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Report on the in-depth review of the national communication of Luxembourg

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Under Articles 4 and 12 of the Convention, Parties are required to prepare national communications on their implementation of the Convention. Guidelines for the preparation of national communications and the process for their review were agreed on by the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, by its decisions 9/2 and 10/1, and by the Conference of the Parties, at its first session, by its decisions 2/CP.1 and 3/CP.1 (see FCCC/CP/1995/7/Add.1). In accordance with these decisions, a compilation and synthesis of the first 33 national communications from Annex I Parties was prepared (FCCC/CP/1996/12 and Add.1 and 2).

When reviewing the implementation of the Convention by Parties, the subsidiary bodies and the Conference of the Parties will have this report available to them in English as well as the summary of the report in the six official languages of the United Nations. (These bodies will also have before them the executive summary of the first national communication of Luxembourg and country-specific information drawn from a compilation and synthesis report covering all countries that have submitted national communications.)

Summary¹

- 1. The in-depth review of Luxembourg was carried out between September 1996 and May 1997 and included a visit to Luxembourg from 13 to 15 November 1996. The review team included experts from Algeria, Romania and Belgium.
- 2. Luxembourg has very specific national circumstances. It is a small, well developed country with a territory of 2,586 sq km and a population of 412,000 (1996). Its per capita gross domestic product is the highest in the European Community (EC) of which Luxembourg is an active member. All oil, coal and gas as well as about 97 per cent of electricity is imported; the rest of the electricity is produced by industries and hydropower stations. Almost all goods manufactured in Luxembourg are exported. Thus its economy is fully integrated into the economies of the EC member States and other countries, making the range of country-specific policies rather limited.
- 3. Luxembourg has a very high level of per capita energy-related carbon dioxide (CO₂) emissions, which in 1990 amounted to roughly 29 tonnes compared to an average of 12 tonnes in the countries of the Organisation for Economic Co-operation and Development (OECD) and 8 tonnes for OECD-Europe. The significant growth in the transport sector, the total dependence on external energy sources and the foreign ownership of a large number of production facilities situated on the territory of Luxembourg significantly limit mitigation efforts in the country. There is no coherent national climate change policy and climate change measures are regarded as part of the EC-wide environmental policies.
- 4. The Government of Luxembourg, while supporting the EC-wide objective of stabilizing CO₂ emissions by the end of the present decade at the 1990 level, has set a more stringent national target of reducing CO₂ emissions by at least 20 per cent by 2005 compared to the 1990 level. Other greenhouse gases (GHG) are not subject to a specific target. Luxembourg is a supporter of the introduction of a CO₂/energy tax at the EC level, especially if implemented in the transport and residential sectors. It does not envisage using increased taxation at the local level as an instrument for reducing GHG emissions.
- 5. The inventories prepared were based on the CORINAIR² methodology and covered the main GHGs and precursors. According to the 1990 GHG inventory, the shares of CO_2 , methane CH_4 and nitrous oxide (N_2O) in the national total were 94 per cent, 5 per cent and 1.6 per cent respectively. Fuel combustion contributed 94 per cent to the total CO_2 emission; 62.4 per cent of fuel combustion emissions were due to industry, 17.7 per cent to energy transformation, 8.5 per

¹ In accordance with decision 2/CP.1 of the Conference of the Parties (see FCCC/CP/1995/7/Add.1), the full draft of this report was communicated to the Government of Luxembourg, which had no further comments.

² CORINAIR is the component dealing with air emissions inventories of the European Economic Community CORINE (Coordinated Information System on the State of Natural Resources and the Environment).

cent to transport and 7.6 per cent to the residential sector. The main sources of the methane emissions were agriculture (74.3 per cent) and waste (16.2 per cent). Agriculture was responsible for 79.3 per cent of total N_2O emissions and energy and transformation for 17.0 per cent. The transport sector - the fastest growing emission source - contributed about 50 per cent of total emissions of non-methane volatile organic compounds (NMVOC) and accounted for roughly 40 per cent of nitrogen oxide (NO_x) and over a quarter of carbon monoxide (NO_x) emissions. All the forest is managed and covers about 34 per cent of the country's territory. Sequestration of NO_x 0 by forest was calculated to be 295 Gg per year and is expected to remain stable or increase slightly in the next ten years.

