH SCHOOL (SENEGAL). SOCIAL SECURITY CHARGES AND INSURANCE FOR VOLUNTE	0.01	Committed	ODA	Grant	Cross-cutting	Energy	THE AIM OF THE PROJECT IS TO INSTALL A PHOTOVOLTAIC POWER STATION AT THE LIMAMOULAYE SECONDARY HIGH SCHOOL OF GUEDAWAYE IN ORDER TO ENSURE THE ENERGETIC SELF-SUFFICIENCY OF THE INSTITUTE AND PARTICULARLY THE COMPUTER LABS FUNCTIONING.
Senegal / ACCESS TO WATER AND SANITATION FOR THE RURAL COMMUNITY OF NIAMONE. SOCIAL SECURITY CHARGES AND INSURANCE FOR VOLUNTEERS	0.02	Committed	ODA	Grant	Mitigation	Water and sanitation	ACRA PROPOSES A SERIES OF INTERVENTIONS TO SUPPLY DRINKABLE WATER, ACCORDING TO WHO STANDARDS, AND SANITATION SERVICES, ACCORDING TO UNICEF STANDARDS, TO THE 8.476 INHABITANTS OF THE 11 VILLAGES PART OF THE RURAL COMMUNITY OF NIAMONE, SENEGAL.
Senegal / ECO-SYSTEM SERVICE IMPLEMENTATION AND GREEN ECONOMY FOR MATAM	0.02	Committed	ODA	Grant	Cross-cutting	Energy	THE PROJECT AIMS TO IMPROVE THE ECONOMIC DEVELOPMENT IN THE REGION

REGION DEVELOPMENT. SOCIAL SECURITY CHARGES AND INSURANCE FOR VOLUNT							OF MATAM, SENEGAL, THROUGH THE INTRODUCTION OF SOME APPLICATIONS OF RENEWABLE ENERGY, IN PARTICULAR THE SOLAR, THE THERMAL, THE PHOTOVOLTAIC.
Senegal / Food Development . Family farming and processing sectors in the regions of Thies and Louga - Senegal	0.01	Committed	ODA	Grant	Mitigation	Agriculture	Ipsia / Food Development . Family farming and processing sectors in the regions of Thies and Louga - Senegal
Senegal / FREDDAS RENEWABLE SOURCES OF ENERGY FOR SUSTAINABLE DEVELOPMENT OF SENEGAL RIVER VALLEY. SOCIAL SECURITY CHARGES AND INSURANCE FOR	0.01	Committed	ODA	Grant	Cross-cutting	Energy	THE PROJECT AIMS TO PROMOTE SUSTAINABLE AND DURABLE DEVELOPMENT UNDER ECONOMIC AND STRATEGIC PROFILE IN DAGAN DEPARTMENT (SAINT LOUIS REGION) AND KANEL (MATAM REGION), BOTH LOCATED IN THE SENEGAL RIVER VALLEY
Senegal / Italy-Senegal Agricultural Program - Contribution art. 15	0.48	Committed	ODA	Grant	Cross-cutting	Agriculture	SENEGAL Autorities / The program will contribute to the improvement of food security for rural populations in the target regions of the Country Program through a concerted and sustainable approach at local level.
Senegal / Italy-Senegal Agrigultural Program - Local fund	0.06	Committed	ODA	Grant	Cross-cutting	Agriculture	Italian Embassy in DAKAR / The program will contribute to the improvement of food security for rural populations in the target regions of the Country Program through a concerted and sustainable approach at local level.
Senegal / Microjardins Milan - Dakar : cultivate a healthy and	0.06	Committed	ODA	Grant	Cross-	Agriculture	Acra-Ccs / Microjardins Milan - Dakar : cultivate a healthy and

productive cities . " (Senegal) .					cutting		productive cities . " (Senegal) .
Senegal / SENEGAL- SUPPORT TO THE NATIONAL PROGRAMME FOR INVESTMENTS IN AGRICULTURE	0.03	Committed	ODA	Grant	Cross-cutting	Agriculture	CARLSON WAGONLIT ITALIA SRL / IMPROVEMENT OF LOCAL ECONOMIC DEVELOPMENT
Senegal / Solar Energy for education. A photovoltaic power station at Limamoulaye High School of Dakar	0.01	Committed	ODA	Grant	Cross-cutting	Energy	ONG CESES / Building of a 40 KW photovoltaic power station on the renewed roof in order to make the school energetically independent. Moreover, the power station is a technical laboratory for students from the Lamamoulaye High School and from Politecnico di Milano who will have the chance to study the station's efficiency at a different latitude.
Senegal / Use of remote sensing and terrain modelling to identify suitable zones for manual drilling in Africa and support low cost water supply	0.15	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Natural Environment Research Council / In the framework of the programme for the achievement of MDG (MIllenium Development Goals) for water supply, UNICEF is promoting manual drilling throughout Africa; with different activities: advocacy, mapping of suitable zones, technical training and institutional support. Manual drilling refers to those techniques of drilling boreholes for groundwater exploitation using human or animal power (not mechanized equipment). These techniques are well known in countries with large alluvial deposits (India, Nepal, Bangladesh, etc). They are cheaper than mechanized

							boreholes, easy to implement as the equipment is locally done, able to provide clean water if correctly applied. But manual drilling is feasible only where suitable hydrogeological conditions are (shallow layers not to hard and groundwater not deeper than 25 m). Therefore a preliminary identification of suitable areas is necessary. The method for the identification of suitable zones at country levelalready aplied in 15 countries is based on the analysis of existing hydrogeological data.
Senegal / Green energy	0.04	Committed	ODA	Grant	Cross-cutting	Energy	Unione delle Chiese Metodiste e Valdesi, Ente morale di Culto, Istruzione e Beneficenza/Setting up a solar-powered pump for water supply and irrigation and supporting the three vocational training centers to promote agriculture and animal husbandry education
Serbia / Reconstruction and development following the floods of May 2014. FL (Fopndi La Pergola)	0.32	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Italian Embassy in BELGRADO / Riconstruction and development following the floods of May 2014. FL
Seychelles / Interuniversity cooperation Torino - Sahel : program area on teaching , research and training in Senegal , Burkina Faso , Niger , Mali and Cape Verde	0.01	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Centor Interdiparimentale Studi Africa Occidentale (CIASAO) - Università di Torino / Interuniversity cooperation Torino - Sahel : program area on teaching , research and training in Senegal , Burkina Faso , Niger , Mali and Cape

							Verde
Seychelles / Support to the subsistence agriculture and biodiversity protection to achieve food self-sufficiency	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Comitato Pavia-Asti- Senegal (CPAS) / As part of the development strategy contained in the Local Development Plan of CR Coubalan, the project aims to contribute to the attainment of food self-sufficiency of its populations, increasing the production and yields of cultivated land in rice. It aims, in particular, to: strengthen local strategies to achieve food self-sufficiency by organizing meetings for consultation and coordination among the elected ,strenghten the technical services of the State, farmers' organizations and civil society; organize technical training, seminars and workshops, with the support of technicians from Piedmont, on specific issues regarding the improvement of agricultural services for farmers and technicians working on site; improve, with the support of the technical services and local counterparts Piedmont (Coldiretti, Ente Risi), the local varieties of rice, strengthen the environmental protection and facilitate people's access to the small farm machinery.
South Africa / A SUSTAINABLE COMMUNITY ENFORCEMENT IN THE INFORMAL SETTLEMENTS OF BUFFALO CITY MUNICIPALITY. SOCIAL	0.01	Committed	ODA	Grant	Mitigation	Water and sanitation	THE PROJECT BUILDS AN INTEGRATED ACTION TO IMPROVE THE LIVING CONDITIONS OF PEOPLE LIVING IN INFORMAL

