

DECISION ON THE MERITS

Adoption: 6 December 2006

Notification: 6 February 2007

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**Marangopoulos Foundation for Human Rights (MFHR)
v. Greece**

Complaint No. 30/2005

The European Committee of Social Rights, committee of independent experts established under Article 25 of the European Social Charter ("the Committee"), during its 219th session attended by :

Mr Jean-Michel BELORGEY, President
Ms Polonca KONČAR, First Vice-President
Messrs Andrzej SWIATKOWSKI, Second Vice-President
Stein EVJU, General Rapporteur
Rolf BIRK
Nikitas ALIPRANTIS
Alfredo BRUTO DA COSTA
Tekin AKILLIOĞLU
Mrs Csilla KOLLONAY LEHOCZKY
Mr Lauri LEPPIK

Assisted by Mr Régis BRILLAT, Executive Secretary of the European Social Charter,

Having deliberated on 17 October and 6 December 2006,

On the basis of the report presented by Mr. Jean-Michel BELORGEY,

Delivers the following decision adopted on this last date:

PROCEDURE

1. The complaint lodged by the international non-governmental organisation, Marangopoulos Foundation for Human Rights ("MFHR"), maintains that Greece has failed to comply with Article 11 of the European Social Charter (the Charter) because in the main areas where lignite is mined the state has not taken sufficient account of the environmental effects or developed an appropriate strategy to prevent and combat public health risks. The MFHR also alleges that there is a violations of Articles 2§4 and 3 of the Charter because there is no legislation to ensure the security and safety of persons working in lignite mines and the latter do not benefit from reduced working hours or additional holidays.

2. Article 2§4 of the Charter reads as follows :

Article 2 – The right to just conditions of work

Part I "All workers have the right to just conditions of work."

Part II: "With a view to ensuring the effective exercise of the right to just conditions of work, the Contracting Parties undertake:
[...]

4. to provide for additional paid holidays or reduced working hours for workers engaged in dangerous or unhealthy occupations as prescribed";

3. Articles 3§§1 and 2 of the Charter read as follows :

Article 3 – The right to safe and healthy working conditions

Part I: "All workers have the right to safe and healthy working conditions."

Part II: "With a view to ensuring the effective exercise of the right to safe and healthy working conditions, the Contracting Parties undertake:

1. to issue safety and health regulations;

2. to provide for the enforcement of such regulations by measures of supervision".

4. Article 11 of the Charter reads as follows :

Article 11 – The right to protection of health

Part I "Everyone has the right to benefit from any measures enabling him to enjoy the highest possible standard of health attainable."

Part II: "With a view to ensuring the effective exercise of the right to protection of health, the Parties undertake, either directly or in cooperation with public or private organisations, to take appropriate measures designed *inter alia*:

1. to remove as far as possible the causes of ill-health;

2. to provide advisory and educational facilities for the promotion of health and the encouragement of individual responsibility in matters of health;

3. to prevent as far as possible epidemic, endemic and other diseases."

5. The complaint was registered on 4 April 2005 and declared admissible by the Committee on 10 October 2005.

6. In accordance with Article 7§§1 and 2 of the Protocol providing for a system of collective complaints ("the Protocol") and with the Committee's decision of 10 October 2005 on the admissibility of the complaint, on 14 October 2005 the Executive Secretary communicated the text of the admissibility decision to the Greek Government ("the Government") and the complainant organisation, to the Contracting Parties to the Protocol and the states that have made a declaration in accordance with Article D§2 of the Revised European Social Charter, and to the European Trade Union Confederation (ETUC), the Union of the Confederations of Industry and Employers of Europe (UNICE) and the International Organisation of Employers (IOE), inviting them to submit their observations on the merits of the complaint by 13 January 2006 at the latest.

7. The Government presented its written submissions on the merits of the complaint on 12 January 2006. It asked the Committee to dismiss the complaint as unfounded. The Government maintains that it is in compliance with all relevant international undertakings and that its legislation and practice are fully compatible with the Charter.

8. In accordance with Article 31§2 of the Committee's Rules of Procedure, the President set a deadline of 10 March 2006 for the complainant to present its response to the Government's submission. The complainant's response was registered on 10 March 2006.

9. In accordance with Article 31§3 of the Rules of Procedure, the President set a deadline of 15 May 2006 for the Government to present its response to the complainant. At the Government's request, the deadline was extended first to 15 July 2006 and then to 15 August 2006. The Government's second response was registered on 2 August 2006.

10. In accordance with Article 31§4 of the Rules of Procedure, the President authorised the MFHR to submit a further response, which was registered on 13 September 2006. He set a deadline of 9 October 2006 for the Government to submit a final response, if it so wished. At the Government's request, the deadline was extended to 25 November 2006. The Government's final response was registered on 24 November 2006.

SUBMISSIONS OF THE PARTIES TO THE PROCEEDINGS

Air pollution

The alleged violation of Article 11§1:

A - The complainant organisation

11. The MFHR maintains that Greece has failed to comply with its obligation to protect public health against air pollution, in accordance with Article 11§1 of the Charter, by authorising the Public Power Corporation (DEH) to operate lignite mines

and power stations fuelled by lignite, without taking sufficient account of the environmental impact and without taking all necessary steps to reduce this impact.

12. In support of its allegations, the MFHR supplies information on the level of pollution caused by lignite in the Kozani-Ptolemaida region (Eordea valley, prefecture of Kozani and Florina) in western Macedonia and in the Megalopolis region (prefecture of Arkadia) in the Peloponnese, and its impact on the health of their inhabitants. It argues that this pollution and its effects on the health of the population are the consequence of a number of actions and omissions of the Greek state, in violation of Article 11.

i. Lignite pollution

13. With regard to the Kozani-Ptolemaida region, the MFHR refers to several studies conducted by independent researchers. The main studies were carried out by or in collaboration with Professor A.G. Triantafyllou of the Department of Geotechnology and Environmental Engineering at the Technological Education Institute of West Macedonia and head of the Environmental Physics and Technology Laboratory¹. In response to the Government, the MFHR also refers to studies by Associate Professor C. Samara² and Professor C. Petaloti of the Aristotle University of Thessaloniki (Department of Chemistry, Environmental Pollution Control Laboratory)³.

14. The MFHR cites the following data to support its allegation that total suspended particulates (TSP)⁴ have regularly or even, in certain cases, continually, over several years, exceeded the exposure limit values set by the European Union (EU) and, internationally, by the World Health Organisation (WHO), and that this pollution is mainly attributable to lignite mining, and the road traffic to which it gives rise.

¹ Triantafyllou, A.G. (2000) "Patterns and Concentrations of PM₁₀ in a Mountainous Basin Region", *J. Air & Waste Management Assoc.*, 50: 1017-1022; Triantafyllou, A.G. (2002), "Respirable Particulate Matter at an Urban and Nearby Industrial Location: Concentrations and Variability and Synoptic Weather Conditions during High Pollution Episodes", *Journal of the Air & Waste Management Association*, Volume 52, 289, Triantafyllou, A.G. (2003), 'Levels and trend of suspended particulates around large lignite power stations', *Environmental Monitoring and Assessment* 89, 15-34. Triantafyllou, A.G. (2005), 'Particulate matter over a seven year period in urban and rural areas within, proximal and far from mining and power station operations in Greece', *Environmental Monitoring and Assessment*, 159-165.

² Samara, C. (2005) "Chemical mass balance source apportionment of TSP in a lignite-burning area of Western Macedonia, Greece", *Atmospheric Environment* 39: 6430-6443.

³ Petaloti, C. (2006) "Trace elements in atmospheric particulate matter over a coal burning power production area of western Macedonia, Greece", *Chemosphere*, 2006.

⁴ Suspended particulates are made up of a mixture of organic substances and minerals, in liquid or solid form. They are classed according to size: PM₁₀ (diameter < 10µm); PM_{2.5} (diameter < 2.5µm). The anthropogenic emissions of the particulates result in part from combustion processes.

Triantafyllou (2000)	<p>This study, which was the first to publish PM₁₀ measurements for Kozani, for the period 1991-1994, showed that:</p> <ul style="list-style-type: none"> • “the annual mean concentration of PM₁₀ in the southern [Eordea Mountain Basin] for 1991-1993 exceeded the US Environmental Protection Agency (EPA) air quality standard, while during the next year this value was ... approximately equal to [this] standard ... The minimum concentrations during the entire 24-hr period were in the range of 50-70 µg/m³, depending on the time of the year”. • The average monthly concentration of PM₁₀ from January 1991 to December 1994 was below the 50µg/m³ short-term limit level in only 17 out of 48 months (this should normally not be exceeded on more than 35 days a year). Only 4 months in 48 had a daily average below the 40 µg/m³ level which is the standard for long-term exposure. • lower PM₁₀ concentrations occurred during spring, and were caused by natural precipitation of particulates because of rainfall. The author also indicates that in summer, the “causes of the high concentration were the lignite mining operation, the open coal mines and the absence of wet removal processes”.
Triantafyllou (2003)	<p>This study analysed the measurements of TSP at eight measurement stations (and PM₁₀ at one) from 1983-1998 and shows that the EU long-term limit-level of 150µg/m⁻³ for TSP was exceeded at:</p> <ul style="list-style-type: none"> • K. Spor (measurements 1985-1996) from 1985 to 1987 • DEH Village (measurements 1986-1998) from 1986 to 1994 and in 1996 • Komanos (measurements 1983-1997) from 1983 to 1986, 1988 to 1990 and 1993 to 1996 • Akrini (measurements 1985-1997) from 1985 to 1990 <p>Moreover, the EU short-term TSP limit-level of 300µg/m⁻³ was exceeded in:</p> <ul style="list-style-type: none"> • K. Spor from 1985 to 1987 • DEH Village from 1986 to 1994 and in 1996 • Komanos from 1984 to 1986, in 1989 and from 1994 to 1996 <p>Finally, in Kozani both long- and short-term limit-levels for PM₁₀ (of 40 and 50µg/m⁻³ respectively) were exceeded for all three years measured (1996-1998).</p>
Triantafyllou (2005)	<p>This study using measurements for both TSP and PM₁₀ from 1997 to 2003 concluded that:</p> <ul style="list-style-type: none"> • 80% of the particulates escaping from electrostatic precipitators (ESPs) were in the range <10µm, and 25% of these were in the range <2.5µm, which is of critical importance for human health related effects. • TSP long-term exposure limit levels were only exceeded in Klitos. No conclusions could be drawn about short-term exposure limit-levels. • PM₁₀ long-term exposure limit levels were only exceeded in Klitos and Kozani. • PM₁₀ short-term exposure limit-levels were exceeded on at least 25% of days in Oikismos and Pentavrisos, at least 10% of days in Florina, and possibly 10% of days in Koilada and Pontokomi. In other words, between five and seven of the nine existing stations recorded excess values of this parameter.
Samara (2005)	<p>This source apportionment study found that TSP long-term exposure limit-levels from 2000-2001 were only exceeded in Klitos. But it also found that limit-levels for Arsenic (As), mainly associated with diesel combustion particulates, were exceeded in Pontokomi, DEH community, Kozani, Klitos, Florina, Ptolemaida and Vegoritis.</p>
Petaloti (2006)	<p>An analysis of the effect of wind on TSP concentration found that in six out of nine measurement stations increases in TSP levels in ambient air were associated with DEH's mining and combustion activities. Moreover, the long-term exposure limit-levels for cadmium (5 ng/m⁻³), arsenic (6 ng/m⁻³) and nickel (20 ng/m⁻³) associated with PM₁₀ were exceeded at Klitos (Cd, As, Ni), Kozani (As), Ptolemaida (As) and Florina (As). Cadmium and Arsenic were strongly associated with diesel combustion, a source of emissions in itself largely attributable to DEH's activities.</p>

15. The MFHR states that it is not aware of any specific studies in the Megalopolis region, where some of the oldest lignite-fired power stations in Greece are located.

16. It claims that sulphur dioxide (SO₂)¹ and nitrogen oxide (NO_x)² emissions factors – the mass of pollutant (kg) emitted per unit of energy produced – is increasing for most lignite-fired power plants, a particularly worrying situation in Megalopolis, which represents about 7% of national installed capacity but 57% of the electricity sector's SO₂ emissions and which only has one desulphurisation unit.

17. The MFHR also maintains that the Government has failed to supply clear data on air quality in the two regions where lignite is used for electricity generation. For example, the state does not appear to have collected any data before 2003 on long-term exposure to NO_x or short-term exposure to PM_{10s}, SO₂ or NO_x in the Ptolemaida region. In Megalopolis, the first measurements of TSP pollution were taken in 1996 and of PM_{10s} in 2003. The state does not appear to have collected any data in this region on short-term exposure to SO₂ (and none on long-term exposure to SO₂ between 1970 and 1996) or on long-term exposure to NO_x before 2003.

ii. Effects of pollution on health

18. The MFHR claims that a link has been established in the aforementioned studies between environmental exposure to air pollution and an abnormally high prevalence of respiratory diseases, particularly rhinitis, atrophic rhinitis, chronic bronchitis and chronic obstructive pulmonary disease (COPD) among residents and non-residents of the lignite mining areas of western Macedonia. For example, the prevalence rate for rhinitis in these areas was apparently comparable to those recorded in highly polluted urban areas. These studies also show that the aforementioned conditions could also be precursors of other cardiovascular and respiratory diseases, including asthma and lung cancer. The studies also reveal a mortality rate from cardiovascular diseases in Megalopolis above the national average, a significant and rapid rise in mortality due to cardiovascular conditions in Kozani and, in Komanos, a statistical correlation between monthly male mortality rates and monthly average particle concentrations.

iii. Acts and omissions of the state

Lignite mining:

19. Because of its direct impact on air quality, which is the main subject of the complaint, the MFHR is particularly concerned about the use of conveyor belts and other transport activities without adequately covering and humidifying dust, resulting in avoidable dispersion of particulate matter. More specifically, it states that the conveyor belts at the Aghios Dimitrios power station remained uncovered for a period of ten years and are still only partially covered, even though they are located close to a village of 1 300 inhabitants (Klitos) in a region where the state itself has

¹ Sulphur dioxide (SO₂) is a colourless, acrid smelling gas. It stems mainly from the combustion of coal and/or heating oil with a substantial sulphur content. On combustion, these sulphuric impurities are oxidised to form sulphur dioxide. This gaseous pollutant is emitted by fixed sources (such as thermal power stations, industrial ovens and urban heating systems) using fossil fuels or by many smaller sources (diesel vehicles).

² Nitric oxide (NO) and nitrogen dioxide (NO₂) are gases. combustion processes (in industry and road transport). These gases are the products of oxygen (O₂) and nitrogen (N₂) in the air combining under the effect of high temperatures during combustion. Nitrogen undergoes an oxidation process which depends on combustion temperature. The quantity of nitric oxide (NO) generated increases with combustion temperature. On contact with ambient air, NO is fairly rapidly oxidised into NO₂. Concentrations of NO are greater than those of NO₂ when one is close to the emission source.

admitted that TSP and PM₁₀ concentrations have always been high and still considerably exceed the EU limit-level standards.