- 6. The majority of measures reported in the national communication were of a "no regrets" nature and basically addressed energy-related issues in the sectors where GHG emissions appear to be on the increase. The industrial sector, which is dominated by the steel industry, was responsible for over 60 per cent of CO₂ emissions in 1990. Major emission reductions in this sector will be achieved soon with the replacement of the older blast furnaces by more energy-efficient electric arc furnaces by the end of 1997. In the industrial sector the main instrument to reduce emissions is a system of voluntary agreements aimed at encouraging enterprises to improve their energy efficiency. The first such agreement was signed with the Federation of Luxembourg Industries (FEDIL), which committed itself to improving energy efficiency in industry by 10 per cent by the year 2000 compared to 1990.
- 7. In the residential/institutional sector the focus is on promoting cogeneration in public buildings. A special agency has been created to promote cogeneration and the Government has established preferential tariffs for electricity produced by these installations. One of the developments that is expected to result in appreciable reductions in CO_2 and NO_x emissions is the wider penetration of natural gas as an energy source for households. It is expected that by the year 2000 about half of the country's communities, accounting for about 85 per cent of the population, will be connected to the natural gas grid. At present, 70 per cent of the population are connected.
- 8. The fact that the transport sector is the fastest growing source of CO₂ emissions, the figure for 1996 being 35 per cent higher than that for 1990, is partly explained by the growth in the number of new cars purchased (with no signs of saturation yet) and partly by the increased transit traffic of heavy trucks. The team noted that, according to the Intergovernmental Panel on Climate Change (IPCC) guidelines, the fuel sold in the territory of a country is counted in the emissions of that country. Since fuel prices in Luxembourg are lower than in neighbouring countries, "fuel tourism" accounts for a substantial share of petroleum products sales and makes a sizeable contribution to budget revenues (about 10 per cent). According to the estimates of the Environment Agency of Luxembourg, in 1996 up to 60 per cent of gasoline and up to 67 per cent of diesel fuel were exported (these numbers in 1990 were 61 and 75 per cent, respectively). "Fuel tourism" also contributes substantially to the emissions attributed to the transport sector. A number of measures are being implemented or are planned to curb the growth of emissions from the transport sector, mainly by promoting public transport. One project is "Bus Tram Bunn 2002", which envisages further development of the public transport network and construction of

sections of the light rail transport system. Another project - involving a hybrid electric bus - is under way, with two buses already operating in Luxembourg city.

- 9. The national communication contains projected estimates of GHG emissions for the year 2000. They indicate that CO_2 emissions are projected to decrease by 33 per cent, CO by 40 per cent, NO_x by 8 per cent and NMVOC by 27 per cent. Emissions of CH_4 and N_2O are projected to increase by 5 and 3 per cent, respectively. No econometric models were used however and no "without measures" scenario was prepared. The team strongly recommended that attention be given to the projections in the next communication.
- 10. Financial assistance to developing countries and countries with economies in transition amounted to 0.42 per cent of the gross national product in 1995 and GNP and 0.44 per cent in 1996. The Government has set itself the objective of increasing this proportion to 0.70 per cent by the year 2000.
- 11. During the review a considerable amount of information was provided to the team on public awareness and the dissemination of information regarding climate change, in particular through leaflets and information campaigns. The Government will be enhancing the existing programmes with a view to raising awareness of consumption patterns and industrial practices associated with climate change.