SECURITY CHARGES AND INSURAN							SETTLEMENTS IN THE BUFFALO CITY MUNICIPALITY (SOUTH AFRICA) THROUGH MEASURES PRIMARILY AIMED AT WOMEN, CHILDREN AND ORPHANS EXPOSED TO VIOLENCE
Africa / Advanced technical and managerial training	0.19	Committed	ODA	Grant	Cross-cutting	Cross-cutting	ISTITUTO AGRONOMICO PER L'OLTREMARE / the initiative aims at strengthening individual capacities of 16 professionals from Subsaharan priority countries through the delivery of a Master of Science in Natural Resources Management for Tropical Rural Development
Africa / CONSERVATION AND EQUITABLE USE OF BIOLOGICAL DIVERSITY IN THE SADC REGION: FROM GEOGRAPHIC INFORMATION SYSTEM (GIS)	0.26	Committed	ODA	Grant	Cross-cutting	Cross-cutting	UNIROMA SAPIENZA DIP BIOLOGIA AMB. / THE INITIATIVE AIMS AT PROMOTING BIODIVERSITY CONSERVATION AND SUSTAINABLE ECONOMIC DEVELOPMENT IN THE SADC REGION, THROUGH BOTH BUILDING THE CAPACITY
Africa / Construction of wells in Southern Sudan and Uganda and promotion of development awareness for the Community	0.20	Committed	ODA	Grant	Adaptation	Water and sanitation	Associazione Centro Aiuti Volontari / Construction of wells in Southern Sudan and Uganda and promotion of development awareness for the Community
South Sudan / Emergency initiative in support of the vulnerable people in South Sudan.	0.40	Committed	ODA	Grant	Adaptation	Cross-cutting	Italian Embassy in ADDIS ABEBA / The initiative will benefit mainly vulnerable groups in Sud Sudan through promotion of agricolture and food security and improvement of basic services.

Sri Lanka / Integrated Rural Dev. through Sustainable Business Social. Technology and innovation applied to two traditional Sri Lankan food chains:spices and rice	0.01	Committed	ODA	Grant	Adaptation	Agriculture	Icei / SRI - BIZ - Integrated Rural Development through Sustainable Business Social . Technology and innovation applied to two traditional Sri Lankan food chains : spices and rice
Sri Lanka / SRI-ECO Integrated rural development ECOsustainable in Sri Lanka	0.13	Committed	ODA	Grant	Mitigation	Agriculture	ISTITUTO COOPERAZIONE ECONOMICA INTERNAZIONALE / The project contributes to the resolution of the socio-economic problems of the rural vulnerable population of Sry Lanka, strengthening the so-called enabling environment to foster the development of the local endogenous production
Tanzania / Construction of a tree farm and strengthening of the environment as a climate change adaptation measure in the district of Missenyi.	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Kolping Society of Tanzania / Construction of a tree farm and strengthening of the environment as a climate change adaptation measure in the district of Missenyi.
Tanzania / Electricity from renewable sources	0.04	Committed	ODA	Grant	Mitigation	Energy	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Bringing electricity into rural areas by building Renewable energy power stations
Tanzania / Improvement of the pasture soil and introduction of eco-sustainable practices in agriculture in the forestry sector as a climate change measure.	0.01	Committed	ODA	Grant	Cross-cutting	Agriculture	Missenyi District Local Government / Improvement of the pasture soil and introduction of eco-sustainable practices in agriculture in the forestry sector as a climate change measure in the Missenyi district, Kagera, Tanzania.

Tanzania / KARIBU MAGI: environmental protection and improvement of health conditions in the Village of Msolwa, Tanzania	0.02	Committed	ODA	Grant	Adaptation	Water and sanitation	Comune di Cavaion Veronese / The project aims to contribute to the improvement of the living conditions of the population by providing access to drinking water and by improving draining of sewage and waste disposal. There will be actions on waterworks, for the restoration and cleaning of the pipeline with installation of water purifiers. A system of sewage draining with biogas production will be also set up together with a system of waste collection and disposal. There will be training courses for local teams working for the realization of the activities and their subsequent maintenance. Information and awareness activities will be also organized during the project.
Tanzania / Mobilization of the local communities to adapt to climate change and to reduce its impact in the Missenyi region.	0.04	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Kolping Society of Tanzania / Mobilization of the local communities to adapt to climate change and to reduce its impact in the Missenyi region.
Tanzania / S.A.F.E. Gardens : Sustainable Actions For Edible Gardens (Tanzania)	0.05	Committed	ODA	Grant	Cross-cutting	Agriculture	Oikos / S.A.F.E. Gardens : Sustainable Actions For Edible Gardens (Tanzania)
Togo / Solar energy for the hospital	0.02	Committed	ODA	Grant	Mitigation	Energy	Unione delle Chiese Metodiste e Valdesi, Ente morale di Culto, Istruzione e Beneficenza/Implanting photo-voltaic cells to produce electrical energy in the Maison

							des Anges Hospital
Tunisia / Contribution to MEDREC Mediterranean Renewable Energy Centre	0.21	Committed	ODA	Grant	Cross-cutting	Cross-cutting	MEDREC Mediterranean Renewable Energy Centre / Financial contribution to the MEDREC related to management costs and development of projects on renewable energies in Tunisia
Tunisia / Contribution to the APREIME - Agency for the promotion of economic relations Italo - Mediterranean		Committed	ODA	Grant	Cross-cutting	Energy	APREIME - Agency for the promotion of economic relations Italo - Mediterranean / Support for the promotion and development of pilot projects in the field of renewable energy
Uganda / Reliable and affordable power systems for the Lacor hospital (year2) and personnel exchange between the Lacor Hospital and the hospital in Bozen(2014)	0.02	Committed	ODA	Grant	Mitigation	Energy	Provincia di Bolzano/Reliable and affordable power systems for the Lacor hospital (2nd year) and personnel exchange between the Lacor Hospital and the hospital in Bolzano/Bozen in 2014.
Uganda / Solar power project	0.02	Committed	ODA	Grant	Mitigation	Energy	Provincia di Bolzano/Solar power project.
Viet Nam / PROJECT TO SUPPORT AGRICULTURE AND IMPROVEMENT OF THE WATER SYSTEM, PHU VANG DISTRICT, PROVINCE OF THUA	0.06	Committed	ODA	Grant	Mitigation	Agriculture	GRUPPO DI VOLONTARIATO CIVILE GVC / THE PROJECT AIMS TO IMPROVE AGRICULTURE FIELD AND THE WATER SYSTEM IN THE DISTRICT PHU VANG, PROVINCE OF THUA THIEN HUE, VIETNAM
Viet Nam / SUPPORT TO BALANCE PAYMENTS AND WATER SECTOR PROGRAM AID. Financing to recipient	0.56	Committed	ODA	Grant	Mitigation	Water and sanitation	Viet Namese Authorities / SUPPORT TO BALANCE PAYMENTS AND WATER SECTOR PROGRAM AID

