

**EUROSAI Working Group on Environmental Auditing  
Seminar on waste, air pollution and renewable energy  
Vienna (Austria) 19-22 September 2005**

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**Case study of environmental control relating to air pollution**

**SUMMARY:**

- 1. Preliminary remarks**
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- 3. The results of the audit. 3.1 Industrial pollution. 3.2 Urban areas. 3.3 Climate change.**
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**Abstract**

This report examines a specific case of environmental auditing in relation to air pollution.

It indicates the objectives, the object of the audit and the procedures adopted.

The audit conducted by the Court of Auditors was essentially a financial audit, designed to verify the efficiency, effectiveness and cost-effectiveness of managing the air-cleaning operations set out in the programmes adopted by the Interdepartmental Committee for Economic Planning (CIPE).

The audit examined the measures designed to deal with pollution caused by domestic heating systems, traffic and industrial plants.

Close attention was paid to climate change-related issues. .

**1. Preliminary considerations**

The audit regarding the management of air pollution abatement programmes that was launched under resolution no.15/2002 on 15 February 2002 by the Central Audit Section of the Court of Auditors originated in a number of work programmes drawn up by the Ministry of the Environment in the period 1997 - 2001, to reduce air pollution in the cities, ensure urban traffic sustainability and prevent industrial hazards.

The audit conducted by the Court of Auditors was essentially a financial audit, to ascertain the efficiency, effectiveness and cost-effectiveness of the budgetary expenditure items for financing the planning of pollution abatement operations.

The audit looked at cases of anthropogenic air pollution essentially from three main sources: domestic heating , traffic and industrial plants.

Sectoral studies showed that there were four air pollution problems, all closely connected: air quality, long-distance cross-border pollution, the problem of the depletion of the ozone layer, and climate change.

Progress with our scientific understanding of air pollution has had positive effects on both Italian and Community legislation, and on the drafting of the related Protocols<sup>1</sup> Italy is a signatory to all these protocols.

The Kyoto Protocol commits the industrialised countries and the countries with economies in transition to reducing the main anthropogenic emissions of the gases which are capable of upsetting our planet's natural greenhouse effect, by 5% over the commitment period 2008-2012.

Italy is required to reduce emissions between 2008-2012 by 6.5% below the 1990 levels. The reduction targets must be achieved in stages, with reductions beginning in 2002, and with a major intermediate result by 2005.

Italy has therefore launched a special policy plan approved by CIPE in 2002 which will be examined by the Court of Auditors in 2005, and the years that follow, in order to audit the management of the resources earmarked to that programme.

## **2. The agencies involved in managing the operations**

Italian air pollution legislation has divided responsibilities between central government, which is responsible for the general coordination and oversight, and local government authorities, which are responsible for actually managing the protection of air quality.

As far as central government responsibilities are concerned, the Ministry of the Environment plays the main role, together with the Ministries of Industry, Health, Transport and Civil Protection, all of which have been given major responsibilities within their own fields.

The Regional governments are responsible for safeguarding the environment from air pollution.

The Municipal authorities are only empowered to control heating systems and vehicles on the roads.

The Provincial authorities are responsible for compiling and keeping up-to-date the provincial inventory of emissions into the atmosphere, and have the power to issue permits and carry out controls in relation to air pollution.

The planning of air pollution-related operations is the responsibility of the Interdepartmental Committee for Economic Planning (CIPE).

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<sup>1</sup> The Vienna Convention for the Protection of the Ozone Layer of 1985, the United Nations Framework Convention on Climate Change adopted in New York in 1992, implemented through the Kyoto protocol and those signed in Gothenburg in 1999.

### **3. The audit findings**

The audit conducted by the Court of Auditors examined the programme adopted by CIPE in its resolution of 21 December 1993 as subsequently updated and supplemented, and the activities undertaken between 1997 and 2000.

One drawback with the implementation of the measures was the fact that the action taken throughout this period was based on programmes adopted by the CIPE many years earlier.

The CIPE resolutions that were adopted later, the need to follow up commitments undertaken internationally, and the many formalities that individual departments and agencies were required to perform helped to slow down the process of implementing the schemes, seriously jeopardising the efficiency and effectiveness of the work performed.

