



ASSOCIATED PROGRAMME ON FLOOD MANAGEMENT



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FLOOD MANAGEMENT**

ANNUAL REPORT (2012-2013)

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The Associated Programme on Flood Management (APFM) is a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP). It promotes the concept of Integrated Flood Management (IFM) as a new approach to flood management. The programme is financially supported by the Governments of Japan, Switzerland, USAID and Germany.



The World Meteorological Organization (WMO) is a specialized agency of the United Nations. It coordinates the activities of the meteorological and hydrological services of 191 countries and territories and is the authoritative voice on weather, climate and water.



The Global Water Partnership (GWP) is an international network open to all organizations involved in water resources management. It was created in 1996 to foster Integrated Water Resources Management (IWRM).



ANNUAL REPORT (2012-2013)

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LIST OF SUB MATERIALS

- I. Flood Management Policy Series
- | | | |
|-----|---|--------------------------|
| (a) | IFM Concept Paper 3rd Edition | (en, fr, sp, ru, jp, ch) |
| (b) | Legal and Institutional Aspects of IFM | (en, fr, sp) |
| (c) | Environmental Aspects of IFM | (en, fr, sp) |
| (d) | Social Aspects and Stakeholder Involvement in IFM | (en, fr, sp) |
| (e) | Economic Aspects of IFM (2nd edition) | (en) |
- II. IFM Tools
- a) Formulating a Basin flood management plan
 - b) Conducting Flood loss assessments (v 2.0)**
 - c) Applying Environmental assessment for flood management (v 2.0)**
 - d) Organizing community participation for flood management (v 2.0)**
 - e) Reservoir operations and managed flows (v 2.0)
 - f) Urban flood risk management
 - g) The role of land-use planning in flood management
 - h) Risk sharing in flood management (v 2.0)**
 - i) IFM as an adaptation tool for climate change
 - j) IFM as an adaptation tool for climate change (case studies)
 - k) Flood emergency planning
 - l) Management of Sediment-related risks
 - m) Urban Flood Management in a changing climate
 - n) Conservation and Restoration of Rivers and Floodplains
 - o) Flood Proofing
 - p) Flash Flood Management
 - q) Coastal and Delta Flood Management**
 - r) Transboundary Flood Management**
 - s) Health and Sanitation Aspects of Flood Management**
 - t) Flood Mapping**
 - u) Flood Forecasting and Early Warning**
 - v) Regulations and technical standards of Flood Management**
 - w) Effectiveness of Flood Management Measures**
 - x) Role of the Media in Flood Management**
- *Bold materials above indicate those newly added or updated in this report. For following material, only new publications are mentioned*
- III. National and Regional support activities
- (a) Concept Paper: Thailand/Lao on Community based Flood Management
 - (b) Concept Paper: Dniester Basin on Transboundary Flood Management
- IV. Training activities - Partnerships for the delivery of a portfolio of capacity building measures
- (a) Self-learning tutorial "IWRM as an adaptation to climate change" (en, fr, es, port)
 - (b) Course material of training on IFM, Universidad Nacional del Litoral, Santa Fe, Argentina
- V. Dissemination of information
- (a) Newsletters (No.28, No.29, No.30)
 - (b) Scientific paper "Roles played by various sectors in Integrated Disaster Risk Management", Makoto Hyodo, IDRiM 2012
 - (c) Scientific paper "Risk Sharing in practice for Integrated Flood Management", Masahiko Murase, IAHS Publications
 - (d) APFM CD (new edition from August '12)
 - (e) Inventory of publications



1. INTRODUCTION

The Associated Programme on Flood Management (APFM), a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP), was established in order to promote the concept of Integrated Flood Management (IFM) and to help demonstrate the practical steps for putting the concept into practice. An IFM approach aims at maximizing the net benefits from flood plains and reducing loss of life due to flooding, flood vulnerability and risks, and at the same time preserving ecosystems within the overall framework of Integrated Water Resources Management (IWRM). It conceptualizes integration of land and water resources development activities in a river basin.

During Phase I (August 2001 - July 2006) of the APFM, the principles of Integrated Flood Management have been established through the IFM Concept Paper supported by the Flood Management Policy Series. The programme has conducted various regional and country demonstration projects, has collected and synthesized flood management case studies and established a website to offer a variety of information including various products and a set of databases on flood management. The outcomes of Phase I have been widely appreciated at various international conferences, workshops and meetings, which facilitated dialogue and involvement of institutions and individuals and start a global network to create the required knowledge base to support countries in their efforts to adopt IFM.