government institutions							
Middle East and North Africa, West Bank and Gaza Strip / Organic fertilizers	0.03	Committed	ODA	Grant	Cross-cutting	Agriculture	CENTRO REGIONALE DI INTERVENTO PER LA COOPERAZIONE / THE AIM IS TO CONTRIBUTE TO MITIGATE THE CLIMATE CHANGE EFFECTS IN AGRICOLTURAL PASTORAL AREA IN ORDER TO PROMOTE FOOD SECURITY AND TO ENHANCE LAND ECOSUSTAINABLE MANAGEMENT
Middle East and North Africa, West Bank and Gaza Strip / POSIT - PRIMARY HEALTH CARE	0.72	Committed	ODA	Grant	Cross-cutting	Cross-cutting	Palestinian Authorities / THE PROJECT AIMS TO SUPPORT THE STRENGHTENING OF PRIMARY HEALTH CARE SYSTEM OF THE PALESTINIAN MINISTRY OF HEALTH
Middle East and North Africa, West Bank and Gaza Strip /	0.01	Committed	ODA	Grant	Adaptation	Agriculture	Unione delle Chiese Metodiste e Valdesi - 8XMILLE / Increasing rural community resilience in the Gaza Strip, by strenghtening biodiversity protection and sustainable production practices, by creating strategic seeds reserves and by providing agricoltural training to beneficiaries
Middle East and North Africa, West Bank and Gaza Strip / WOMEN'S EMPOWERMENT AND LOCAL DEVELOPMENT EX ART 15 LA PERGOLA	0.40	Committed	ODA	Grant	Cross-cutting	Cross-cutting	THE PROGRAMME AIMS TO INCREASE THE OPPORTUNUNITIESFOR SOCIO-ECONOMIC DEVELOPMENT OF PALESTINIAN WOME
Zimbabwe / Purchase, installation and connection of solar panels for Emerald Hill	0.02	Committed	ODA	Grant	Cross-cutting	Energy	CEI/Purchase, installation and connection of solar panels for

Children's Home	Emerald Hill Children's Home

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

[a] Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

[b] Parties should report, to the extent possible, on details contained in this table.

[c] Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

[d] Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under “Other”.

[e] Parties should report, as appropriate, on project details and the implementing agency.

[f] Parties should explain in their biennial reports how they define funds as being climate-specific.

[g] Please specify.

[h] Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

CTF Table 8 Provision of Technology Development and Transfer Support

Provision of technology development and transfer support[a,b]

Recipient country and/or region	*Targeted area*	*Measures and activities related to technology transfer*	*Sector*[c]	*Source of the funding for technology transfer*	*Activities undertaken by*	*Status*	*Additional information*[d]
China	Mitigation and Adaptation	CCS Technologies studies; geological investigation, data colelction and interpretation; emission sources investigation and analysis	Other (Carbon capture and storage)	Public	Private and Public	Implemented	
China	Mitigation and Adaptation	Design, demostration and validation of an open platform for data sharing;	Transport	Public	Public	Implemented	Processing and management for urban sustainable transportation
Mexico	Mitigation	Application of solar energy for food refrigeration	Energy, Agriculture	Public	Private and Public	Implemented	
Brazil	Mitigation	Application of solar heating for industrial process, in the Pirelli plant based in Feira de Santana.	Energy	Private and Public	Private and Public	Implemented	Application of a medium temperature solar collector receiver tube-based high-efficiency selective coating DSG with high performance

		Application of direct steam generation at plant.					
Papua New Guinea	Mitigation	Installation of three mini PV solar systems, a mini hydro project, a biodiesel project and several training activities	Energy	Public	Public	Planned	
Kiribati	Adaptation	Installation of solar pump system	Other (Water)	Public	Public	Implemented	
Kiribati	Mitigation	Setting up and checking of wind sensors on the Tower; Training of Government Representatives	Energy	Public	Public	Implemented	
Micronesia (Federated States of)	Mitigation	Installation of four photovoltaic (PV) power systems; data sharing.	Energy	Public	Public	Implemented	

Salomon Islands	Mitigation	Application of small scale solar lighting system	Energy	Public	Public	Implemented	
Brazil	Mitigation	Application of solar heating for industrial process, in the Pirelli plant, based in Feira de Santana. Application of direct steam generation at plant. Application of a medium temperature solar collector receiver tube-based high-efficiency selective coating DSG with high performance.	Energy	Private and Public	Private and Public	Implemented	
China	Mitigation	Low-NOx Emission Gas-boiler Pilot Project - The project promotes the technical retrofitting in the use of gas-fired boilers, to lower the NOx emission. According to Beijing's	Energy	Public	Private and Public	Implemented	Two Italian companies - mainly: Elco and Riello - are involved in the project. In particular, Elco gives solutions for industrial, residential and commercial heating, from 11kWto 45MW, by providing burner head replacement + flue gas recirculation + control system upgrading, and boiler replacement, circulating pump and subsystem replacement. Riello's technology consists of retrofitting the existing burners with a new combustion head and other special components, plus flue gas recirculation system, with a low

		Emission Standards for Boilers Air Pollutants (May 2015), the NOx emission from existing boilers should be below 80 mg/m3 and from new boilers below 30 mg/m3, from the year of 2017.					NOx emission lower than 80 mg/m3, possibly achieving emissions around 60mg/M3.
Congo	Mitigation and Adaptation	Completion of a micro-power plant in M'bau	Energy	Public	Public	Planned	
Egypt	Mitigation and Adaptation	New materials with low environmental impact for thin film solar cells fabrication	Energy	Public	Public	Planned	The project has several aspects: 1. Development of CZTS films for solar cells application. 2. Physical understanding and overcoming of limiting processes in prepration of CZTS films. 3. Fabrication of low-cost, stable and efficient solar cells
Lebanon	Mitigation	Integrated system for the management of the Jouz river resources aimed at installation of hydro power plant	Energy	Public	Public	Planned	
Lebanon	Mitigation	Installation of 70 solar street	Energy	Public	Public	Planned	

		lights					
Mali	Mitigation and Adaptation	Installation of solar energy stations	Energy	Public	Public	Planned	Improving living conditions of neglected children by building solar energy stations for an orphanage
Mozambique	Mitigation and Adaptation	Solar power energy	Energy	Public	Public	Planned	Solar powered energy supply to 820 families in Namaacha district and start-up of income-generating activities involving a solar lantern rental system
Kiribati	Mitigation	Biofuel production and refining development - pilot project of production of biofuel from biomass.	Energy	Public	Public	Implemented	System installed in a private company (Kiribati Copra Mill Company)
Kiribati	Mitigation	Installation of PhotoVoltaic Hybrid Mini-Grid - Generation of solar energy in a pilot site.	Energy	Public	Public	Implemented	
Tuvalu	Mitigation	PhotoVoltaic stand alone sytem in housing and cooling storage facility.	Energy	Public	Public	Implemented	The objective is to make these islands independent from an energy point of view
Peru	Mitigation	Installation of 12 windmill blade in Pomabamba district	Energy	Public	Public	Planned	

