



UNITED
NATIONS



Framework Convention
on Climate Change

Distr.
GENERAL

FCCC/SBI/2003/INF.11
22 May 2003

ENGLISH ONLY

SUBSIDIARY BODY FOR IMPLEMENTATION

Eighteenth session

Bonn, 4–13 June 2003

Item 4 (b) of the provisional agenda

**FINANCIAL MATTERS RELATING TO PARTIES NOT INCLUDED IN ANNEX I
TO THE CONVENTION**

PROVISION OF FINANCIAL AND TECHNICAL SUPPORT

**List of projects submitted by Parties not included in Annex I to the Convention
in accordance with Article 12, paragraph 4, of the Convention**

Note by the secretariat

I. MANDATE

1. By its decision 12/CP.4 (FCCC/CP/1998/16/Add.1), the Conference of the Parties requested the secretariat to compile and make available to Parties a list of projects submitted by Parties not included in Annex I to the Convention (non-Annex I Parties) in accordance with Article 12, paragraph 4, of the Convention.
2. In response to the above mandate, the secretariat reviewed the relevant sections of all 96 initial national communications submitted by non-Annex I Parties as at 1 April 2003 with a view to compiling the list of projects.
3. Pursuant to decision 10/CP.2 (FCCC/CP/1996/15/Add.1) and Article 12, paragraph 4, of the Convention, developing country Parties may, on a voluntary basis, propose projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, together with, if possible, an estimate of all incremental costs of the reduction of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits.

II. SCOPE

4. In order to provide Parties with more frequent updates of the list of projects submitted in accordance with Article 12, paragraph 4, of the Convention, the secretariat has compiled the information on these projects in a database. This information is presented in Table 1 below (List of projects submitted by Parties not included in Annex I to the Convention in accordance with Article 12.4).

Table 1: LIST OF PROJECTS SUBMITTED BY PARTIES NOT INCLUDED IN ANNEX I TO THE CONVENTION IN ACCORDANCE WITH ARTICLE 12.4*

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
A. Agriculture				
A.1. Subsector: Adopt manure management practices for CH₄ collection				
1 Manure management using biodigesters			Ecuador	2000
2 Research into low-methane-emitting agriculture systems			Chad	2001
A.2. Subsector: Expand biofuel production as carbon offset				
1 Biogas programme in the agriculture and livestock sectors	2.68	60	Ecuador	2000
A.3. Subsector: Improve management of ruminant animals				
1 Animal breeding and use of biodigesters for the production of energy			Mali	2000
2 Better management of pastures and the adjustment of stocking rates			Albania	2002
3 Diet enhancement of livestock using management programmes			Ecuador	2000
4 Improve livestock management (lower enteric fermentation and manure management)		80 000	Mauritania	2002
5 Improvement of livestock diet			Chad	2001
6 Improving the efficiency of livestock feed			Uganda	2002
7 Information, education and communication on greenhouse gas (GHG) emission reduction in agriculture and cattle breeding			Burundi	2001
8 Programme on livestock and carbon uptake			Nicaragua	2001
9 Reduction of methane emissions in livestock by introducing diet changes			Costa Rica	2000
10 Research and development technologies aiming to reduce GHG emissions in agriculture and cattle breeding			Burundi	2001
11 The improvement of digestibility by ruminants			Albania	2002
A.4. Subsector: Improve rice production practices				
1 Improve water and fertilizer management		70 000	Mauritania	2002
2 Improve water management in the irrigated rice cultivation			Mali	2000
3 Use and management of rice crop wastes			Ecuador	2000
A.5. Subsector: Increase carbon storage in agricultural soils				
1 Awareness programme on agricultural practices that could help to curb GHG emissions			Seychelles	2000

* This information is compiled from all initial national communications submitted by non-Annex I Parties to the UNFCCC secretariat by 1 April 2003.

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
A.5. Subsector: Increase carbon storage in agricultural soils				
1 Awareness programme on agricultural practices that could help to curb GHG emissions			Seychelles	2000
2 Climate change mitigation through development of carbon sinks		600	Kenya	2002
3 Pilot production of biohumus by processing organic part of solid urban wastes and manure		65	Armenia	1998
4 Programme on livestock and carbon uptake			Nicaragua	2001
5 Reduction in savanna burning			Chad	2001
6 Restore abandoned agricultural lands and plant trees			Belize	2002
7 Soil nutrient management			Seychelles	2000
8 Study of a problem of application of methane fermentation		35	Armenia	1998
A.6. Subsector: Improve efficiency of use of nitrogen fertilizer				
1 Improve nitrogen fertilizer use efficiency			Mauritania	2002
A.7. Subsector: Reduction of fossil energy use				
1 Increasing efficiency of irrigation systems; reduction of energy consumption by water pumps and agricultural equipment			Tajikistan	2002
2 Introduction of systems for metering and control of consumption of energy resources and water		72 300	Uzbekistan	2000
3 Rationalization of energy-saving of irrigation systems and reduction of irrigation water losses		2 500	Uzbekistan	2000
4 Replacement of diesel pumping plants by electric pumps		120 200	Uzbekistan	2000
5 Replacement of out-of-date machinery by qualitatively new machinery		1 000	Uzbekistan	2000
B. Sector: Energy supply				
B.1. Subsector: Decarbonization of flue gases and fuels, and CO₂ storage and sequestrating				
1 Reduction of flaring gas by 50%			Algeria	2001
2 Reduction of fugitive emissions by renovating oil and gas installations (refineries, pipelines)			Algeria	2001
B.2. Subsector: Efficient conversion of fossil fuels				
1 Action programme for the promotion of energy efficiency using energy audits, training programmes, public awareness and promoting solar energy			Niger	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
2 Alkylation unit		30 000	Jordan	1997
3 Carry out regular energy audits and put in place energy management plan			Seychelles	2000
4 Chemical industry: 3 projects for upgrading energy systems		688 400	Uzbekistan	2000
5 Co-boiler for the fluid catalytic cracking unit		2 740	Jordan	1997
6 Coal gasification			Botswana	2001
7 Combustion optimization in boilers in the industrial sector	21	1 500	Ecuador	2000
8 Construction of a 60 MW cogeneration plant			Barbados	2001
9 Continuous catalytic reformer		85 000	Jordan	1997
10 Crude oil distillation unit		2 500	Jordan	1997
11 Declare emission standards for mobile and stationary sources			Seychelles	2000
12 Electric power supply: 12 projects for upgrading and more efficient new gas turbines and boilers		1 118 600	Uzbekistan	2000
13 Energy conservation project			Micronesia	1997
14 Energy efficiency improvement and GHG reduction			Egypt	1999
15 Expansion of distillation capacity		80 000	Jordan	1997
16 Ferrous and non-ferrous metallurgy: 7 projects for power equipment		275 300	Uzbekistan	1999
17 Gasification		225 000	Jordan	1997
18 Heat recovery from sulphuric acid plant/Jordan Phosphate Mining Company		26 000	Jordan	1997
19 Heat recovery from the public electricity generation power stations			Seychelles	2000
20 Hydro desulphurization for diesel		60	Jordan	1997
21 Hydrocracking		100 000	Jordan	1997
22 Improve transmission and distribution system to bring down the current energy losses			Sri Lanka	2000
23 Improvement of baseline scenarios for the development and selection of appropriate policies and measures to mitigate climate change			Chad	2001
24 Improvement of electricity supply and heating networks efficiencies			Tajikistan	2002
25 Improvements in efficiency relating to the control and administration of electricity distribution			Grenada	2000
26 Isomerization unit		30 000	Jordan	1997
27 Merox upgrade		1 000	Jordan	1997
28 Modern fluid catalytic cracker		200 000	Jordan	1997
29 Modernization and rehabilitation of power plants		1 061	Kazakhstan	1998
30 Modernization of flare facilities			Tajikistan	2002
31 Modernization of petroleum storage facilities			Tajikistan	2002