20. The MFHR also argues that there is a negative impact on the environment resulting from inadequate dumping of fly-ash, the stockpiling of lignite without adequate measures to prevent dispersion and the use of depleted mine sites such as the use of the Kardia mine as dump sites for hazardous industrial waste, in violation of waste management regulations.

21. Alternately, the MFHR alleges that these practices result in other forms of pollution, for example of the soil, subsoil and water.

Lignite-fired power stations:

22. The MFHR first criticises the national administrative procedure for licensing power stations.

23. It points out that, using a *sui generis* procedure, the power stations of Kardia, Aghios Dimitrios and Ptolemaïda were granted, by law, a provisional joint extension of operation until July 2005, without an individual and specific environmental assessment for each plant. The joint ministerial decisions approving the environmental conditions for these plants had expired in 2002. The Ombudsman has examined petitions from inhabitants of the region concerning the failure to approve environmental conditions, the imminent expiry of the licences and the pollution created by these plants. In his conclusions, published in October 2005¹, the Ombudsman stated that these practices were incompatible with Article 24 of the Greek Constitution, as interpreted by the Supreme Administrative Court. The latter had in fact ruled that if for any reason a joint operating permit had to be issued, it still had to be based on individual and specific environmental assessments for each unit. The Ombudsman also argued that the procedure followed in this case effectively denied those concerned access to judicial review because, unlike joint ministerial decisions, which were the usual basis for decisions on the siting of plants, the law could not be challenged by the Supreme Administrative Court, the court that generally heard cases concerning such individual decisions. In conclusion, the Ombudsman urged the Government to comply with the procedure laid down in law. The Government did not reply to the Ombudsman and the temporary operating licence had been extended to 31 December 2008.

24. Secondly, the MFHR criticises the continued use of old, high-polluting technology that is incompatible with the 'best available technology' requirements laid down by the European Union in its reference document on best available techniques in large combustion plants (BREF LPC) published in May 2005 BREF. It maintains that this approach is not new, as shown by Judgment C-364/03 of the Court of Justice of the European Communities (Commission v Greece, judgment of 7 July 2005), which criticised the lack of policies or strategies for progressively adapting plants in line with the 'best available technology', as required under Council Directive 84/360/EEC on the combating of air pollution from industrial plants (subsequently superseded by Directive 96/61/EC concerning integrated pollution prevention and control (the IPPC Directive)).

¹ *Affaires* No. 6536 and 6537/2004

25. With regard to the reduction of particle emissions, the MFHR complains that very old and inefficient electrostatic precipitators still operate in three of the four units of the Aghios Dimitrios plant, even though they are unable to withhold the most dangerous particles produced in the course of lignite combustion. It also argues that the technologies used are an inefficient way of reducing particle emissions because electrostatic precipitators are not used in combination with flue-gas desulphurisation, as recommended under the 'best available technology' requirements.

26. Similarly, in connection with SO₂ abatement, the MFHR maintains that the DEH relies almost exclusively on natural desulphurisation and has not installed flue-gas desulphurisation systems in the majority of its units, whereas according to the 'best available technology' standards natural desulphurisation is not enough to abate SO₂ and can also contribute to the emission of higher levels of particulate matter

27. The MFHR maintains that in any case there is nothing in domestic law to ensure that developments in the 'best available techniques' and their application in practice are properly monitored, pursuant to article 10 of Directive 96/61/EC concerning integrated pollution prevention and control (the IPPC directive), and that the latter has therefore not been fully transposed.

28. Finally, the MFHR criticises Greece for being the only European country to have secured the right to increase its SO₂ emissions under Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants. It also criticises the use of the national necessity argument to authorise violations of limit values under Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants.

The monitoring of environmental standards

29. The MFHR argues that the environmental inspectorate is inadequately financed, equipped and staffed. For example, although Presidential Decree 165/2003 creates 78 posts for the environmental inspectorate, there are only 28 in the general section and southern Greece and 4 in northern Greece.

30. It also alleges that the fines imposed are not sufficiently dissuasive to persuade violators to change their conduct. It cites several examples of the financial penalties imposed on the DEH by the Kozani prefecture because the Aghios Dimitrios plant had exceeded emission limit values, with fines ranging from € 5 000 in May 2003 to € 60 000 in January 2001, the latter being the maximum on the scale of fines. It argued that these sums were manifestly inadequate when compared with the DEH's annual earnings (€ 4.1 billion in 2004).

31. It criticises the authorities' near or total failure to respond to requests for action from persons living in the vicinity of mines or power stations. It cites a 2004 request to the Arkadia prefecture from a local citizen's movement in Megalopolis to investigate the monitoring of pollution levels, the maintenance and replacement of equipment, the follow-up to the inspectorate's finding that damage had been caused to archaeological sites, access to information on air pollution values and measurements of pollution levels, etc. The result was a visit from the mines inspectorate and a fine of € 10 000 for minor infringements in the organisation of the activities of certain work teams.

32. The MFHR maintains that even when the courts and higher authorities consider that the law has not been applied to the detriment of public health, the Government fails to implement their decisions. In particular, it cites the case brought by the inhabitants of Mavropigi and the municipality of Ptomelaida in connection with the Dytiko Pedio mine, on which the Supreme Administrative Court ruled in 2005¹. Although the Court ordered the setting aside or suspension of the joint ministerial decrees approving the environmental conditions, the authorities used various manoeuvres to ensure that they remained in force and that the mine could continue to operate on the basis of a previous environmental permit. It also refers to a case that it submitted to the Ombudsman on the environmental impact of the Kokkari power station on the island of Samos. One of the points raised was the failure to execute the Supreme Administrative Court's Judgment 4577/1998², when the DEH continued to divert a river against the Court's orders. After examining the various cases brought before him, the Ombudsman referred in his May 2000³ conclusions to the comments in his annual report on the inertia of the administration, the arbitrary nature of its decisions and the lack of transparency of its procedures.

Environmental policy in the energy sector

33. The MFHR does not deny the vital importance of the energy sector in general, and more specifically that of lignite-fired electricity production, for Greece's energy independence.

34. It criticises the continued massive use of lignite as being quite incompatible with the Kyoto Protocol objectives and the associated lack of tangible progress towards fulfilling these objectives. It considers that the European Commission's approval for Greece's first national allocation plan (NAP1), adopted in 2004, and the emissions allowance distribution is not significant and simply means that the formal aspects of the plan comply with requirements and that if the energy scenarios announced in the plan (forecast production levels and assessed changes in emission levels) actually materialised, the country would probably achieve its target. However, the MFHR thinks it unlikely that these forecasts will be borne out in practice and that Greece will achieve its objectives. It bases these allegations on Greek performance in controlling emissions. Under the BaU (business as usual) scenario in NAP1, greenhouse gas emissions for the whole country and all sectors combined are set to increase by 39.2% by 2010, whereas the binding target for Greece, under the Kyoto Protocol, is an increase in these gases of just 25% in 2010, compared with the reference year (1990 for CO₂, CH₄ and N₂O, and 1995 for fluorinated gases). This represents a first indication that the country will not be honouring its undertakings. According to the MFHR, its doubts were confirmed by the detailed analysis of the third Greek national communication to the UNFCCC secretariat on 14 February 2003 and in the European Environment Agency's 2005 report on the state of the environment in Europe. It notes that these two assessments were sceptical about Greece's capacity to achieve these objectives. They concluded, respectively, that meeting the Kyoto target would be challenging and that at best Greece would come close to meeting its target.

¹ Supreme Administrative Court Decision 998/2005 of 1 April 2005; Supreme Administrative Court, Commission des suspensions, Decision 519/2005 of 14 July 2005

² Judgment 4577/1998 of 18 January 1998 of the Supreme Administrative Court

³ Findings in Cases No. 1114/1998 and 894/1999

35. Turning more specifically to the energy sector and lignite-fired power stations, the MFHR states that not only did NAP1 allocate emission allowances (52 198 137 tons of CO₂) to Greek power stations in excess of actual emission levels (52 626 207 tons of CO₂), which was hardly an incentive to reduce emissions, but also that, despite these built-in savings to the national energy situation, in 2005 the energy sector's contribution to the national emissions balance was negative. The energy sector emitted 1.13% more CO₂ than provided for in NAP1 (0.64% for lignite, mainly attributable to the emissions of the Aghios Dimitrios plant) and the plants concerned had to purchase allowances from other plants that really had reduced their emissions.

36. The MFHR considers that the main reason for these poor results is Greece's unambitious and back-peddalling policy in the energy sector. In particular, it refers to slow progress in introducing alternative resources into the energy market. For example, gas is the main alternative resource but the first private gas-fired plant will not be operational until 2007, even though NAP1 provides for the increase in demand for electricity to be covered by gas.

B – The Government

37. The Government argues that the continued use of lignite is justified by the general interest since lignite enables the country to maintain its energy independence and offers the entire population access to electricity at a reasonable cost, thus contributing to Greece's economic growth and industrial development at levels comparable to those of other European Union countries.

i. Lignite pollution

38. In response to the MFHR's allegations concerning pollution, the Government acknowledges that particulate emission limit values have occasionally been exceeded in Klitos, Kozani and Aghios Dimitrios.

39. However, it firstly maintains that these excess values do not reflect the general situation, where the trend is towards a decline in pollution, particularly of particulates. It argues that the misleading or isolated use of certain data means that the MFHR presents a somewhat biased picture of the general situation.

40. Secondly, the Government considers that where excess values are recorded these cannot be attributed to its own actions. It maintains that it has taken all necessary measures to reduce pollution at the Aghios Dimitrios power plant and that thanks to these measures the situation is significantly better. It has also relocated the village of Klitos. It further argues that these problems cannot be attributed solely to lignite mining but also result from meteorological conditions, other sources of pollution such as road traffic etc., as shown by a number of studies conducted by independent researchers (see below).

41. It states that several of the reference values used by the MFHR are not relevant either because they were not applicable at the time of the matters in question, such as the limit value on PM₁₀, which only became binding in 2005, or apply to the future, as in the case of the Kyoto objectives, for which 2012 is the key date, or the IPPC directive, which must be transposed by November 2007. The Government also refers to the agreement reached in the Council of the European Union on the draft Directive on ambient air quality (2757th meeting (environment), 23 October 2006) on the possible deferral of the deadline for achieving PM₁₀ limit values.

42. The Government also believes that the data quoted by the MFHR has to be seen in context. From the national perspective, the TPS levels in the Kozani-Ptolemaida region are comparable to those recorded in other residential areas in Greece where there are no power plants. Moreover the high particulate concentrations at regional level are not uniquely a Greek phenomenon but affect all southern Europe and are the consequence of multiple meteorological and topographical factors such as the poorer renewal of air masses in the Mediterranean region, dry soil, less frequent rain, etc.

43. Finally, the Government disputes the MFHR's interpretation of various scientific findings and makes the following points:

- Triantafyllou (2000): this study was not concerned with identifying the origin of the pollution and also found that in 1994 the average annual PM₁₀ concentration in Kozani had fallen below the air quality standard of 50µg/m³, which it attributes to the installation of new electrostatic precipitators at the Ptolemais and Kardias power stations;
- Triantafyllou (2003): this study records a general downward trend in TSP concentrations between 1983 and 1988 in eight measuring stations (Amynteo, Kapnochori, Polymylos, Petrana, DEH Village, Komanos, Akrini and K. Spor), equivalent to an average decrease of 45.5% between 1986 and 1998, which it attributes to the DEH's anti-pollution measures;
- Triantafyllou (2005): this study does reveal long-term exposure to very fine particulates (<10 µm) in excess of the limit values. However, the Government argues that these are emitted from a height of 200 metres, resulting in very good dispersion and thus very limited effects on respiratory health;
- Samara (2005): this study shows that ordinary traffic is the main source of TPS emissions in Kozani. In support of this, the Government points out that annual average TPS concentrations in Petrana, close to Kozani, were less than half the Kozani level. On the other hand, in Klitos traffic linked to lignite mining is probably a significant source of pollution. The contribution of fly ash to this pollution ranged from less than 2% in Florina to 16% in Klitos in warm periods and averaged less than 15% in all sites (other than the 21% in Klitos in the cold season);
- Pelatoli et al (2006): this study shows that TSP limit values (150g/m³) were only exceeded in Klitos, the site closest to the power stations and the lignite transporters. Moreover, in the majority of other sites, the highest TSP concentrations are associated with particular weather conditions.

44. Turning to particulate pollution in the Megalopolis region, the Government supplies data on average annual TSP concentrations between 1995 and 2005 that show that although the daily limits were exceeded in a number of years this has not occurred since 2004 and that the long-term exposure limits have never been exceeded.

45. The Government maintains that nitrogen oxide (NO_x) pollution in both the Kozani-Ptolemaida and Megalopolis regions is very low, which is the result of the very low calorific value of lignite, resulting in even lower combustion temperatures. The daily limits for these and nitrogen dioxide (NO₂) concentrations laid down in European regulations have rarely if ever been exceeded and emissions are currently well within European standards. In support of this, the Government supplies graphs showing average annual nitrogen dioxide (NO₂) concentrations from 1997 to 2006.

46. It supplies figures on trends in annual average sulphur dioxide (SO₂) concentrations from 1985 to 2006 that also show that the daily limits laid down in European regulations have rarely if ever been exceeded and that emissions are currently well within European standards.

47. The Government states that it is pursuing a coherent and progressive emissions reduction strategy that reflects a firm national commitment to reduce polluting emissions. This has already led to a significant improvement in air quality and will continue to do so in the future. In support of this, it refers to the implementation of the IPPC directive and the adaptation of equipment to "best available techniques" (see below), as well as the application of Directive 2001/80/EC and presentation of the national emissions reduction plan concerning existing combustion plants, which establishes emission ceilings for SO₂, NO_x and particulates to be achieved in 2008 and 2016.

48. The Government denies that there are gaps in the air quality measuring system. Since the early 1980s – and even earlier in the case of SO₂ and NO₂ – air quality has been measured systematically in the regions concerned. There are nine air quality monitoring stations in the prefectures of Kozani and Florina (western Macedonia) and three in the Arcadia prefecture (Megalopolis). These measure, as the case may be, concentrations of SO₂, NO_x, NO₂ and particulates, as well as meteorological parameters, such as wind force and direction and humidity. The results are notified at regular intervals to the competent agencies. The Government points out that it is these measurements that have served as the basis for the aforementioned studies by independent researchers.

ii. Effects of pollution on health

49. The Government acknowledges that lignite mining causes pollution but denies that the DEH's activities have had any particular effect on the health of the inhabitants of the regions concerned. It makes the general point that there is still uncertainty about the exact effects of pollution on health and on the methods of prevention. For example, there is still considerable disagreement about the long-term effects of particulate, particularly very-fine particulate, pollution on health and what constitute appropriate limit values, which are the subject of Community research under the CLEAR (Cluster of European Air Quality Research) programme launched in 2002.

