UNITED
NATIONS

Framework Convention
on Climate Change

Distr.
GENERAL

FCCC/IDR.1(SUM)/ITA
12 May 1997

Original: ENGLISH

**SUMMARY**

**of the**

# REPORT OF THE IN-DEPTH REVIEW OF THE NATIONAL COMMUNICATION

**of**

# ITALY

(The full text of the report (in English only) is contained in document FCCC/IDR.1/ITA

Review team:

Morteza Samsam Bakhtiari, Islamic Republic of Iran
Eunice Ñañez, Colombia
James Penman, United Kingdom of Great Britain and Northern Ireland
James Grabert, UNFCCC secretariat
Lucas Assunção, UNFCCC secretariat, Coordinator

Also available on the World Wide Web (http://www.unfccc.de)

GE.97-61009

## Summary[1]

1. The in-depth review of Italy was carried out between November 1996 and February 1997 and included a visit to Rome from 11 to 15 November 1996. The review team included experts from the Islamic Republic of Iran, Colombia and the United Kingdom of Great Britain and Northern Ireland.

2. Italy has fulfilled its reporting commitment under FCCC Articles 4 and 12. During the in-depth review of Italy's first national communication, which was conducted with a high level of transparency, a considerable amount of additional relevant information was shared with the review team, greatly improving the understanding and comparability of information provided with the national communication. Through a series of in-depth discussions between the review team and government officials the overall understanding of several critical points was substantially improved, including recent developments in Italy's economy, its energy programmes and vulnerability to climate change, as well as the way carbon dioxide ($CO_2$) forest sinks have been estimated and emissions projections prepared.

3. The communication was approved by the Interministerial Committee on Economic Planning (CIPE) chaired by the Minister of Budget and Economic Planning and it largely confirms Italy's commitment to meeting the European Union (EU) target to stabilize carbon dioxide ($CO_2$) emissions by 2000 at 1990 levels. Italy, however, has avoided establishing its own national target regarding GHG emissions. Italy's general climate policy seeks to meet its part of the EU-wide commitment through burden sharing with other EU members. During the review, it remained unclear whether there is an overall coordination or monitoring mechanism for the implementation of climate change policies and measures described in the communication.

4. Italy is a member of the G-7 group of countries, with a large and buoyant economy and a gross domestic product (GDP) of over $1,100 billion (the third largest economy within the European Community after Germany and France). Its population has stabilized at the 57 to 58 million mark. Italy comprises three very different regions: the rich north, the intermediate central region and the poorer south. In 1990, Italy's level of energy-related $CO_2$ emissions per capita was roughly 7.5 tonnes, compared to the EU and OECD averages of 9 and 12 tonnes, respectively. Italy's level is among the lowest within the EU and the lowest among G-7 countries. Italy also has a per capita energy consumption which is lower than the EU average and a relatively low level of energy-related $CO_2$ emissions per unit of GDP when compared with other European economies.

5. Italy is heavily dependent on fossil fuels -- which account for 90 per cent of primary energy needs -- and also very dependent on imports, as over three quarters of primary energy,

---

[1] In accordance with decision 2/CP.1 of the Conference of the Parties, the full draft of this report was communicated to the Government of Italy, which had no further comments.

including oil, coal, natural gas and electricity, is currently imported. During the 1990s, while the share of other energy sources in Italy's energy balance has remained about constant, natural gas has filled an increasing share of energy needs. This trend is likely to continue up to (at least) 2000, and additional gas supplies will come to match any increase in domestic demand. By 2000, natural gas should account for roughly one third of Italy's primary energy requirements, with consequent positive effects on total $CO_2$ emissions as final consumption of other more carbon-intensive fossil fuels is reduced.

6. Italy's first communication under FCCC is largely based on the National Programme for the Limitation of $CO_2$ Emissions approved in February 1994 and on the 1988 national energy plan. The energy plan has been implemented through specific legislation, in particular Laws 9 and 10 of 1991. There have been partial reviews of the plan since its enactment, but no actual formulation of new energy policies. As Italy's latest national energy plan it has so far proved to be a resilient instrument for managing national energy supply. While it will remain relevant up to 2000, a fresh set of decisions affecting Italy's energy policies may be expected into the new century -- especially if the privatization programme of ENI (Italy's national oil and natural gas board) and ENEL (national electricity board) is implemented as planned and a national energy authority is established as expected in 1997. This process has been driven by the deliberate decision to involve greater private participation in the energy sector, as well as to ensure consistency with a EU decision which calls for deregulation in national energy markets.

7. The review team considered the Italian greenhouse gas (GHG) inventory to be substantially complete for the main direct and indirect greenhouse gases, subject to the observations made in chapter II below. Omissions identified by the review team include $CO_2$ emissions from land-use change, $CO_2$ from incineration of carbon in waste, $N_2O$ from the manufacture of inorganic chemicals and $N_2O$ from animal wastes. The methodology used is mainly the CORINAIR[2] default methodology, although in some cases procedures were developed to reflect national conditions. There has so far been relatively little basic research on inventories and there is a need for some extra work on activity data, for example, in land-use change statistics. The remaining gaps should be filled as soon as possible and it is strongly recommended that a technical report be produced separately from the next national communication and be kept updated annually using the full Intergovernmental Panel on Climate Change (IPCC) minimum data tables. The inventory is fairly transparent for most energy-related emissions, though cross-referencing between activity data and emission factors is less easy than it would have been if the IPCC standard data tables had been completed. Transparency for the more complex areas could be improved by providing the suggested technical report on inventories. The estimated $CO_2$ uptake rate in Italian forests of about

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

5 per cent appeared to be too high, especially since the review team was told that estimates include mature forests, coppice and Mediterranean scrub. The in-depth review proved to be a useful exercise to review estimates of the national $CO_2$ sink capacity.