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
32 Oil, gas and coal industry: 6 projects for upgrading and more efficient new technologies		969 100	Uzbekistan	2000
33 Paper sludge and solid waste		AUS\$9 000 000	Indonesia	1999
34 Power generation and fuel refining		2 019	Azerbaijan	2000
35 Programme for the achievement of greater energy efficiency in energy transformation centres			Grenada	2000
36 Project for the reduction of losses in supply/distribution			Grenada	2000
37 Project to improve the efficiency of generators			Grenada	2000
38 Reduction in electricity supply system losses			Seychelles	2000
39 Replacement of out-of-date gas distributing equipment			Tajikistan	2002
40 Sulphur recovery plant		5 000 to 10 000	Jordan	
41 Technical upgrading and change of fuel in two thermal plants			El Salvador	2000
42 Utilization of associated gas/increase in natural gas share in the energy consumption			Kazakhstan	1998
B.3. Subsector: Switching to low-carbon fossil fuels				
1 Electricity generation using residual natural gas	53/year	35 000	Ecuador	2000
2 Integrated solar thermal/natural gas power plant			Egypt	1999
3 Natural gas substitution of coal	7 800		Peru	2000
4 Natural gas substitution of diesel	6 000		Peru	2001
5 Piping of natural gas from the proposed West Africa Gas Pipeline to and within some urban areas of Ghana		480 000	Ghana	2001
6 Support construction of a gas pipeline from Mexico in order to promote the use of natural gas in Honduras			Honduras	2000
7 Technical upgrading and change of fuel in 2 thermal plants			El Salvador	2000
8 Two additional gas pipelines will substitute coal, residual oil and diesel	2 400		Peru	2001
9 Utilization of associated gas/increase in natural gas share in the energy consumption			Kazakhstan	1998
B.4. Subsector: Switching to nuclear energy				
B.5. Subsector: Switching to renewable sources of energy				
1 16 MW in wind turbine farms at good wind sites in northern Barbados			Barbados	2001

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
2 The Asian Development Bank's Promotion of Renewable Energy, Energy Efficiency and GHG Abatement (PREGA) programme			Cambodia	2002
3 Alternative energy sources			Kiribati	1999
4 Construction of wind farms			Barbados	2001
5 Demonstration project for grid-connected renewable energy technologies and their commercial and economic potential			Antigua and Barbuda	2001
6 Development and implementation of long-term renewable energy policy programmes, including the development and application of carefully selected technological and institutional "leapfrogging" strategies			Antigua and Barbuda	2001
7 Development of renewable energy	11 091 equivalent in the period 2001-2020		Morocco	2001
8 Dissemination of solar, wind and biogas energy technology			Ethiopia	2001
9 Establishment of a renewable energy centre			Barbados	2001
10 Generation of energy from Botswana Meat Commission abattoir waste			Botswana	2001
11 Geothermal hot water supply: Hippodrome district geothermal hot water supply project		860	Georgia	1999
12 Hydroelectricity substitutes diesel	8 500		Peru	2001
13 Hydroelectricity substitutes natural gas	2 300		Peru	2001
14 Power generation options for Botswana from mixing and hybrids of renewable energy resources (solar, wind and waste)			Botswana	2001
15 Promote the use of renewable energy technologies and energy-efficient appliances by energy users			Seychelles	2000
16 Promoting the use of renewable energy			Ethiopia	2001
17 Promotion of renewable energies: solar, wind and micro-hydro			Chad	2001
18 Removal of barriers to rural electrification with renewable energy			Chile	2000
19 Solar collectors	1 000		Peru	2001
20 Solar energy		482	Kazakhstan	1998
21 Use renewable sources of energy to satisfy energy demand by 2010	61.49/year		Costa Rica	2000
22 Wind turbines	900		Peru	2000
B.5.1. End use/Description: Biomass/biogas				
1 10-MW waste combustion plant			Barbados	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
2 Accelerated promotion of biogas technology in rural low-income households			Zimbabwe	1998
3 Application of renewable energy system to sustainable rural development and demonstration hybrid system (1)		AUS\$240 000	Indonesia	1999
4 Application of renewable energy system to sustainable rural development and demonstration hybrid system (2)		AUS\$3 400 000	Indonesia	1999
5 Bamboo international developing company project, production of electricity using bamboo			Honduras	2000
6 Biogas production			Guinea	2002
7 Biogen Project, use of wood waste and waste of African palm to produce electricity			Honduras	2000
8 Electricity generation using wood waste in Ocotal area			Nicaragua	2001
9 Phytothermal energy production		880	Ghana	2001
10 Promoting sustainable biomass energy use in rural areas to reduce CO ₂ emissions			Morocco	2001
11 Promotion of application of biogas technology		750	Kenya	2002
12 Remove barriers for using fast-growing trees in the private sector as a source of renewable energy		50	Armenia	1998
13 Replacement of wood-fuel boilers for tea drying		2 000	Kenya	2002
14 Utilization of organic residues from food processing plants for energy generation			Botswana	2001
B.5.2. End use/Description: Geothermal and ocean energy				
1 2-MW of solar PV system distributed around the island			Barbados	2001
2 2-MW wave power plant			Barbados	2001
3 3-MW ocean thermal energy conversion plant			Barbados	2001
4 Conditions of geothermal resource studies and prospects for the practical use of geothermal energy			Armenia	1998
5 Expand the use of geothermal energy in electricity generation			El Salvador	2000
6 Exploration regarding geothermal energy in Jordan		1 400	Jordan	1997
7 Geothermal hot water supply: Tbilisi geothermal hot water supply project		30 800	Georgia	1999
8 Geothermal hot water supply: Zugdidi geothermal heat supply project		15 000	Georgia	1999
9 Production of electric energy using geothermal resources	4 496	88 000	Djibouti	2002

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
B.5.3. End use/Description: Hydropower				
1 Action programme for energy supply using hydro dams, solar and wind energy			Niger	2000
2 Alternative/renewable energy sources for the outer islands of the Maldives			Maldives	2001
3 Assessing small-scale hydropower potential and demonstration project in combination with dissemination of electric cooking stoves			Lao People's Democratic Republic	2000
4 Construction of Mpanda hydropower unit			Burundi	2001
5 Construction of small hydroelectric plants			El Salvador	2000
6 Development of mini-hydropower plants (101 KW to 10 MW)			Cambodia	2002
7 Energy generation using small hydroelectric systems	8.8/year	3 200	Ecuador	2000
8 Feasibility study on other renewable energy resources			Micronesia	1997
9 Harness the total maximum identified potential of hydropower, based on a study of the economic and environmental impacts of identified potential hydropower			Sri Lanka	2000
10 Hydropower based mitigation options			Uganda	2002
11 Increasing the number of hydropower units	4 902 equivalent in the period 2001-2020		Morocco	2001
12 Introduction of hydropower plants to replace heavy fuel oil plant in Albania's power sector			Albania	2002
13 Introduction of hydropower plants to replace natural gas plant in Albania's power sector			Albania	2002
14 Introduction of small hydropower plants and utilization of renewable energies			Tajikistan	2002
15 Investment in small-scale hydroelectricity power stations to supply rural and peri-urban consumers			Zimbabwe	1998
16 Pilot programme for rural electrification using small hydropower plants			Nicaragua	2001
17 Putting into operation large hydropower plants, which are currently under projection and/or construction			Tajikistan	2002
18 Removal of barriers to the development of hydroenergy			Haiti	2002
19 Renewable sources of energy: 2 hydropower plants		720 000	Uzbekistan	1999
20 Replacement of diesel generators by hydropower, mainly in urban centres			Ethiopia	2001
21 Introduction of small hydropower plants		578	Kazakhstan	1998
22 Small hydro-energetics: Abasha hydropower plan rehabilitation project		1 000	Georgia	1999