Phase II of the programme (August 2006 - March 2010) was intended to consolidate these gains. It sought to develop capacities in the countries by supporting local and regional actions that advocate, support or demonstrate the IFM principles. This was supported by a combination of training and awareness building at various levels addressing flood management issues within the integrated water resources management. The advocacy for IFM has been achieved through capacity development, and providing long-term support in the form of IFM HelpDesk and information services. The IFM HelpDesk is based on voluntary contribution from approximately 20 Support Base Partners.

Phase III of the APFM started in April 2010 for the period of four years. The overall goal of the APFM Phase III is to improve field-effectiveness of IFM practices, and outreach, while covering a wide range of demand-driven applications of the IFM principles. The AC/MC meetings in 2011 discussed and agreed on the activity plan of Phase III.

This Annual Report documents the activities undertaken during the reporting period from 1 June 2012 to 31 May 2013. Most of the output materials are attached as sub-materials in a separate CD.

In addition to financial contributions from Japan and Switzerland and in-kind contribution from Germany, USAID committed financial support for demonstration projects and capacity building under APFM activities on a multi-annual basis.



2. ACTIVITIES

2.1 COOPERATION BETWEEN APFM AND THE WMO CHY

The WMO Technical Commission for Hydrology (CHy) during its 14th session in November 2012 recognized the substantial achievements made through the APFM in the form of providing flood management policy guidance, technical tools and capacity building. The Commission commended the operationalization of the HelpDesk for Integrated Flood Management as the backbone of the initiative and called for a demand-based outreach strategy of the HelpDesk. The Commission suggested that APFM consider documenting the implementation of flood management practices, especially in developing countries. The Commission appreciated the wide scope of the target audience, reaching beyond NMHs while fully integrating these in the activities of the APFM. It appreciated the substantial support provided by the governments of Japan, Switzerland, Italy and Germany to the success of the programme and noted with interest pledges made by the USA to provide further funding for APFM activities. The Commission recommended continuing promoting the APFM to increase its field effectiveness and to attract extra budgetary resources for its activities.

The Commission welcomed the recent development of an Integrated Drought Management Programme (IDMP) in association with the Global Water Partnership and UNESCO, based on and inspired by the development and success of the APFM.

2.2 FLOOD MANAGEMENT POLICY SERIES

Flood Management Policy Series

The '*Flood Management Policy Series*' has been established within the framework of the APFM. The series comprises of publications on various aspects of flood management policy, including legal and institutional, environmental, social, as well as economic aspects to facilitate the implementation of IFM principles into the development planning practice of river basins (Sub-material I(b), I(c), I(d) and I(e)). The series of publications have been translated into various languages as shown below;

- IFM Concept Paper (en, fr, es, ru, jp, ch)
- Legal and Institutional Aspects of IFM (en, fr, es, Serbian)
- Environmental Aspects of IFM (en, fr, es, jp)
- Social Aspects and Stakeholder Involvement in IFM (en, fr, es)
- Economic Aspects of IFM (2nd edition) (en)

2.2.1 Translation of IFM Concept Paper 3rd edition

The '*IFM Concept Paper*' (Sub-material I(a)) was revised in 2009 in consideration of emerging issues, such as risk management, urbanization, climate variability and change, and adaptive management. In addition to the existing languages, Japanese translation was prepared by the Japan Institute of Construction Engineering (JICE); the Russian translation was completed by WMO in October 2012.

Regarding the translation into Chinese, proposed by GWP during the 2012 AC/MC meeting, TSU has corresponded with Mr Zheng Rugang from GWP China. The draft Chinese version of the Concept Paper was received in May 2013 and is currently being edited by WMO.

2.2.2 Economic Aspects of IFM 2nd edition

The policy series publication "Economic Aspects of Integrated Flood Management" has been revised as recommended by the AC/MC meeting 2011. The revision has been done to provide recent updates on evolution of economic tools for flood management and disaster risk reduction across the world and