I. INTRODUCTION AND NATIONAL CIRCUMSTANCES

- 12. Luxembourg ratified the Convention on 9 May 1994 and its first national communication was received by the secretariat on 25 March 1996. The in-depth review of the national communication was carried out during the period September 1996 to May 1997, including a country visit from 13 to 15 November 1996 to the capital. The review team consisted of Mr. Khaled Boukhelifa (Algeria), Ms. Beatrice Popescu (Romania), Mr. Didier Goetghebuer (Belgium) and Mr. Vitaly Matsarski (UNFCCC secretariat, Coordinator). The team met with representatives of several ministries as well as with representatives of business and nongovernmental organizations.
- 13. In Luxembourg, the responsibility for the coordination and implementation of national environmental policies and for participation in the relevant international activities rests with the Ministry of the Environment. Other ministries, such as the Ministry of Foreign Affairs, Foreign Trade and Cooperation, Ministry of Economic Affairs, Ministry of Energy and Ministry of Transport, take part in the implementation of environmental policies in their respective fields of competence.
- 14. In many respects Luxembourg has very peculiar national circumstances. It is a small, well developed country with a territory of 2,586 sq km and a population of 412,000 (1996). Its per capita gross domestic product (GDP) of \$30,596 (in 1990 United States dollars, data for 1995) is the highest in the European Community (EC) of which Luxembourg is an active

member. In 1995, more than a quarter of its workforce was made up of residents of neighbouring countries. Luxembourg has the lowest greenhouse gas (GHG) emissions in absolute terms among the EC countries yet its per capita and per unit of GDP emissions of carbon dioxide (CO₂) are the highest among the same group of countries owing to its small population and sizeable iron and steel industry. As a consequence CO₂ emission patterns closely follow developments in this sector of the economy. All oil, coal and gas as well as about 97 per cent of electricity is imported; the rest of the electricity is produced by industries and hydropower stations. Almost all goods manufactured in the territory of Luxembourg are exported. Thus its economy is fully integrated into the economies of the EC member States and other countries, making the range of country-specific policies rather limited.

- 15. The first national communication is about 30 pages long and thus just briefly describes national climate-related policies and measures. During the in-depth review, the team was provided with additional information and documentation, including the most recent (1995/96) annual reports of the Ministry of the Environment, Ministry of Energy and Ministry of Economic Affairs; each of these reports contains a section on GHG abatement measures and key developments since the publication of the first national communication.
- 16. The Government of Luxembourg, while supporting the EC-wide objective of stabilizing CO₂ emissions by the end of the present decade at the 1990 level, has set a more stringent national target of reducing CO₂ emissions by at least 20 per cent by 2005 compared to the 1990 level. Other GHGs are not subject to a specific target. There is no coherent national climate change policy since it is expected that technological progress together with wider use of low carbon content fuels, especially natural gas, will be sufficient to decrease emissions and reach the national target. Climate change measures are regarded as part of the EC-wide environmental policies.
- 17. The energy mix has recently undergone a marked change. The share of coal in final consumption decreased from 22.7 per cent in 1990 to 11.4 per cent in 1996; in the same period the share of oil increased from 47.4 to 54.3 per cent, that of natural gas from 12.7 to 19.1 per cent, and that of electricity from 10.6 to 12.9 per cent. In 1990 the share of industry in final consumption was 55.3 per cent, of transport 29.1 per cent and of the residential sector 15.6 per cent; in 1996 these numbers were 39.4, 40.3 and 20.3 per cent respectively.
- 18. Luxembourg is a supporter of the introduction of a CO₂/energy tax at the EC level, especially if implemented in the transport and residential sectors. It does not envisage using increased taxation at the local level as an instrument for reducing GHG emissions. Actually, taxes on fuel and some other goods are lower than in neighbouring countries, residents of these countries travel to Luxembourg to fill up, thus bringing in substantial revenues for the national budget.

