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Abstract This introduction gives a brief summary of the 7th International IWA Conference on Diffuse Pollution. The scope of the Conference topics is addressed and the main trends identified during its course are described.

Keywords Diffuse Pollution; IWA Conference; trends

DIPCON 2003

The 7th International IWA Conference on Diffuse Pollution (DIPCON 2003) was held at University College Dublin, in Ireland, from 16th to 22nd August 2003. It was attended by in excess of 300 delegates from 40 different countries. 190 papers and 35 posters were accepted for presentation and inclusion in the Conference Proceedings. The presentations were organised in 13 main themes, which are listed in Table 1. The Estuarine and Coastal Sciences Association (ECSA) joined with DIPCON and special sessions were organised for them. Participants in a large transboundary project, 5P-MANTRA-East (Lake Peipsi), also arranged a meeting at the Conference commencing on 16th and presented some of their results. The REGFLUD Project was also significantly represented at the conference. Specialised workshops and field visits were organised as part of the Conference.

From the papers and posters presented at the Conference, 46 are included in this special issue of Water Science and Technology. These were chosen to represent the range of topics, quality of papers and geographical spread of contributions at the Conference. There were many more good papers in the Conference Proceedings than could be published in this special issue. In the selection process, papers which described completed work were preferred to papers which described work in progress and papers with novel elements and/or in-depth analyses were especially appreciated.

Scientific trends

Some of the main scientific trends emerging from the Conference were as follow here.

Modelling

1. The place of modelling in diffuse pollution studies has strengthened. At the Conference, many different models were described, using different types of data and for different purposes. For instance, Shiratani et al. (2005) describe adding macropore drainage and more to Sugawara’s Tank Model. Bärlund et al. describe an economic analysis with the DREMFIA model. Nasr et al. (2005) add a phosphorus modeling post-processor to the SHETRAN model. Kim et al. (2005) describe a dynamic model of first flush wash-off of pollutants from roads. Vassiljev et al. (2005) describe a statistical model used for nutrient source apportionment in a very large catchment and Dunn et al. (2005) describe a GIS-based nitrogen risk assessment model for Scotland.
2. The balance between empirical and physically based models seems to be shifting towards the latter, but it does depend on the time and space scales required.

3. Model uncertainty has been recognized as an issue and was addressed by a number of papers. This is important, because not alone does it improve our understanding of the strengths and weaknesses of the models themselves, but it identifies the critical input data requirements, allowing more effort to be directed to improving or gathering the type of data which is important for model performance. For instance Yoshihiko et al. (2005) found that a Monte Carlo method was preferable to a single run when dealing with timing uncertainties in work schedules and fertiliser applications. Murdoch et al. (2005) use the Monte Carlo technique to treat export coefficients in a probabilistic manner and Vandenberghe et al. (2005) apply the Monte Carlo method and Latin Hypercube sampling to investigate the effects of uncertainties in any of the inputs to a nitrogen export model.

4. Despite this, there are very few model inter-comparisons. Although we do not expect to find a universally best model, careful comparisons are useful because we can learn from explaining the different choices in different models and comparing their performance in different types of catchment.

Practical matters
There was considerable concern expressed at the Conference about the practical aspects of measures for dealing with non-point source pollution. For instance, who would implement the measures and how? Who would be responsible for maintaining them? This was very noticeable in relation to issues of sustainable urban drainage systems (SUDS).

Research
It is gratifying to see that the results from research and monitoring projects, started in the last decade in response to the prioritisation of specific issues, are now becoming available. For instance Fraters et al. (2005) report on 10 years of nitrogen monitoring in groundwater during a period of decrease in surface application in Holland and Schreiber et al. (2005) describes a very large data set collected for 388 sub-catchments of the Danube.

Expanding scope
It is obvious from Table 1 that the scope of discussions relating to issues about and sources of nonpoint source pollution has become very broad. In addition to agriculture

Table 1 Scientific themes at DIPCON 2003

<table>
<thead>
<tr>
<th>Theme</th>
<th>No. of papers accepted for Conference</th>
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<tbody>
<tr>
<td>Integrated Water Resources Management</td>
<td>21</td>
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<td>Policy and Socio-Economics</td>
<td>7</td>
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<tr>
<td>Agriculture</td>
<td>35</td>
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<tr>
<td>Sustainable Urban Drainage Systems</td>
<td>15</td>
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<tr>
<td>Forestry</td>
<td>5</td>
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<tr>
<td>Estuarine and Coastal Studies (ECSA)</td>
<td>34</td>
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<tr>
<td>Groundwater</td>
<td>11</td>
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<td>Ecology</td>
<td>11</td>
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<td>Transboundary</td>
<td>9</td>
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<tr>
<td>Geographical Information Systems</td>
<td>24</td>
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<tr>
<td>Public Awareness/Education</td>
<td>5</td>
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<td>Regulatory</td>
<td>8</td>
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<td>Laboratory/Monitoring</td>
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and urban stormwater systems, this Conference included papers on road runoff, and faecal pollutants (O’Keefe et al., (2005) and Wither et al., (2005)) even from birds (Wither et al., (2005)) Interestingly, the Estuarine and Coastal papers concentrated mainly on the effects on bathing waters, and there was no mention of effects on the shellfish cultivation industry.

The success of DIPCON 2003 was due to the efforts of a large number of people and organisations, too numerous to mention individually here. In particular, the efforts of the Programme Committee, the Local Organising Committee and the contribution of many sponsors is acknowledged and appreciated.

References