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
23 Small hydro-energetics: Intsoba hydropower plant rehabilitation project		850	Georgia	1999
24 Small hydro-energetics: Martkopi hydropower plant rehabilitation project		750	Georgia	1999
25 Small hydro-energetics: Misaktsieli hydropower plant rehabilitation project		2 300	Georgia	1999
26 Small hydro-energetics: Stori hydropower plant project		8 400	Georgia	1999
27 Technologies required for implementation of mitigation policy: electric and mechanical equipment for small hydro and wind power plants		11 000	Georgia	1999
B.5.4. End use/Description: Solar energy				
1 Action programme for energy supply using hydro dams, solar and wind energy			Niger	2000
2 Application of renewable energy system to sustainable rural development and demonstration hybrid system (1)		AUS\$240 000	Indonesia	1999
3 Application of renewable energy system to sustainable rural development and demonstration hybrid system (2)		AUS\$3 400 000	Indonesia	1999
4 Building houses with efficient lighting and solar energy			El Salvador	2000
5 Decentralized energy supply through solar home systems in rural households			Lao People's Democratic Republic	2000
6 Decentralizing electrification by PV systems			Burundi	2001
7 Electricity supply sector: removing barriers for implementing renewable energy (solar and wind)			Lebanon	1999
8 Encourage the use of PV energy			Tuvalu	1999
9 Encouraging the use of solar water heaters	728 equivalent in the period 2001-2020		Morocco	2001
10 Enhancement of the market for solar water heaters			Tunisia	2001
11 Expand rural electrification by promoting the use of renewable energy			El Salvador	2000
12 High-efficiency PV module station: manufacturing and testing		25	Armenia	1998
13 Install solar mini-grid utilities to serve rural centres not connected to the grid			Zimbabwe	1998
14 Integrated solar thermal/natural gas power plant			Egypt	1999
15 Introduction of solar PV to replace diesel generators in Albania's power sector			Albania	2002
16 Irrigation using PV systems			Mauritania	2002
17 Large-scale power generation from solar energy			Botswana	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
18 Introduction of PV-based mitigation options			Uganda	2002
19 Power supply by PV systems to remote villages		3 500	Jordan	1997
20 Promote use of solar energy in rural areas through education and public awareness, capacity-building and technology transfer		310	Djibouti	2002
21 Promoting the use of PV equipment	161	943	Mauritania	2002
22 Promotion of solar-based rural electrification		1 200	Kenya	2002
23 Reducing wood consumption by promoting energy-saving technologies such as solar lighting equipment			Mali	2000
24 Rehabilitation of the Regional Center for Solar Energy (CRES)			Mali	2000
25 Reverse osmosis water desalination (ROWD) with renewable energy hybrid system in remote areas		2 400	Jordan	1997
26 SALT-gradient solar pond pilot plant		633	Jordan	1997
27 Solar and wind energy resources assessment and mapping		600	Mongolia	2001
28 Solar energy desalination			Indonesia	1999
29 Solar energy project for communities		115	Ghana	2001
30 Heat supply from solar energy		21 800	Egypt	1999
31 Solar pilot project			Micronesia	1997
32 Subsidy programme for solar energy			Micronesia	1997
33 Use of solar energy for water heating in the residential sector	73	3 900	Ecuador	2000
34 Utilization of PVs to reduce fossil fuel use			Guinea	2002
B.5.5. End use/Description: Wind				
1 Action programme for energy supply using hydro dams, solar and wind energy			Niger	2000
2 Development of wind energy map			Cambodia	2002
3 Electricity generation using wind energy	12 655 equivalent in the period 2001-2020		Morocco	2001
4 Electricity supply sector: removing barriers to implementing renewable energy (solar and wind)			Lebanon	1999
5 Honduras ZOND project. A 60-MW wind power station to be installed in the area of Tegucigalpa			Honduras	2000
6 Installation of wind generators in Nouadhibou		4 150	Mauritania	2002
7 Introduction of wind turbines to replace diesel generators in Albania's power			Albania	2002
8 Pilot project to generate electricity using wind			Grenada	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
9 Promote use of wind energy in rural areas through education and public awareness, capacity-building and technology transfer		310	Djibouti	
10 Substitution of thermic plants by a 25-MW wind energy unit	56 per year		Colombia	2001
11 Technologies required for implementation of mitigation policy: electric and mechanical equipment for small hydro and wind power plants		11 000	Georgia	1999
12 Use of aeolian energy			Mexico	1997
13 Wind energy			Kazakhstan	1998
14 Wind Power: Karenergo wind power plant project		5 000	Georgia	1999
C. Sector: Forest				
C.1. Subsector: Bioelectricity production from wasteland and degraded lands				
C.2. Subsector: Conservation forests				
1 Activities implemented jointly: Río Cóndor carbon sequestration project			Chile	2000
2 Activities implemented jointly: SIF carbon sequestration project			Chile	2000
3 Carbon sequestration projects in Bahia Kino in Sonora and in forested areas of Chiapas			Mexico	1997
4 Conservation and management of ecosystems in the Uraba zone	21 920 in 30 years		Colombia	2001
5 Conservation of natural forests in the Tinigua and Macarena zones	15 289 in 30 years		Colombia	2001
6 Conservation of biodiversity by the rehabilitation of arid and semi-arid areas in the Trarza region		12 366	Mauritania	2002
7 Controlling forest fires			Seychelles	2000
8 Conversion of livestock farms to agroforestry systems in the Puerto Carreño zone	5 034 in 25 years		Colombia	2001
9 Expansion of closure system			Eritrea	2002
10 Forest conservation and reforestation in the Medio Atrato zone	1 193		Colombia	2001
11 Forest conservation and reforestation in the Purace zone	24 531 in 30 years		Colombia	2001
12 Forest conservation and reforestation in the Quindío zone	9 146 in 30 years		Colombia	2001
13 Forest conservation in the Bucaramanga Corporation's zone	7 408 in 25 years		Colombia	2001
14 Forest conservation in the Guerrero zone	359		Colombia	2001
15 Forestry: Tbilisi Dendrological Park restoration project		230	Georgia	1999
16 Protecting/managing forests in reserves and protected areas			Seychelles	2000
17 Protection of existing natural forest			Eritrea	2002

