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Clean air - how the nations stand

Acid news: a newsletter on air pollution and climate change

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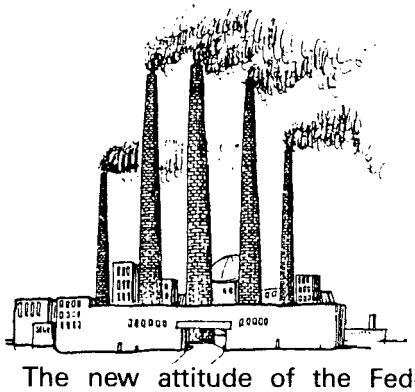
How the nations stand

The International Institute for Environment and Society in West Berlin has a long tradition of analyzing clean air policy in Europe and elsewhere. It has now published a very interesting report entitled "Clean Air Policy in Europe — A Survey of 17 Countries."

The study reveals progress so far made in western Europe towards the attainment of clean air. It also shows that while SO_2 emissions have been reduced throughout Europe, little has been done about NO_x. There is reason to fear that there may even be an increase in such emissions during the next few years.

The report first describes in detail the early developments within the Geneva Convention on Long-Range Transboundary Air Pollution and the directives from the European Community showing how the governments of Great Britain and the Federal Republic of Germany used their influence to make the text of the ECE Convention very vague in regard to the measures that were to be carried out. For example, the signatory states merely obligated themselves to endeavour to limit and, as far as possible, gradually reduce and prevent air pollution. As regards the reduction of emissions, the states only undertook to use the best available technology that is economically feasible.

In contrast to Great Britain, the Federal Republic of Germany later made a fundamental change in its position with regard to international measures aimed at limiting transboundary air pollution. The reasons of this change was the rapid increase in forest damage in that country and the resulting, sometimes heated public debate about overly lax air-pollution control policies. It had become all too clear that the problems of the Federal Republic of Germany could not be solved merely by national measures.



The new attitude of the Federal German government found public expression at the "Conference on the Acidification of the Environment" which was organized by the Swedish government in Stockholm in June 1982. There, to the surprise of many observers, the representatives of the Federal Republic supported the efforts of some states to establish clear, controllable targets within the framework of an international program for the reduction of emissions. These states came to comprise the hard core of the so-called *30 Per Cent Club*, which took its name from the goal of decreasing by 30 per cent *either* their total annual SO_2 emissions *or* their transboundary fluxes from the base year 1980 to fixed target date (as a rule, by 1993).

Significant declines in NO_x emissions from stationary plants can moreover be expected in the Federal Republic of Germany during the next years.

In another central area of environmental policy, however, the Federal Republic brings up the tail end of the European parade: it is still the only European country in which there is no general speed limit on motorways. The decision of the Federal German government to reject the proposal for a speed limit of 100 kph on motorways (combined with a speed limit of 80 kph on other non-urban main highways), which was recommended by many experts and environmental organizations, not only hinders the necessary reduction of pollution from nitrogen oxides, but will also complicate the possibilities of cooperation with other EC member states. The governments of several countries have already pointed out that the Federal German government should first exhaust every possibility of reducing pollution within its own borders before summoning other countries to undertake coordinated action, which — as some sceptical governments suspect — may in any case primarily benefit the German forest or shield German industry from competition.

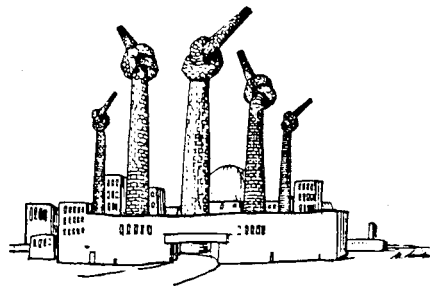
Since the Federal Republic of Germany has established controllable goals as its contribution to the reduction of transboundary air pollution, and has already implemented important measures towards their realization, it is now primarily the responsibility of other European states to take steps towards improving the situation. It seems likely however that some time will pass before other countries make comparable efforts. There are, to be sure, a number of countries which have undertaken to achieve measurable reductions in emissions, including countries which had adopted effective regulations on immission control even before the Federal Republic of Germany did so. However, other countries with high rates of pollutant export are currently not prepared to adopt clean air policies (and in some cases, as for instance eastern socialist countries or Spain, Portugal, and Ireland, will not be able to do so within the next few years) even with respect to SO_2, let alone NO_x, comparable to those of the Federal Republic.