Senegal	Mitigation and Adaptation	Installation of a photovoltaic power station at the Limamoulaye secondary high school	Energy	Public	Public	Planned	The aim of the project is to install a photovoltaic power station in order to ensure the energetic self-sufficiency of the institute and particularly the computer labs functioning.
Senegal	Mitigation and Adaptation	Installation of a photovoltaic power station at Limamoulaye High School of Dakar	Energy	Public	Public	Planned	Building of a 40 KW photovoltaic power station on the renewed roof in order to make the school energetically independent. Moreover, the power station is a technical laboratory for students from the Lamamoulaye High Schoo
Senegal	Mitigation and Adaptation	Setting up a solar-powered pump for water supply and irrigation and supporting the three vocational training centers to promote agriculture and animal husbandry education	Energy	Public	Public	Planned	
United Republic of Tanzania	Mitigation and Adaptation	Electricity from renewable sources	Energy	Public	Public	Planned	Building Renewable energy power stations in order bringing electricity into rural areas
Togo	Mitigation	Solar energy	Energy	Public	Public	Planned	Implanting photo-voltaic cells to produce electrical energy in the Maison des Anges Hospital
Uganda	Mitigation	Installation of a photovoltaic system	Energy	Public	Public	Planned	

Uganda	Mitigation	Reliable and affordable power systems for the Lacor hospital	Energy	Public	Public	Planned	
Uganda	Mitigation	Solar power project	Energy	Public	Public	Planned	
Zimbabwe	Mitigation and Adaptation	Installation and connection of solar panels for Emerald Hill Children's Home	Energy	Public	Public	Planned	
Solomon Islands	Mitigation and Adaptation	Renewable Energy Electrification Project for rural boarding schools in Solomon Island	Energy	Public	Public	Planned	
Kiribati	Mitigation and Adaptation	PV Hybrid Mini-Grid for Chevalier College, Abemana Atoll	Energy	Public	Public	Planned	
Bolivia	Mitigation	The project aims at improving the quality of life and the access to electricity from renewable energy sources of the inhabitants of the Bolivian	Energy	Public	Public	Planned	

		rural population					

[a] To be reported to the extent possible.

[b] The tables should include measures and activities since the last national communication or biennial report.

[c] Parties may report sectoral disaggregation, as appropriate.

[d] Additional information may include, for example, funding for technology development and transfer provided, a short description of the measure or activity and co-financing arrangements.

7. Capacity-building support to developing country Parties[28]

Despite the persistence of economic crisis effects in Italy, the environmental cooperation efforts continued, particularly focusing on a smaller number of countries considered of priority by the Italian Cooperation.

In particular in Asia, the cooperation activities were carried out in the framework of existing Sino-Italian Cooperation Program for Environmental Protection (SICP) for the sector especially dedicated to Climate Change, launched on March 2011. The SICP started a joint program of activities addressing mitigation and adaptation to climate change, transfer and promotion of low-carbon technologies, studies and researches as scientific support to decision-making. The cooperation program includes activities for training and capacity building Program on Climate Change and Sustainable Development.

The training aims at providing Chinese participants with theoretical instruments and practical cases on Italian and European experiences in the field of environmental protection and climate change.

Furthermore, in the Himalaya region research activities continued to be carried out by the EvK2CNR Committee, in close collaboration with the Italian National Research Council (CNR), by promoting scientific and technological research. In 2007 a Research Unit was established within Ev-K2-CNR, coordinated by CNR Earth and Environment Department and also supported by the Italian Ministry of Foreign Affairs, the Ministry of Education, Universities and Research, the Ministry of Economy and Finance, the Ministry of the Environment, Land and Sea and the Ministry of Agriculture and Forestry. Ev-K2-CNR carries out scientific and technological research in the Hindu Kush – Karakorum – Himalaya (HKKH) region, with particular reference to Nepal, and Pakistan. The Committee is best known for the Pyramid International Laboratory Observatory, located in Nepal, at 5,050 m a.s.l. at the base of Mount Everest. Due to their relatively remoteness from highly populated and industrialized regions, mountains are considered ideal locations for investigating the impact of climate changes from regional to global scales.

Following the UN resolutions and indications, Ev-K2-CNR launched the SHARE project - Stations at High Altitude for Research on the Environment - an observational network of international and institutional collaborating partners (UNEP, WMO, NASA, ESA and IUCN) with the aim to promote continuous scientific observations in key high-mountain regions able to contribute to knowledge on regional and global climate change. It collaborates with the Nepalese Government and with International Research Programs. Capacity building activity is one of the crucial objectives of SHARE project: local institutions, as the Nepal Academy of Science & Technology, are directly involved in monitoring and research activities assuring support to environmental management policies and decision-making processes. By means of awareness raising, training and technology transfer initiatives, citizens are involved in discovering climate change and its effects on mountains chains and glaciers for a sustainable use.

Capacity building activities for local authorities and local stakeholders are carried out by SHARE also through the collaboration with NextData Project (a national system for the retrieval, storage, access and diffusion of environment and climate data from mountain and marine areas) aiming at an integrated system of archives and portals through the development of technological and data-processing tools. These archives will allow local decision–makers and stakeholders to develop actions and adaptation plans to Climate Change. Several training programs to local staff involved in the management and maintenance of stations installed in Nepal, Pakistan and Uganda are carried out.

Within the framework of Pakistan-Italian debt for development SWAP agreement (PIDSA), signed to fund jointly agreed development projects, Ev-K2-CNR Committee together with the Italian Government and the Karakorum International University has implemented the SEED Project (Social, Economic, Environmental Development). It aims at an integrated development of the Central Karakorum National Park Plan (CKNP) supporting the implementation and the management of the Park, one of the most vulnerable ecosystems in the world. A key feature of SEED project's approach is its strategy to integrate research and capacity building for intrinsic knowledge generation with community development and ecosystem management.

[28] Authors: Stefania Fusani, Sandra Moscone

Among the wide range of projects supported by EU programs including climate-related capacity development actions and strengthening institutional capacity of countries not included in Annex I, the Euromed Programme on “Prevention, Preparedness and Response to Natural and Man-made Disasters” (PPRD South), led by the Italian Civil Protection Department was completed successfully in 2013 carrying out activities aimed at improving Civil Protection at international, national and local levels, in the South Mediterranean Region in both institutional and operational terms. The projections on impact of natural disasters due to climate change, combined with poverty in many Southern Mediterranean Countries, need continuous efforts to improve capacities to cope with disasters and to invest more in Disaster Risk Reduction Policies and Community Resilience. To this end, the Programme is aimed to contribute to the development and reinforcement of the quality of Civil Protection services in the Euro-Mediterranean region and to the continuation of institutional cooperation in the field, both between the EU and the Mediterranean Partner Countries (Albania, Algeria, Bosnia & Herzegovina, Croatia, Egypt, Israel, Jordan, Lebanon, Montenegro, Morocco, Occupied Palestinian Territories, Tunisia, Turkey). The project supports, among other, the implementation of measures for adaptation to the negative effects of climate change through, in particular, the “Prevention and Preparedness” component that includes the organization of training workshops, study visits and demand-driven technical assistance, by sensitizing the creation of National Platforms for Disaster Risk Reduction and by supporting regional coordination.

Another initiative led by the Italian Civil Protection Department is the EU funded Capacity building project “EVRECA!” European Volunteers for Response of Emergencies in the Caribbean” whose main objective is to define guidelines and standards for the recruitment and training of volunteers in the field of emergency management and Disaster Risk Reduction (DRR) activities. Secondly, the project aims to deploy the volunteers in third countries with the aim of strengthening local authorities' preparedness, early warning systems, response and hosting of volunteers. A stronger institutional response to natural disasters will directly benefit local communities' resilience and awareness of hydro-meteorological risks. The EU volunteers will enhance the level of preparedness and awareness of the institutional stakeholders and of the local volunteers’ organizations in order to better respond to hydro-meteorological disasters.

