

WORLD METEOROLOGICAL ORGANIZATION



**MEETING ON IMPLEMENTATION AND
CO-ORDINATION OF
HOMS IN RA VI**

**Geneva, Switzerland
9-10 September 1999**

REPORT

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1. OPENING OF THE MEETING (Agenda Item 1)

1.1 Mr Arthur Askew, Director of the Hydrology and Water Resources Department of WMO, opened the meeting at 9h30 on Thursday 9 September 1999 on behalf of the Secretary-General, Professor G.O.P. Obasi. Mr Askew informed the meeting that his earlier years in the WMO Secretariat had included work on the development of HOMS as it gained its acceptance within the WMO environment. Mr Askew reminded the participants of the important role that HOMS had played in technology transfer within WMO since its inception in 1981, however he pointed out that past success marked by the period of Mr John B. Miller's service as Officer for HOMS was partly halted after his retirement. HOMS must now be considered a mature system that needs to be revitalised at the dawn of the XXI Century. Mr Askew noted that Mr Claudio Caponi had been appointed to the Hydrology and Water Resources Department in January 1999 as the Officer for HOMS, thus ensuring secretariat support to HOMS.

1.2 Mr Askew also stated that the participants at the meeting, coming as they did from RA VI, represented mostly contributors to HOMS. As such, the meeting had an important role in reviewing the plan of action for HOMS into the XXI Century and advising the meeting of CHy Advisory Working Group (AWG) which was to be held the following week. Mr Askew noted that Mr Jozef Hladny had played an important role as Rapporteur on Regional Aspects of HOMS. He had contributed to the preparation of the International Workshop on HOMS in the XXI Century and especially to the present Meeting. Mr Askew proposed that Mr Howard R. Oliver and Mr Gabor Balint act as Chairman and Rapporteur for the meeting, respectively.

2. ORGANIZATION OF WORK AND ADOPTION OF THE AGENDA (Agenda Item 2)

2.1 The meeting adopted the Draft Agenda (Attachment A) for its deliberations and established its working hours. A list of participants is given as Attachment B.

3. PRESENT STATUS OF HOMS (Agenda Item 3)

3.1 Mr Claudio Caponi reported on actions by the WMO Secretariat since the CHy AWG meeting held in late 1997. This included acting on the recommendations from the AWG, as the Steering Committee for HOMS, to:

- Review existing and develop new acceptance criteria for new components;
- Modify the process for obtaining components (Components can be made directly available from the supplier);
- Reassess the role of HOMS and HNRC's;
- Develop a HOMS training package (see Agenda Item 6); and
- Transform the HOMS Office into a clearinghouse for hydrological technology.

3.2 Mr Caponi also reported on activities being undertaken in response to recommendations from the Fifth UNESCO/WMO International Conference on Hydrology, including:

- Out-dated components should be 'retired';
- Emphasis on public domain technology with commercial components on a subsidiary list;
- HNRC's to become "help desks" for hydrology;
- Establishment of an electronic bulletin board to link HNRC's; and
- Multi-lingual descriptions on the Internet.

3.3 The activities were being undertaken in the framework of a three-phased plan for strengthening of HOMS. These phases involve the updating of existing components (March-December 1999), submission of new components (October 1999 – December 2000) and increased utilisation of HOMS (2001 – continuous). With respect to Phase 1, 17 replies have been received from a total of 38 HNRC's responsible for at least one component. Mr. Caponi was pleased to report that most of the 19 Members of RA VI who were among those 38 had already replied.

3.4 At the global level, this process had so far resulted in the removal of 53 components out of 131 (40%). If this rate of withdrawal were applied to the current 456 components, this would leave only 271 components. Mr Caponi reported that it was proposed to have a revised version of the English HOMS Reference Manual (HRM) available by December 1999 and French, Spanish and Russian versions within 2-3 months of the English version.