Great Britain, for example, which is the country with the highest level of total SO_2 emissions (basis 1980) and the second highest level of total NO_x emissions in western Europe and whose pollutants have a massive adverse affect other European countries, as a result of

stubborn adherence to the "tall-chimney" principle, has refused for years to undertake to reduce emissions, either through multilateral agreement or through EC regulation. (A small change in British air pollution policy has however occurred since 1986. See articles in *Acid News 3-4/86* and *1-2/87.*)

The report includes an attempt to construct a basis for an international comparison of the air pollution situation as regards SO_2 and NO_x in seventeen western European countries. It notes that the usual rankings that have been used until now generally only indicate the relative position of the various countries with respect to the amount of total emissions. For the year 1980, Great Britain is, according to this way of reckoning, the leading SO_2 polluter in West Europe (the Federal Republic of Germany being fifth), whereas the Federal Republic occupies the first place among NO_x polluters, with Great Britain second.

A ranking procedure which differentiates according to various criteria results however in a different conclusion. According to this procedure, Spain occupies the first place among the countries with unfavourable overall records in SO_2 pollution, with the United Kingdom and



the Federal Republic of Germany ranking second and tenth respectively. As regards NO_x, the Federal Republic is still number one, while Belgium comes out number two, before the UK (number three).

Tables 1 and 2 provide a complete overview of the rankings of all 17 countries according to the differentiated scheme of evaluation that has been applied here. In the various categories each country has been ranked according to available real data (on a scale of 1-17, or less where individual countries have received equal rankings). In any case the *lower* numbers always indicate a less favourable pollution situation as compared with higher ones. Thus, in the category "Sum of Ranking Values", the country with the lowest score has the worst overall position.

It should be noted that the rankings relate to performance during the *baseline year 1980.* This year was selected because it is often used as the control within the framework of international agreements. It should however be borne in mind that the position of some countries has since improved decisively, especially with respect to SO_2 emissions. France, Austria, Luxembourg and Sweden are among the countries that have made progress. In the case of the Federal Republic of Germany, substantial improvement can be expected during the next few years as a result of the measures for reducing SO_2 emissions that have been introduced since 1983. In general, the improvements in the situation as regards SO_2 emissions can be expected in nearly all European countries.

On the other hand a comparable result as regards NO_x pollution can definitely not be expected.

For years nearly all countries have registered a continously rising curve for NO_x emissions from stationary and mobile sources. There has been a particularly strong increase in vehicle emissions, which will persist as a result of a continued increase in the total number of vehicles on the roads and the amount of vehicle-kilometres driven, combined with the lax emission standards for NO_x set by the EC compromise. So far large-scale NO_x abatement tech-

Table 1: Ranking list of countries: total SO_2 emissions 1980. (Emissions in relation to different criteria.)

Country	Total Emission	Area (t/sq.km)	Inhabitants (kg per capita)	Gross Domestic Product (kg per unit GDP)	Energy Consumption (kg per unit of energy)	Sum of all Rank Numbers	Total Ranking SO_2 Emissions
Austria	11	10	11	11	11	54	12
Belgium	6	1	5	8	10	30	4
Denmark	10	6	3	9	8	36	6
Finland	7	15	1	3	7	33	5
France	4	9	7	10	9	39	7
Germany, F.R. of	5	3	12	13	12	45	10
Greece	11	12	13	5	2	43	9
Ireland	13	11	8	2	6	40	8
Italy	2	4	6	6	3	21	3
Luxembourg	16	7	10	12	17	62	15
Netherlands	9	5	15	14	14	57	13
Norway	14	17	14	15	15	75	16
Portugal	12	14	16	4	5	51	11
Spain (1979)	3	8	2	1	1	15	1
Sweden	8	16	9	13	13	59	14
Switzerland ('79)	15	13	17	16	16	77	17
United Kingdom	1	2	4	7	4	18	2

Note: The lower the ranking number, the more unfavourable the emission situation.

nologies at stationary sources (e.g., denitrification plants or fluidized bed combustion systems) have not been installed in most countries — nor are they planned, except in rare instances, for the foreseeable future.