II. INVENTORIES OF ANTHROPOGENIC EMISSIONS AND REMOVALS

- 19. In preparing the national 1990 GHG inventory, Luxembourg used the CORINAIR methodology; it is not clear what methods were used to estimate CO_2 sequestration by forest. Originally the national communication contained an inventory in the CORINAIR format but later the 1990 inventory was converted into the Intergovernmental Panel on Climate Change (IPCC) format using the conversion utility developed by CITEPA³ and submitted to the secretariat. The inventory covered the three major greenhouse gases CO_2 , methane (CH_4) and nitrous oxide (N_2O) and the precursors carbon monoxide (CO), nitrogen oxides (NO_x) non-methane volatile organic compounds (NMVOC), as well as sulphur dioxide (SO_2) and ammonia (NH_3) , which are not included in the reporting instructions. Other deviations from the reporting instructions were identified in the inventory during the review process. For instance:
 - (a) IPCC minimum standard tables were not provided;
 - (b) Uncertainty levels associated with GHG emission levels were not reported;
 - (c) Data on emissions of perfluorocarbons (PFCs) and hydrofluorocarbons (HFCs) were not provided.
- 20. During the review visit the team, with the help of officials from the Ministry of the Environment and the Environment Administration (a technical division of the ministry responsible for the preparation of the inventory), attempted to reconstruct the inventory for 1990 and to estimate GHG emissions, especially energy-related CO₂ emissions, for the years 1991 to 1994 since no such estimates were provided in the national communication in the IPCC format. To this end supplementary documentation provided by the host country and energy statistics compiled by EUROSTAT were used.
- 21. The original 1990 inventory contained in the national communication estimated the GHG emissions as follows: CO₂ 11,343 Gg, CH₄ 23.8 Gg, N₂O 0.6 Gg. On the IPCC 1994 global warming potential (GWP) 100 years basis the shares of these gases were 94 per cent, 5 per cent and 1.6 per cent, respectively. Fuel combustion contributed 94 per cent to the total CO₂ emissions, of which 62.4 per cent were due to industry, 17.7 per cent to energy transformation, 8.5 per cent to transport and 7.6 per cent to the residential sector. The main sources of the methane emissions were agriculture (74.3 per cent) and waste (16.2 per cent). Agriculture was responsible for 79.3 per cent of total N₂O emissions and energy and transformation for 17.0 per cent. The transport sector the fastest growing emission source contributed about 50 per cent of total NMVOC emissions and accounted for roughly 40 per cent of NO_x and over a quarter of CO emissions.

³ Centre Interprofessionel Technique d'Etudes de la Pollution Atmospherique.

- 22. The estimate made by the review team resulted in the following numbers for 1990: CO_2 13,188 Gg, CH_4 24.1 Gg, N_2O 0.69 Gg. Thus there is good agreement for methane and nitrous oxide, whereas carbon dioxide emissions calculated by the team were almost 14 per cent higher than reported in the national communication. This difference is mainly due to the conversion from CORINAIR to IPCC methodology made in the national communication, accounting for the emissions from fuels sold in the country but consumed abroad and for electricity import.
- 23. On the basis of the calculations made by the review team, an attempt was made to estimate trends in the GHG emissions for the years 1990-1994. Taking 1990 as 100 per cent the CO₂ emission level in 1991 was 105.8 per cent, in 1992, 101.0 per cent, in 1993, 103.5 per cent, in 1994, 96.0 per cent. Apparently these emissions closely follow developments in the steel industry, which is the major source of CO₂. Methane emissions were estimated to be about 8 per cent lower in 1994 than in 1990. Nitrous oxide emissions increased in the same period by more than 33 per cent, mainly because of rapid growth in the transport sector, which was responsible for 18.8 per cent of these emissions in 1990 and 34.8 per cent in 1994. CO emissions were estimated to have decreased by 16.5 per cent, and NMVOC emissions by 12.3 per cent, while NO_x emissions remained practically unchanged in spite of the rapid growth of the transport sector. The latter might be explained by the wider use of catalytic converters in cars.
- 24. The estimates provided in the above paragraph should be regarded as preliminary and indicative only, since they were not validated or approved by the Government officials. Nevertheless the team felt that they might be of help to the Luxembourg experts in preparing the second national communication.
- 25. Forest covers about 34 per cent of the country's territory. All the forest is managed, with 36 per cent owned by communities and 11 per cent by the State, and the rest being privately owned. Hardwood species constitute 46 per cent and conifers 36 per cent. Annual net increment is estimated to be 2.9 cubic metres per hectare per year. Sequestration of CO₂ by forest was calculated to be 295 Gg per year and is expected to remain stable or increase slightly in the next ten years.

