
Chapter 2

The beginnings — the political background

Meteorology is international. The rain washing the dust from the vine leaves in France this morning is from the same frontal system that will be starting the windscreen wipers on the German autobahns this evening, and irritating the cyclists in Leiden tomorrow as they pedal their way to work.

Closer European co-operation in the field of meteorological research, and the practical application of the results of that research for forecasting the weather, has been of interest for a very long time. In July 1951, Prof Carl-Gustaf Rossby published a “Note on Co-operative Research Projects” in which he stated that:

the relations between meteorologists in the south and in the far north of Europe are not nearly as intimate as one might wish.

Further:

Studies are now being conducted . . . to determine the advisability of organising international scientific laboratories . . . the organisation of an International Computing Centre appears to have been accepted in principle.

He also noted that:

the national weather services are likely to profit more from properly staffed and equipped independent research teams organised and operated in academic settings outside the regular government services than from any attempt to conduct the required research within the rigid framework of the official government meteorological bureaus.

As a result of the initiative taken by Prof Rossby, and with the strong support of the former Minister for Foreign Affairs of Sweden, Richard Sandler, the renowned International Meteorological Institute (IMI) in Stockholm was created in 1955 by a decision of the Swedish Parliament.

Its objective was “to conduct research in meteorology and associated fields and to promote international scientific co-operation within meteorology”.

Indeed, when the IMI was set up, work in using computers to provide weather forecasts had already progressed. By October 1954, Sweden was preparing to make the world’s first “operational” numerical forecasts; “operational” in the sense that the forecasts were available before the actual weather.

In the 10 to 15 years following creation of the IMI, a great deal happened in the world of politics and science. Meteorological science and technology advanced on multiple fronts. Some form of rather undefined European political integration was under way.

The idea of setting up a “European Meteorological Computer Centre for Research and Operations” had an unusual starting point. The initiative came not from scientific or technical sources but rather from the political arena. Previously it had been customary for meteorologists to develop plans for the improvement of their services. These plans were submitted to their Governments, who were asked to provide the financial resources required.

In this case, however, the stimulus came from the Governments. The meteorologists were requested to develop plans following a political initiative.

In 1963, in a recommendation to its Council, the Commission of the European Communities called attention to the importance of scientific and technical research. A Working Group on Policy in the Field of Scientific and Technical Research was set up within the EC Committee for Medium-Term Economic Policy. This Working Group, first chaired by Prof Maréchal, later by Prof Aigrain, made a decisive contribution to the establishment of the Centre. The most important tasks of the Group were to:

define those areas in which the efforts in the field of applied research, especially in comparison with the efforts of other countries, had evidently been insufficient, and those developed areas in which the dynamic forces closely and directly depended upon the development of scientific and technical research.

We note in passing that bad, or at least tortured, English was apparently already established as the lingua franca for Europe!

In 1967 the Council of Ministers of the European Communities dealt with all aspects of general research policy. The European Community of Coal and Steel created in 1951, and the European Economic Community (EEC) and the European Atomic Energy Community (EURATOM), both established in 1957, had jointly prepared a document: “Memorandum on problems raised by the scientific and technical progress in the European Community”. This contained an analysis of the general situation, taking into

account the economic state of Europe. The promotion of projects of great economic importance was considered; co-operation was particularly emphasised. The document stated that:

The individual European countries can no longer develop and implement their own policies in the field of technology; on the contrary, they must . . . unite their forces, and aim at a common organisation,

and later:

Training of an adequate number of highly qualified researchers and technicians is another basic requirement for the success of every research work. In this field, for which the States are responsible in the first place, increased efforts are required. At the same time, it has to be considered how to prevent a great many European researchers and technicians from emigrating forever to third countries.