For some time SO_2 emission totals have been falling in a number of European countries; it is however very questionable for several reasons whether this fact alone will be sufficient to prevent further environmental damage: for one thing, there is still relatively little being done about the emissions of NO_x. For another, although several countries have already achieved or exceeded the goal of the "30 Per Cent Club", (to reduce total annual SO_2 emissions by 30 per cent before 1993 from 1980 levels), reports of damage from air pollution are nevertheless increasing rather than decreasing. It will therefore be necessary not only to start with effective measures in a pan-European framework against NO_x pollution, but to strengthen the measures designed to reduce SO_2 pollution as well.

On September 8, 1986, 21 European environmental protection organizations, meeting in a conference on "Acid Rain" in Stockholm, demanded that the total amount of SO_2 in Europe be reduced by at least 80 per cent by 1993 and total NO_x emissions by at least 75 per cent by 1995, at the latest. These demands are at present hardly politically achievable, but in the perspective of active environmental protection they would seem justified.

At the international level, and even more so at the national one, it has above all been environmental protection groups and organizations, which, often earlier than responsible governmental agencies, have called attention to emerging environmental problems and pressed for counter-measures. In many countries it was these groups and organizations which — often against the powerful resistance of economic interest groups — were able through various activities, sometimes including massive protest against

Such substantial participation of environmental organizations in international deliberations on environmental protection would, Helmut Weidner suggests, be an important step towards invigorating a still rather sluggish po-environmentally detrimental projects, to achieve stricter environmental regulations. Without the activities of these groups and organizations, the air-pollution situation in Europe would undoubtedly be much worse than it actually is.

The author says he knows of no cases where the demands of such groups, once adopted, have been revealed in retrospect to be irrational. There are, in contrast, many examples of environmental neglect resulting from the influence of economic interest groups on the formulation of environmental policy which has led to irreparable environmental damage. This demonstrably stimulating and ecologically responsible position of environmental organizations should be accorded stronger recognition at future international meetings on environmental protection. This could be achieved by stronger representation of these groups in the decision-making process, by formalizing, for instance their rights to participate and to be heard in international organizations and responsible EC institutions.

litical process. The introduction of new regulatory instruments through international agreement — international environmental policy has thus far shown itself to be little inclined towards innovation — could also facilitate progress in environmental policy. Among the possible measures are the following: effective international regulations concerning responsibility for environmental damage based on strict liability, proof of damage on the basis of statistical plausibility instead of strict causality, and the reversal of the burden of proof in the case of demonstrable environmental damage. As regards the least example, this would mean (given the current state of knowledge on the consequences of air pollution) that emitters should be required to demonstrate that the present levels of total SO_2 and NO_x emissions, as well as those targeted for the future, do *not* constitute a hazard to health and the environment.

Note: The above report, "Clean Air Policy in Europe: A Survey of 17 Countries," by Helmut Weidner, 77 pp, 1986, is available in English, German and French, and can be obtained free of charge from the International Institute for Environment and Society (IIUG), Potsdamerstr. 58, 1000 Berlin (West), FRG.

Table 2: Ranking list of countries: total NO_x emissions 1980.

(Emissions in relation to different criteria.)

Country	Total Emission	Area (t/sq.km)	Inhabitants (kg per capita)	Sum of all Rank Numbers	Total Ranking NO_x Emissions
Austria	11	11	10	32	11
Belgium	7	1	4	12	2
Denmark	9	6	2	17	5
Finland (1978)	12	16	6	34	13
France	3	9	8	20	6
Germany, F.R. of	1	2	3	6	1
Greece	14	14	14	42	15
Ireland	16	13	13	42	15
Italy	4	7	11	22	7
Luxembourg	17	5	1	23	8
Netherlands	6	3	7	16	4
Norway	15	17	9	41	14
Portugal	10	10	12	32	11
Spain	5	12	13	30	10
Sweden	8	15	5	28	9
Switzerland	13	8	11	33	12
United Kingdom	2	4	7	13	3

Note: **The lower the ranking number, the more unfavourable the emission situation.**