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
18 Quantitative evaluation of the carbon sink potential of ecosystems in the Federated States of Micronesia			Micronesia	1997
19 Restoration and protection of the tropical humid forest in the area of Esperanza Verde, Rio San Juan			Nicaragua	2001
20 Three further projects in Oaxaca, Campeche and Monarc Butterfly Reserve			Mexico	1997
C.3. Subsector: Forest practices/goals				
1 Afforestation			Eritrea	2002
2 Afforestation with exotic species	9 900		Peru	2001
3 Afforestation with indigenous species	4 300		Peru	2001
4 Artificial reforestation: long-term rotation on hill forest land			Bangladesh	2002
5 Artificial reforestation: medium-term rotation on hill forest land			Bangladesh	2002
6 Artificial reforestation: short-term rotation on hill forest land			Bangladesh	2002
7 Coffee cultivation			Peru	
8 Control of deforestation			Seychelles	2000
9 Controlling commercial biomass harvest			Seychelles	2000
10 Controlling outbreaks of pests and invasive species			Seychelles	2000
11 Enhancement of Ecuador's national system of protected areas	25 609		Ecuador	2000
12 Establishment of silvopastoral systems in the Gaumote area	477		Ecuador	2000
13 Forest management in the Calamar zone	35 012 in 25 years		Colombia	2001
14 Forest management	2 400		Peru	2001
15 Forestry plantations in the Balzar area	477		Ecuador	2000
16 Forestry plantations in the Bolivar area	143		Ecuador	2000
17 Forestry: Nabadkhevi forest rehabilitation project		270	Georgia	1999
18 Forestry: afforestation project of Red Bridge environs		250	Georgia	1999
19 Forestry: reforestation project of Kaspi District		350	Georgia	1999
20 Green belt of Guayaquil city	11		Ecuador	2000
21 Hydrologic rehabilitation and carbon uptake project for the sustainability of coffee production in the Matagalpa area			Nicaragua	2001
22 Implementation of the forest improvement operations			Albania	2002
23 Increase forest cover and ensure sustainable management of the forest estates			Uganda	2002
24 Introduce forest management plans			Belize	2002
25 Joint forestry project to offset GHG emissions		5 000	Ghana	2001
26 Management of forests in the Puyango area	29		Ecuador	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
27 Management of 330,000 ha of forests		14 220	Mauritania	2002
28 Management of forests in order to slow down rates of deforestation			Chad	2001
29 Management of natural resources in wet zones		25 900	Mauritania	2002
30 Participatory coastal plantation: medium-term rotation on littoral land/newly accreted Char Land			Bangladesh	2002
31 Participatory woodlot plantation: short-term rotation on littoral forest land			Bangladesh	2002
32 Changing cultivars (pijuayo for palmito)			Peru	
33 Prepare a database to a) quantify the role of forests, forest soils as reservoirs, sinks and sources of carbon and b) define ways to alter forest management systems to optimize adaptation to climate change, sequestration and storage of carbon			Sri Lanka	2000
34 Private forestry project			Costa Rica	2000
35 Promote planting of Pourghere to preserve vegetation, to maintain the fertility of soils and to increase the sequestration of CO ₂	20/30 years		Niger	2000
36 Protected areas project			Costa Rica	2000
37 Reforestation			Albania	2002
38 Reforestation and management of forests through EPA, capacity-building and data basing/studies		1 095	Djibouti	2002
39 Reforestation and management of plains and small catchment areas		2 205	Djibouti	2002
40 Reforestation of 30,000 ha per year			Burundi	2001
41 Reforestation of mountain regions		1 095	Djibouti	2002
42 Reforestation of several areas using trees able to adapt to difficult ecological conditions			Chad	2001
43 Reforestation programmes in Assaba, Gorgol, Brakna, Trarza, Guidimakha, Hodh el Gharbi, Hodh Chargui and Tagant		688	Mauritania	2002
44 Rehabilitation of degraded forest areas		1 500	Ghana	2001
45 Replication of a reforestation project in other regions of the country			Mali	2000
46 Sal plantation: medium-term rotation on inland forest land			Bangladesh	2002
47 Socio-economic development of rural communities in the Caribbean zone	3 818 in 25 years		Colombia	2001
48 Support for the implementation of the Forestry Policy and Action Plan			Grenada	2000
49 Supporting the reforestation master plan	7 147 equivalent in the period 2001-2020		Morocco	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
50 Sustainable management of the Chachi native forest in the Cayapas river	8		Ecuador	2000
51 The use of remote sensing for monitoring forest cover changes and for establishing base-line data			Ghana	2001
C.4. Subsector: Fuel wood conservation and substitution				
1 Substitution of firewood by other energy resources			Chad	2001
C.5. Subsector: Production forestry/agroforestry				
1 Agroforestry for production of cashew nuts	12 864	8 407	Guinea	2002
2 Agroforestry projects in 12 areas that have degraded soils			Honduras	2000
3 The development of agroforestry	4 613 equivalent in the period 2001-2020		Morocco	2001
4 Establishment of silvopastoral systems in the Gaumote area	477		Ecuador	2000
5 Establishment of agroforestry systems in the Carmen area	1 750		Ecuador	2000
6 Forestry plantations in the Balzar area	477		Ecuador	2000
7 Forestry plantations in the Bolivar area	143		Ecuador	2000
8 Green belt of Guayaquil city	11		Ecuador	2000
9 Joint forestry project to offset GHG emissions		5 000	Ghana	2001
10 Private forestry project			Costa Rica	2000
11 Protected areas project			Costa Rica	2000
12 Sequestration of CO ₂ : demonstration of carbon increase in forests			Chile	2000
13 Sequestration of CO ₂ : measurement of carbon sequestration in Chilean forests and promotion in a global carbon market			Chile	2000
14 Teak production	6 754	6 260	Guinea	2002
C.6. Subsector: Substitution of sustainably grown wood for non-sustainably harvested wood and for non-wood products				
C.7. Subsector: Use of recycled and more efficient wood products				
1 Enhancement of the use of treatments for the better preservation of wood products			Burundi	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
D. Sector: Industrial				
D.1. Subsector: Cogeneration and thermal cascading				
1 Cogeneration in sugar cane production			Colombia	2001
2 Cogeneration in the textile industry	9 equivalent per year		Colombia	2001
3 Cogeneration project			Grenada	2000
4 Development of cogeneration	4 002 equivalent in the period 2001-2020		Morocco	2001
5 Gasification of sugar cane bagasse for energy generation			Colombia	2001
6 Introduction of combined heat and power and district heating plants in industrial zones			Albania	2002
7 Utilization of heat from clinker production in cement industry			Tajikistan	2002
D.2. Subsector: Energy efficiency gains				
1 Building and industrial building sectors: 6 projects		13 000	Uzbekistan	1999
2 Improving biomass boilers			Bangladesh	2002
3 Improving coal boilers			Bangladesh	2002
4 Improving fuel boilers			Bangladesh	2002
5 Improving the efficiency of gas boilers			Bangladesh	2002
D.3. Subsector: Fuel switching				
1 Elimination of residual fuel oil in industry			Uganda	2002
2 Energy switch to sources with lower GHG emission factors (e.g., electricity)			Eritrea	2002
3 Industrial sector: efficiency improvements to boilers and furnaces via replacement and fuel switching options			Lebanon	1999
D.4. Subsector: Introducing new technologies and processes				
1 Activities implemented jointly: CHILIPAVE: Chili cold mix in place; recycled asphalt pavement GHG reduction project			Chile	2000
2 Building and industrial building sectors: 6 projects		13 000	Uzbekistan	1999
3 Coal bed methane investigations			Botswana	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
4 Cooling system in cement production			Indonesia	1999
5 Demonstration and introduction of smokeless and high-efficiency coal bracketing technology		15 000	Mongolia	2001
6 Desalination of water using wind energy in Tan-Tan	292 equivalent in the period 2001-2020		Morocco	2001
7 Desalination water plant for San Andres	5 equivalent per year		Colombia	2001
8 Develop an inventory on emissions from different industries			Sri Lanka	2000
9 Develop mechanisms to reduce GHG emissions from different industries			Sri Lanka	2000
10 Drying sugar beet by using superheated steam in the Doukkala sugar refineries	350 equivalent in the period 2001-2020		Morocco	2001
11 Economic evaluation of GHG abatement strategies			Senegal	1997
12 Efficiency improvement and conversion of industrial boilers	2 100		Peru	2001
13 Electricity generation from biogas in Bogota	12 218 equivalent in 20 years		Colombia	2001
14 Electricity generation from biogas in Tumaco	5 equivalent per year		Colombia	2001
15 Electricity generation from biogas in Tunja	11 equivalent per year		Colombia	2001
16 Energy auditing in industries			Burundi	2001
17 Exploring potential markets for natural gas			Barbados	2001
18 Finish construction of the aggregates for production of weak nitric acid and ammonia saltpetre at PO Azot in Fergana		8 800	Uzbekistan	1999
19 Gas boiler retrofitting			Bangladesh	2002
20 Improved energy efficiency in brick manufacture	54 339 equivalent per year		Colombia	2001
21 Improved energy efficiency in coke production	65 equivalent per year		Colombia	2001
22 Improved energy efficiency in juggery production	277 equivalent per		Colombia	2001
23 Industrial sector: efficiency improvements to boilers and furnaces via replacement and fuel switching options			Lebanon	1999
24 Industrial Sector: motor-driven system improvement and replacement			Lebanon	1999