50. Moreover, the Government highlights the methodological difficulties associated with epidemiological studies arising from the need to work with large population samples, which is complicated by the level of mobility of Greek workers and the fact that certain diseases have multiple causes. One example is cancer, whose prevalence in certain regions is also attributable to poor life styles, particularly the high level of smoking in Greece, and the effects of the Chernobyl accident. It also refers to the difficulty of establishing scientifically a cause-effect relationship between the findings of such studies in terms of morbidity and mortality and environmental factors.

51. The Government acknowledges that lignite mining causes pollution but denies that the DEH's activities have had any particular effect on the health of the inhabitants of the regions concerned. In support of these claims, the Government states that two studies in the 1990s failed to reveal any pollution effects on mortality and morbidity rates in the populations concerned. These concerned an epidemiological study directed by Professor Kondakis of the hygiene laboratory of Patras University School of Medicine on the potential impact of Megalopolis energy activities on the health of the region's population¹ and, in the Ptolemaida region, epidemiological research on health problems of the Kozani Prefecture population, conducted by the hygiene laboratory of Thessaloniki University School of Medicine under Professor V. Koutsogiannopoulos². Similarly, it has not been possible to draw any conclusions on the prevalence of cancer from the first initial findings of the epidemiological study currently being conducted in Megalopolis by the Greek health and safety institute.

iii. Acts and omissions of the state

52. The Government states that it has fully complied with its obligations under Article 11 of the Charter and that the environmental consequences of lignite mining and of lignite-fired electricity generation have been properly taken into account. It maintains that steps have been taken constantly to steadily improve the situation.

¹ Prof. X. Kondakis, Laboratory of Hygiene and Epidemiology, Medical School of Patras University, Study of the effect of air pollution on the health of inhabitants of Komanos, Kozani prefecture, Patras 1990.

² Prof. B. Katsougiannopoulos *et al*, 1st Macedonian Environmental Conference, Thessaloniki, "Environmental Conditions and Health within the Country of Kozani", 2002.

Lignite mining:

53. Regarding the transport and storage of lignite, the Government states that the conveyor belts in the points that are not closed usually operate without cover and humidification on account of the high rate of humidity and the size of the pieces transported. In contrast, it maintains that protective measures regarding the transport of crushed lignite and fly ash have already been introduced, such as closed conveyor belts close to Ptolemais and Megalopolis, or will be by 2006, as in the case of closed conveyor belts close to residential areas such as Klitos.

54. The Government states that the depositing of asbestos cement waste has only been authorised in the depleted Kardia mine in Kozani, under joint ministerial decision 124528/07.05.2004, and takes into consideration all the requirements of national and European legislation. It considers that this initiative demonstrates the commitment of the state and the DEH to appropriate and effective waste management.

55. The Government adds that, in accordance with IPPC environmental permits (see below), in western Macedonia and Megalopolis the DEH has systematically embarked on programmes to rehabilitate land as it becomes exhausted, so that it can be used for agriculture or forestry or for other purposes such as tree planting, restoring the local flora and fauna and experimental cultivation. So far, such programmes have affected 6 800 hectares of mining areas, out of a total of 23 200 hectares. Eventually, once the mines have been exhausted, it is planned to rehabilitate the entire surface area, or even more.

Lignite-fired power stations:

56. Firstly, in connection with the licensing of power stations, the Government considers that the MFHR fails to distinguish between the procedure for authorising power stations to operate and the environmental authorisation procedure in Directive 96/61/EC concerning integrated pollution prevention and control (the IPPC directive), which have separate objectives and are quite distinct.

57. The object of the former, which was the basis for issuing the Kardia, Aghios Dimitrios and Ptolemaida power plants with a temporary joint operating permit, is to ensure the continued production and supply of electricity to the public, in accordance with the DEH's legal obligations under Acts 1468/1950 and 2773/1999, for example in the event of extended administrative proceedings. The Government emphasises the significant damage that could ensue for the entire population if these operating licences were not issued in good time.

58. The aim of the second procedure is to ensure that each unit satisfies all the environmental criteria and that electricity production has the minimum possible impact on the neighbouring population. In Greece as in other EU countries this is a slow procedure. Approval of the environmental criteria is on a temporary basis and by ministerial order, so that these criteria can be revised to take account of national and European technical and legal developments. According to the Government, IPPC environmental permits have been issued for the Kardia, Ptolemaida and Megalopolis B power stations while procedures relating to the others - Megalopolis A, Amynteon and Aghios Dimitrios - are under way.

59. The Government also reports that detailed environmental impact assessments have been carried out on each power plant, and that these form the basis for individual programmes for managing, monitoring and recording all relevant parameters, the results of which are regularly evaluated by scientific personnel of DEH and the competent authorities. The DEH also encourages ISO 14001 certification of existing environmental management systems at power plants, and this has been completed at Aghios Dimitrios.

60. Secondly, the Government states that the DEH has set itself the objective of gradually applying the best available techniques to both new and existing units.

61. In accordance with the IPPC directive, by the end of 2007 existing plants will be equipped with the best available techniques described in the reference document on large combustion plants (BREF LCP) published in 2005 (see table below). The Government considers that in assessing the situation it needs to be borne in mind that the final date for transposition of the directive is 30 October 2007 and that the BREF document is indicative rather than binding. It also points out that the IPPC directive should be applied flexibly and account should be taken of each installation's characteristics, geographical situation and local environmental conditions.

62. Pursuant to Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants, Greece has presented a national emissions reduction plan for existing combustion plants. Under the plan, the DEH has announced the closure of Megalopolis units I and II for 2010-2015 and restrictions on their operations over the period from 2008 and 2010. The Government states that because they are approaching the ends of their lives, the filters will not be replaced, in accordance with the exception provided for in Article 4§4 of the Directive.

63. As part of the process of transposing the two directives, there are various technical projects and programmes to reduce particulate, SO₂ and NO_x emissions and improve equipment to improve energy performance and secure energy savings. Some projects have already come to fruition while others are under investigation or at the planning stage. They are described in the following table:

Plant	
Megalopolis A Units I-II	<ul style="list-style-type: none"> ▪ Reduction of particulate emissions: maintenance and modernisations of electrostatic precipitators (ESPs) completed for Unit I and under way for Unit II
	<ul style="list-style-type: none"> ▪ Reduction of SO₂ emissions: No reference to any gas desulphurisation techniques.
	<ul style="list-style-type: none"> ▪ Reduction of NO_x emissions: Low excess air, air staging, flue gas recirculation.
Megalopolis A Unit III	<ul style="list-style-type: none"> ▪ Reduction of particulate emissions: Installation of high performance electrostatic precipitators completed in March 2006
	<ul style="list-style-type: none"> ▪ Reduction of SO₂ emissions: A wet gas desulphurisation system under construction in Unit III, to be completed in 2008
	<ul style="list-style-type: none"> ▪ Reduction of NO_x emissions: Low excess air, air staging, flue gas recirculation.
	<ul style="list-style-type: none"> ▪ Modernisation of the cooling tower planned for 2008.

Megalopolis B Unit IV	▪ Reduction of particulate emissions: High performance electrostatic precipitators installed in 1991
	▪ Reduction of SO ₂ emissions: wet gas desulphurisation system in operation in Unit IV since 1999; modernisation of the desulphurisation units under way.
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
Kardia Units I-II	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since 1993
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Modernisation of the cooling towers planned
Kardia Units III-IV	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since 2003 and 2004 respectively
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Modernisation of steam turbines completed
	▪ Modernisation of the cooling towers completed
Ptolemaida Units I-III	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since 1987
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Modernisation of the cooling towers completed
	▪ Upgrading of the boiler in Unit II
Ptolemaida a Unit IV	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since 1994
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Modernisation of the cooling towers completed
Ag. Dimitrios Units I, III, IV	▪ Reduction of particulate emissions: Upgrading of existing and installation of new electrostatic precipitators to be completed by 2007-2008
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
	▪ Modernisation of cooling towers in units I-IV planned for 2008
	▪ Modernisation of steam turbines and of preheating system for condensates planned for 2008
Ag. Dimitrios Unit II	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since May 2006; modernisation of existing and introduction of new precipitators should be completed by late 2007
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
	▪ Modernisation of steam turbines and of preheating system for condensates planned for 2008
Ag. Dimitrios Unit V	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation since 1999
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
Melitris	▪ Reduction of particulate emissions: High performance electrostatic precipitators operate in conjunction with a wet gas desulphurisation system
	▪ Reduction of SO ₂ emissions: A wet gas desulphurisation system in operation
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
Amynteon I-II	▪ Reduction of particulate emissions: High performance electrostatic precipitators in operation in Units 1 and II
	▪ Reduction of SO ₂ emissions: natural desulphurisation
	▪ Reduction of NO _x emissions: Low excess air, air staging, flue gas recirculation.
	▪ Modernisation of the cooling towers completed

64. The Government disputes the MFHR's interpretation of what constitutes best available techniques for reducing SO₂ emissions. Whereas the MFHR argues that gas desulphurisation systems should be introduced into every power plant, the Government maintains that such systems, which themselves give rise to CO₂ emissions, are only required in sites where SO₂ emissions need to be reduced. This does not apply to the power stations in northern Greece, which burn lignite, with its very low sulphur content. As a result, the high alkaline (CaO) ash content means that natural desulphurisation is sufficient. The Government considers that the approach it has adopted is fully consistent with the principle of integrated pollution prevention and reduction and the document BREF LCP.

65. According to the Government, all the DEH installations are equipped with the best available techniques for reducing NO_x emissions, bearing in mind the low combustion temperatures and the high humidity levels of the flue gases, namely low excess air, air staging and flue gas recirculation.

66. It states that there are no specific techniques for reducing PM₁₀, the only one mentioned in BREF LCP being the use of electrostatic precipitators to filter particulates in general.

67. Finally, the Government states that as part of the IPPC authorisation procedure, the DEH is required to submit technical reports to the competent authority on the best available techniques being used or to be used in the plants concerned. The introduction of such best available techniques to DEH installations is subject to detailed inspections. When environmental criteria are being approved, these also include requirements to introduce best available techniques, implementation of which is then monitored by the competent administrative authorities. The Government therefore denies that Articles 10 and 11 of the IPPC directive have not been fully transposed into domestic law. More specifically, it states that Article 10 has been transposed by joint ministerial decree 11014/703Φ104, implementing Act 2010/2002, and Article 11 by joint ministerial decree 29457/1511, which makes no reference to best available techniques because it transposes Directive 2001/80.

The effectiveness of environmental standards:

68. The Government maintains that compliance with environmental standards is monitored by the environmental inspectorate and by close scrutiny of the DEH annual reports, including its efforts to bring its plants into line with "best available techniques". It states that irrespective of which body imposes them, the level of penalties always reflects the circumstances of each particular case and must be compatible with the constitutional principle of proportionality.

69. If any follow-up action is required in response to action taken by persons living in the vicinity of mines and power stations, this must be in accordance with statutory procedures and initiated by the local prefecture, which will take whatever steps are necessary, including the ordering of penalties against the DEH. For example, with reference to the request by the Megalopolis citizens' movement to the Arkadia prefecture in 2004, the Government states that in addition to the inspection visit to the mine and the resulting penalties that were imposed, a wet gas desulphurisation system is currently under construction (see the table above).

70. Turning to the “Dytiko Pedio” mine case, the Government states that throughout the proceedings environmental permits were in force, in accordance with the general principles of administrative law, and that when they were finally annulled by decision 519/2006 of the Supreme Administrative Court, new permits had been approved. Finally, the Government questions the relevance of the Kokkari power station case to this complaint but also notes that no proceedings have been launched to enforce the execution of decision 4577/1998 of the Supreme Administrative Court, and that in any event the plant is operating on the basis of a valid environmental permit.

Environmental policy in the energy sector

71. The Government maintains that Greece has long demonstrated its commitment to combating climate change with a series of ambitious and practical measures, including ratification of the Rio Convention and the Kyoto Protocol and transposition of relevant Community directives. It points out that Greece's right to increase greenhouse gas emissions by 25% under the Community's Kyoto burden-sharing agreement reflects an economic policy decision to enable countries such as Greece to move closer to the European average per capita GDP.

72. Greece is pursuing its efforts in the two directions specified in European and international regulations and agreements for achieving the Kyoto objectives, principally by limiting emissions and, secondarily, by using flexible mechanisms such as the European scheme for greenhouse gas emission allowance trading.

73. The Government says that Greece has made demonstrable progress in implementing its commitments to reduce emissions of greenhouse gases in general and CO₂ in particular and has met the objectives set in accordance with established forecasts and scenarios.

74. Unlike the MFHR, it considers that the European Commission's approval for Greece's first national allocation plan (NAP1) and the emissions allowance distribution is a significant development, since it follows a detailed examination of the formal and substantive criteria laid down in Directive 2003/87 and of the energy scenarios described in the plan.

75. The Government acknowledges that the BaU scenario in PNA1 (2005-2007) predicts an increase of 39.2% in greenhouse gas emissions for the whole country and all sectors combined up to 2010. However, it maintains that the purpose of such a scenario is to determine what efforts are required to achieve the objectives. In practice, CO₂ emission quotas for DEH plants were 2 533 863 tonnes (4.6%) below the BaU forecasts and thanks to various efficiency measures 80.6% of this total was covered by a real reduction of 2 041 507 tonnes (3.7%) in DEH CO₂ emissions. The remaining 19.4% came from the purchase of quotas.

76. The Government considers that a certain lack of precision in forecasts is inevitable in exercises such as the presentation of reports to the UNFCCC secretariat and that for various reasons every country adjusts its forecasts of greenhouse gas emissions from one year to the next. At all events, it notes that, as the UNFCCC itself acknowledges in its *Report on individual review of the GHG inventory of Greece submitted in 2005* (12 April 2006), the target volume of greenhouse gas emissions in the first national action plan for climate change (15%±3%) has been achieved, since the actual increase between 1990 and 2000 was 18%.

77. Turning to the second dimension of its Kyoto policies, the Government states that its Convention commitments have to be viewed from a global rather than a local perspective. As such, the use of flexible mechanisms such as the purchase of emission quotas forms part of a global strategy and is the equivalent, in terms of environmental protection, to local reductions in emissions. Similarly, it argues that greenhouse gas emissions cannot be assessed in terms of their health effects, particularly at local level, but only in terms of their effects on the climate.

78. Finally, the Government states that under the first national action plan natural gas will play a significant part in the country's future energy mix, accounting for 28% of total electricity production in 2010 and 36% in 2020. This should result in a decline in lignite's contribution from 67% in 2005 to 38% in 2020.

The alleged violation of Articles 11§§2 and 3:

A - The complainant organisation

79. According to the MFHR, the state has failed, in breach of Article 11§2 of the Charter, to “provide advisory and educational facilities for the promotion of health and the encouragement of individual responsibility in matters of health”.

80. Firstly, it argues that the state has failed to involve the affected populations in environmental impact assessment. Indeed, on a number of occasions, it has shown evidence of its determination not to involve them. For example, in the case of the inhabitants of Mavropigi (see above, §32), the Government approved the environmental criteria for the DEH mine in "Dytiko Pedio" to operate, despite a study demonstrating the negative impact of mining activity on the village, and did not listen to the inhabitants who wished to be moved. These were among the factors that persuaded the Supreme Administrative Court to set aside joint ministerial decree 10594/2003¹ approving the environmental conditions. Another example concerned the public consultation process on the preparation of NAP1, which despite its complexity was published on the internet for a total of just four days between 20 and 24 December 2004, which did not leave time even for specialist non-governmental organisations to offer a useful opinion.