The Mediterranean Region has always been considered as a priority for Italy and then is towards the countries of this region that major efforts of cooperation and capacity building have been addressed.

Among these countries, Tunisia was the main beneficiary, with the Italy-Tunisia Sea-Crossing Programme, as part of the ENI-CBC EU Programme, with one of the Thematic Objectives focusing on “Environmental protection and adaptation to climate change”; the Cooperation Agreement Italy-Tunisia - Environment Sector, concluded in 2010 between the Italian Development Cooperation of the Ministry of Foreign Affairs extended until 2018, that provides contribution for the implementation of CDM projects envisaged by the Kyoto Protocol, as part of public/private partnerships. The MEDREC regional centre, based in Tunis, launched in 2004 by the Italian Ministry of Environment and Territory (IMELS) in collaboration with the National Agency of Energy Conservation of Tunisia (ANME), is the focal point of the Mediterranean Renewable Energy Program and a donor-funded project from the IMELS.

The Mediterranean Region is also targeted by number of project implemented by Italian private companies or public administrations and financed by EU Programs, as for example:

Clima South: support to climate change mitigation and adaptation in the ENPI South region. The project seeks to enhance regional cooperation mainly through capacity development and information sharing. The overarching goal is to support the transition of ENP South countries towards low carbon development and climate resilience.

MED DESIRE (MEDiterranean DEvelopment of Support schemes for solar Initiatives and Renewable Energies): the project aims at spreading energy efficiency, and in particular, solar energy use across the Mediterranean area through the definition of innovative financial schemes and market stimulation tools and by achieving an effective cross-border cooperation and by raising public awareness on the related benefits for the environment and for sustainable local development.

ACLIMAS Adaptation to Climate Change of the Mediterranean Agricultural Systems: the project addresses the Water and Climate Change issues by promoting in 6 Mediterranean countries the demonstration, implementation and dissemination of the research results of previous EC-funded initiative. The overall

objective is to bring a durable improvement of the agricultural water management and a broader socio-economic development of target areas in the context of adaptation to climate change, increasing water scarcity, and desertification risks.

OrientGate: a network for the integration of climate knowledge into policy and planning in the framework of the South Eastern Europe (SEE) Program. The project aims to implement concerted and coordinated climate adaptation actions by means of pilot studies of specific climate, capacity-building seminars and workshops and a set of web tools, designed to provide access to data and metadata from climate observations and simulations, that will be available through a data platform connected to the European Climate Adaptation Platform.

In the Latin America and the Pacific Small Island Developing States (SIDS) is worth to mention two initiatives promoted by the Italian Development Cooperation thus reinforcing its presence by strengthening bilateral relations and by entering the local international organizations, and confirming its firm commitment to the development of the area. Italy contributes to development projects by funding programmes administered by local international organization.

The Italian Development Cooperation, in collaboration with FAO, is carrying out an important pilot project on the island of Papua New Guinea aimed at reducing the impact of deforestation through an assessment of forest biodiversity on a national scale. The funding of the Italian Cooperation falls under the program "Climate Change and Mountain Forests - The Mountain Partnership and the Global Island Partnership (GLISPA) join hands in Latin America and the Pacific", approved in October 2013.

Overall objective of the initiative is to help achieve the targets of adaptation to climate change provided for under the United Nations Convention on Climate Change (UNFCCC) through the sustainable management of forest resources.

The project Energy, Ecosystems and Sustainable Livelihoods Initiative: Managing the Ecosystem Implications of Energy Policies in the Pacific Island States also promoted and funded by the Italian Development Cooperation, has had a wide visibility in 2014 in the UN framework as an international best practice due to significant achievements in the field. It is planned that this allocation would be used to enable Pacific Island Countries to tailor the implementation of their energy policies to ensure that the ecosystem and livelihood implications of these energy policies are sustainable to the ecosystems they exist in and do not become a threat to critical biodiversity's.

Italy's promotion of programmes on environmental issues is very welcomed by the small islands of the Pacific, which are the most vulnerable victims of climate change.

Table 9 of the CTF provides details of these capacity building activities achieved by Italy.

CTF Table 9 Provision of capacity-building support

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
Sino-Italian Cooperation Program for Environmental Protection (SICP) (2011-ongoing)	China	Technology development & transfer Multiple areas	In the framework of the Sino-Italian Cooperation Program for Environmental Protection (SICP), the cooperation Program between China and Italy, especially dedicated to Climate Change, has been launched on March 2011 with the aims to start a joint program of activities addressing mitigation and adaptation to climate change, transfer and promotion of low-carbon technologies, studies and researches as scientific support to decision-making. The cooperation program includes activities for training and capacity building Program on Climate Change and Sustainable Development. The training aims at providing Chinese participants with theoretical instruments and practical cases on Italian and European experiences in the field of environmental protection and climate change. The Chinese Institutions involved are: Ministry of Science and Technology (MoST), Chinese Academy of Social Sciences (CASS), Ministry for Environmental Protection (MEP), Beijing Metropolitan Environmental Protection Bureau (BMEPB), Shanghai Environmental Protection Bureau (SEPB), Tianjin Science & Technology Commission (TSTC) e la National Development and Reform commission (NDRC), and from 2013 the Ministry for Industry and Information Technology (MIIT). Specific courses have been organized in the field of climate change and sustainable development related issues, such as: “capacity building on climate change” “climate change: policy, conventions and statistical systems” “Environmental management and sustainable development” “Eco-cities” “Industrial Energy Efficiency” “Sustainable Development: Innovation of Science, Technology and Management for Ecological Environment” “air and water pollution prevention and control” “Eco –management Strategies and Policies” “High-Technology and Science Parks for Sustainable Development” “Innovation of Enterprises Green Technologies”. The capacity building activities are on-going (at 2015).	**Sino-Italian Cooperation Program for Environmental Protection (SICP) (2011-ongoing)**

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
Prevention, Preparedness and Response to Natural and Man-made Disasters (**PPRD South)** (2008-2013) Euromed Programme Project activities runned until March 2013.	South Mediterranean Countries: Albania, Algeria, Bosnia & Herzegovina, Croatia, Egypt, Israel, Jordan, Lebanon, Montenegro, Morocco, Palestine, Tunisia, Turkey	Mitigation Technology development & transfer	The **PPRD South** was signed between the European Commission (EU funding of EUR 5 million) and the Consortium established by the **Italian Civil Protection Department,** as leader and the Civil Protection Authorities of Egypt, Algeria, France and the United Nations International Strategy for Disaster Reduction (UNISDR). This EU programme is specifically addresed to climate-related capacity development actions and strengthening institutional capacity of countries not included in Annex I. To this end, the Programme was aimed to contribute to the development and reinforcement of the quality of Civil Protection services in the Euro-Mediterranean region and to the continuation of institutional cooperation in the field. The objectives of the project have been pursued through 4 broad areas of activity aimed at: 1. Risk Assessment – by developing tailored national and regional assessment tools such as the Regional Risk Atlas and the Civil Protection Operational Manual; 2. Prevention and Preparedness – by organising training workshops, study visits and demand-driven technical assistance, by sensitising the creation of National Platforms for Disaster Risk Reduction and by supporting regional coordination; 3. Response – by improving the coverage and the coordination on existing Warning Systems and the relevant Operational Centres and implementing simulation exercises; 4. Information/Communication – by developing a user-friendly Web Portal, improving the level of information and the awareness of risk-prone populations regarding risk exposure, prevention and response. In particular, the “Prevention and Preparedness activities” include the organization and implementation of severale the thematic training workshops focused in particular on: Flood Risk reduction, Information in Emergency, Awareness-Raising, Early Warning System, Emergency Preparedness and Disaster Mitigation for Critical Facilities’ Failure, Tsunami Emergency Preparedness in Mediterranean Coastal Zones, Increasing Disaster Resilience in Urban Settings, Multi-hazard Risk Assessment in Urban Environment. The target audience of the training workshops included high-level managers and operational staff and officials.	**Prevention, Preparedness and Response to Natural and Man-made Disasters** (**PPRD South)** (2008-2013) Euromed Programme Project activities runned until March 2013.