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
25 Integration of climate change topics in curricula of technical studies			Grenada	2000
26 Improvement of drying systems in textile industry			Tajikistan	2002
27 Improvement of energy consumption through better management			Albania	2002
28 Improvement of furnaces in metal smelting, with introduction of 'know-how' technologies			Tajikistan	2002
29 Improvement of efficiency of power supply for industrial consumers			Albania	2002
30 Introduction of district heating plants in industrial zones			Albania	2002
31 Introduction of efficient coal-fired boilers for industrial consumers			Albania	2002
32 Introduction of efficient electrical motors for industrial consumers			Albania	2002
33 Introduction of efficient heavy fuel oil fired boilers for industrial consumers			Albania	2002
34 Introduction of efficient lighting for industrial consumers			Albania	2002
35 Introduction of gas power plant to replace heavy fuel oil power plant in Albania's power sector			Albania	2002
36 Introduction of mini-hydropower plants to replace diesel generator in Albania's power sector			Albania	2002
37 Introduction of new industrial technology which consumes less energy (lower energy intensity)			Albania	2002
38 Modification of wet-type cement mills to dry-type mills in the Mongolian cement industry		20 000	Mongolia	2001
39 Other industries: 3 projects (cotton, butter-oil) to improve power generation		20 800	Uzbekistan	1999
40 Partial substitution of clinker by fly ash from thermal plants	6 000 equivalent in the period 2001-2020		Morocco	2001
41 Process improvement in brick making			Bangladesh	2002
42 Process improvement in paddy parboiling			Bangladesh	2002
43 Programme/project to disseminate information on energy audits, rational use of energy, energy diversification and clean technologies in the industrial sector			Grenada	2000
44 Project for the standardization and certification of industrial equipment			Grenada	2000
45 Project to build national consulting capacity in energy and the environment in the industrial sector			Grenada	2000
46 Project to increase energy efficiency in Kaspi cement plant		1 000	Georgia	1999

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
47 Research on agricultural by-products, vegetable oils and alcohol as alternative sources of energy			Mali	2000
48 Set up energy education and extension services for industries			Seychelles	2000
49 Setting up of manufacturing facilities to produce high-purity silicon for the computer chip and solar PV industries			Barbados	2001
50 Technological upgrading in cement industry			El Salvador	2000
51 Technologies required for implementation of mitigation policy: electric filters necessary for the Kaspi cement plant		500	Georgia	1999
52 First stage of methanol production to replace ammonia at PO Navoiazot		2 500	Uzbekistan	1999
53 Updating technology of nitrate producing aggregate at PO Azot in Fergana		30 000	Uzbekistan	1999
54 Upgrading of nitrate-producing factory in Chirchik PO Elektrohimprom		20 000	Uzbekistan	1999
55 Use of efficient electric motors, mechanisms and drives in all industries			Tajikistan	2002
56 Use of humid phosphate instead of dry phosphate in the Jorf Lasfer plant	894 equivalent in the period 2001-2020		Morocco	2001
57 Use of more energy-efficient and clean technology in industries			Seychelles	2000
58 Use of renewable energy technologies in hotels and guesthouses			Seychelles	2000
59 Use of solar distillation as a source of fresh water for the outer islands and Male			Maldives	2001
D.5. Subsector: Material recycling				
D.6. Subsector: Material substitution				
1 Partial substitution of black phosphate by white phosphate in Youssoufia	1 981 equivalent in the period 2001-2020		Morocco	2001
2 Use of wastes as energy source and use of alternative materials to clinker in cement production			Costa Rica	2000
3 Valorization of waste as energy source	1.02/year	12 360	Djibouti	2002
D.7. Subsector: Process improvements				
1 Cement industry: conservation and preheating in pyroprocessing and improvements in the grinding process			Lebanon	1999
2 Coal upgrading (coal drying plant)			Indonesia	1999
3 Combustion optimization in boilers in the industrial sector	21	1 500	Ecuador	2000
4 Commission a study on energy recovery from waste			Sri Lanka	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
5 Cooling system in cement production			Indonesia	1999
6 Economic and environmental benefits of energy efficiency and conservation at the Barnangwato Concession Limited - Copper/Nickel Mine			Botswana	2001
7 Energy demand side management programme for Mongolian industry		500	Mongolia	2001
8 Heat recovery in the Safi and Jorf Lasfer chemical plants	4 690 equivalent in the period 2001-2020		Morocco	2001
9 Improvements to the La Sierra thermic power plant			Colombia	2001
10 Increased use of natural gas in the industrial sector	15 354 equivalent in the period 2001-2020		Morocco	2001
11 Rational use of energy in the industrial sector	10 920 equivalent in the period 2001-2020		Morocco	2001
12 Recover liquefied petroleum gas (LPG) from natural gas	686/year	67 000	Ecuador	2000
13 Reduction of losses in the energy sector	0.385/year	128 000	Ecuador	2000
14 Rehabilitation of mining sites in Khouribga	264 equivalent in the period 2001-2020		Morocco	2001
15 Replacement of boilers in the industrial and tertiary sectors	450 equivalent in the period 2001-2020		Morocco	2001
16 Use of wastes as energy source and use of alternative materials to clinker in cement production			Costa Rica	2000
E. Sector: Residential, commercial and institutional buildings				
E.1. Subsector: Building equipment				
1 Energy saving in the tertiary and residential sectors		800 million FCFA	Burkina Faso	2002
2 Use of solar energy for water heating in the residential sector	73	3 900	Ecuador	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
E.1.1. End use/Description: Cooking				
1 Assessing small-scale hydropower potential and demonstration project in combination with dissemination of electric cooking stoves			Lao People's Democratic Republic	2000
2 Assessment of emissions from kerosene stoves			Kiribati	1999
3 Developing project proposal for improved cooking stoves demonstration project			Lao People's Democratic Republic	2000
4 Dissemination of ecological stoves in the Pacific Region of Nicaragua			Nicaragua	2001
5 Improve biomass cooking stoves			Bangladesh	2002
6 Improvement of carbonization techniques			Burundi	2001
7 Improving carbonization efficiency		350	Mauritania	2002
8 Improving/promoting energy efficiency and conservation, e.g., wide distribution of improved biomass and charcoal stoves			Ethiopia	2001
9 Introduction of energy-efficient devices (e.g., wood stoves)			Eritrea	2002
10 Introduction of improved stoves			Ethiopia	2001
11 Promoting biogas use for GHG emission reduction			Lao People's Democratic Republic	2000
12 Promoting the use of butane		5 250	Mauritania	2002
13 Promoting the use of improved stoves in rural and urban areas			Burundi	2001
14 Promoting the use of improved stoves		400	Mauritania	2002
15 Promoting the use of kerosene as cooking fuel		70	Mauritania	2002
16 Promotion and diffusion of improved ovens and practices to reduce the use of fuel wood	70	400	Ecuador	2000
17 Promotion of improved stoves and charcoal kilns			Namibia	2002
18 Recovery and use of sawing waste for briquette production			Burundi	2001
19 Substitution of fuel-wood in rural areas through promotion and use of residues			Botswana	2001
20 Use of LPG for domestic cooking			Seychelles	2000
21 Use of peat as cooking fuel		1 770	Mauritania	2002

