

From science to advocacy

The CAFE experience

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Introduction

The development of Air Quality legislation involves an increasingly sophisticated use of science in a wide range of fields such as health impact assessment, modelling, emission control technologies and cost-benefit analysis. This poses a special challenge for advocacy organisations such as EUROPIA¹, whose role is to develop position proposals on policies and legislation initiatives for their membership and, once adopted, to represent them to the EU Institutions.

The purpose of this article is to provide an insight into the challenges of working with complex integrated assessment programmes such as CAFE, and to highlight the key contribution of CONCAWE to this process.

The CAFE Programme

The Clean Air For Europe (CAFE) Programme was launched by the European Commission in 2001, with the objective of developing strategic objectives for the EU environmental policy in 2020. These objectives were adopted by the Commission in 2005 in the Thematic Strategy on Air Pollution. Furthermore as the first major follow-ups to CAFE, the Commission developed a draft Ambient Air Quality Directive and launched a review of the National Emissions Ceilings Directive (NECD).

The approach chosen by the Commission for CAFE is known as 'effect-driven': it starts by assessing the effects of air pollutants on human health and ecosystems at each location inside the EU, and establishes their relationship with the emissions of each particular source or group of sources (industrial installations, domestic heating, transport, agriculture etc.). It then looks for the most cost-effective reduction of emissions to reach a given improvement in effects. This approach is to be

contrasted with the so-called 'technology approach', which consists of simply reducing emissions without regard to the effective improvement that it may (or may not) generate.

It was the first time that the EU Commission decided to conduct such a wide-reaching programme and, indeed, CAFE was the first Thematic Strategy approved by the Commission.

The effects-driven approach is by nature complex and demands elaborate scientific support at each stage of the pollution analysis process, for example:

- modelisation of the pollutants generation and transport;
- establishment of relationship between health impact and exposure to each pollutant;
- integrated assessment on a multi-pollutant, multi-effect basis throughout the EU;
- monetisation of the effects and evaluation of the cost of measures;
- cost optimisation and cost/benefit analysis.

One of the greatest challenges is the handling of uncertainties. These are highly significant in all of these steps, either because of knowledge gaps (health effects), shortcomings in forecast assumptions (economic drivers, energy scenario), meteorology variability, inaccuracies in modelling or simply incomplete inventories of sources.

While these uncertainties cannot be eliminated, it is important that they be expressed in policy-relevant terms in order to inform the decision makers about their potential impact on policy decisions. Combining the complexity of science with the pragmatism of policy was an essential requirement in CAFE.

One of CONCAWE's activities was to develop sensitivity/alternative scenarios, an essential task to evaluate uncertainties. In this fashion, one can translate uncertain-

¹ *European Petroleum Industry Association*

ties into a range of variability for the key output parameters i.e. effects, benefits and costs. This provides an appropriate basis for the risk management process which underpins any policy decision.

Oil industry approach

The oil industry has always promoted the view that robust environmental policy should be based on the following principles:

- scientific, fact-oriented analysis;
- realisable benefits; and
- cost-effective solutions.

Consistent with these principles, EUROPIA supported the effects-driven approach as the only one capable of delivering cost-effective solutions.

EUROPIA strategy in CAFE was to:

- get involved as early as possible in the CAFE Consultation Process;
- participate actively in the various working groups set up by the Commission; and
- contribute positively by making proposals, in cooperation with the other industry sectors through UNICE.

As new issues were raised in the course of the programme, this required frequent evaluation and reorientation of the technical work to be done by CONCAWE in order to:

- understand the facts, including the knowledge gaps;
- understand the process by which the various options had been developed by the Commission;
- assess the robustness of the methodologies used, in particular those relative to the benefits evaluation;
- develop alternative perspectives on the analysis done at all levels; and
- offer proposals regarding the pursuit of optimum cost-effective strategies and solutions.