III. POLICIES AND MEASURES

26. Luxembourg does not seem to have a coordinated national climate change policy separate from the policies and measures implemented in the European Community. This is not necessarily a negative statement, since for a country of that size and with an economy totally integrated into the economies of its neighbours and other members of the EC, participation in the regional environmental actions might be at least as important as implementation of specific measures at the national level. The team felt that the national target of reducing CO₂ emissions by at least 20 per cent by 2005 compared to 1990 can be met, provided the envisaged measures are fully implemented.

- 27. The majority of measures reported in the national communication were of a "no regrets" nature and basically addressed energy-related issues in the sectors where GHG emissions appear to be on the increase. They were not subdivided into sector or gas specific categories and are mostly of the energy conservation and general environment protection type, with the emphasis on air quality control.
- 28. The legal basis is laid out in a number of legislative acts such as the amended law on the abatement of air pollution of 21 June 1976, the regulation of 30 November 1989 on the application of the CEC directive 88/609 relating to limits on emissions of some pollutants to the atmosphere from large combustion plants, and the law of 5 August 1993 on the rational use of energy. The last-mentioned in particular provides for guaranteed provision of energy in a diversified and economically viable way, promotion of energy saving and rational use of energy in all sectors of the economy, decreasing dependence on conventional types of energy and promotion of new and renewable sources of energy, reduction in CO₂ emissions and coordination of actions by commercial enterprises at the community level. On the basis of this law specific regulations were to be drawn up aimed at applying strict standards on insulation of new buildings, establishing standards and technical specifications related to safety, efficiency and quality of energy installations, introducing obligatory energy balances and studies of potential savings of energy in residential and public buildings, and introducing assistance mechanisms to promote energy savings and rational use of energy. A number of such regulations have been adopted since and some of them are mentioned below.
- 29. Supplementary documentation provided to the team during the visit revealed a number of measures that had been introduced recently and had thus not been included in the national communication. The majority of these measures are in the buildings and transport sectors, since their shares in the final consumption of petroleum products are 19 and 69 per cent, respectively. These measures mainly apply to CO_2 emissions although some of them are also intended to reduce emissions of other GHGs.
- 30. The <u>industrial sector</u>, which is dominated by the steel industry, was responsible for over 60 per cent of CO_2 emissions in 1990 thus making it an obvious focus for emission reduction measures. The team was informed that major emission reductions in this sector will be achieved fairly soon, thanks to the replacement of the older blast furnaces by more energy efficient electric arc furnaces by the end of 1997.
- 31. In industry, <u>voluntary agreements</u> are the main means by which enterprises are encouraged to improve their energy efficiency. The first such agreement was signed in March 1996 with the Federation of Luxembourg Industries (FEDIL), which committed itself to improving energy efficiency in the industrial sector by 10 per cent by the year 2000 compared to 1990. All the major industrial enterprises situated in Luxembourg (accounting for about 95 per cent of the total energy consumption) adhered to this agreement, and its implementation will be documented in annual reports. Another voluntary agreement aims at conserving energy in hospitals and is expected to bring savings of up to 20 per cent in 2001 compared to 1991. Implementation of this agreement will also be monitored by means of annual reports.