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
E.1.2. End use/Description: Cooling				
1 Demonstration heating and cooling system implementation on the basis of environmentally safe heat-pump equipment		20	Armenia	1998
2 Installing reflective glass windows			Bangladesh	2002
3 Introduce energy-efficient cooling devices			Eritrea	2002
4 Introduction of solar cooling devices			Eritrea	2002
5 Maximization of ventilation in newly built houses			Eritrea	2002
6 Rehabilitation of heating and cooling of buildings by environmentally safe systems for the earthquake zone of Armenia		2 000	Armenia	1998
7 Switch to coolers that use energy sources with lower GHG emission factors			Eritrea	2002
8 Using efficient air conditioners			Bangladesh	2002
E.1.3. End use/Description: Energy management				
1 Adopt energy-efficient building codes and standardization and labelling of energy-consuming end-use equipment			Sri Lanka	2000
2 Commercialization of the supply of electricity			Cambodia	2002
3 Connection of Nouakchott to the OMVS (Organisation pour Mise en Valeur du fleuve Sénégal) grid		10	Mauritania	2002
4 Demand management and promotion of substitute energy sources			Senegal	1997
5 Demonstration project to create a demand-side management programme unit			Antigua and Barbuda	2001
6 Develop procedures to ensure consistency of classification of energy data with the economic data			Cambodia	2002
7 Development of a plan to decentralize electrification			Burundi	2001
8 Development of a system for assessing potential mitigation options			Cuba	2001
9 Efficiency improvements for existing and new building shells			Cambodia	2002
10 Electricity supply improvement			Cambodia	2002
11 Electricity trading with neighbouring countries			Cambodia	2002
12 Electrification of the Vallée village		276	Mauritania	2002
13 Energy audits for commercial and institutional buildings			Seychelles	2000
14 Energy conservation programme in the public sector			Grenada	2000
15 Energy conservation programme			Barbados	2001
16 Energy pricing			Cambodia	2002

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
17 Energy saving in government buildings		20	Mauritania	2002
18 Establishment of a fuel and appliance testing laboratory			Cambodia	2002
19 Establishment of a sustainable energy centre		2 000	Mongolia	2001
20 Establishment of an educational campaign to promoted the rational use of			Honduras	2000
21 Evaluation of the electricity generation system			Kiribati	1999
22 Expand and strengthen the capacity of the Energy Conservation Fund to improve its capability to assist different stakeholders in the energy sector in the areas of energy conservation and management			Sri Lanka	2000
23 Financing the decentralization of rural electrification	604 equivalent in the period 2001-2020		Morocco	2001
24 Improvement of energy database			Cambodia	2002
25 Improvement of energy efficiency of buildings in Western Africa (Senegal and Côte d'Ivoire)		3 500	Senegal	1997
26 Improvements in building insulation		500	Mongolia	2001
27 Improvements in the Électricité du Cambodge (EDC)			Cambodia	2002
28 Incorporation of energy-efficient measures and standards in building design			Seychelles	2000
29 Information programme in efficient use of energy and energy diversification in the services sector			Grenada	2000
30 Installation of gas consumption monitoring systems			Tajikistan	2002
31 Introduction of incentives for the substitution of electricity by renewable energy			Grenada	2000
32 Introduction of prepaid meters for domestic consumers			Albania	2002
33 Introduction of solar water heating system to replace electric boilers in households			Albania	2002
34 Introduction of solar water heating systems to replace electric boilers in service consumers (hotels, restaurants, hospitals)			Albania	2002
35 Introduction of thermostatic time switches for electric boilers in household consumers			Albania	2002
36 Introduction of total energy supply schemes (hydro/solar energy and small-scale combined heat and power, based on diesel generators) for meeting electricity and heat demand in tourist villages			Albania	2002
37 Investing in demand-side management in the electricity sector			Zimbabwe	1998
38 Lower energy consumption through demand-side energy efficiency and conservation programmes and incentives			Mauritius	1999

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
39 National transmission system			Cambodia	2002
40 Passive solar building design			Cambodia	2002
41 Programme of training and technical assistance for efficient use of energy			Grenada	2000
42 Programme to conserve and efficiently use energy through seed fund			El Salvador	2000
43 Providing the public with a menu of architectural designs for residential buildings that take advantage of natural lighting and cooling			Grenada	2000
44 Provincial and rural electrification			Cambodia	2002
45 Rational use of energy in government buildings	350 equivalent in the period 2001-2020		Morocco	2001
46 Reconstruction and improvement of small-size boiler houses		5 000	Mongolia	2001
47 Regulatory reform action - establishment of power sector regulatory framework			Cambodia	2002
48 Rehabilitation of the electricity system			Cambodia	2002
49 Reorganization of the information system in the energy sector		170	Djibouti	2002
50 Residential and commercial energy efficiency building codes			Botswana	2001
51 Setting rules for thermic building efficiency			Tunisia	2001
52 Setting up of an energy-efficient use and conservation extension service within the Energy Affairs Bureau			Seychelles	2000
53 Encouraging building retrofits			Cambodia	2002
54 Sustainable management of the domestic energy sector		20 000	Haiti	2002
55 Training on energy audit			Cambodia	2002
E.1.4. End use/Description: Heating				
1 Demonstration heating and cooling system implementation on the basis of environmentally safe heat pump equipment		20	Armenia	1998
2 Energy saving in district heating system improvement		814	Kazakhstan	1998
3 Introduction of bio-digesters, solar heaters, electric heaters			Eritrea	2002
4 Introduction of central heating plants to replace individual ones			Albania	2002
5 Introduction of combined heat and power and district heating plants in the service sector			Albania	2002
6 Introduction of district heating plants in the service sector			Albania	2002
7 Pilot project on heating and hot water supply		814	Kazakhstan	1998

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
8 Rehabilitation of heating and cooling of buildings by environmentally safe systems for the earthquake zone of Armenia		2 000	Armenia	1998
9 Removing barriers to energy efficiency in municipal heat and hot water supply		211	Georgia	1999
10 Use of solar energy for water heating in the residential sector	73	3 900	Ecuador	2000
E.1.5. End use/Description: Lighting				
1 Building houses with efficient illumination and solar energy			El Salvador	2000
2 Carbon emission reduction through replacement of incandescent bulbs with compact fluorescent lamps		12 000	Mongolia	2001
3 Demonstration project to promote compact fluorescent lamps (CFLs) for residential use			Antigua and Barbuda	2001
4 Efficient lighting and alternative energy sources			Namibia	2002
5 Efficient lighting programme			Botswana	2001
6 Energy saving in the residential sector by lamps substitution	680	27 200	Ecuador	2000
7 Enhance energy saving in the residential sector by using compact fluorescent lamps			Costa Rica	2000
8 Improved kerosene lamps			Bangladesh	2002
9 Incandescent lamps substitution by efficient lamps, oriented to the residential sector			Honduras	2000
10 Introduction of compact fluorescent bulbs and timers/switches to low-income consumers via the removal of common external tariff (CET) and domestic taxes/levies			Grenada	2000
11 Introduction of efficient lighting for domestic consumers			Albania	2002
12 Introduction of efficient lighting for service consumers			Albania	2002
13 Introduction of solar panels for light energy generation and storage whenever possible			Eritrea	2002
14 Lighting efficiency improvements through the use of fluorescent in place of incandescent lamps			Eritrea	2002
15 Reducing CO ₂ emissions through use of compact fluorescent lamps in the government and commercial sectors			Lao People's Democratic	2000
16 Rural electrification with solar PV systems	8.4	5 100	Écuador	2000
17 Substitution of conventional lamps in Villavicencio	1 equivalent per year		Colombia	2001
18 Substitution of PV lanterns for kerosene lighting			Ethiopia	2001

