

## INTRODUCTION TO THE 8<sup>TH</sup> HARMONISATION CONFERENCE

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### BACKGROUND

The first Harmonisation workshop was held in 1992 in Denmark. Since then, we have seen developments in data processing technology and communication which have put us in a much better position today than ten years ago in our ability to perform modelling and to share information.

Furthermore, we have witnessed a political process, whereby the European Union is being enlarged. Now, the European Environment Agency comprises 29 member states – both EU countries and countries outside EU. There is a widespread need for air quality assessments and air quality regulations. In the audience of the present conference most of us work with these types of problems. We fight the same problems, but in order to make life easier and not repeat the same mistakes, our experiences should be shared. We should develop and apply common methodologies in approaching the problems. Therefore there is a need for the harmonisation conferences.

The harmonisation conferences are conferences on modelling, but not *only* on modelling. What distinguishes these conferences from others is the focus on "modelling culture": How can we in common make better use of our work? There is an unnecessary duplication of effort; too much work is forgotten and partly wasted.

Among modellers, as well as in the community of model users, we should strive towards building upon the experiences of each other, and this conference is an opportunity to work in this direction.

The Harmonisation conferences are ideal fora for debating how we can increase the usefulness of our work. It is my hope that during this conference and afterwards, we can further develop actions so that our work is put to better use.

If you are new to the Harmonisation activities you may wish to read a more comprehensive overview of their outcome. This can be found in the paper *Ten years of Harmonisation activities: Past, present and future* (Olesen, 2001) presented at the previous conference in Belgirate.

### ACTIONS TO TAKE

If we consider what to do in the future in order to improve matters, we may distinguish between actions to be taken as a community, and things that we can do as individuals.

#### **Actions as a community**

As a group, we should construct common tools such as databases, software tools and tools for information exchange. It is not enough that common tools exist: we should also be aware of their existence, and they have to be readily accessible.

The present conference has a mission in that respect: it is a proper place to disseminate information on common tools, standards and guidelines and inspire further developments.

### **Individual actions**

Individually, as modellers we shall do our best in order to make our own work accessible to colleagues. Often this aspect is neglected, because the emphasis is on providing the immediate answers that the sponsors want – rather than building up durable, well-documented and generally accessible methodologies.

If we look at the individual aspect, we can all pay more attention to how we make our work easily accessible to others. There are many facets of this:

- Be aware of which audience you write to.
- Make software user-friendly.
- Make code well documented and freely accessible.
- Rely on standards or on other recognised common tools wherever suitable.
- Report not only on success, but also on failures and pitfalls.
- Make work accessible through the Internet.

These "commandments for good behaviour" are frequently not adhered to. An obvious obstacle is time and resource constraints: It takes extra time to comply with the rules outlined above, so quality is often sacrificed in order to keep deadlines. But we can all do something in this respect. When presenting your work during the current conference, try to place it in a greater context: How does your work fit into the set of methodologies that are already available to the modelling community? It should not be too difficult for others to make use of your work, and hopefully, part of your work will evolve to into durable methodologies.

### **USING THE WEB**

The Internet plays an extremely important role in our efforts to share experiences, and it can be used even better. We can use this conference to further improve our usage of the Web in order to increase the benefits we get from it.

In the modelling community, we use the web in (at least) the following ways:

- A. We communicate via e-mail.
- B. We use search engines such as Google to look for information we need.
- C. We know relevant sites ('fixed points') from where we can start looking for information.
- D. We use discussion forums (or archives of items from discussion forums).
- E. We conduct traditional literature searches using commercial abstracting services.

I will comment on items C and D, which are of particular relevance in the context here.

In respect to item 'C', the present conference gives us the opportunity to disseminate information on relevant 'fixed points', which we should be aware of. A short listing of some fixed points in presented in Table 1. After the conference, the web site of the Harmonisation initiative (listed in the table) will be updated to include useful links brought to general awareness during the conference.

*Table 1. Useful 'fixed points' on the web for dispersion modellers*

Title and URL	Comments
AtmosphericDispersion discussion list <a href="http://listserv.surfnet.nl/archives/atmosphericdispersion.html">http://listserv.surfnet.nl/archives/atmosphericdispersion.html</a>	E-mail list for discussion on atmospheric dispersion. It is intended as a forum where people working in the field of atmospheric dispersion can exchange experiences. The list is open for announcements, questions and discussions.
Harmonisation home page <a href="http://www.dmu.dk/AtmosphericEnvironment/harmoni.htm">http://www.dmu.dk/AtmosphericEnvironment/harmoni.htm</a>	Entry point for information on all past harmonisation conferences and proceedings. Model evaluation tools and links to numerous related activities and tools.
Model Documentation System <a href="http://etc-acc.eionet.eu.int/databases/mds.html">http://etc-acc.eionet.eu.int/databases/mds.html</a>	A web-based catalogue of atmospheric dispersion models maintained by the European Topic Centre of Air and Climate Change under the European Environment Agency.
DAMS, Datasets for atmospheric modelling <a href="http://rtmod.ei.jrc.it/dam">http://rtmod.ei.jrc.it/dam</a>	Web site providing information on and access to experimental data sets relevant for dispersion modellers.
European Topic Centre on Air and Climate Change <a href="http://etc-acc.eionet.eu.int/">http://etc-acc.eionet.eu.int/</a>	Access to databases on air pollution and other tools.
SCRAM (Support Center for Regulatory Air Quality Models) <a href="http://www.epa.gov/ttn/scram/">http://www.epa.gov/ttn/scram/</a>	US dispersion models and documentation. Operated by the US EPA.
International projects and databases: SATURN, TRAPOS, CEDVAL, COST 615, COST 710, COST 715	You can find descriptions and links through the home page of the Harmonisation initiative.
Urban Climate mailing list <a href="http://www.geography.ohio-state.edu/UrbanClimate/urbclim.html">http://www.geography.ohio-state.edu/UrbanClimate/urbclim.html</a>	E-mail distribution list. Partly overlaps the AtmosphericDispersion list, but is meant for distribution of announcements, not a discussion list.
Webmet <a href="http://www.webmet.com/">http://www.webmet.com/</a>	A repository of meteorological data for models such as ISC and AERMOD, as well as for terrain data. Free, but covers only the USA.

Concerning 'D', I think that in the modelling community we should make more use of discussion forums than has been the case until now. At the previous Harmonisation conference in Belgirate I advocated for this, and also discussed the establishment of FAQ-like structures (FAQ: Frequently Asked Questions). You will find more information in Olesen (2001), and the discussion can be pursued at the present conference.

#### **TOPICS FOR DISCUSSION**

I consider it central to this conference to discuss how to pool experiences in the best way and encourage re-use of the work we do. One thing we can do here is to advertise tools of common interest and make suggestions and recommendations for further work.

A prominent theme is model evaluation, where work is ongoing on methodology development and standardisation.

Furthermore, we should address the many 'good questions' raised at previous conferences, e.g.,

- How can we convey information on model uncertainties to users?
- How can regulators be assisted in their choice of models?
- How can we best provide users with guidance on model use?

I encourage you all to take part in the discussions during the conference.

**REFERENCE**

Olesen, H.R. (2001), 'Ten years of Harmonisation activities: Past, present and future'. 7th international conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Belgirate, Italy, May 28-31, 2001. Available on the web, <http://www.dmu.dk/atmosphericenvironment/Harmoni/Conferences/Belgirate/BelgiratePapers.asp>