- 32. In the <u>residential/institutional</u> sector the regulation of 11 August 1996 on a programme of action aimed at conserving energy envisages, *inter alia*, promoting <u>cogeneration</u> in the public buildings. Cogeneration installations are entitled to subsidies of up to Lux F 6 million if they will function for not less than 2,500 hours per year with an efficiency of over 80 per cent. A special agency has been created to facilitate the penetration of cogeneration and the Government has established preferential tariffs for electricity produced by these installations. It is expected that these and other measures will lead to a larger share of cogeneration in the electricity supply up to 10 per cent by the year 2000. At present 14 cogeneration facilities operate in Luxembourg with a total installed capacity of 9.18 MW. The regulation of 22 November 1995 introduces stricter standards for thermal insulation of new buildings and is expected to save in the long term from 30 to 50 cent of energy used for heating. A study commissioned by the Environment Administration and the Ministry of Energy will attempt to quantify the energy savings obtainable through the envisaged renovation of existing buildings. At present it is estimated that the potential saving may be of about 30 per cent.
- 33. One of the developments that is expected to result in appreciable reductions in CO_2 and NO_x emissions is the wider penetration of <u>natural gas</u> as an energy source for households. It is expected that by the year 2000 about half of the country's communities, accounting for about 85 per cent of the population, will be connected to the natural gas grid. At present, 70 per cent of the population are connected.
- 34. The fact that the <u>transport sector</u> is the fastest growing source of CO₂ emissions, the figure for 1996 being 35 per cent higher than that for 1990, is partly explained by the growth in the number of new cars purchased (with no signs of saturation yet) and partly by the increased transit traffic of heavy trucks. The team noted that, according to the IPCC guidelines, the fuel sold in the territory of a country is counted in the emissions of that country. Since fuel prices in Luxembourg are lower than in neighbouring countries, "fuel tourism" accounts for a substantial share of petroleum products sales and a sizeable contribution to budget revenues (about 10 per cent). According to a non-governmental organization, up to 75 per cent of gasoline and up to 90 per cent of diesel fuel are exported. "Fuel tourism" also contributes substantially to the emissions attributed to the transport sector.
- 35. A number of measures are being implemented or are planned to curb the growth of emissions from the transport sector, mainly by promoting public transport. One project, which was still under discussion at the time of the visit, was "Bus Tram Bunn 2002", which envisages further development of the public transport network and construction of sections of the light rail transport system. It is expected that work on the new tracks can be started in 1999 and the first stage could be commissioned by the year 2002. According to the study on the effects of the improved transport infrastructure on GHG emissions, by the year 2005 CO₂ emissions could be reduced by 43,000 tonnes, CO by 385 tonnes and NO_x by 186 tonnes per year. The team was informed that a hybrid electric bus project is under way with two buses already operating in Luxembourg city. Strict compulsory technical inspections of vehicles also reduce emissions of GHG but no quantitative estimate was made available.

- 36. To promote the introduction of <u>new and renewable</u> sources of energy and cogeneration, it was planned to introduce obligatory studies on the feasibility of using these energy sources in buildings exceeding a certain level of energy consumption as well as in the industrial sector, and to create an advisory system on utilization of cogeneration and new and renewable sources. In the case of small generating capacities (up to 1.5 MW) based on renewable energy sources, the Regulation of 30 May 1994 obliges public and local electricity supply grids to purchase their surplus output and fixes a price for such purchases.
- 37. <u>Hydropower</u> has reached its limits and cannot be developed any further; at present hydropower stations produce about 105 GWh per year, representing 3.2 per cent of the electricity consumption from the public grid. For this reason alternative energy sources, mainly renewable ones, are being investigated. A special study on the use of <u>wind energy</u> identified 50 sites where up to 211 wind generators could be potentially used. Yet even if all of them were commissioned (which cannot realistically be expected owing to environmental and technical constraints) they would produce only about 1 per cent of the final electricity consumption and thus their effect on reducing CO₂ emissions would be close to negligible. Research on <u>solar energy</u> also indicated that its contribution to mitigating CO₂ emissions would be small, although it could be applicable in countries outside the OECD in the framework of the Activities Implemented Jointly (AIJ). Other projects involving the use of <u>biomass</u> for energy purposes biogas, wood and biofuels are still at the exploratory stage although some partial results have already been achieved. For example, 10 out of 140 Luxembourg city buses have been adapted to run on bio-diesel fuel.
- 38. A number of measures targeting waste treatment and thus contributing to the reduction of methane emissions in the waste sector were reported in the supplementary documentation, although no measures are planned in the agricultural sector, in spite of the fact that about 80 per cent of the national total emissions in 1994 originated in this sector. The Government has decided to establish three regional composting installations and to conduct a pilot project to test a new taxation scheme encouraging recycling and reductions in the amount of waste. At present methane collected at the dump sites is flared and there are no plans to use it for energy purposes.
- 39. No information was provided on measures in the <u>agricultural</u> sector which could have an effect on N_2O emissions and no explicit measures on N_2O emissions from the use of fertilizers were reported.