4. OUTCOME OF THE INTERNATIONAL WORKSHOP ON HOMS IN THE XXI CENTURY (Agenda Item 4)

4.1 The Chairman of the Meeting, Mr Oliver, gave a brief overview of the Workshop on HOMS in the XXI Century, which had been held during the previous few days. He underlined several important items touched upon in the report of the Workshop and in the Draft Implementation Plan for HOMS in the XXI Century that it had established and asked the participants to take these items and their relevance for RA VI into account during their deliberations.

4.2 In discussion, the meeting emphasised the importance of streamlining the procedure for submitting and accepting new HOMS components. It also suggested that commercial components should carry details of established users who could be contacted for advice as to their experience.

4.3 The preceding Workshop had identified a range of themes which might be included in HOMS (see paragraphs 4.6 and 4.7 of that report). The Meeting, through its working groups and the plenary session, then discussed these in detail.

4.4 The themes were found to be formulated in general terms and it was felt that a more detailed breakdown would be more useful for hydrological purposes. The following were also suggested for inclusion:

- Water demand projections relevant under "sustainable water resources development";
- Expert systems for flood risk assessment and flood mapping relevant under "disaster reduction";
- Eco-hydrological models relevant under "environmental studies";

4.5 The following component needs were also identified:

- Water quality protection procedures, definition of protected areas for groundwater resources;
- Development of models producing meteorological input (QPF) for flash flood forecasting and warning;
- Models using statistical approaches in flood forecasting and warning;
- Modelling of ice phenomena with special emphasis on ice jam induced flooding;
- Standardised profiles indicating hydrometeorological data availability for the country of each HNRC, as well as its administrative structures.

4.6 Restructuring of the HRM would also be desirable. A matrix structure was suggested as a possibility.

5. IMPLEMENTATION OF HOMS IN RA VI (Agenda Item 5)

5.1 The Rapporteur of RA VI WGH for Regional Aspects of HOMS, Mr Hladny, informed the session about his terms of reference for the period 1998–2001. He described the HOMS projects that were under way, the monitoring system for the production and technology transfer and suggested methods for the “Implementation Plan for HOMS 1997-2000” in RA VI. The Rapporteur’s final report endorsed by the Twelfth plenary session of RA VI in Tel Aviv, 1998 was commented on by representatives of the HNRCs. Five key points were emphasised:

- Being aware of the fact that RA VI is the largest supplier of HOMS technology, a monitoring system is necessary and should be preserved for the future;
- It is recommended to adjust the monitoring system as HOMS develops further;
- Deadlines for regional monitoring actions should be co-ordinated with the planned three-phased strengthening of HOMS;
- Due to the growing vulnerability of Members of RA VI, training of personal in flood protection on a “hydrometeorological and water management training simulator” should be supported and developed;
- It was proposed that the WMO Office for HOMS should investigate similar interests to the above among other RAs, with the aim of collaborating and solving these issues.

5.2 The workshop then broke up into three working groups (Attachment C) to discuss the following topics in greater detail:

- Strategies for strengthening existing HNRCs
- Measures to promote the creation of new HNRCs
- Regional projects

5.3 Strategies for strengthening existing HNRCs (Agenda Item 5.1). The Working Group identified two main ways to strengthen HOMS National Reference Centres:

- Raising the status of HOMS
 - HOMS should be recognised as a major information and technology resource;
 - Widespread advertising at the national level;
 - Elaboration of a feedback system between producers and users of HOMS components and sequences;
 - Inclusion of authors’ names in HOMS component descriptions.
- Raising resources for HNRCs
 - “Project type” personnel resources can be allocated within NHSs (Institutions housing HNRCs) to the HNRC;
 - Raising funds through scientific foundations/bodies;
 - Co-operative agreements with suppliers of commercial components.