¹ Supreme Administrative Court Decision 998/2005 of 1 April 2005

81. Secondly, the MFHR complains that the affected groups have been refused access to environmental data and other information, which has prevented them from exercising their right to challenge decisions. It again refers to the 2004 request by the Megalopolis citizens' movement to the Arkadia prefecture (see above, §31) for an investigation into access to information on limit values and pollution levels in the region and the lack of any administrative response.

82. Similarly and thirdly, the MFHR argues that the health assessment made by the state into the impact of lignite mining was confined to two epidemiological studies (see below, §86), which were based exclusively on data compiled by Government departments and did not allow those concerned to participate.

83. Fourthly, it maintains that there was no attempt to communicate with persons living in the lignite mining regions and offer them public health information. It states that it considers that the figures quoted by the Government – 103 health and environmental education courses organised in 150 primary and secondary schools in the Kozani prefecture – themselves reveal the shortfall in this area.

84. It also alleges that nothing has been done to inform the affected groups of what they can do to deal with health risks in normal circumstances and when incidents occur, for example when certain thresholds are reached.

85. According to the MFHR, the State has failed to “prevent as far as possible epidemic, endemic and other diseases”, in contravention of Article 11§3 of the Charter.

86. It argues firstly that the state has failed to conduct regular, population-wide health assessments of the effects of air pollution on health, and argues that 45 years after the start of DEH activities in the Kozani-Ptolemaida area, only two epidemiological studies of the population have been carried out. As a result, according to the MFHR, the state does not systematically collect or analyse data on mortality or morbidity in the regions concerned and thus lacks significant information that would allow it to assess the health situation and respond appropriately. For example, while recognising the need for it, the state has not sponsored any research into the impact of lignite mining on the prevalence of cancer.

87. Secondly, the MFHR argues that the state's failure to regularly monitor environmental conditions and assess the state of health of the population, or to provide for the participation and representation of those concerned, signifies that it has no long-term strategy for managing the public health effects of high levels of air pollution and has no policies for responding rapidly and effectively to threats to the environment when air pollution exceeds the limit values.

B – The Government

88. The Government states that, as required by Articles 11§§2 and 3, it has a long-term strategy for managing the public health effects of air pollution, and that its policy is to foster a public health culture among its citizens in accordance with WHO objectives, as set out in the Ottawa and Alma-Ata declarations.

89. The Government acknowledges that despite the methodological difficulties associated with epidemiological studies and the caution with which their findings should be used (see § 49), their value is undeniable. It has therefore helped to finance several such studies and commissioned the ones conducted by professors Kondakis and Koutsogiannopoulos (see § 51). These studies were presented to the public in Kozani in 1998. The Government says that further studies are planned or under way. In particular an epidemiological study of the population of Megalopolis is scheduled and will be carried out by the Greek health and safety institute, in conjunction with the Democritus University of Thrace, and another is being conducted in Florina by the University of Thessaloniki. However, it acknowledges that no epidemiological studies of morbidity have been carried out in areas near lignite power plants.

90. The Government denies the MFHR's allegations that those concerned were not granted or were refused access to information and data about the environment. It replies, point by point, to the issues raised by the Megalopolis citizens' movement in 2004 with the Arkadia prefecture and maintains that the municipalities and their inhabitants had full access to air quality monitoring data.

91. Finally, the Government states that it is drawing up health promotion strategies for children of school age and that the health and environmental education officers' network runs health and environmental education courses in primary and secondary schools. For example, in 2004-2005 116 such courses were organised in primary and secondary schools in Arkadia prefecture and 103 in Kozani.

Working and employment conditions in the lignite mines

The alleged violation of Articles 3§§1 and 2:

A – The complainant organisation

92. The MFHR maintains that in violation of Article 3§1 Greece has failed “to issue safety and health regulations”.

93. The MFHR maintains that there is a significant gap in the mines and quarries regulation because it imposes no specific requirement to screen for, identify, notify or pay compensation to persons suffering from occupational diseases. This situation has to be seen in the more general context of the fact that compensation procedures are the same whether or not the origin of an illness or disease is occupational. The MFHR claims that there is no body of legislation and regulations under which persons affected by occupational diseases can be identified, quantified and awarded compensation. It argues that the Government has itself acknowledged this general gap in its legislation under the reporting system (17th Greek report, p. 27).

94. The MFHR criticises Act 1568/1985, under which workplaces with more than 50 employees are only required to employ one occupational physician, irrespective of the size of their workforce. This allows firms operating large single sites, such as lignite mines, which each employ over a thousand persons, to satisfy the health and safety regulations while only employing one occupational physician. In the specific case of the DEH (public power corporation) mines, the MFHR considers that 7 occupational physicians for 7000 employees is manifestly inadequate, particularly in

view of the fact that they have to cover 13 sites that are geographically widely dispersed.

95. The MFHR maintains that in violation of Article 3§2 Greece has also failed to “provide for the enforcement of regulations by measures of supervision”.

96. The MFHR argues that the mines inspectorate lacks the means to carry out sufficiently frequent and thorough checks to avert – as far as possible – occupational accidents and diseases. In support of its allegations it refers to the small number of inspectors (five engineers), in the south of Greece and a decline in the number of visits, from about 780 checks carried out in 2000, to 550 in 2004.

97. It adds that the general labour inspectorate (SEPE) pays very few visits to extraction sites – three in 2005, according to the inspectorate's 2005 report. It considers that the inspection services' oversight has been made even more ineffective by the fact that the DEH sub-contracts a significant proportion of its mining activities and does not exercise sufficient control over its contractors' health and safety policies.

98. As evidence of the inspection services' ineffectiveness, it cites the particularly high number of occupational accidents in Greece, including fatal ones. It also quotes Eurostat statistics, which show that, before enlargement of the European Union, the occupational accident and fatal occupational accident rates in Greece were above the average of the countries of the European Union (EU – 15). It also relies on data produced by the Government on trends in fatal accidents notified to the Institute of Social Insurance (IKA), to show that the number of fatal accidents has recently risen.

99. The MFHR claims that the fines imposed by the SEPE are often the minimum laid down in the legislation - Act 3385/2005, which establishes a scale from €1 000 to 30 000 - and are too light to act as a deterrent: €1 333 on average in 2005, according to the SEPE's 2005 report. It concludes that non-financial penalties, such as suspension of activities, disciplinary measures and criminal proceedings, are seldom if ever applied.

B – The Government

100. The Government maintains that it has met all its obligations under Article 3 of the Charter.

101. The Government states that the DEH has an internal directive on the recording of occupational diseases. It acknowledges that there has been a delay in the recording process but hopes that once the recording process is complete, there will be proper provision for recognising and preventing occupational accidents.

102. The Government maintains that the number of occupational physicians is fixed in accordance with Act 1568/85 and that in 2003, 96.3 % of undertakings that were required to employ such doctors were in compliance with their obligations, namely 580 undertakings out of 602, employing 78 016 people. It also argues that the number of hours required to be worked, and thus the number of doctors are laid down in presidential decree 294/88 on the minimum employment time of safety technicians and occupational physicians, in application of Act 1568/85, and that these depend on the number of personnel and the risk category of the undertaking

concerned. Moreover, enterprises whose employees are exposed to carcinogenic factors, lead or asbestos may have to employ an occupational physician even for just one employee.

103. The Government also claims that the DEH has set up an internal prevention and protection department, the ESYPP, with 35 occupational physicians, 100 full and part-time safety technicians and 55 auxiliary nursing staff employed across the country. In particular, seven occupational physicians are employed in the Western Macedonia and Megalopolis energy centres for around 7000 employees.

104. The Government acknowledges that there are gaps in the mines and quarries inspection services, owing to staff shortages. However, it maintains that the agencies concerned are very active in the field. Moreover, as part of a current study on the reorganisation of all agencies of the Ministry of Development, care will be taken to ensure that the mines inspectorates have sufficient staff, material and technical equipment to function properly. Finally, the Government points out that the SEPE is not competent for the mines inspection and henceforth that referring to SEPE is irrelevant in the context of the present complaint.

105. The Government notes that the number of occupational accidents reported to the IKA and the SEPE since 1977 has been in continuous decline. Regarding fatal accidents, particularly their increase in 2001, the Government states that nearly 30% were the result of road accidents or pathological factors, that major building projects were under way at the time, particularly in preparation for the 2004 Olympics, and that there are many foreign workers in Greece, who face problems such as language difficulties, lack of education and limited work experience. It maintains that the period 2001-2004 saw a decline in the number of fatal accidents.

106. The Government argues that the use of contractors has had no effect on health and safety at work. Firstly, the relevant legal obligations are clearly stated in the contracts with the firms concerned and secondly the legislation continues to apply while contracts are being executed and if necessary the labour inspectorate collaborates with the relevant departments of the DEH, which may also where appropriate ask the mines inspectorate to carry out visits.

107. The Government maintains that the level of penalties, whichever body orders them, is always determined in accordance with the proportionality principle, which is enshrined in the Constitution, and that the Labour Inspection Act, No. 2639/1998, grants a right of appeal to the courts against fines imposed by the SEPE. Without specifying which inspectorate it is talking about, the Government supplies figures on action taken on breaches of the regulations identified between 1999 and 2004, which show a rising trend in the number of measures taken, suspensions of activities and fines imposed.

The alleged violation of Article 2§4:*A - The complainant organisation*

108. The MFHR argues that lignite miners are particularly exposed to high levels of air pollution, especially in the form of fine particles, and that irrespective of their place of residence they are more subject to rhinitis than other categories of worker. In addition, high concentrations of mineral substances in fly ash are considered responsible for pneumoconiosis among coal miners.

109. The MFHR maintains that the state has not met its obligations under Article 2§4, either directly, as law-maker, since lignite miners have no statutory entitlement to reduced working hours or additional paid holidays, or indirectly, as *de facto* manager of DEH since it has failed in its duty to include such provisions in its employment contracts, whether individual or collective.

B – The Government

110. The Government states that the internal prevention and protection department of the DEH, the ESYPP, has a fully equipped network of measurement units for harmful substances and where excessive values have been recorded, protective measures have been introduced in accordance with the legislation. In addition, individual means of protection are available for workers exposed to dust and more and more use is being made of them.

111. According to the Government, miners have the statutory protection required by Article 2§4. Firstly, because of the difficult weather conditions in which they work, they are classified as performing arduous or hazardous work and the majority of the mining staff employed by the DEH are entitled to retire at the lowest age limit. Secondly, because their working conditions are the most difficult, those working shifts are entitled to five additional days' leave per year. Thirdly, collective agreements grant special bonuses to the majority of DEH mining staff.

112. Finally, the Government argues that reductions in working hours and supplementary leave for DEH employees working in lignite mines may be included in collective agreements, whose provisions are determined exclusively by the social partners. In the case of the DEH, the unions have never submitted such claims.

RELEVANT LAW

Air pollution

International standards

United Nations Framework Convention on Climate Change of 9 May 1992 (UNFCCC)¹

113. The objective of this Convention is to achieve the stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

114. States are obliged to develop, periodically update, publish and make available to the Conference of Parties national inventories of anthropogenic emissions and sinks; to adopt and implement national and regional measures to mitigate climate change; and to promote the application of processes that control anthropogenic emissions, including technology transfers.

Kyoto Protocol to the United Nations Framework Convention on Climate Change of 11 December 1997²

115. The Kyoto Protocol has the same ultimate objective as the UNFCCC. In ratifying the Protocol, developed countries commit themselves to reducing their combined greenhouse gas emissions by the period 2008-2012. The targets cover the six main greenhouse gases, namely, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). The objective is to reduce by at least 5 per cent compared with the reference years : 1990 for CO₂, CH₄ and N₂O, and 1995 for fluorinated gases.

116. The Protocol also establishes three innovative mechanisms, known as joint implementation, emissions trading (see § 152-158 below on European Union law) and the clean development mechanism, which are designed to help the parties listed in Annex I of the UNFCCC to reduce the costs of meeting their emission targets.

117. Each developed country was required to have made demonstrable progress in implementing its emission reduction commitments by 2005. The Protocol includes a procedure for the communication and review of information. Developed countries are required to incorporate in their national communications the supplementary information necessary to demonstrate compliance with their commitments under the Protocol.

¹ <http://untreaty.un.org>

² Ibid.

World Health Organisation (WHO)

118. The WHO has laid down guidelines on air quality¹ to provide states with some guidance and reduce the impact on health of air pollution. The guidelines published in 1987 and updated in 1997 related to Europe. Those published in 2006 cover the entire world and are based on an assessment of current scientific data by experts. The limits on the concentration of air pollutants apply mainly to particulate matter, ozone (O₃), nitrogen dioxide (NO₂) and sulphur dioxide (SO₂). A summary of these guidelines was published in 2006 and the complete text will be published in 2007.

European standards²

The Treaty establishing the European Community

119. “Article 2: The Community shall have as its task ... to promote throughout the Community ... a high level of protection and improvement of the quality of the environment ...

120. Article 6: Environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities referred to in Article 3, in particular with a view to promoting sustainable development.

121. Article 174: 1. Community policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems.

2. Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. ...”

Prior assessment

122. The Community has set up a system for the assessment of the effect of public and private plans on the environment (construction work, other installations and schemes, power stations, waste treatment, deforestation, etc.), which is based on the following legal instruments:

- Directive 85/337/EEC, as modified by Directive 97/11/CE³, which set up a system of prior assessment of the impact of certain projects on the environment and public information;

¹ Use of the air quality guidelines in protecting public health: a global update, Fact sheet No. 313, October 2006; see WHO (European Regional Office) site: www.euro.who.int.

² europa.eu.int/eur-lex ; europa.eu.int/scadplus

³ Official Journal L 073, 14/03/1997, p. 0005 – 0015; deadline for transposition 14 March 1999

- Directive 2001/42/EC¹, which extended the environmental assessment system at the planning stage (impact of certain plans and programmes on the environment). It includes measures for information on procedures to be made public and provision for public opinion and opinion of the authorities responsible for the environment to be sought ahead of the decision to adopt the plan or programme.

123. Directive 96/61/EC² on integrated pollution prevention and control made it compulsory for member states to establish a procedure for applying for operating permits prior to the installation of highly polluting industrial activities (see below).

Integrated pollution prevention and control: IPPC Directive

124. Under the IPPC Directive, industrial and agricultural activities with a high pollution potential must have a permit. To be granted this permit, industrial or agricultural installations must meet certain basic requirements. In particular they must:

- take every appropriate measure to prevent pollution, making particular use of “best available techniques” (BAT);
- prevent all large-scale pollution;
- prevent, recycle or dispose of waste in the least polluting way possible;
- use energy efficiently;
- prevent accidents and curb their effects;
- restore sites to their original state when activities are over.

125. The expression “best available techniques” is defined in Article 2 of the Directive as “the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values”.