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
Capacity building project '**EVRECA**! - European Volunteers for Response of Emergencies in the Caribbean (2013-2014) http://www.evreca.eu/	Caribbean Region Barbados and Grenada Islands	Mitigation Multiple areas	The Italian Civil Protection Department is coordinating the capacity building project 'EVRECA! The main objective of this project is to define guidelines and standards for the recruitment and training of volunteers in the field of emergency management and Disaster Risk Reduction (DRR) activities. Secondly, the proposal aims to deploy the volunteers in third countries in order to follow the path of ongoing projects with the aim of strengthening local authorities' pre-paredness, early warning systems, response and deployment of volunteers. A stronger institutional response to natural disasters will directly benefit local communities' resilience and awareness of hydro-meteorological risks. The EU volunteers will enhance the level of preparedness and awareness of the institutional stakeholders and of the local volunteers organisations in order to better respond to hydro-meteorological disasters. Priority will be given to those communities who are most exposed to natural disasters and have extremely limited coping capacities.	Capacity building project '**EVRECA**! - European Volunteers for Response of Emergencies in the Caribbean (2013-2014) http://www.evreca.eu/
SHARE Project - Stations at High Altitude for Research on the Environment (2005-2014)	Asia (Nepal and Pakistan), Africa (Uganda), Europe (Italy).	Mitigation Technology development & transfer	SHARE project - Stations at High Altitude for Research on the Environment was launched in 2005 by the EvK2CNR Committee coordinated by CNR Earth and Environment Department. Ev-K2-CNR carries out scientific and technological research in the Hindu Kush – Karakorum – Himalaya (HKKH) region, with particular reference to Nepal, and Pakistan. It is best known for the Pyramid International Laboratory Observatory, located in Nepal, at 5,050 m a.s.l. at the base of Mount Everest. SHARE Project is an observational network of international and institutional collaborating partners (UNEP, WMO, NASA, ESA and IUCN) with the aim to promote continuous scientific observations in key high-mountain regions, which due to their remoteness from highly populated and industrialized regions are considered to be ideal locations for investigating the impact of climate changes from regional to global scales. The promotion of environmental observations in these areas allows the acquisition of unique information about the background conditions of the environment. Following the UN resolutions and indications, Ev-K2-CNR launched the SHARE project. Capacity building activity is one of the crucial objective of SHARE project: local institutions, as the Nepal Academy of Science & Technology, are directly involved in monitoring and research activities assuring support to environmental management policies and decision-making processes. By means of awareness raising, training and technology transfer initiatives, citizens are involved in discovering climate change and its effects on mountains chains and glaciers for a sustainable use. During each field	**SHARE Project -** Stations at High Altitude for Research on the Environment (2005-2014)

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
			mission carried out by European scientists the involvement of local researchers and technicians for the transferring of scientific and technological knowledge is guaranteed during the usual research activities. Local technicians will be thoroughly trained in the management and maintenance of sophisticated environmental monitoring systems. Furthermore, politicians and local decision-makers are provided with information useful for the definition of national development policies. Workshop "Karakoram Resources and Climate Change: glacier, water and ecosystem" (Islamabad, September 10, 2013). The main objective of the conference is to find out knowledge and scientific research trying to identify strategies to mitigate the effects of climate change	
Nextdata project (A national system for the retrieval, storage, access and diffusion of environment and climate data from mountain and marine areas) **Project of strategic interest – PNR 2011-2013**	Asia Nepal-Pakistan	Technology development & transfer Adaptation and Mitigation	The Nextdata Project (a national system for the retrieval, storage, access and diffusion of environment and climate data from mountain and marine areas) aiming at an integrated system of archives and portals through the development of technological and data-processing tools is promoted by EvK2Cnr and CNR. The project consist in a national system for the retrieval, storage, access and diffusion of environment and climate data from mountain and marine areas. It aims at an assessment of the effects induced by climate change and environmental changes in mountain areas and to the creation of an integrated system of archives and portals to facilitate the access to data on the state of the mountain environment. These archives will allow decision–makers and stakeholders to develop actions and adaptation plans to Climate Change. Several training programs to local staff involved in the management and maintenance of stations installed in Nepal, Pakistan and Uganda are carried out. Sub-project 2 consist in Long-term system of digital data on climate and environment, and pilot studies on data use. It also envisages setting up a General Portal providing access to the entire archive ensemble and a centre for data collection and analysis in the Himalaya-Karakorum region, in collaboration with major international research programmes. Sub-project 2 additionally foresees a number of pilot studies based on the use of the Portal, for the definition of the "scientific questions", and providing answers to applicative questions concerning climate and environment change impacts. It will cover, moreover, training and educational activities and implement the dissemination of NextData results. Several training workshops and activities have been carried out on the field and remotely by Italian researchers who daily coordinate with the stations, to train local staff involved in the management and maintenance of stations installed in Nepal, Pakistan and Uganda. Among these activities:	**Nextdata project** (A national system for the retrieval, storage, access and diffusion of environment and climate data from mountain and marine areas) **Project of strategic interest – PNR 2011-2013**

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
			- 29-30 April 2013, Islamabad : Karakorum Data Portal Pakistan Scientific Operational Meeting, - 10 September 2013 (NAST Nepal Academy of Sciences and Technologies – Kathmandu): Training on the application of correct metrological procedures in the execution of meteorological measures, management of monitoring network and correct procedures of calibration of sensors.	
SEED Project (Social, Economic, Environmental Development) Framework: Pakistan-Italian debt for development SWAP agreement (2009-2014)+A9 Donors: Government of Italy, Government of Pakistan	Asia Province of Gilgit, Baltistan – Pakistan	Adaptation	The SEED project is an initiative submitted by Ev-K2-CNR Committee, Italy and the Karakorum International University, within the framework of the Debt for Development Swap program between the Governments of Italy and Pakistan. One of the key project's approach is its strategy to integrate research and capacity building for intrinsic knowledge generation with community development and ecosystem management. Thematically, the SEED project will focus on three main interconnected areas, (macro-economic development, protected area management/entitlements, livelihood development and well-being) which can be considered the main pillars of an integrated development of CKNP (Central Karakorum National Park Plan). The Central Karakorum National Park is situated in Northern Pakistan and is one of the most vulnerable ecosystems in the world. The most vulnerable ecosystems are mountainous areas (as CKNP), arid areas, wetlands, and coastal/marine ecosystems. The area enjoys a unique natural and cultural heritage that is one of the richest in the world. Unfortunately, external pressures including climate change threaten this heritage. Before the SEED project started in the CKNP area, basic information on the main natural resources (wildlife, forest, water, glaciers, but also livestock and any other resource) was very scanty and not systematically collected. The SEED Project aims at an integrated development of the Central Karakorum National Park Plan (CKNP) supporting the implementation and the management of the Park. A key feature of SEED project's approach is its strategy to integrate research and capacity building for intrinsic knowledge generation with community development and ecosystem management. The project aims at providing capacity building for local authorities and stakeholders in the management of natural resources . In collaboration with KIU and CKNP directorate and with a continuous consultations with the Gilgit Baltistan Government it has been decide to follow a participatory approach, involving more than 150 villages, in order to share with local communities rules, regulations, borders definition.	**SEED Project (Social, Economic, Environmental Development) Framework: Pakistan-Italian debt for development SWAP agreement (2009-2014)+A9** Donors: Government of Italy, Government of Pakistan