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
19 Transition to efficient lighting equipment, in particular luminescent lamps, halogen infrared lamps, automatic systems of street illumination, etc			Tajikistan	2002
20 Use of compact fluorescent lamps			Bangladesh	2002
21 Use of low-wattage and renewable energy technologies, such as compact fluorescent lamp (CFL) and solar water heater (SWH)			Seychelles	2000
E.1.6. End use/Description: Motors				
1 Introduce demand-side measures (DSM) such as peak lopping through appropriate pricing, popularization of more efficient end-use devices such as luminaries, refrigerators, air conditioners and motors, etc.			Sri Lanka	2000
2 Introducing efficient motors			Bangladesh	2002
3 Introduction of efficient electrical motors for service consumers			Albania	2002
E.1.7. End use/Description: Office equipment				
E.1.8. End use/Description: Other appliances				
1 Promote the use of improved boilers in business establishments (hammams, ovens)	3 426 equivalent in the period 2001-2020		Morocco	2001
E.1.9. End use/Description: Refrigeration				
1 Certification of refrigerators			Tunisia	2001
2 Introduce demand-side measures (DSM) such as peak lopping through appropriate pricing, popularization of more efficient end-use devices such as luminaries, refrigerators, air conditioners and motors, etc.			Sri Lanka	2000
3 Introduction of energy-efficient refrigerators			Eritrea	2002
4 Introduction of energy-efficient refrigerators for household consumers			Albania	2002
5 Introduction of energy-efficient refrigerators for service consumers			Albania	2002
6 Use of energy-efficient refrigerators and freezers			Seychelles	2000
7 Using energy-efficient refrigerators			Bangladesh	2002
E.1.10. End use/Description: Water heating				
1 Introduction of solar water-heat collectors (SWHC) into the energy system			Armenia	1998
2 Pilot project on heating and hot water supply		814	Kazakhstan	1998

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
3 Removing barriers to energy efficiency in municipal heat and hot water supply		211	Georgia	1999
4 Solar hot water supply demonstration system for the international post-trauma rehabilitation centre (IPTRC)		200	Armenia	1998
E.2. Subsector: Building thermal integrity				
1 Energy efficiency: building sector			Lebanon	1999
2 Enhancing thermal performance of building envelopes: capacity-building project			Lebanon	1999
3 Enhancing thermal performance of building envelopes: market-based programme			Lebanon	1999
4 Improvement of energy efficiency of buildings in Western Africa (Senegal and Côte d'Ivoire)		3 500	Senegal	1997
5 Improvement of heating systems, enhancing conditioning and optimizing the microclimate of residential and commercial buildings			Tajikistan	2002
6 Introduction of progressive thermo insulation of households			Tajikistan	2002
7 New approach in planning, design and construction of residential and commercial buildings, with increased application of high-tech materials for walls, roofs, windows etc.			Tajikistan	2002
8 Thermo insulation of households in cases when the main energy sources are electricity, fuel wood, LPG or kerosene and when a district heating system is in operation			Albania	2002
9 Thermo insulation of stock of buildings which use electricity, firewood, LPG, kerosene for meeting space heating energy demand			Albania	2002
F. Sector: Solid waste and waste water disposal				
F.1. Subsector: Methane recovery				
F.1.1. End use/Description: Solid waste disposal				
1 Climate change early action technology measures: methane recovery from			Egypt	1999
2 Composting and landfilling with gas recovery and flaring			Lebanon	1999
3 Composting and landfilling with gas recovery and utilization			Lebanon	1999
4 Construction of new sanitary landfills: the gas generated from the landfill will be utilized			Albania	2002
5 Development of sewage treatment facilities			Maldives	2001
6 Establish secondary treatment systems for new residential sites			Belize	2002
7 Expand sewage system in Belize City			Belize	2002

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
8 Implement methane recovery at landfills			Belize	2002
9 Integrated household waste management and process		4 500	Kenya	2002
10 Landfilling with gas recovery and flaring			Lebanon	1999
11 Landfilling with gas utilization			Lebanon	1999
12 Pilot production of biohumus by processing organic part of solid urban wastes and manure		65	Armenia	1998
13 Promote proper solid waste management with methane recovery			Sri Lanka	2000
14 Recovery and utilization of the methane from landfills			Grenada	2000
15 Recovery of biogas from solid waste disposal sites in Mediouna and Marrakesh	6 121 equivalent in the period 2001-2020		Morocco	2001
16 Reduction of methane emissions to the atmosphere through commercial utilization of landfill methane			Egypt	1999
17 Upgrade sewage treatment system in Belmopan			Belize	2002
18 Waste management in Nouakchott village	59.97 in the period 2003 - 2010	12 593	Mauritania	2002
19 Waste treatment and use of waste for energy production	82.62 equivalent	15 160	Djibouti	2002
F.1.2. End use/Description: Waste water treatment				
1 Aerobic treatment of waste water			Seychelles	2000
2 Construction of new sewerage systems with waste water treatment plants			Albania	2002
3 Generation of electricity using natural gas from the Rio Azul Landfill	76.44 equivalent per year		Costa Rica	2000
4 Implementation of an integrated waste management system			Maldives	2001
5 Recovery of biogas from waste water treatment plants in Benslimane and Grand Agadir	834 equivalent in the period 2001-2020		Morocco	2001
6 Treatment of commercial and industrial waste before discharge into aquatic and terrestrial environment			Grenada	2000
7 Waste water treatment in coffee production			Costa Rica	2000
F.2. Subsector: Source reduction				
1 Collection and transport of solid waste in major cities		9 000	Mongolia	2001

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
2 Extending the collection and utilization of secondary resources through the application of separated collection to reduce the amount of municipal solid waste (MSW)			Albania	2002
F.2.1. End use/Description: Composting				
1 Composting		2 800	Djibouti	2002
2 Composting and landfilling with gas recovery and flaring			Lebanon	1999
3 Composting and landfilling with gas recovery and utilization			Lebanon	1999
4 Pilot production of biohumus by processing organic part of solid urban wastes and manure		65	Armenia	1998
5 Promotion of composting for biogas production			Chad	2001
6 Recycling and composting of solid waste			Seychelles	2000
7 Recycling, reuse, composting and smart selection of materials for use			Grenada	2000
F.2.2. End use/Description: Incineration				
1 Construction of a new MSW incinerator with energy utilization			Albania	2002
2 Municipal and household sector: waste incinerating plant for Tashkent		45 000	Uzbekistan	1999
F.2.3. End use/Description: Recycling				
1 Pilot production of biohumus by processing organic part of solid urban wastes and manure		65	Armenia	1998
2 Promotion of waste re-use and recycling		1 500	Kenya	2002
3 Recycling and composting of solid waste			Seychelles	2000
4 Recycling, reuse, composting and smart selection of materials for use			Grenada	2000
5 Study of a problem of application of methane fermentation		35	Armenia	1998
G. Sector: Transport				
G.1. Subsector: Alternative energy sources				
1 Integrated system for zero or reduced emission fuel cell bus operation in Cairo			Egypt	1999
2 Introduction of electric vehicles, trolleys and trains			El Salvador	2000
3 Introduction of petrol/ethanol blending			Uganda	2002
4 Natural gas vehicles (refuelling station and conversion kit)		AUS\$32 800 000	Indonesia	1999