126. The decision to issue a permit must also contain a number of requirements:

- emission limit values for polluting substances (with the exception of greenhouse gases if the emissions trading scheme applies – see below);
- any soil, water and air protection measures required;
- waste management measures;
- measures to be taken in exceptional circumstances (leaks, malfunctions, temporary or permanent stoppages, etc.);
- measures to minimise long-distance or cross-border pollution;
- release monitoring;

¹ Official Journal L 197, 21/07/2001 p. 0030 – 0037; deadline for transposition 21 July 2004

² Official Journal L 257, 10/10/1996, p. 0026 – 0040; deadline for transposition 30 October 1999

127. To coordinate the permit process required under the Directive and the emissions trading scheme (see below), a permit issued in compliance with the Directive is not obliged to contain the emission limit values for greenhouse gases if they are subject to an emissions trading scheme, provided there is no local pollution problem.

128. All permit applications must be sent to the competent authority of the member state concerned. They must include information on the following points:

- a description of the installation, the nature and scale of its activities and site conditions;
- materials, substances and energy used or generated;
- sources of emissions from the installation, the nature and quantities of foreseeable emissions into each medium and their environmental impact;
- the technology and techniques proposed to prevent or reduce emissions from the installation;
- waste prevention and recovery measures;
- emissions monitoring measures;
- possible alternative solutions.

129. The Directive requires the European Commission to organise an exchange of information between member states and the industries concerned on best available techniques. The reference document on best available techniques in large combustion plants (BREF) published by the Commission in May 2005 is one of the reference documents published in this connection and must be taken into account when determining best available techniques.

Public information and participation

130. The Aarhus Convention (1998) on access to information, public participation in decision-making and access to justice in environmental matters was approved on behalf of the Community by Decision 2005/370/EC. The Convention has been implemented by Directive 2003/4/EC on public access to environmental information. This encompasses any information in written, visual, aural or electronic form on the state of air and atmosphere, water, soil, land, flora and fauna, landscape and natural sites, together with activities and measures affecting or likely to affect them or that are intended to protect them, including administrative measures and environmental management programmes. The aim is to ensure that environmental information is systematically made available and disseminated to the public. This information should at least include international treaties, conventions or agreements and Community, national, regional or local legislation on the environment; environmental policies, plans and programmes; reports on the state of the environment; environmental authorisations and agreements; and environmental impact studies and risk assessments. Public authorities are required to make available environmental information held by or for them to any applicant at his request and without his having to state an interest. Member states must ensure that members of the public likely to be affected by an imminent threat to human health or the environment receive all relevant information held by the public authorities, immediately and without delay.

131. Furthermore, Directive 2003/35/EC¹, which provides for public participation when certain plans and programmes related to the environment are drawn up, makes it compulsory for the member states to adopt the necessary measures to ensure that the public can get fully involved in devising – and, where necessary, reconsidering – environmental plans and programmes. These measures include informing the public about draft plans and programmes in the sectors of waste, air pollution and the protection of water from nitrate pollution, giving the public the opportunity to voice comments and opinions on these drafts and taking account of results of public participation when making decisions.

Air pollution strategy

132. This strategy is based on the premise that air pollution seriously damages human health and the environment: respiratory problems, premature death, eutrophication and damage to ecosystems as a result of the deposition of nitrogen and acidic substances. The pollutants that are considered to raise the greatest public health concerns are tropospheric ozone² and particulate matter (especially fine particles).

133. When drawing up the strategy, it was impossible to determine a level of exposure to particulate matter and tropospheric ozone that does not pose a threat to human beings. However, there is a conviction that a significant reduction in these substances will have positive effects on public health and benefits for ecosystems.

134. Taking the situation in 2000 as its departure point, the Strategy sets specific long-term objectives (for 2020): a 47% reduction in the loss of life expectancy as a result of exposure to particulate matter; a 10% reduction in cases of acute mortality caused by exposure to ozone; reduction in excess acid deposition of 74% and 39% in forest areas and surface freshwater areas respectively; a 43% reduction in areas or ecosystems exposed to eutrophication.

135. To achieve these objectives, sulphur dioxide (SO₂) emissions will need to decrease by 82%, nitrogen oxide (NO_x) emissions by 60%, volatile organic compounds (VOCs) by 51%, ammonia (NH₃) by 27% and primary PM_{2.5} by 59% compared with year-2000 levels.

136. Another of the strategy's aims is to improve European air quality law through the merger into a single directive of Framework Directive 96/62/EC on ambient air (see below), its three "daughter" directives setting the limits for various types of air pollutants and a decision of the Council on exchanges of air quality data between member states³.

¹ Official Journal L 156, 25/06/2003, p. 0017- 0025; deadline for transposition 25 June 2005

² Tropospheric or ground-level ozone is a colourless and highly irritating gas that forms just above the earth's surface. It is called a "secondary" pollutant because it is produced when two primary pollutants react in sunlight and stagnant air. These two primary pollutants are nitrogen oxides (NO_x) and volatile organic compounds (VOCs). NO_x and VOCs come from natural sources as well as human activities. About 95 per cent of NO_x from human activity come from the burning of coal, petrol and oil in motor vehicles, homes, industries and power plants.

³ Proposal presented by the Commission on 21 September 2005 for a Directive of the European Parliament and the Council on ambient air quality and cleaner air for Europe (COM(2005)447 final).

Legislation on air quality

137. Directive 96/62/EC¹ on ambient air quality assessment and management establishes limit values and alert thresholds for a number of pollutants (see section below on the first daughter directive).

138. Ambient air quality must be monitored throughout the member states. Different methods may be used for this: measuring, mathematical modelling, a combination of the two, or estimates. Assessment of this type is mandatory in built-up areas with more than 250 000 inhabitants, or in areas where concentrations are close to limit values. Where limit values are exceeded, member states must devise programmes to reach them within a set deadline. The programme, which must be available to the public, must contain at least the following information: the location where the pollution is excessive; the nature and an assessment of the degree of the pollution; the origin of the pollution.

139. States must draw up a list of areas and conurbations where pollution levels exceed limit values.

140. Where the alert thresholds are exceeded, member states must inform the inhabitants and send the European Commission any relevant information (recorded pollution level, length of the alert, etc.).

141. Where certain geographical areas and conurbations have pollution levels below limit values, member states must keep below the said values.

142. The Directive contains provisions on the forwarding of information and on reports on pollution levels and the areas concerned.

143. The first daughter directive of Directive 96/62/EC, Directive 99/30/EC², sets the limit values for sulphur dioxide (SO₂), sulphur oxide (SO_x), nitrogen dioxide (NO₂), particulate matter (PM₁₀) and lead in ambient air.

144. Directive 2001/81/EC set national emission ceilings regardless of pollution sources for certain atmospheric pollutants that cause acidification, eutrophication and tropospheric ozone formation – i.e. sulphur dioxide (SO₂), nitrogen oxide (NO_x), volatile organic compounds (VOC) and ammonia (NH₃). States were required to introduce them by 2010 at the latest.

¹ Official Journal L 296, 21/11/1996 p. 0055 – 0063; deadline for transposition 21 June 1998

² Official Journal L 163, 29/06/1999 p. 0041 – 0060; deadline for transposition 19 July 2001

145. Summary table of EU limit values and ceilings for certain pollutants:

	long-term exposure	short-term exposure	national ceiling
TSP	150µg/m ³	300µg/m ³ daily limit (not to be exceeded >18 days per year)	n.a.
PM₁₀	40µg/m ³	50µg/m ³ daily limit (not to be exceeded >35 days per year)	n.a.
SO₂	120µg/m ³	350µg/m ³ hourly limit (not to be exceeded >24 times a year) and 125µg/m ³ daily limit (not to be exceeded >3 times a year)	320 ktons (For plants existing before 1 July 1987)
NO_x	40µg/m ³	200µg/m ³ hourly limit (not to be exceeded >18 times a year)	70 ktons (For plants existing before 1 July 1987)
GHG	n.a.	n.a.	110,2 Mtons (to be reached at the latest in 2012)

146. The limit value for long-term exposure, expressed as the annual mean daily concentrations of a pollutant, measures the average level of exposure of individuals, without taking account of short-term periods of exposure or seasonal variations in pollutant concentrations. It describes ambient air quality and make it possible to assess the cumulative long-term effects of poor air quality. Limit values for short-term exposure are set at a higher level but may only be exceeded on a certain number of days or for a certain number of hours each year. This indicator measures the risks associated with brief periods of high pollution concentrations, which are considered to be responsible for short-term peaks in mortality and morbidity. National ceilings, expressed as total volume (tonnes) of a specific pollutant, indicate the amount of pollution that can be emitted by certain – or all – sectors of activity in a particular country.

147. The limit value for TSP, laid down in Directive 88/779/EEC on air quality limit values and guide values for sulphur dioxide and suspended particulates, has been suspended by the EU, because it is no longer considered to be a sufficiently precise indicator of air quality for the purposes of health protection.

148. Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants¹ aims to bring about a step-by-step reduction in annual emissions of sulphur dioxide (SO₂) and nitrogen oxides (NO_x) from existing plants and set emission limit values for sulphur dioxide, nitrogen oxides and dusts for new plants.

149. Different rules apply to existing combustion plants and to permits for the construction of combustion plants or licences for the operation of new plants. As regards the former, states were required to draw up progressive programmes for the reduction of total annual emissions by 1 July 1990 and to elaborate a national emission reduction plan (NERP) for existing plants which they had to communicate to the Commission by 27 November 2003 (such plans set up objectives, provide for measures and timetables for attaining them and refer to a monitoring mechanism).

¹ Official Journal L 309 of 27.11.2001, p. 0001 – 0021; deadline for transposition 27 November 2002

150. The directive grants exemptions from the need to comply with emission limit values for plants using certain types of fuel. States may adopt stricter emission limit values and compliance deadlines than provided for in the directive. In all events, they must achieve significant emissions reductions by 1 January 2008 at the latest.

Measures taken by the European Union to comply with the Kyoto Protocol¹

Joint fulfilment of commitments

151. Under the Kyoto Protocol, as signed by the European Community on 29 April 1998, the fifteen states which made up the EU before enlargement undertook to reduce their greenhouse gas emissions by 8% of 1990 levels by between 2008 and 2012. This overall objective was divided up into individual emissions reduction or limitation targets under a burden-sharing agreement (decision 2002/358/EC concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the UNFCCC and the joint fulfilment of commitments thereunder).

Emissions trading²

152. Drawing on the ground-breaking mechanisms set up by the Kyoto Protocol (see § 116 above), Directive 2003/87/EC³ establishes a scheme for greenhouse gas emission allowance trading within the Community. Under the scheme, industrial firms can exchange and build up stocks of emission allowances and use them to fulfil their emissions obligations. The scheme came into force on 1 January 2005 in the 25 EU member states.

153. Although the system can cover many economic sectors and all the greenhouse gases covered by the Kyoto Protocol, its field of application during the implementation and experimentation stage (2005-2007) will be limited to major emitters in the heat and electricity generating sectors (emitting CO₂).

154. Member states must draw up national allocation plans (NAPs) in accordance with common rules set out in Directive 2003/87/EC. When drawing up these plans, states must take account of public opinion. The Commission assesses NAPs on the basis of these rules and EU rules on state aid and competition and has the power to require changes or even to reject a plan altogether. Once a plan has been approved, neither the total quantity of emission allowances nor the number of allowances per installation may be changed.

155. NAPs must include “business-as-usual” (BAU) scenarios including production forecasts and assessments of emission trends.

156. NAPs assign each installation a number of emission allowances, which entitle it to emit the corresponding quantity of CO₂. Each allowance is a trading unit representing the right to emit one tonne of CO₂. Companies which manage to keep their emission levels within the allowances allocated to them may sell excess amounts at market rates. Those which have difficulty in remaining within emission thresholds can opt (i) to reduce their emissions, for example by investing in more

¹ europa.eu.int/eur-lex; europa.eu.int/scadplus

² European Commission, EU action against climate change. EU emissions trading – an open scheme promoting global innovation, 2005.

³ Official Journal , L 275, 25/10/2003 p. 0032 – 0046; deadline for transposition 31 December 2003

efficient technologies or by using an energy source that generates less carbon, (ii) to purchase the allowances they need at market rates or (iii) to combine both approaches.

157. 95% of allowances will be granted to installations free of charge during the first stage of the scheme (2005-2007) and 90% during the second stage (2008-2012).

158. Since 1 January 2005, all installations covered by the emissions trading scheme have been required to hold a permit to emit greenhouse gases issued by the competent authority.

159. In Greece, 72% of allowances were allocated to the electricity generating industries, 59% of which went exclusively to lignite-fired power stations.

Domestic standards

General Obligations

160. The Greek Constitution, as amended in 2001, contains two Articles relating to the environment and health protection:

“Article 21 ...

3. The State shall care for the health of citizens and shall adopt special measures for the protection of young, elderly and disabled people and for the relief of the needy.

Article 24

The protection of the natural and cultural environment is the state's duty and everyone's right. The state is required to adopt special preventive or enforcement measures for the preservation of the environment in accordance with the principle of sustainability. Matters pertaining to the protection of forests and afforested areas in general shall be regulated by law. The state shall compile a forest register. Alteration of the use of forests and afforested areas is prohibited, except where agricultural development or other uses necessitated by the public interest take priority in the interests of the national economy.”

161. The Environmental Protection Act No. 1650/1986¹, as amended by Act No. 3010/2002², is the first general law governing environmental matters in Greece. In section 2 of the Act the environment is defined as “the full range of natural and anthropogenic factors and features which interact with one another and affect ecological balances, quality of life, residents' health, historical and cultural traditions and aesthetic values”. The aim of the Act is to “establish fundamental rules, criteria and mechanisms for the protection of the environment so that everyone, as an individual and a member of society, can live in a high quality environment, which protects his or health and fosters his or her personal development”.

¹ Official Journal A 160 (16/10/1986).

² Official Journal A 91 (25/04/2002). This Act brings Act No. 1650/1986 into line with Directive 97/11/EC, amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment, and with Directive 96/61/EC concerning integrated pollution prevention and control.

Environmental impact assessment

162. Joint Ministerial Order H.P. 15393/2332¹ defines the categories of work and activities with common features for the purposes of evaluating and appraising their environmental impact, dividing them into ten main groups, one of which is “mining and related activities” (Article 3§1.5) and another “industrial installations”, including solid fuel combustion plants (Article 3§1.9).

163. Article 3 of Joint Ministerial Order H.P. 11014/703/F104² establishes the procedure for preliminary environmental evaluation. The evaluation must include the following information: (a) the location and scale of the operations; (b) the type and general technical characteristics of the operations or activity and the technology used; (c) the conditions in the sector in which the operations or activity are to be carried out, particularly as regards the natural and cultural environment; (d) the use of natural resources; (e) combined work with other operations or activities; (f) any waste produced; (g) any pollution caused; (h) accident prevention measures, particularly when using certain substances or technologies; (i) in principle, a brief description of measures taken to avoid, reduce and if possible redress major negative effects; and (k) a brief description of the main alternatives planned by the applicant and the main reasons for his or her choice, bearing in mind its impact on the environment.