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
Clima South: support to climate change mitigation and adaptation in the ENPI South region (2013-2017) http://www.climasouth.eu/	Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Occupied Palestinian Territory, Tunisia	Mitigation Adaptation	The project seeks to enhance regional cooperation between the EU and its southern Mediterranean neighbours and among the partner countries themselves (South–South) on climate change mitigation and adaptation, mainly through capacity development and information sharing. The overarching goal is to support the transition of ENP South countries towards low carbon development and climate resilience. Main activities include: • Organisation of regional trainings and meetings on mitigation (e.g. monitoring, reporting and verification including the establishment of national greenhouse gas inventories) and about adaptation (data management, vulnerability assessments, national adaptation strategies and plans); • Fostering EU-South and South-South peer-to-peer cooperation on climate change mitigation and adaptation issues; • Organisation of workshops, trainings and study visits involving the main stakeholders in climate change policy development and implementation. Workshop and training during 2014: •Lecce (Italy) April, 2014, Improving Climate Information seminar framing the opportunities and challenges in the region for enhancing climate information in order to improve vulnerability assessments and strengthening institutional adaptation capacity. • Brussels, February 2014, seminar to increase technical knowledge and facilitate exchange of experiences with the ultimate objective of increasing capacity in international climate change policy making. • Bari (Italy), November 2014, Greenhouse Gas Modelling Seminar: ClimaSouth and ClimaEast projects jointly organised a GHG modelling seminar at the CIHEAM training center in Bari. This event allowed 12 ENP countries to work together, namely: Algeria, Egypt, Israel, Lebanon, Morocco, and Palestine for Climasouth; Armenia, Belarus, Republic of Moldova, Ukraine, Georgia and Azerbaijan for ClimaEast. • Amman (Jordan), August 2014: Climate Change Capacity Building & NAMA activity Identification & Formulation: workshop on general Climate Change capacity building followed by the identification and the draft formulation of a NAMA (Nationally Appropriate Mitigation Activities). The project is implemented by Agriconsulting SpA, an Italian Private Consulting Company, as leader of a Consortium of 7 Institutions of which 5 are Italian.	**Clima South: support to climate change mitigation and adaptation in the ENPI South region (2013-2017)** http://www.climasouth.eu/

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
OrientGate A network for the integration of climate knowledge into policy and planning SEE Program (South Eastern Europe Program) 2012-2014	South Eastern Europe among which: Albania, Bosnia and Herzegovina, The former Yugoslav Republic of Macedonia, Serbia	Adaptation Multiple areas	The OrientGate project, coordinated by the Euro-Mediterranean Centre on Climate Change (CMCC), aims to implement concerted and coordinated climate adaptation actions across South Eastern Europe (SEE). The partnership comprises 19 financing partners, 11 associates and three observers, covering 13 countries, that together will explore climate risks faced by coastal, rural and urban communities, contributing to a better understanding of the impacts of climate variability and climate change on water regimes, forests and agro ecosystems. Main outputs are a set of web tools, designed to provide access to data and metadata from climate observations and simulations that will be available through a data platform connected to the European Climate Adaptation Platform. Other project outputs will include six pilot studies of specific climate adaptation exercises developed by the project's three thematic centres; capacity-building seminars and workshops; main seminars carried out during 2013- 2014: Trento, (Italy), Sep. 2014: Training seminar and dissemination event, guidelines, methodologies and indicators for analysing the impacts of climate change on the hydroelectric sector; Belgrade (Serbia), Jun 2014 Training Seminar, an opportunity to share with participants the results and outputs of Work Package on mapping and harmonising data and downscaling. Matera (Italy), Jul 2014: Seminar on climate and impact indicators to explore how climate and impact indicators can support the climate change adaptation policy-making process. Bari (Italy), Nov 2014: Stakeholder workshop and study day in Puglia. CMCC and Puglia Region Mediterranean Service organised the workshop "Analysis of risks related to climate change in order to support planning for the management and protection of the waters and coasts of Puglia.	**OrientGate A network for the integration of climate knowledge into policy and planning SEE Program (South Eastern Europe Program) 2012-2014**

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
Climate Change and Mountain Forests - The Mountain Partnership and the Global Island Partnership join hands in Latin America and the Pacific" (October 2013- 2014)	Latin America and the Pacific Ecuador, Bolivia Papua New Guinea	Adaptation	The project builds upon the outcomes of a side event organized in 2012 in Brazil by the Mountain Partnership (MP) at the UN Conference on Sustainable Development (Rio+20) in collaboration with the Global Island Partnership and with the financial support of the Italian Development Cooperation of the Ministry of Foreign Affairs, a core founder and active partner of both alliances. The project aims to promote sustainable management of mountain ecosystems in key tropical mountain regions by supporting the implementation of the Mountain Products Programme (MPP) of the Mountain Partnership Secretariat, as well as FAO's activities aimed at Reducing Emissions from Deforestation and forest Degradation (REDD+). The actions undertaken in the context of REDD+ and MPP programs focus on the development of technical and institutional capacity, support the creation of instruments of forest monitoring and support to local communities regarding sustainable business activities in the agro-forestry.	**Climate Change and Mountain Forests - The Mountain Partnership and the Global Island Partnership join hands in Latin America and the Pacific" (October 2013- 2014)**
Pacific Small Island Developing States (SIDS) Energy, Ecosystems and Sustainable Livelihoods Initiative: Managing the Ecosystem Implications of Energy Policies in the Pacific Island States. (Phase I 2008-2012) (Phase II 2013-2014)+A9	Pacific Small Island The Marshall Islands, Palau, Samoa, Tonga, Tuvalu and Vanuatu.	Technology development & transfer Adaptation	The Pacific SIDS Energy, Ecosystems and Sustainable Livelihoods Initiative (EESLI) was designed with the vision to accelerate the transition to energy systems that are ecologically sustainable, socially equitable and economically efficient. The EESLI is funded by the Governments of Italy and, at a later stage also of Austria, that entrusted its implementation to IUCN Oceania Regional Office (IUCN ORO) together with partner governments. The IUCN ORO Energy Programme, entitled the project **"Managing the Ecosystem and Livelihood Implications of Energy Policies in the Pacific Island States"**. Project activities are being implemented in six Pacific Island countries: the Marshall Islands, Palau, Samoa, Tonga, Tuvalu and Vanuatu. The project, to which Italy has contributed whit a EUR 600.000 donation, had a wide visibility in 2014 in the UN framework as an international best practice due to significant achievements in the field. Phase II of the Project has been approved by the development partners for implementation from 2013 to 2014. It is planned that this allocation would be used to enable Pacific Island Countries to tailor the implementation of their energy policies to ensure that the ecosystem and livelihood implications are sustainable to the ecosystems. Activities included in the second Phase are: • Institutional Capacity Development: capacity building for the development of policies and eco-sustainable energy strategies. • Implementation of a series of projects for the practical application of technologies related to renewable energy, based on the designs submitted	**Pacific Small Island Developing States (SIDS) Energy, Ecosystems and Sustainable Livelihoods Initiative: Managing the Ecosystem Implications of Energy Policies in the Pacific Island States. (Phase I 2008-2012) (Phase II 2013-2014)+A9**