The Ministry of the Environment was unable to provide adequate justification for the delays and for having defaulted on the requirements stipulated by CIPE.

There is no doubt that the complexity of the procedures and the piecemeal nature of the initiatives which, particularly with regard to the reduction in greenhouse gases, appear to be fragmentary and far off target, certainly played a negative part in this.

The findings showed that in Italy the level of emissions was lower than in the majority of the industrialised countries.

In particular, there was a lack of intermediate targets for both the modernisation of the electricity facilities and the reduction of non-energy sector emissions, while no steps had been taken to absorb emissions of carbon dioxide by forests.

With regard to the national programme to exploit agricultural and forestry biomass, about EUR150 million deriving from the levying of the carbon tax for 1999 have been used for emission-abatement measures, including those for the application of the flexible mechanisms provided by the Kyoto protocol.

The Ministry of the Environment has committed a further EUR50 million to promote solar and photovoltaic energy.

The regional plans for coordinating policies covering greenhouse gas emissions have also been delayed.

As for the research into climate change, the 1999 CIPE resolution is still waiting to achieve its targets, because numerous state entities and agencies have not promptly performed all the required formalities.

Similarly, the environmental subprogramme, on which work began in 2000 is not yet fully completed.

Another reason for the failure to the prompt implementation of the scheduled activities has been the generic nature of the planning documents and their lack of incisiveness, as well as the fact that powers and activities have been repeated which are already governed and regulated by law.

There is also a total lack of oversight on the part of the political and administrative authorities regarding the level of implementation of the programmes that have already been drafted.

Delays have been reported in drawing up annual programmes, and failures in complying with the guidelines laid down by the Office of the Prime Minister.

This has led to poor results, which have at all events been diluted across time.

### **3.1 Industrial pollution**

As for industrial pollution in the period under review, it transpires that Italy has more than 11 polluted areas, for which the reclamation cost is put at several tens of millions of euros.

In addition to the direct action taken in the Puglia (Apulia) region, we would also recall the Programme Agreement with ACNA of Cengio which made it possible to solve the problem of disposing of 300,000 of saline waste through an environmental reclamation and production generation project for the site.

Another major result was achieved with the signing of the supplementary Chemicals Industry and Porta Marghera-Venice Agreement, which rationalised and simplified the procedure for examining reclamation projects, and set down the procedures for adopting strategic action policies.

The national environmental reclamation and regeneration programme for polluted sites can also make a substantial contribution to reducing air pollution.

### **3.2 Urban areas**

Traffic congestion is the main source of environmental and local degradation in the urban centres, creating high levels of air and noise pollution.

Air quality continues to cause concern, even though there are signs of improvement, such as the reduced sulphur dioxide emissions thanks to the change in fuels and their improved quality.

The results of monitoring air quality in the towns also show a reduction in the frequency of exceeded limits, particularly for carbon dioxide, but on the other hand, there are many towns and cities that have far exceeded the upper thresholds laid down in the new European directive for annual average carbon dioxide emissions.

According to the findings of the investigation, particular attention should be devoted to fine particulate matter pollution (PM10) from polycyclic aromatic hydrocarbons and benzene.

The renewal of the motorcar stock, which is taking place more rapidly in the central/northern towns, should further lower the concentration levels, at least as far as certain pollutants are concerned.

Italy's stock of motorcycles under 50cc, Europe's largest, is a major source of environmental pollution.

To help address the problem of the existing motorcycles stock, the industry has put a catalytic conversion kit on the market which is claimed to reduce motorcycle emissions to limits that are comparable to the Euro 1 models.

In the urban areas, the results have not therefore been significant, because the measures adopted have been too timid and not radical enough to bring about a permanent

reduction in air pollution.

Recently, environmentally-compatible and human health-compatible air quality targets have been gradually regulated, as have measures to prevent air pollution caused by urban traffic.

These are initiatives that have been incorporated into the new General Transport Plan, whose results are still under review.

### **3.3 Climate change**

In order to attain the Kyoto targets, Italy is committed to reducing emissions by about 25,000,000 tonnes of CO<sub>2</sub>, and by 2008/2012 by over 100,000,000 tonnes of CO<sub>2</sub> equivalent.