It appears that meteorological projects were suggested for the first time on 29 March 1967. In a document submitted to the Working Group “Policy in the field of scientific research” we find that:

According to German belief, the possibility of international co-operation in the following fields could be discussed:

1. *Natural Sciences*
2. *Engineering Sciences*
3. *Medicine*
4. *Agricultural and veterinary sciences*
5. *Future sociological and political tasks in research and development.*

Among the 11 subjects under “Natural Sciences” we find two relating to meteorology: “longer-range weather forecasts” and “influencing weather”. Through today’s eyes, the reference to influencing weather may seem a bit strange. In the mid-1960s, however, meteorologists were hopeful that soon rain and snowfall could be encouraged or reduced by artificial means, hail made less harmful, fog dissipated, hurricanes steered away from populated areas and more. Early optimism has since given way to cold realism. It remains true that “you can’t fool with mother nature”; but at the time, there was no indication that weather modification would by-and-large wither on the vine, while application of computers would become widespread in almost all areas of meteorological science.

The Working Group on Policy in the Field of Scientific and Technical Research was asked to present a report to the meeting of the Council of Ministers in October 1967. This contained a great many suggestions about

areas of science and technology where there could be useful European co-operation. In June 1967, seven areas were emphasised:

- documentation research,
- language translation,
- computer installations for scientific purposes,
- oceanography,
- materials research,
- annoyance caused by noise, and
- refuse disposal.

The Working Group decided to concentrate on the most important areas, and in July it gave its opinion that, for the time being, four areas were worthy of promotion:

- information processing,
- traffic and telecommunications,
- oceanography, and
- metallurgy.

In October 1967, the Council of Ministers recognised that political co-operation of the six Members of the EEC had come to something of a deadlock. They adopted a resolution at a meeting in Luxembourg, which asserted that the Member States of the European Economic Community — Belgium, France, Germany, Italy, Luxembourg and the Netherlands — were willing to extend their co-operation in fields outside economics, and specifically to implement an energetic programme to promote scientific and technical research. The Council was of the opinion:

that progress in scientific and technical matters was a fundamental factor affecting the economic growth and general development of the Member States of the Communities and in particular their competitive capability;

and

that the achievements of European countries in the field of scientific and technical matters and their industrial application had not been as rapid during the previous few years as those recorded outside Europe in a certain number of branches essential to the development of modern industrial economies, and that Europe is far behind in this field creates a serious risk to its medium and long term economic and social development.

At its session on 31 October 1967, the Council of Ministers agreed to the proposal of the Working Group on Policy in the Field of Scientific and Technical Research, with minor modifications. The Council required the Working Group to examine the opportunities for co-operation in six fields:

- information science and telecommunications,
- development of new means of transport,
- oceanography,
- metallurgy,
- nuisances, and
- meteorology.

Expert Groups for each of these areas were set up. The Council requested Reports before 1 March 1968, allowing only four months for their preparation, so that it could submit conclusions before 1 June 1968. It required that the Reports should “take into consideration the co-operation existing at the present time in other international organizations, and should seek means to enable other European States to participate in such projects”. This was particularly relevant for meteorologists, who were already well accustomed to working internationally.

The meteorologists of the Member States of the European Communities were thus presented with a unique opportunity: to study, by official order, the fields in which joint actions were possible.

It was a frustrating fact in the world of European meteorology that meteorologists from Western Europe wishing to work with other European meteorologists found it easiest to do this by going to the United States, and in some cases to the Soviet Union. The USA had a number of university departments in the field with lecturers, researchers and professors from several European countries.

Novosibirsk had a strong school in meteorology, with good expertise in numerical techniques. Guri Marchuk in 1962 had set up a computational centre of the Siberian Department of the USSR Academy of Sciences in Novosibirsk. Extensive research on atmospheric and oceanic physics, along with studies on computing technology and software, were conducted under his guidance. Marchuk later became President of the Academy of Sciences of the USSR, and served as Vice Chairman of the Council of Ministers of the Soviet Union. Lev Gandin, author of more than 200 journal articles and 14 books, was there as well. Several scientists from Météorologie Nationale, France, spent periods in Novosibirsk.

Western Europe lacked co-operative opportunities in other scientific fields as well as in meteorology. Many European scientists of several disciplines had emigrated to take advantage of the better research opportunities elsewhere. It was becoming accepted that individual states would find it difficult to resolve the problem; a common initiative was required.

Work started immediately.



<http://www.springer.com/978-0-387-26928-3>

Medium-Range Weather Prediction

The European Approach

Woods, A.

2006, XVI, 270 p., Hardcover

ISBN: 978-0-387-26928-3