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			by the partner countries. Each project uses energy sources more appropriate to the needs of each country and includes a training component for the management and maintenance of applied technologies.	
ACLIMAS Adaptation to Climate Change of the Mediterranean Agricultural Systems (2012-2016)	Mediterranean Region Morocco, Tunisia, Jordan, Egypt; Lebanon, Syria, Algeria	Adaptation	ACLIMAS is a demonstration project funded within the Sustainable Water Integrated Management (SWIM) programme of the European Commission (EC). The project addresses the priority - Water and Climate Change - by promoting in 6 Mediterranean countries/target areas the demonstration / implementation / dissemination of the research results of previous EC-funded initiatives. The overall objective is to bring a durable improvement of the agricultural water management and a broader socio-economic development of target areas in the context of adaptation to climate change, increasing water scarcity, and desertification risks. ACLIMAS pursues an holistic multidisciplinary border-crossing approach that integrates a set of locally-tailored technical adaptation measures with socio-economic and environmental aspects of water management in Mediterranean agriculture. The project is coordinated by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), Mediterranean Agronomic Institute of Bari (IAMB). ACLIMAS has started in January 2012 and lasts 4 years.	**ACLIMAS Adaptation to Climate Change of the Mediterranean Agricultural Systems (2012-2016)**
European Neighborhood Instrument (ENI) 2014-2020 Cross-Border Cooperation(CBC) Italy-Tunisia Sea-Crossing Programme	Mediterranean Region Tunisia	Adaptation	Under the ENI, support for CBC on the EU's external border continue to draw on funds from both the external and internal headings of the EU budget, for the pursuit of CBC activities serving both sides of the EU's external border. The Italy-Tunisia Sea-Crossing Programme is part of the ENI-CBC EU Programme and one of the 3 Thematic Objectives is the OT3 "Environmental protection and adaptation to climate change" within which there are two types of Priority Actions : 1. Joint actions for environmental protection 2. Conservation and sustainable use of natural resources These of actions include capacity building activities, capitalization of expertise, dissemination of good practice and experimentation in the field of energy and integrated management and recycling, as well as pilot actions and awareness for adaptation to climate change.	**European Neighborhood Instrument (ENI) 2014-2020 Cross-Border Cooperation(CBC) Italy-Tunisia Sea-Crossing Programme**

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Cooperation Agreement Italy-Tunisia Environment Sector 2010-2018	Mediterranean Region Tunisia	Technology development & transfer	With a total budget of 3 million euro the Environment sector of the Cooperation Agreement Italy-Tunisia provides for 2 sub components: climate change and Mediterranean Sea protection. Calls for projects will be launched in the sub sector CDM Projects, Plant Genetic Resources and Early Warning System. In particular, the program aims to promote the implementation of CDM projects (Clean Development Mechanism) envisaged by the Kyoto Protocol, as part of public/private partnerships. In this framework it is planned to create a revolving fund for the financing of feasibility studies and Project Design Documents. It is also planned the technical assistance for the promotion of Tunisian CDM portfolio and to identify potential sustainable economic sectors (ESCO - Energy Company Serving, enhancement of green waste etc ...). The technical assistance services provided will be carried out in partnership between Tunisian and Italian actors.	**Cooperation Agreement Italy-Tunisia Environment Sector 2010-2018**
MED DESIRE (MEDiterranean DEvelopment of Support schemes for solar Initiatives and Renewable Energies) (2013-2015)	Mediterranean Region Egypt, Lebanon and Tunisia	Technology development & transfer	MED-DESIRE main priority is to remove barriers related to the legal, regulatory, economic and organizational framework of distributed solar energy technologies. Co-funded by the European Union through the ENPI CBC MED Programme 2007-2013 for an amount of 4.192.000 Euro, the project aims at spreading energy efficiency, and in particular, solar energy across the Mediterranean area through the definition of innovative financial schemes and market stimulation tools. The project will facilitate the take up of distributed solar energy and energy efficiency in the target regions, by achieving an effective cross-border cooperation and by raising public awareness on the related benefits for the environment and for sustainable local development. MED-DESIRE is implemented by a consortium of nine partners from five countries (Egypt, Italy, Lebanon, Spain and Tunisia), leaded by Puglia Region – Economic Development Regional Ministry - Industrial Research and Innovation Department. Among the initiatives carried out by the project there are: • the Elaboration of recommendations and action plans for improving legislative and regulatory frameworks • Capacity building initiatives for solar energy technicians and professionals to ensure the quality of components and installations • Training sessions for policy-makers in charge of solar energy regulation The project main expected results are: the strengthening of the capacity of public administrations and regional institutions, the improvement of	**MED DESIRE (MEDiterranean DEvelopment of Support schemes for solar Initiatives and Renewable Energies) (2013-2015)**

Programme or project title	Recipient country / region	Targeted area	Description of programme or project	Comments
			competences of local technicians and professionals, facilitating the removal of the main technical barriers for distributed solar technology and the establishment of a co-operation framework among providers of energy technologies and services in EU Mediterranean Countries and Mediterranean Member Countries (MPC) to foster the development of a sustainable common energy market.	
MEDREC Mediterranean Renewable Energy Centre	Mediterranean Region Algeria, Egypt, Libya, Morocco, and Tunisia	Technology development & transfer	The MEDREC, based in Tunis, was launched in 2004 by the Italian Ministry of Environment and Territory (IMELS) in collaboration with the National Agency of Energy Conservation (ANME) . It involves international and governmental Institutions of Algeria, Egypt, Libya, Morocco, and Tunisia. MEDREC is a regional centre and a donor-funded project within the ANME, through funding from the IMELS. In 2014 the Centre in collaboration with UNEP promoted initiatives of capacity building, training and information as well as programs to support renewable technologies markets: **PROSOL Industria**l: Solar Water Heating for Industrial Processes: in order to promote the development of solar thermal systems in the industrial sector. In this framework, a workshop was held during the Energy Solutions World Sustainable Energies Forum (Enersol WSEF) gathering the global sustainable energy community in Tunis during which two studies were presented as proposal for a new support scheme for solar thermal technology in industrial sector in Tunisia, and a demonstration project to reduce greenhouse gases emissions, developed with the financial support of IMELS and BENETTON Group. Advanced Training Course: **"Integration of renewable energy solutions in the Mediterranean electricity markets"** was organized in Milan on Nov. 2014 in the framework of RES4MED (Renewable Energy Solutions for the Mediterranean - A platform of public-private dialogue within the Energy Mediterranean Partnership), in cooperation with Enel Foundation and Politecnico di Milano. The course is addressed primarily to middle managers with an appropriate seniority selected among public institutions, energy companies, energy centers, universities and research agencies operating in the Mediterranean basin.	**MEDREC Mediterranean Renewable Energy Centre**