5.4 Measures to promote the creation of new HNRCs (Agenda Item 5.2). According to the latest information available to the HOMS Office, the following countries in RA VI currently have no HOMS National Reference Centre: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Denmark, Georgia, Iceland, Jordan, Kazakstan, Lebanon, Luxembourg, Monaco, Republic of Moldova, The Former Yugoslav Republic of Macedonia, Ukraine, Yugoslavia. The working group suggested the following measures to cope with this situation:

- Official contacts
The Office for HOMS of the WMO Secretariat and the RHAs should approach Hydrological Advisors and/or Permanent Representatives of the countries concerned;
- Personal contacts
Representatives of HNRCs should establish co-operative links with hydrologists in those neighbouring countries which do not have an HNRC;
- Offering financial support
Travel expenditures and, in a few cases, some possible salary support;
- Offering benefits through HNRCs
For example:
 - components free of charge
 - international co-operation.
- Provision of training in the HOMS system and components

5.5 As regards regional projects (Agenda Item 5.3), the working group identified three new regional project areas which could both benefit from HOMS and provide sources of new components and sequences:

- Transboundary flood mitigation systems
Main topics:
 - Monitoring
 - Unified modelling of floods
 - Dissemination system for flood warnings
 - Estimating and rectifying damage
- Management of water scarcity conditions
Main topics:
 - Low flow estimation and regionalisation
 - Drought risk mapping
 - Management techniques for drought risk assessment
- Hydrology and ecological aspects of inland waters
Main topics:
 - Monitoring of the hydrological part of the environmental system
 - Management of wetlands and delta areas
 - Transport of pollutants
 - Shore erosion and sediment transport.

5.6 In order to implement these projects, the following funding sources have been identified:

- HWRP – WMO
 - IHP – UNESCO
 - European Union
 - Government financing
 - Institutions
 - World Bank
- | – e. g. LIFE Project and PHARE

5.7 In discussion it was confirmed that all three projects fall under existing Hydrology and Water Resources Programme activities. The problem of data base incompatibility was highlighted. Land use studies, GIS and socio-economic components would be required for the projects. The regional projects would lead to the development of many new HOMS components but it may also be possible to find existing related large projects, which could act as sources of new components.

6. OTHER BUSINESS (Agenda Item 6)

6.1 Mr Oliver made a presentation of the HOMS training package currently under preparation. The meeting discussed this package and found it very useful for promoting HOMS in the region. The meeting made further recommendations with respect to enhancing the visibility of HOMS and these are contained under Agenda Item 5. It was agreed that it would be a great advantage to accompany the presentation of the package with a computer demonstration of HOMS.

7. REVIEW AND ADOPTION OF THE REPORT OF THE MEETING (Agenda Item 7)

7.1 The meeting reviewed and accepted this report on its deliberations.

7.2 It was the view of the participants that further meetings of this type would be beneficial for the success of HOMS.

8. CLOSURE OF THE MEETING (Agenda Item 8)

8.1 Mr Askew confirmed the value of the meeting and thanked participants for their active contribution.

8.2 Mr Oliver expressed the feeling of the meeting that it had been a success and had helped to revitalise work in RA VI. He thanked all participants and the WMO staff for their help.

8.3 Mr Caponi expressed his thanks to the Chairman and all participants.

8.4 The meeting closed at 4:15 p.m. on Friday 10 September 1999.

AGENDA

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 - 5.1 Strategies for strengthening existing HNRCs
 - 5.2 Measures to promote the creation of new HNRCs
 - 5.3 Regional projects
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WORKING GROUPS

Working Group 1

Dr Dobri Dimitrov (Chair)
Mr Markku Puupponen (Rapporteur)
Dr Jeanna Balonishnikova
Dr Katarína Hajtášová
Mr Jamal Jamaledin
Mr Michel Odier

Working Group 2

Dr Giuseppe Onorati (Chair)
Ms Ingjerd Haddeland (Rapporteur)
Dr Wojciech Feluch
Ms Mira Butina
Mr Dušan Trninic

Working Group 3

Mr Gerhard Strigel (Chair)
Dr Mary-Jeanne Adler (Rapporteur)
Mr Iacovos Iacovides
Ms Olga Kovalenko
Mr Hamza Ozgüler