164. Articles 4 to 7 of this Order govern the approval of environmental criteria. Applications for approval must be made to the Ministry of Environment for operations in category A, sub-category 1 (mining operations covering $\geq 500,000$ sq. m – or about 125 acres – and combustion plants with a rated thermal input ≥ 50 MW). All of DEH’s lignite mines and all of Greece’s lignite-fired power plants except Liptol-Ptolemaida fall into this category.

165. Joint Ministerial Order H.P. 3711/2021³ establishes the arrangements for informing the public about and participation in the procedure to approve the environmental criteria of projects and activities. Under this Order, prefectures are required to publish preliminary environmental evaluations and appraisals (Article 2) and environmental impact studies (Article 4) in the local press so that everyone can express their concerns, on the basis of “adequately documented” information, within thirty days of the publication of studies. After this, it is for the prefecture concerned or the relevant Ministry of the Environment department to publish the notice of approval of the environmental criteria (Article 5).

¹ Official Journal B 1022 (05/08/2002)

² Official Journal B 332 (20.03.03), implementing section 4 of Act No. 1650/1986, as amended by section 2 of Act No. 3010/2002, and harmonising it with Directives 97/11/EC and 96/61/EC, as cited above.

³ Official Journal B 1391 (29/09/2003). This law brings Greek law into line with Directive 85/337/EEC, Directive 96/61/EC and Directive 97/11 as above.

166. In the case of large combustion plants (with a rated thermal input of ≥ 50 MW), the environmental impact study must also contain information, in the light of Joint Ministerial Order H.P. 15393/2332, on measures taken to combat pollution and measure emissions, along with details on the choice of best available techniques and waste management measures and their environmental impact. Lastly, under Article 16 of Appendix II to Joint Ministerial Order H.P. 11014/703/F104, carbon dioxide (CO₂) and nitrogen oxide (NO_x) emissions must be taken into account when calculating limit values of air emissions (the list of pollutants is not exhaustive).

Air pollution control

167. Joint Ministerial Order 3277/209¹ on ambient air quality assessment defines the basic principles of a common strategy to protect ambient air in order to prevent or reduce harmful effects on human health and the environment as a whole. Under this Order, the Ministry of the Environment's Directorate General for the Environment is responsible for framing general guidelines and co-ordinating policy at national level. The appendix to Article 5 of the Order includes the list of air pollutants to be taken into account when assessing and managing ambient air quality.

168. Joint Ministerial Order 58751/2370² sets out the measures and conditions for the control of air pollution from large combustion plants. Under Article 5§5, the Ministry of the Environment may authorise higher limit values for emissions in combustion plants using Greek lignite. To justify this exception, it is argued that lignite is the main electricity generating fuel in Greece and by its very nature raises major problems, even if the best possible affordable pollution abatement techniques are used. The state is required to notify the European Commission of such cases so that joint decisions can be made on what measures to take.

Specific mining regulations

169. The specific legal framework governing the impact of mining on the environment is the Mines and Quarries Regulation³. Under Article 85, mining and quarrying must be planned to avoid any damage to the environment. The mine operator (in this case, DEH) is required to take measures to this effect in co-operation with the authorities. A special environmental impact study must be carried out to analyse and describe the natural and human environment, propose alternative methods, evaluate the effects of operations, particularly the most negative ones, and propose remedies. Article 85 also sets out requirements concerning specific protection and restoration measures. Article 86 states that measures must be taken to prevent pollution when loading, transferring or storing products, materials or waste. Specific and appropriate measures must also be taken to spray and cover dust to prevent particulate matter pollution.

170. Joint Ministerial Order 40786/2143⁴ expressly recognises the need to reduce fly-ash emissions from the Kozani and Florina combustion plants by introducing pollution abatement measures.

¹ Official Journal B 180 (17/2/2000). The text is in line with Directive 96/62/EC on ambient air quality.

² Official Journal B 264 (15/04/1993) brings national law into line with Directive 88/609/EEC on the limitation of emissions of certain pollutants into the air from large combustion plants.

³ Adopted in accordance with ministerial order II-5H/F/17402/1984, Official Journal B 931 (31/12/1984).

⁴ Official Journal B 341 (06/06/1988).

171. It requires each plant to install dedusters capable of dealing with emissions from ash silos and automatic water spraying systems capable of uniform and efficient ash wetting (Article 1§1). Furthermore, where conveyor belts or similar open-air systems are used to transport ash, there should be a water spraying system to maintain a degree of humidity, thus preventing the emission of particulate matter. Appropriate measures must also be taken to cover ash transported by any open-air system (Article 1§2). In areas in which ash is stored, there must be sufficient humidity and compaction and, failing this, there should be a system for the pelletisation of ash (Article 1§§3 and 4). All chimneystacks through which emissions from lignite combustion pass must be equipped with an automated system continuously measuring particle emissions (Article 2). The DEH is required to appoint an expert in charge of the upkeep and operation of pollution control systems and, more generally, compliance with environmental standards (Article 3). It is also required to carry out checks at least once a month to measure the quantity of heavy and toxic metals in the ambient air produced by lignite use (Article 4).

Monitoring of the implementation of environmental standards

172. The aforementioned Act No. 1650/1986 requires a specific mechanism to be set up to monitor the implementation of environmental law. This mechanism was established by Act No. 2947/2001¹, under which a special environmental inspectorate was set up under the authority of the Ministry of the Environment. The inspectorate's duties include supervising and monitoring the implementation of the environmental standards applicable to public works, in the broadest sense, and private activities and imposing penalties where environmental laws have been broken.

173. The environmental inspectorate has particular responsibility for the application of environmental legislation and standards to mines, quarries and industrial sites. Inspections must be carried out regularly or on an ad hoc basis and whenever a specific complaint has been made. Article 4 of Presidential Decree no. 165/2003² created 78 posts for the inspectorate.

174. Under Article 9§5 of Act No. 2947/2001, the environmental inspectorate may propose sanctions when it finds that environmental standards have been infringed. The actual enforcement of sanctions depends on the regional authorities (prefectures) or on the Ministry of the Environment (depending on the type of offence).

¹ Official Journal A 228 (09/10/2001).

² Official Journal A 137 (05/06/2003).

Electricity market

175. Public Power Corporation (DEH) was established in 1950 for an unlimited duration as a corporation for electricity generation, transmission and distribution throughout Greece. In 1999, Act 2773/1999 on Liberalization of the Electricity market, regulation of energy policy issues and other provisions¹ provided for, among other provisions, the transformation of DEH into a public limited company. DEH's transformation to a public limited company became effective on 1st January 2001, by virtue of the Presidential Decree 333/2000. According to Act 2773/1999 the Greek State is not permitted to hold less than 51% of the voting shares of DEH, including voting shares issued after any increase in its share capital.

176. Act 2773/1999 incorporated the provisions of Directive 96/92/EC concerning common rules for the internal market in electricity.²

177. Act 2773/1999 liberalized the Greek electricity market. Accordingly, as from 19 February, 2001, with the exception of non-interconnected islands, consumers with an annual consumption of more than 100 GWh per point of consumption (eligible customers) are allowed to conclude supply contracts with energy suppliers on the basis of private agreements. As of July 1, 2007, all consumers will be considered eligible customers with the exception of micro isolated islands' consumers whose supply of energy will be done exclusively by the DEH.

178. The DEH is the Greece's largest electricity generator, the sole owner of transmission assets and currently the sole distributor of electricity in the country, providing electricity to approximately 7.1 million customers as at 31 December 2005. It is therefore subject to public service obligations.³

Working and employment conditions in the lignite mines

General obligations and definitions

179. The main general legislation governing occupational health and safety is Act 1568/1985⁴, which establishes which authorities have responsibility at national and regional level for improving working conditions. Section 4 requires undertakings with more than 50 employees to appoint safety technicians and occupational physicians. Section 2 authorises employees to set up health and safety councils or committees. Sections 17 to 21 lay down the basic principles relating to safety in general, and more specifically safety at work, and sections 24 to 28 are concerned with protection against physical, biological and chemical agents. Finally sections 33 to 35, as amended, lay down penalties for breaches of the legislation.

180. Following the entry into force of presidential decree 17/1996 (see below), only the first part of the aforementioned act – relating to occupational medicine, safety technicians and employee committees – has applied to mining activities.

¹ Official Journal A 286.

² Official Journal n° L 027, 30/01/1997 p. 0020 – 0029; deadline for transposition : 19 February 1999

³ DEH s.a. Annual Report, 1.1.2001-31.12.2002, DEH s.a. Annual Report 2005.

⁴ Official Journal A 177 (10/10/1985).

181. Presidential decrees 17/1996 and 159/1999¹ on measures to improve employees' health and safety at work transpose directives 89/391/EEC and 91/383/EC. These place a number of obligations on employers, including general requirements regarding prevention, information on occupational risks and the application of all health and safety measures, and specific ones concerning written assessments of occupational risks and a special register and list of occupational accidents. Section 4§1 of PD 17/1996 requires every undertaking, irrespective of number of employees, to appoint a safety technician to its staff and those with more than fifty employees to employ an occupational physician. Paragraph 4 authorises employers to delegate safety or occupational health responsibilities to one or more members of their staff, subject to minimum time requirements (paragraph 7) to ensure that the individual(s) concerned have sufficient time to carry out all their responsibilities to the letter.

182. Section 7 of decree 17/1996 imposes several general obligations on employers, covering occupational risk prevention, regular information to employees, and the establishment of appropriate health and safety machinery, with the attendant obligation to make available the necessary facilities. The general principles that must be applied include risk avoidance (prevention, assessment and elimination), people-centred organisation of work and maximum use of technology. Moreover, when several employers share the same work places, they must co-operate on health and safety matters, co-ordinate any measures introduced and inform each other of any risks (paragraph 9).

183. All employers must produce written assessments of occupational risks, including, under section 3 of PD 159/1999, detailed information on risk characteristics, related preventive measures and the physical, biological or chemical risks to which employees might be exposed. In carrying out such assessments, the occupational physicians and safety technicians concerned must make quantitative and qualitative assessments of the occupational risks and take account of the results of regular health checks.

184. Under section 10, employees must be consulted on and participate in the formulation of health and safety policies. Section 11 requires employees to be informed of the relevant legislation, the risks identified and relevant measures taken.

185. The Presidential decree (PD) 294/88 on minimum safety technician and occupational health coverage in relation to number of employees and the degree of risk of the activities concerned, which implements Act 1568/85, divides undertakings into three categories according to risk: A = high risk activities, B = medium risk activities, C = office work. For each category, there is a minimum annual requirement for safety technician and occupational health coverage, which itself varies according to number of employees.

¹ Official Journal A 11 (18/01/1996), as amended by presidential decree 159/1999, Official Journal A 157 (03/08/1999).

Specific mining regulations

186. The mines and quarries regulation¹ allocates responsibilities and deals with other, more specific, safety matters. For example, where several contractors are used for the same activity, the employers are responsible for their employees' health and safety but co-ordinating and programming works is the operator's responsibility (section 4§1 f). Under section 4§2 of the regulation, the employer, whether this be the operator or a contractor, must comply with relevant health and safety measures, implement any protective measures concerning the work, employees, the neighbouring population and the environment proposed by the head of team or doctor concerned and, in the case of contractors, reach agreement on the apportionment of responsibilities in accordance with section 4§1 f (see above).

187. Sections 7 to 13 of chapter II of the regulation concern individual safety measures, occupational health, health surveillance and health and safety training for employees. Chapter IV deals with general and specific safety measures. For example, section 22 requires employees to be protected against suspended dust, gases, vapours and smoke. Section 82 lays down general safety measures relating to the land surface, particularly in connection with landslides and fissures. Section 83 imposes special obligations concerning waste sites, which must be specifically covered in all the technical studies required for any mining activity (Article 4). Under sections 92 to 96, accidents at work must be reported to the authorities and the mines inspectorate. Section 96 requires a list of accidents to be submitted to the mines inspectorate every three months to enable the relevant section of the Ministry of Development to assemble data on the frequency, seriousness and origin of accidents.

188. The Ministerial order 14080/732/96 is more specifically concerned with minimum requirements for improving the safety and health protection of workers in surface and underground mineral-extracting industries. As well as other general safety provisions, employers are required to prepare and regularly update a health and safety document (section 3), take all appropriate measures to prevent risks, including health risks resulting from air pollution (section 4) and those associated with waste sites (part A, § 15 of the appendix), and so on. Section 8 also requires employers to ensure that every employee receives a health check on recruitment and at regular intervals thereafter.

Monitoring health and safety standards

189. A labour inspectorate (SEPE) was set up in 1999 as part of the Ministry of Labour, under section 6 of the Labour Inspection Act, No. 2639/1998 on labour relations and the establishment of a labour inspectorate². Presidential decree 136/1999 on the organisation of a labour inspectorate³ establishes the inspectorate's central and regional structure. It is divided into two branches, one concerned with social security and general employment matters, the other with health and safety. It may investigate and take proceedings against any person who infringes the labour legislation. It may also be consulted by employees and employers. Finally, the

¹ Mines and quarries regulation, approved under ministerial order II-5H/F/17402/1984, Official Journal B 931 (31/12/1984).

² Official Journal A 205 (02/09/1998)

³ Official Journal A 134 (30/06/1999)

inspectorate must advise the minister of any problems linked to the application of the legislation or matters not covered by it.

190. The mines and quarries inspectors are answerable not to the SEPE but to a quite separate department, the mines inspectorate, composed of engineers. This department monitors compliance with the mines and quarries regulations¹. Its inspectors are empowered to carry out checks on any aspects of undertakings' activities and consult the employees and trade unions. Measures imposed by the inspectors are notified to operators so that they can inform contractors and liaise with them on health and safety matters.

THE LAW

Preliminary remarks

191. When the admissibility of the complaint was being examined, the Government objected that the matters complained of could not be imputed to the state and that the Committee had no jurisdiction *ratione temporis*. The Committee stated that these objections would be considered, if necessary, when it assessed the merits of the complaint (decision on admissibility, 10 October 2005, §§14 and 15).

192. Regarding the first point – whether the matters complained of can be imputed to the state – the Committee notes that the DEH, which until its partial privatisation in 2001 was solely answerable to the Greek state, has private law status. However, as a signatory to the Charter, Greece is required to ensure compliance with its undertakings, irrespective of the legal status of the economic agents whose conduct is at issue. Moreover, the DEH's activities are clearly subject to the general legislation on the environment and under Act 2773/1999 on the liberalisation of the Greek electricity market, the Greek Government is required to supervise those activities. Finally, the state still holds a majority of the DEH's shares (51.12% in 2005).