According to available figures, in 1998 the climate-affecting gas emissions in Italy were still above the levels of 1990, the benchmark year for the Kyoto Protocol.

This trend was mainly due to the increased emissions from thermoelectric power stations, refineries, and from the transport sector.

In recent years, a number of measures have been introduced by the authorities to reverse this trend. CIPE has approved the "guidelines for national policies and measures to reduce greenhouse gas emissions".

The full implementation of these actions will require overall investments of about EUR50 million between now and 2012, which will reduce energy consumption, with savings of over 80,000 billion.

On the basis of available data, carbon dioxide emissions in the developing countries are increasing at the present time about three times more than in the developed countries. This means that by 2010 the commitment of the industrialised countries will not only be thwarted in its purpose, but worldwide emissions of greenhouse gases will actually have risen about 30% overall above 1990 levels.

At all events, these long-term goals can only be adequately attained if the timing, the modalities and the costs of the operations and the measures are spelled out precisely, indicating in advance the structures, the short, medium and long-term results, and the resources and facilities needed.

## **4. Conclusions**

The cleaner air environmental audit programme addressing specific activities undertaken for similar Ministry of the Environment budgetary allocations was duly conducted in implementation of law no. 20 of 14 January 1994.

The procedure and the methodology used for the audit were followed correctly and the evaluation criteria and coordination parameters laid down by the Court of Auditors' central government audit section were used.

In short, the results of the audit have shown that there had been delays in implementing the various measures, failure to carry out some of the planned measures, a fragmentation of powers and responsibilities, and inefficiencies and inadequacies due to delays in drawing up programmes, failures on the part of the central government entities

concerned to undertake formalities , and a lack of control and monitoring on the part of the political/administrative Authority.

## **APPENDIX**

### **LIST OF LAWS**

- 1) Law no. 615 of 13 July 1966
- 2) Presidential Decree no. 323 of 22 February 1971
- 3) Law no. 437 of 3 June 1971
- 4) Presidential Decree no. 616 of 24 July 1977 (arts. 101, 102, 104 and 105 Tab. A)
- 5) Law no. 468 of 5 August 1978
- 6) Cabinet Decree of 28 March 1983
- 7) Law no. 349 of 8 July 1986
- 8) Presidential Decree no. 203 of 24 May 1988
- 9) Cabinet Decree of 21 July 1989
- 10) Law no. 305 of 28 August 1989 (section 7)
- 11) Ministerial Decree of 12 July 1990
- 12) Law no. 368 of 4 December 1990
- 13) Law no. 10 of 9 January 1991 (section 5(5)).
- 14) Ministerial Decree of 20 May 1991 (article 3)
- 15) Ministerial Decree of 20 May 1991
- 16) Presidential Decree of 25 July 1991
- 17) Law no. 211 of 26 February 1992
- 18) Ministerial Decree of 6 May 1992
- 19) Decree Law no. 29 of 3 February 1993
- 20) Law no. 61 of 21 January 1994
- 21) Ministerial Decree of 15 April 1994
- 22) Ministerial Decree of 25 November 1994
- 23) Law no. 662 of 23 December 1996 (section 2(106))
- 24) Decree Law no. 22 of 5 February 1997
- 25) Law no. 30 of 28 February 1997, (section 10)
- 26) Law no. 59 of 15 March 1997 (section 4)
- 27) Law no. 344 of 8 October 1997
- 28) Ministerial Decree of 27 March 1998 (arts 3, 4 and 5)
- 29) Decree Law no. 112 of 31 March 1998, (arts 68, 71 and 72)
- 30) Law no. 448 of 23 December 1998 (sections 8 and 49)
- 31) Ministerial Decree GAB/DEC/946/99 of 28 July 1999
- 32) Decree Law no. 351 of 4 August 1999,
- 33) Presidential Decree no. 549 of 3 December 1999,
- 34) Decree Law no. 164 of 23 May 2000 (article 16)
- 35) Decree Law no. 267 of 18 August 2000 (arts 30 and 158)

- 36) Law no. 388 of 23 December 2000 (sections 61(4) and (5), 112 and 145)
- 37) Law no. 36 of 22 February 2001
- 38) Constitutional Law no. 3 of 18 October 2001