8. Preliminary CORINAIR emission inventories for 1991-1994 were provided during the review. Although these are still subject to change, more reliable energy-related $CO_2$ emissions have also been estimated using the top-down approach suggested by IPCC. Emissions of $CO_2$ were marginally lower in 1993 than in 1990, primarily because of the recession combined with the effects of fuel switching. Based on the new CORINAIR data, however, $CO_2$ emissions were 0.4 per cent higher in 1994 than in 1990. If these new estimates are confirmed, higher emissions, despite the increased use of natural gas, would most probably be due to a sharp increase in emissions in the transport sector and higher overall energy consumption as economic growth resumed in 1994[3].

9. Italy has reported on an array of policies, measures and directives which should ultimately limit the growth of GHG emissions in the decade. These policies contain mostly "no-regrets" measures, which could be subdivided into "supply-side" and "demand-side" ones. However, most of the laws and directives discussed are either very general (with no direct fiscal or other economic incentives attached to them) or seriously under-funded, hindering the achievement of their initial objectives and potential mitigation effects. Nevertheless, Italy's array of policies and measures will eventually have an impact on the mitigation of GHG emissions -- albeit not as widespread as expected. Italy does not have a strong and concerted national action plan to mitigate climate change. At this stage, it could be said that the main thrust of Italy's policy for mitigating GHG emissions lies in the future replacement of solid and liquid fuels by natural gas and the expected improvement in energy efficiency resulting from this shift.

10. Laws 9 and 10 (both of 1991) are the cornerstone of Italy's climate-related energy policies. They constitute the enabling acts for energy supply-side (Law 9) and demand-side (Law 10) policies and the framework within which the Ministry of Industry and Energy formulates specific regulatory measures, tax incentive proposals and other specific measures directed towards the laws' objectives. The transport sector is Italy's perennial weak point. Reducing fuel consumption, with the introduction of effective measures, would have an important effect on GHG emissions, but will be challenging in this sector that emits over a quarter of total $CO_2$ emissions. Promising new measures were announced to the team as being under formulation. The team recommends that the description of policies and measures be updated in the second communication to account for major developments that have occurred since mid-1994.

---

[3] Recent estimates prepared according with the simplified IPCC top-down approach indicate that energy-related $CO_2$ emissions in 1995 were 3.3 per cent higher than in 1990, due to resumed economic growth and reduced hydroelectric production.

11. The $CO_2$ projections for 2000 were made in the communication using net emission levels, i.e. the estimated sequestration by the forestry sink has been subtracted. This is a deviation from the reporting guidelines adopted in 1994 for Annex I Parties, which stipulate that removals by sinks should be provided separately from emission sources in inventories and projections.

12. The aggregate mitigation effects of approved policies and measures were fed into a simple economic model which calculated that: (a) assuming a business-as-usual (without measures) scenario, Italy's gross $CO_2$ emissions would increase by 14 per cent in 2000 compared to the 1990 level; (b) if approved "supply-side" policies are fully implemented the increase in such emissions would be of 8.3 per cent and, (c) if in addition "demand-side" measures are also fully implemented, the increase would be further reduced to only 3.4 per cent in the decade. Hence, even in the best case scenario, Italy does not foresee stabilizing $CO_2$ emissions at their 1990 level by 2000. And as neither the "business-as-usual" nor best case scenarios are expected to come about (but rather some scenario in between), the final increase will end up somewhere between 3.4 and 14 per cent. Moreover, as Italy has no well-defined national GHG emissions target, stabilization of emissions by 2000 is not perceived as a national goal.

13. Substantial additional information was provided to the review team on the methodology used and assumptions made in each projection scenario. The team found that such information greatly improved the understanding of projections of Italy's $CO_2$ emissions for 2000 and strongly recommends that projections be thoroughly revised in a transparent manner for the second communication, taking into account major developments in the energy sector since 1994 as well as $CO_2$ emissions originating in sectors other than fuel combustion.

14. The expected impacts of climate were estimated using IPCC emission scenarios. The findings suggest that endangered spots include the Po delta and the Venice lagoon. Some land ecosystems are threatened in the long term and coastal freshwater resources might be in danger in the case of further sea-level rise. Finally, desertification might constitute a real threat in the future in parts of the more vulnerable southern regions.

15. Italy has contributed its full share to the Global Environment Facility (GEF), providing approximately US$ 64 million to the pilot phase and US$ 105 million to the restructured GEF. As the sixth largest contributor, its contributions to the restructured GEF accounts for five per cent of total pledges. Official development assistance (ODA) as a percentage of GNP has varied in recent years from 0.34 to 0.27 per cent. In absolute terms 1994/1995 ODA was US$ 2,705 million, having declined over the last few years.

16. There is a significant amount of research on climate change and sources of $CO_2$ taking place in universities, institutes and research centres in Italy. However, the research being done lacks overall coordination towards the objectives of the FCCC. Very little research into the economic costs of climate change, including the cost of adaptation, has been undertaken.

Efforts to increase public awareness of climate change have been very limited and mostly carried out through programmes of the Ministry of Education.

- - - - -