193. Regarding the second point – the Committee's jurisdiction *ratione temporis* – it notes that the origin of several of the complaints is long-term exposure to air pollution, partly preceding 1998, whose effects have either been felt continuously since lignite mining began in the regions concerned or may only be felt several years after exposure. The Committee considers that under these circumstances, the main question raised by the current complaint is how to make the distinction between performed and continued wrongful acts, bearing in mind the state's particular duty to take all reasonable measures to ensure that a given event does not occur. In this connection, it notes that Article 14 of the draft articles prepared by the International Law Commission² on responsibility of states for internationally wrongful acts deals with the extension in time of the breach of an international obligation and states that “the breach of an international obligation requiring a State to prevent a given event occurs when the event occurs and extends over the entire period during which the event continues and remains not in conformity with what is required by that obligation” (§3). In so doing, it is simply endorsing an established legal interpretation of national and international courts. In the present case, the Committee considers that there may be a breach of the obligation to prevent damage arising from air pollution for as long as the pollution continues and the breach may even be

¹ See footnote ..

² Official records of the General Assembly of the United Nations, 56th session, Supplement No. 10, A/56/10.

progressively compounded if sufficient measures are not taken to put an end to it. Consequently, the Committee considers that it is competent *ratione temporis* to consider all the facts raised in this complaint.

The alleged violation of Article 11

194. The Committee highlights that the Charter is a living instrument, whose purpose is to protect rights not merely theoretically but also in fact (International Commission of Jurists v. Portugal (Complaint No. 1/1998), decision on the merits of 9 September 1999, §32). It therefore interprets the rights and freedoms set out in the Charter in the light of current conditions.

195. The Committee has therefore taken account of the growing link that states party to the Charter and other international bodies (see below) now make between the protection of health and a healthy environment, and has interpreted Article 11 of the Charter (right to protection of health) as including the right to a healthy environment.

196. The Committee would like to take the opportunity presented by this complaint to clarify its interpretation of the right to a healthy environment. In doing so, it takes account of the principles established in the case-law of other human rights supervisory bodies, namely the European Court of Human Rights¹, the Inter-American Court of Human Rights² and the African Commission on Human and Peoples' Rights³ at the regional level, and the UN Committee on Economic, Social and Cultural Rights⁴ at the global level. In view of the scale and level of detail of the European Union's body of law governing matters covered by the complaint, it has also taken account of several judgments of the Court of Justice of the European Communities.

197. The Committee observes that Greece has used its natural resources of lignite for forty years as its main form of fuel for energy production. The most important deposits of lignite are located in the Kozani-Ptolemaida region (Eordea valley, prefecture of Kozani and Florina) in western Macedonia and in the Megalopolis region (prefecture of Arkadia) in the Peloponnese. Nearly all the lignite extracted is used in electricity production in coal-fired power stations. Greece is the second largest lignite producer in the European Union and fifth in the world. Despite progress made towards the diversification of energy supplies, it is likely in the near future that lignite will continue to be the main energy source in Greece.

¹ See, in particular, *Manual on human rights and the environment - Principles emerging from the case-law of the European Court of Human Rights*, prepared by the Steering Committee for Human Rights (CDDH), Council of Europe Publishing, Strasbourg, 2006, 90 pages.

² See in particular Inter-Am.C.H.R., report on the situation of Human Rights in Ecuador, OEA/Ser.L/V/II.96, doc. 10rev.1(1997).

³ See in particular *The Social and Economic Rights Action Center and the Center for Economic and Social Rights in Nigeria*, African Commission on Human and People's Rights Decision on Communication 155/96, 30th ordinary session, Banjul, Gambia, 13 October 2001.

⁴ Committee on Economic, Social and Cultural Rights, General Comment No. 14 (2000), The right to the highest attainable standard of health (article 12 of the International Covenant on Economic, Social and Cultural Rights), E/C.12/2000/4, 11 August 2000.

198. The Government argues that the use of lignite and the continued mining of this combustible fuel is justified by the general interest, in terms of energy independence, access of the entire population to electricity at a reasonable cost and Greece's economic growth and industrial development at levels comparable to those of other European Union countries. The Committee considers that these are undoubtedly legitimate objectives within the meaning of the Charter.

199. Nevertheless, lignite's predominant role in energy production is detrimental to the environment, something the Government does not deny. In particular, it acknowledges that man-made emissions of particles, sulphur dioxide (SO₂) and nitrogen oxide (NO_x) derive directly in part from lignite combustion, and that the latter is a significant source of carbon dioxide (CO₂) emissions. So even taking into account other factors, such as the meteorological and topographical conditions in Greece and other Mediterranean countries, combustion plants such as those operated by the DEH make a contribute significantly to pollutant emissions.

200. The Committee also notes from a recent WHO publication¹ that there is clear and widely established scientific evidence that particles and the gases SO₂ and NO_x have harmful effects on human health and life. It also considers that the conclusions of studies of the effects of pollution arising from lignite mining and its use in electric power plants on the health of those living nearby are clear and unambiguous, particularly in so far as they reveal a higher prevalence of respiratory diseases such as rhinitis and chronic bronchitis, and even of cardiovascular diseases or cancers.

201. The most comprehensive data on particle, SO₂ and NO_x emissions in the lignite mining regions derive from studies carried out by a number of independent researchers. Although the Government challenges the MFHR's interpretation of some of this data, it does not deny that at Klitos, Kozani and Aghios Dimitrios particle emissions have, on a number of occasions over several years, exceeded the limit values laid down by the European Union and in domestic law. Moreover, the Committee observes that the figures produced by the Government do not provide a comprehensive view of the situation because they do not cover certain years, and mainly relate to annual averages rather than indicating peak pollution levels. The Committee cannot exclude the possibility that in certain places and in certain periods, the environmental situation could have been worse than appears from the available data.

202. Under Article 11 of the Charter, everyone has the right to benefit from any measures enabling him to enjoy the highest possible standard of health attainable. The Committee sees a clear complementarity between Article 11 of the Charter and Article 2 (right to life) of the European Convention on Human Rights, as interpreted by the European Court of Human Rights (General Introduction to Conclusions XVII-2 and 2005, statement of interpretation of Article 11, §5). Measures required under Article 11 should be designed, in the light of current knowledge, to remove the causes of ill-health resulting from environmental threats such as pollution (this link was established in Conclusions XV-2, Poland, Article 11§1, pp. 446-449).

¹ Use of the air quality guidelines in protecting public health: a global update, Fact sheet No. 313, October 2006; see WHO (European Regional Office) site: www.euro.who.int.

203. In order to fulfil their obligations, national authorities must therefore:

- develop and regularly update sufficiently comprehensive environmental legislation and regulations (Conclusions XV-2, Addendum, Slovakia, pp. 201-205);
- take specific steps, such as modifying equipment, introducing threshold values for emissions and measuring air quality, to prevent air pollution at local level and to help to reduce it on a global scale (Conclusions 2005, Moldova, Article 11§3, pp. 452-457);
- ensure that environmental standards and rules are properly applied, through appropriate supervisory machinery (see, *mutatis mutandis*, International Commission of Jurists v. Portugal, aforementioned decision, § 33);
- inform and educate the public, including pupils and students at school, about both general and local environmental problems (Conclusions 2005, Moldova, Article 11§2, pp. 450-452);
- assess health risks through epidemiological monitoring of the groups concerned.

204. Admittedly, overcoming pollution is an objective that can only be achieved gradually. Nevertheless, states party must strive to attain this objective within a reasonable time, by showing measurable progress and making best possible use of the resources at their disposal (see, *mutatis mutandis*, Autism Europe v. France, Complaint No. 13/2002, decision on the merits of 4 November 2003, § 53). The Committee assesses the efforts made by states with reference to their national legislation and regulations and undertakings entered into with regard to the European Union and the United Nations (Conclusions XV-2, Italy, Article 11§3, pp. 307-312), and in terms of how the relevant law is applied in practice.

205. The Committee notes firstly that the Greek Constitution makes protection of the natural environment an obligation of the state and at the same time an individual right, and that Greek environmental legislation and regulations are well developed, have been regularly updated and substantially reflect the large number of European Union standards in this area. In particular, in the case of mining and fossil fuel combustion activities, an environmental impact study must be carried out, environmental criteria approved and an operating licence issued by the competent authorities. Provision is also made for the public to be informed and to participate in the decision making process. Limit values have been set for exposure to pollutants arising from lignite mining. Greece has also ratified all the relevant international treaties, in particular the United Nations Framework Convention on Climate Change of 9 May 1992 (UNFCCC) and the Kyoto Protocol to the UNFCCC of 11 December 1997.

206. However, the National Allocation Plan for 2005-2007 (NAP1) drawn up by Greece in accordance with Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community provides for such emissions for the whole country and all sectors combined to rise by 39.2% to 2010, whereas the binding target for Greece, under the Kyoto Protocol, is an increase in these gases of just 25% in 2010, compared with the reference year (1990 for carbon dioxide, CO₂).

207. The Committee acknowledges that the main purpose of these forecasts, and of the other energy scenarios and emission reduction plans, is to determine what

efforts are required to achieve the objectives and that, as the Government maintains, a certain lack of precision is inevitable in such exercises. Nevertheless, the Committee considers that the authority granted to Greece to increase its SO₂ emissions under Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants, the purchase of emission rights to meet the forecasts in NAP1, which are much less demanding than the Kyoto Protocol target, and the power granted to the environment minister under Joint Ministerial Order 58751/2370 to authorise higher limit values for emissions in combustion plants using Greek lignite do not offer real evidence of Greece's commitment to improving the situation within a reasonable time or make such an outcome plausible.

208. The Committee also notes that Act 2947/2001 gives responsibility for monitoring private and public operators' compliance with environmental legislation to a special environmental inspectorate, which according to the MFHR has only been operational since 2004, something the Government does not deny, and that of the 78 posts in the inspectorate, there are only 28 in the general section and southern Greece and four in northern Greece.

209. Information supplied by the complainant organisation shows that when air quality measurements reveal that emission limit values have been exceeded, as in the case of the Aghios Dimitrios plant, the penalties imposed in the form of fines are limited and have little deterrent effect. The Government confines itself to stating that the financial penalties satisfy the proportionality principle and fails to show that when checks carried out reveal violations this leads to effective measures with a direct impact on emission levels.

210. Turning to measures to ensure that plant and equipment are adapted to the "best available techniques", the Government simply indicates that checks are mainly carried out by the supervisory authorities responsible for the authorisation procedure in Directive 96/61/EC concerning integrated pollution prevention and control (the IDEH Directive) and in the procedure for approving environmental criteria. Again, it does not show how these checks are carried out in practice and how effective they are.

211. The Committee notes that although in its second response the Government replies point by point to the issues raised by the request in 2004 from the Megalopolis citizen's movement to the Arkadia prefecture for an investigation, it did not at any stage communicate this information at an appropriate moment to the association.

212. The Committee notes that, despite the Ombudsman's findings, the Kardias, Aghios Dimitrios and Ptolemaida power stations are operating on the basis of a temporary operating licence that has been extended to 2008, without prior approval of the environmental criteria. The Committee agrees with the Government that considerable economic harm could ensue from an interruption to these plants' operations, but cannot accept the Greek authorities' interpretation of the distinction between the operating and the environmental authorisation procedures, which deprives the latter of any potential value.

213. The Committee considers that the Greek Government's explanations concerning the failure to implement several decisions of the Supreme Administrative Court do not invalidate the complainant's arguments.

214. Again in connection with whether all reasonable steps have been taken by Greece to adapt plant and mining equipment to the "best available techniques", the documents produced by the parties show that, however one determines the requirements, an assessment of the plant in question, the local geographical and environmental conditions and the economic implications of the decisions to be made shows that the DEH was slow to act and the measures it did introduce were only partially successful or are simply programmed for the future.

215. The Government does admittedly claim that measures to monitor and record emissions are equivalent to adapting to "best available techniques". Apart from the fact that this argument is irrelevant and clearly incompatible with Greece's European commitments, the Committee has in any case found that Greece has failed to show that the checks concerned were sufficiently effective, since the Greek authorities considered it satisfactory to carry out these checks prior to the authorisation process and deemed it acceptable to distinguish between operational and environmental authorisation.

216. In connection with the measures that the authorities were required to take to develop a sense of individual awareness among exposed groups towards the health risks arising from lignite mining, the Committee notes firstly that Greek regulations satisfy all the requirements concerning information to the public about and their participation in the procedure for approving environmental criteria for projects and activities. For example, prefectures are obliged to publish the preliminary environmental evaluation and appraisal and the environmental impact study in the local press. However, the circumstances surrounding the granting and extension of several authorisations, at least those concerning the joint authorisation for several plants and the case of the "Dytiko Pedio" mine, show that in practice the Greek authorities do not apply the relevant legislation satisfactorily.

217. The publication on the Internet of such a complex document as the first national allocation plan (NAP1) for just four days (20-24 December 2004) also reveals the Greek authorities' manifest disregard for the obligation to enter into fair and genuine consultations with those exposed to environmental risks.

218. The Committee also notes the Greek authorities' tendency not to pass on information at their disposal, even if they have been asked to do so, as in the Megalopolis case.

219. The Government maintains that it is following a policy of health promotion and culture in accordance with the objectives of the World Health Organisation (WHO) and that those concerned have been presented with the results of epidemiological studies undertaken at the request of the state. The Committee considers that this is too vague to amount to a valid education policy aimed at persons living in lignite mining areas. The Committee also notes, as does the complainant organisation, that the figures quoted by the Government to show that it organises environmental health education courses in primary and secondary schools themselves reveal the shortcomings in this area.

220. The Committee has already noted (§ 200) the health risks that lignite mining poses for local inhabitants. However, as the Government itself acknowledges, despite the importance the latter claims to ascribe to systematic epidemiological monitoring of

those concerned very little has so far been done to organise such monitoring. For example, in 45 years of lignite mining in Greece, only two epidemiological surveys have been commissioned by the state, and these only covered part of the regions concerned. The results of these studies were presented to the public in 1998. Other epidemiological studies are admittedly scheduled or under way, but no morbidity studies have been carried out in the areas neighbouring the power plants.

221. In conclusion, even taking into consideration the margin of discretion granted to national authorities in such matters, the Committee considers that Greece has not managed to strike a reasonable balance between the interests of persons living in the lignite mining areas and the general interest, and finds that there has thus been a violation of Article 11§§1, 2 and 3 of the Charter.

The alleged violation of Article 3§§1 and 2

222. Regarding the question of whether the acts and omissions of the DEH can be imputed to the defending Government, the Committee considers that what it has said above (§§ 191-193) in connection with Article 11, applies *mutatis mutandis* to Article 3.

223. The Committee notes that Article 3 of the Charter grants everyone the right to safe and healthy working conditions. It considers that this right stems directly from the right to personal integrity (Conclusions I, statement of interpretation of Article 3, p. 22).

224. States' first obligation under Article 3 is to ensure the right to safe and healthy working standards of the highest possible level. Paragraph 1 of this article requires them to issue health and safety regulations providing for preventive and protective measures against most of the risks recognised by the scientific community and laid down in Community and international regulations and standards (Conclusions XIV-2, statement of interpretation of Article 3, pp. 36-37).

225. Regarding the complaint that there are no specific regulations concerning occupational diseases, the Committee considers that this must be dismissed, in view of the legislation and regulations on screening for and recording of occupational diseases currently in force in Greece.