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
5 Producing hydrogen from renewable energy to power fuel cell vehicles, e.g., cars and buses			Barbados	2001
6 Promote the use of gasohol (blending of ethanol with gasoline) for cars			Ethiopia	2001
7 Promoting the use of fuels with low carbon content (fuel switching)			Ethiopia	2001
8 Promotion of bicycle use			El Salvador	2000
9 Rapid public transport system utilizing electric-powered vehicles			Mauritius	1999
G.2. Subsector: Energy efficiency improvements				
G.2.1. End use/Description: Improve fleet management				
1 Adopt an appropriate road pricing system			Sri Lanka	2000
2 Better engine and tyre maintenance and driver training			Grenada	2000
3 Declare emission standards for mobile and stationary sources			Seychelles	2000
4 Development of a concept, strategy and action plan to reduce emissions from road vehicles		400	Armenia	1998
5 Development of a sustainable inter-island sea-based mass transport system			Maldives	2001
6 Diagnostic centres for vehicle engines	4 187 equivalent in the period 2001-2020		Morocco	2001
7 Dissemination of leaflets, pamphlets and brochures on vehicle selection; advice on maintenance, control of fuel combustion emissions and good driving practices			Grenada	2000
8 Driver and pedestrian training and education			Cambodia	2002
9 Encouraging vehicles with lower energy consumption in relation to capacity			Uganda	2002
10 Energy-efficient and pollution control technology			Cambodia	2002
11 Equipping the highway patrol unit with required resources to enforce measures and regulations			Seychelles	2000
12 Expansion of the use of 4-stroke 3-wheelers			Bangladesh	2002
13 Implementation of proper transport/traffic management using control changes in traffic flow through improved traffic signal timing and adopting measures to encourage increased capacity utilization			Grenada	2000
14 Implementing measures to reduce the atmospheric pollution caused by the transport sector			Mali	2000

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
15 Implementing the National and the Greater Kampala Transportation Master Plans			Uganda	2002
16 Improve traffic management systems through the use of information technology			Sri Lanka	2000
17 Improvement of the public transport system			Seychelles	2000
18 Improving the efficiency of the transport system in Ghana			Ghana	2001
19 Improving vehicle efficiency by carrying out maintenance, inspections and training			Ethiopia	2001
20 Integrate bus-rail operation through proper network planning			Sri Lanka	2000
21 Introduce a suitable vehicle inspection and monitoring programme			Sri Lanka	2000
22 Light electric rail system for the east coast/shifting to sea transport			Seychelles	2000
23 Limit import of used vehicles, reinforce technical inspections, encourage use of public transport	10 932	54 000	Mauritania	2002
24 Nairobi city traffic flow improvement project		210	Kenya	2002
25 Promoting environmentally friendly transport modes such as bicycles			Ethiopia	2001
26 Promotion of the use of smaller cars through tax differentiation based on engine size			Ethiopia	2001
27 Reopening of the railway services to reduce the use of fuels on the roads			Costa Rica	2000
28 Removing barriers to energy use efficiency in the urban transport system		1 200	Kenya	2002
29 Road transport		2 000	Uzbekistan	1999
30 Technical inspections in the transport sector	23 800		Peru	2001
31 Traffic management plan			Seychelles	2000
G.2.2. End use/Description: Improve speed management				
1 Driver awareness campaign for efficient use of vehicles			Seychelles	2000
2 Improving urban traffic			Ethiopia	2001
G.2.3. End use/Description: Increase vehicle load factor				
1 Implementation of proper transport/traffic management using control changes in traffic flow through improved traffic signal timing and adopting measures to encourage increased capacity utilization			Grenada	2000
G.2.4. End use/Description: Vehicle energy intensity reduction				
1 Climate change early action technology measures: retrofitting 2-stroke engines			Egypt	1999

Project title	Estimated emission reduction/ sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
2 Conversion of taxis to LPG	500		Peru	2001
3 Conversion of vehicles from normal fuel to LPG			Colombia	2001
4 Encourage importation of fuel-efficient vehicles			Belize	2002
5 Encourage use of 4-stroke outboard engines			Belize	2002
6 Encouragement of use of low fuel consumption motor vehicles			Tajikistan	2002
7 Establish level of vehicular emissions for purposes of adequate planning		48	Ghana	2001
8 Expansion of exhaust emission rationing tools and mechanisms			Tajikistan	2002
9 Formulation and implementation of a procurement policy for vehicles in the public (government) sector (more efficient vehicles and system of transporting larger groups and bigger loads)			Grenada	2000
10 Fuel efficiency in transport			Botswana	2001
11 Improvements in motor fleet structure, technical characteristics of engines and quality of roads		460	Azerbaijan	2000
12 Initiate a 'Clean Air Act'			Mauritius	1999
13 Introduction of efficient vehicles using catalysers and the provision of good-quality roads and proper traffic planning			Eritrea	2002
14 Introduction of technologies to improve fuel quality in the road transport sector aimed at reducing harmful emissions			Tajikistan	2002
15 Introduction of trade regulations, tariffs for fuel efficiency and domestic fuel			Grenada	2000
16 Modernization and technical upgrading of vehicle park			El Salvador	
17 Modernization and technical upgrading of the vehicle fleet			El Salvador	2000
18 Phase out old vehicles	3 700		Peru	2001
19 Planning and implementing a programme for technical testing of vehicles to reduce fuel consumption			Niger	2000
20 Removing barriers to adoption of 4-stroke engine for 2-wheelers			Lao People's Democratic Republic	2000
21 Road transport		2 000	Uzbekistan	1999
22 Switching of public transport to alternative fuels, in particular liquefied gas			Tajikistan	2002
23 Vehicle fuel efficiency improvement		900	Mongolia	2001
G.3. Subsector: Infrastructure changes, modal shift and fleet management				
1 Improve transport infrastructure			Belize	2002

Project title	Estimated emission reduction/sequestration (1000 t CO ₂)	Cost (US\$1000)	Country	Year
G.3.1. End use/Description: Traffic reduction				
1 Electrification of railway and development of urban electrified transport			Tajikistan	2002
2 Establishing dedicated non-motorized transport (NMT) lanes			Uganda	2002
3 Implementation of an integrated transport system in the large metropolitan area of Costa Rica			Costa Rica	2000
4 Improvement of urban and inter-urban road networks			El Salvador	2000
5 Increase use of mass public transport			El Salvador	2000
6 Promotion of use of bicycles			El Salvador	2000
7 Rail infrastructure improvement			Namibia	2002
8 Rail transport		1 464 000	Uzbekistan	1999
9 Rapid public transport system utilizing electric-powered vehicles			Mauritius	1999
10 Road improvement in urban areas			Cambodia	2002
G.3.2. End use/Description: Transport energy intensity reduction (fleet management)				
1 Air transport		1 000 000	Uzbekistan	1999
2 Bicycle paths	23 900		Peru	2001
3 Development of alternative transport, including bicycles; and emission reduction from light vehicles, which are most popular in the republic			Tajikistan	2002
4 Encourage the use of non-motorized transport systems, such as bicycles			Eritrea	2002
5 Expansion of public transport infrastructure			Ethiopia	2001
6 Improvements in motor fleet structure, technical characteristics of engines and quality of roads		460	Azerbaijan	2000
7 Increase use of mass public transport			El Salvador	2000
8 Introduce energy-efficient mass transit			Cambodia	2002
9 Introduction of non-motorized modes of transport			Albania	2002
10 Promotion of use of bicycles			El Salvador	2000
11 Railway network enhancement		Between US\$ 52.836 million and 111.888 million	Ghana	2001
12 Reopening of the railway services to reduce the use of fuels on the roads			Costa Rica	2000
13 Setting up of a second city on Mahe			Seychelles	2000