IV. PROJECTIONS AND EFFECTS OF POLICIES AND MEASURES

- 40. The national communication contains estimates of the GHG emissions for the year 2000. These estimates indicate that CO_2 emissions are projected to decrease by 33 per cent, CO by 40 per cent, NO_x by 8 per cent and NMVOC by 27 per cent. Emissions of CH_4 and N_2O are projected to increase by 5 and 3 per cent, respectively.
- 41. The review team noted however that the figures used as a basis for projections were taken from the CORINAIR data, which differ from those presented in the IPCC format. No

information was provided in the national communication on the methods used to develop the projections. During the visit the team was informed that the figures for the year 2000 were arrived at by calculating the cumulative effect of all measures implemented or planned till the end of this decade and subtracting the resulting number from the amount of emissions in the base year. No econometric models were used and no "without measures" scenario prepared. The team strongly recommended that attention be given to the projections in the next communication.

42. Estimates of the effects of individual measures were not available at the time of the visit. Some indication of the effects of measures was given in the supplementary documentation and mentioned where appropriate in the previous section.

V. EXPECTED IMPACTS OF CLIMATE CHANGE

43. In Luxembourg, no adaptation measures as such are being implemented or planned.

VI. FINANCIAL ASSISTANCE AND TECHNOLOGY TRANSFER

- 44. During the review visit, information was provided on Luxembourg's financial assistance to developing countries and countries with economies in transition. In 1995 this assistance amounted to 0.42 per cent of gross national product (GNP) and in 1996 it was 0.44 per cent. The Government has set the objective of increasing its assistance to 0.70 per cent of GNP by the year 2000. In 1995, 82 per cent of assistance was provided through the Ministry of Foreign Affairs, 8 per cent through the Ministry of Finance and the rest through other governmental agencies.
- 45. A new law on development cooperation adopted on 6 January 1996 specifies different sectors to which financial assistance will be channelled, including cooperation in the field of environmental protection. These activities include financing of afforestation and reforestation projects in African countries, combating desertification, etc. A number of projects relate to the energy sector and involve technology transfer, such as construction of hydroelectric microstations and electrification projects.
- 46. About 13 per cent of the funds allocated for assistance to the countries with economies in transition are being spent on environmental projects, in particular in the Czech Republic, Hungary, Slovakia and Slovenia. Part of these funds is also channelled through the Council of Europe.

VII. RESEARCH AND SYSTEMATIC OBSERVATION

47. No information was given on this subject in the national communication.

VIII. EDUCATION, TRAINING AND PUBLIC AWARENESS

48. Although this issue was not mentioned in the national communication, during the review considerable information was provided to the team on public awareness and the dissemination of information regarding climate change, in particular through leaflets and information campaigns. The Government will be enhancing the existing programmes with a view to raising awareness about consumption patterns and industrial practices associated with climate change. In this regard, the team felt that non-governmental organizations (environmental and business) play a useful role in distributing documentation containing analyses of the causes of climate change.

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