226. Regarding the complaint concerning arrangements for compensating for occupational diseases and accidents, the Committee notes that in Greece occupational risks are covered by sickness and invalidity insurance in the same way as non-occupational accidents or diseases. Although the majority of states party to the Charter have introduced specific insurance for occupational risks, which generally offer more generous benefits than those paid by sickness and invalidity insurance schemes, the Committee does not consider that states are required to introduce such specific insurance to comply with Article 3§1.

227. Regarding the complaint that there are insufficient occupational physicians, the Committee notes that the progressive development of occupational health services is an obligation under Article 3§4 of the revised Charter. Since the complaint is based on the Charter rather than the revised Charter, and the former cannot be interpreted more strictly than the latter, the Committee decides not to examine this aspect of the complaint any further.

228. Based on the lack of effective supervision of health and safety regulations, the Committee recalls that the compliance with the Charter "cannot be ensured solely by the operation of legislation if this is not effectively applied and rigorously supervised" (International Commission of Jurists v. Portugal, decision cited above, §33). The enforcement of health and safety regulations required by Article 3§2 is therefore essential if the right embodied in Article 3 is to be effective.

229. States that have ratified the Charter have undertaken, under Article 20§5, to "maintain a system of labour inspection appropriate to national conditions". The Committee considers that states have a measure of discretion regarding not only how they organise their inspection services but also what resources they allocate to them. However, since such services are the main safeguard of health and safety in the workplace, "there must be a minimum number of regular inspections to ensure that the largest possible number of workers benefit from the right enshrined in Article 3" (Conclusions XIV-2, Belgium, p. 127) and that the risk of accidents is reduced to a minimum. The Committee stresses that this limits states' discretion and that the Charter is violated when the staffing of the inspection services and the number of visits carried out is manifestly inadequate for the number of employees concerned.

230. The relevant data available to the Committee come from the complainant organisation. The Government does not quote any figures but does acknowledge in a general way that there are gaps in the inspection arrangements for mines and quarries because of staffing problems. It claims however that, in spite of the situation, the inspectorates are active in supervising mines and quarries and that there are plans to improve the situation.

231. The Committee considers that in the areas such as the right to safety and health at work, which are so intimately linked with the physical integrity of individuals, the state has a duty to provide precise and plausible explanations and information on developments in the number of occupational accidents and on measures taken to ensure the enforcement of regulations and hence to prevent accidents. In the present case, the Committee considers that Greece has failed to honour its obligation to effectively monitor the enforcement of regulations on health and safety at work particularly as the Government recognises the lack of inspectors and is unable to supply precise data on the number of accidents in the mining sector.

The alleged violation of Article 2§4

232. The Committee points out that Article 2§4 of the Charter requires states to grant workers exposed to occupational health risks compensatory measures.

233. The Committee notes that for a number of years Greece, like the other states party to the Charter, has been pursuing a policy of occupational risk prevention and elimination rather than one of compensation. It considers that this development needs to be taken into account in interpreting Article 2§4 of the Charter, to ensure consistency with Articles 3 (right to safe and healthy working conditions) and 11 (right to protection of health). A literal reading of Article 2§4, without taking other factors into consideration, would point to the conclusion that there had been a violation of the Charter.

234. It follows from the newer interpretation that states' obligation under Article 2§4 of the Charter consists in measures to compensate for residual risks. By this, the Committee means situations in which workers are exposed to risks that it is not possible or has not yet been possible to eliminate or sufficiently reduce despite the application of the preventive and protective measures referred to in Articles 3 and 11 or in the absence of their application.

235. In this case, it considers that the mining industry is still one of the particularly dangerous industries in which workers' health and safety risks cannot be eliminated, and that Greek law still classifies mining as an arduous and hazardous occupation. It therefore considers that, in addition to preventive and protective measure, the state was required to provide for compensation in this sector.

236. Article 2§4 mentions two forms of compensation, namely reduced daily working hours and additional paid holidays. In its examination of reports under the revised Charter, the Committee has stated that other means of reducing the length of exposure to risks may be considered acceptable (Conclusions 2003, Bulgaria, Article 2§4 of the revised Charter, pp. 24-27). It states that under no circumstances can financial compensation be considered an appropriate response under Article 2§4. Apart from this particular situation, the Committee will rule on the suitability of other approaches not in the abstract but case by case. For example, in a situation where a measure of this type was contemplated as a general solution, making no distinction according to the type and nature of the risk involved, it ruled that a reduction in the number of years of exposure was not an appropriate measure in all cases (ibid).

237. Greek law does provide for compensation for miners because of the arduous nature of their work, such as early retirement and special bonuses for most DEH mine staff and additional leave for those working shifts. However, such measure must be implemented by collective agreements.

238. The Greek Government argues that it cannot be held responsible for the lack of provisions on this subject in collective agreements. The Committee points out that while states party can choose to leave it to collective agreements to ensure that the Charter is implemented, the "state" – whether a legislative, regulatory or judiciary body – must guarantee the effectiveness of rights (Confederation of Swedish Enterprise against Sweden (No. 12/2002), decision on the merits of 15 March 2003, §27; see also European Roma Rights Center v. Greece, complaint No. 15/2003, decision on the merits of 8 December 2004, §29);

239. In the present case, current Greek legislation does not require collective agreements to provide for compensation pursuing the aim intended by Article 2§4, although employers and employees are of course at liberty to do so themselves. The Committee considers therefore that the collective bargaining procedure does not offer sufficient safeguards to ensure compliance with Article 2§4. Moreover, the Committee also notes that the Government has taken no subsequent steps to enforce the right embodied in Article 2§4.

CONCLUSION

240. For these reasons, the Committee concludes :

1. by 9 votes to 1 that there is a violation of Article 11§§1 to 3 of the Charter;
2. by 9 votes to 1 that there is no violation of Article 3§1 of the Charter;
3. unanimously that there is a violation of Article 3§2 of the Charter;
4. unanimously that there is a violation of Article 2§4 of the Charter.

Jean-Michel BELORGEY
Rapporteur
President

Régis BRILLAT
Executive Secretary

APPENDIX

DECISION ON ADMISSIBILITY
10 October 2005

Marangopoulos Foundation for Human Rights (MFHR)
v. Greece

Complaint No. 30/2005

The European Committee of Social Rights, committee of independent experts established under Article 25 of the European Social Charter ("the Committee"), during its 210th session attended by:

Messrs. Jean-Michel BELORGEY, President
Gerard QUINN, First Vice-President
Andrzej SWIATKOWSKI, Second Vice-President
Stein EVJU, General Rapporteur
Rolf BIRK
Matti MIKKOLA
Nikitas ALIPRANTIS
Alfredo BRUTO DA COSTA
Tekin AKILLIOĞLU
Mrs Csilla KOLLONAY LEHOCZKY
Mrs Polonca KONCAR
Messrs. Lucien FRANÇOIS
Lauri LEPPIK
Mrs Beatrix KARL

Assisted by Mr Régis BRILLAT, Executive Secretary of the European Social Charter,

Having regard to the complaint registered as number 30/2004, lodged on 4 April 2005 by the Maragopoulos Foundation for Human Rights (MFHR) and signed by its President, Alice YOTOPOULOS-MARANGOPOULOS, requesting the Committee to find that Greece is not in conformity with Articles 11, 2§4, 3§1 and 3§2 of the European Social Charter ("the Charter");

Having regard to the documents appended to the complaint;

Having regard to the Charter, and in particular to Articles 11, 2§4, 3§1 and 3§2, which read as follows:

Article 11 – The right to protection of health

Part I "Everyone has the right to benefit from any measures enabling him to enjoy the highest possible standard of health attainable."

Part II: "With a view to ensuring the effective exercise of the right to protection of health, the Parties undertake, either directly or in cooperation with public or private organisations, to take appropriate measures designed *inter alia*:

1. to remove as far as possible the causes of ill-health;
2. to provide advisory and educational facilities for the promotion of health and the encouragement of individual responsibility in matters of health;
3. to prevent as far as possible epidemic, endemic and other diseases."

Article 2 – The right to just conditions of work

Part I "All workers have the right to just conditions of work."

Part II: "With a view to ensuring the effective exercise of the right to just conditions of work, the Contracting Parties undertake:

[...]

4. to provide for additional paid holidays or reduced working hours for workers engaged in dangerous or unhealthy occupations as prescribed";

Article 3 – The right to safe and healthy working conditions

Part I: "All workers have the right to safe and healthy working conditions."

Part II: "With a view to ensuring the effective exercise of the right to safe and healthy working conditions, the Contracting Parties undertake:

1. to issue safety and health regulations;
2. to provide for the enforcement of such regulations by measures of supervision".

Having regard to the Additional Protocol to the European Social Charter providing for a system of collective complaints ("the Protocol");

Having regard to the Rules of the Committee adopted by the Committee on 29 March 2004 at its 201st session ("the Rules");

Having deliberated on 10 October 2005;

Delivers the following decision, adopted on the above date:

1. The MFHR alleges that in the main areas where lignite is mined, the state has not done enough to reduce its impact on the environment and has not developed an appropriate strategy to prevent and respond to the health hazards for the general population. It is also alleged that there is no legislation to ensure the security and safety of persons working in lignite mines and that the latter do not benefit from reduced working hours or additional holidays.
2. The Government challenges the admissibility of the complaint on three grounds.
3. It argues firstly that the complainant organisation has no particular competence, within the meaning of Article 3 of the Protocol. It acknowledges the MFHR's important contribution in the field of human rights. However, it claims that the two activities to which the complainant organisation refers, the 1988 round table on "Ptolemaida: a case of heavy environmental pollution" and publication of a book entitled "*The Right to Environment: Infringements and Protection*", are not sufficient for the complainant to be regarded as having particular competence in the fields of environmental pollution, its impact on workers' health and health and safety at work.
4. Secondly, the Government maintains that the state is not responsible for individual acts and omissions. The Government leaves it to the Committee to decide whether acts and omissions on the part of the Public Power Corporation (DEI) can be imputed to the Greek state.
5. Thirdly, the Government argues that if the Committee does nevertheless decide to examine the merits of the complaint, it must confine its consideration to acts and omissions occurring after the signature of the Protocol by Greece.
6. In its observations presented on 21 September 2005, the MFHR replies to the Government's three objections.
7. Firstly, it produces a detailed list of its activities specifically related to social rights (colloquies, conferences, seminars, publications and press conferences). Eight of these activities concern environmental protection, seven concern health protection and seventeen concern rights relating to working conditions.
8. Secondly, regarding the Government's objection concerning the acts and omissions of the DEI, the MFHR states that until its partial privatisation in 2001 the corporation was solely the responsibility of the state. Since 2001, the Greek state has held 51.5% of its shares, thereby exercising full control of its activities. Regarding the alleged failures to comply with Article 2§4 of the Charter, the state had a dual responsibility as economic regulator and as employer. Turning to the aspects of the complaint relating to Articles 3§1, 3§2 and 11 of the Charter, the MFHR maintains that the Greek state had a duty to regulate the lignite mining sector in accordance with the requirements of these articles.
9. Thirdly, in response to the arguments concerning the Committee's competence *ratione temporis*, the MFHR states that all the alleged acts and omissions have

occurred repeatedly over the last forty years and continue to take place. It argues that even if the Committee considers that these acts took place before Greek ratification of the Protocol or even Greek ratification of the Charter, to the extent that they continue to have consequences up to the present day they constitute continuing violations. In support, it refers to the relevant judgments of the European Court of Human Rights.

THE LAW

As to the admissibility conditions set out in the Protocol and the Committee's Rules of Procedure and the Government's related objections

10. The Committee observes that, in accordance with Article 4 of the Protocol, which was ratified by Greece on 18 June 1998 and entered into force for this state on 1 August 1998, the complaint has been submitted in writing and concerns Articles 11, 2§4, 3§1 and 3§2 of the Charter, provisions accepted by Greece when it ratified this treaty. In addition, the grounds for the complaint are indicated.

11. The Committee also observes that, in accordance with Articles 1 b) and 3 of the Protocol, the MFHR is an international non-governmental organisation with consultative status with the Council of Europe. It is included on the list, established by the Governmental Committee, of international nongovernmental organisations that are entitled to lodge complaints.

12. As regards the particular competence of the MFHR in the matters of the complaint, the Committee has examined the statute of the organisation and the detailed list of its various activities relating to the articles of the Charter covered by this complaint (see above, §7), which shows that the complainant has long been involved in and particularly concerned with the relevant areas, and considers that the organisation has particular competence within the meaning of Article 3 of the Protocol.

13. The complaint is signed by Mrs Alice YOTOPOULOS-MARANGOPOULOS, who is President of the MFHR and is authorised to represent the complainant organisation before any authority or court under Article 6§1 sub-paragraph a of its statute. The Committee therefore considers that the complaint complies with Rule 23 of the Rules.

As to the Government's other objections concerning the admissibility of the complaint

14. In response to the Government's objection concerning its responsibility for the acts and omissions of the DEI, the Committee emphasises that the state is responsible for enforcing the rights embodied in the Charter within its jurisdiction. The Committee is therefore competent to consider the complainant's allegations of violations, even if the State has not acted as an operator but has simply failed to put an end to the alleged violations in its capacity as regulator. The extent of the Government's responsibilities, whether in the capacity of operator or in that of regulator will, if necessary, be examined in the proceedings on the merits of the complaint.

15. As regards the Government's objection in connection with the Committee's competence *ratione temporis*, in accordance with the principle of non-retroactivity of

treaties as codified in Article 28 of the 1969 Vienna Convention on the Law of Treaties, the starting point for application is the date on which a treaty came into force in a country and not the date of its signature as the Government points out. However there are exceptions to this rule when events occurring before the entry into force of a treaty continue to occur after this date, thus potentially constituting a continuing violation (see, for example, European Court of Human Rights, *Papamichalopoulos and others v. Greece*, judgment of 24 June 1993, Series A. 260B, §40).

16. The Committee notes that several allegations of violations in the complaint registered on 4 April 2005 refer to the period after 1 August 1998, the date on which the Protocol came into force in Greece. As regards events that occurred before this date, the question of whether these are to be linked to a continuing violation or not will be considered in the proceedings on the merits of the complaint.

17. For these reasons, the Committee, on the basis of the report presented by Mr Jean-Michel BELORGEY and without prejudice to its decision on the merits of the complaint,

DECLARES THE COMPLAINT ADMISSIBLE

In application of Article 7§1 of the Protocol, requests the Executive Secretary to notify the complainant organisation and the defending state of the present decision, to transmit it to the parties to the Protocol and the states having submitted a declaration pursuant to Article D paragraph 2 of the Revised Charter, and to make it public.

Invites the Government to make written submissions on the merits of the complaint by 13 January 2006.

Invites the MFHR to submit a response to the Government's submissions by a deadline which it shall determine.

Invites parties to the Protocol and the states having submitted a declaration pursuant to Article D paragraph 2 of the Revised Charter to make comments by 13 January 2006, should they so wish.

In application of Article 7§2 of the Protocol, requests the Executive Secretary to inform the international organisations of employers or workers mentioned in Article 27§2 of the Charter and to invite them to make observations by 13 January 2006.

Jean-Michel BELORGEY
Rapporteur
Président

Régis BRILLAT
Executive Secretary