CONCAWE contribution

EUROPIA and CONCAWE have been involved in CAFE since the very beginning. Their respective roles were clearly defined:

- EUROPIA being in charge of developing the advocacy strategy and conducting it in the field; and
- CONCAWE being responsible for overseeing all technical aspects.

CONCAWE's contribution can be broken down into several categories:

Expertise

CONCAWE had several strengths at the outset:

- multi-disciplinary expertise in most areas relevant to CAFE (energy, air quality, transport, and health);
- in-depth knowledge and practical experience in modelling and data analysis techniques;
- sophisticated and efficient in-house modelling tools;
- a structure of working groups able to tap into the Member Companies' expertise.

Moreover, CONCAWE was able to pull together further expertise in health effects analysis (in the area of exposure evaluation and epidemiology) and to acquire new competences in techno-economic areas, such as benefit evaluation techniques and cost-benefit analysis, with the utilisation of advanced statistical methods.

Credibility and continuity

CONCAWE benefits from long experience in the air quality area since the Auto/Oil Programme carried out in the 1990s, and has participated in the technical debates in all the key legislative initiatives that followed, including the Air Quality Directive, Fuels Directive, Vehicle Emission Directive, NECD and IPPC—all of which relate to CAFE in some way.

During all those years CONCAWE gained the recognition of the scientific community as an authoritative technical

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expert organisation, and built connections with a global scientific network thus facilitating exchange of information and cross-fertilisation of ideas.

Focused technical programme

Under a Steering Committee, Special Task Forces were assigned specific work areas:

- emissions inventories;
- modelling;
- health aspects;
- cost-benefit analysis;
- scenarios; and
- techno-economics.

A particular effort was devoted to scenarios, consistent with the view that these play a central role in the risk management process. It involved not only the analysis of the scenarios run by the Commission's contractor, but also the development of alternatives by means of CONCAWE's internal tools. This provided a useful input into the discussions held within the Commission Stakeholders' Working Groups.

In addition, CONCAWE participated directly, as a technical expert, in specific sub-projects within CAFE, together with other contractors and agencies working for the Commission. An important one, known as City Delta, aimed at developing the modelisation of urban area air pollution and incorporating it into the main Integrated Assessment Model used in CAFE.

Vision

The CONCAWE structure covers a wide range of issues and is flexible enough to allow exchanges that ensure it gets 'the broad picture'. In CAFE, this has been the case in terms of air quality, climate change, energy supply, vehicle emissions, and product availability and supply.

This broad coverage has, of course, been an essential element for EUROPIA in forming the vision from which it could define its positions and orient its advocacy on a consistent basis, both within and outside of CAFE itself.

Responsiveness

In an initiative like CAFE, the traditional view that there is research and science on the one side and advocacy on the other is not applicable. The intensive dynamics of CAFE translated into a huge amount of data and scenarios presented to stakeholders for review at very short notice. Complex analysis and simulations had to be carried out on a tight time schedule in order to allow meaningful and productive input into the stakeholders' debate. Turning back to the title of this paper, it is worth stressing that the transfer 'from science to advocacy' is not a one-way, linear process. On the contrary, it must be a fully interactive cooperative process in which the two organisations continue nevertheless to adhere strictly to their respective missions.

Conclusions

The oil industry assigned high priority to the CAFE programme. Significant resources were mobilised, not only for formulating a stakeholder opinion in the debate, but also for delivering substantial contribution to the technical work that prepared and underpinned the political decision making phase. The collaboration between CONCAWE and EUROPIA builds on the technical strengths of CONCAWE to support EUROPIA's advocacy in a programme of unprecedented technical sophistication and complexity. The main achievement which resulted from this work has been to demonstrate that the ambition levels initially chosen for the Thematic Strategy were too high to be cost-effective. The levels finally adopted by the Commission were reduced (although not enough in EUROPIA's view, but this is another debate).

This operating mode between EUROPIA and CONCAWE will be usefully continued in the NECD Review, with the additional value of the experience gained and improvements made during the four years of joint hard work on CAFE.