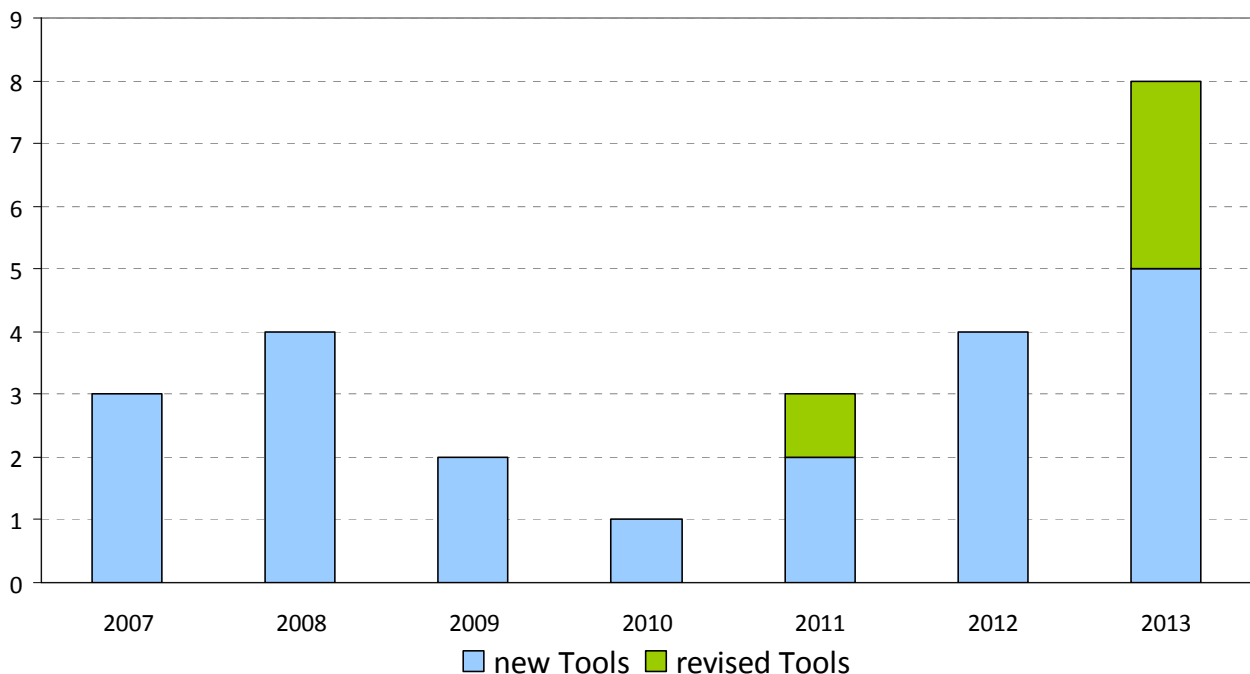


expanded some of the tools with practical examples as inputs to fulfill the identified gap in the previous version. The document has been revised by TSU with external consulting support of Ms Oksana Ekzarkho, former intern in APFM and with a technical review by Mr Jarl Kind of Deltares, the Netherlands. The second edition is currently under final revision with the TSU. The final draft is prepared and attached as sub material I (e).

2.3 IFM TOOL SERIES

During the process of compiling policy series papers, requirement of several tools to implement the concept of IFM in the field were identified. Along with the issued tools (Sub-material II(a) - II(p)), a new inventory of IFM Tools has been prepared (Sub-material II(q) - II(x)). IFM Tools are intended to provide substantive guidance to flood management practitioners and provide a perspective of how the different tools fit together for an integrated approach to flood management.

The following shows the development of new tools and completed revisions of existing tools from 2007 until May 2013.



The following Tools have been finalized or are in the final edit stage.

- Coastal Flood Management
- Flood Mapping
- Regulations and Technical Standards for Flood Management
- Effectiveness of Flood Management Measures
- Effectiveness of Flood Management Measures - England Case Study
- Flood Forecasting and Early Warning
- Transboundary aspects of Flood Management.

The update/revision of existing tools was completed.

- Organizing Community Participation for Flood Management,
- Conducting Flood loss assessments,
- Risk Sharing in Flood Management,
- Applying Environmental Assessment for Flood Management.



Further tools are currently being developed by the TSU in close collaboration with independent experts and including universities and institutes, and are in various stages of development.

- Health and Sanitation Aspects of Flood Management
- Role of the Media in Flood Management
- Effectiveness of Flood Management Measures (Case Studies)

2.3.1. Flood Mapping (final draft)

Flood Maps are tools to visualize flood information for decision makers and the general public. These maps form the basis for developing flood risk scenarios based on land use, various environmental and climate conditions and including social and economic conditions. Flood maps in their various formats and scales are the basis for the planning and implementation of development alternatives. In addition to the general objective of a flood map, special uses require specific information including maps that depict exposure to floods of various recurrence periods, flood risks, vulnerability and response information such as evacuation routes, safe high grounds, shelter areas etc that are of utmost importance in flood plains but also in coastal areas at risk of storm surges and tsunamis. Different methodologies are presented in the production of flood maps for various purposes to support decision-making at all levels.

Based on an initial draft version of a Flood Mapping Guideline intended to be published at a later date as a WMO Manual under the WMO Quality Management Framework, material contained in the draft were reviewed and brought up-to-date by Dr. Markus Zimmermann as external expert and edited by TSU to become a tool in the APFM Tool Series. The final draft of the Tool is attached as Sub-material II (t).

2.3.2. Regulations and Technical Standards for Flood Management (completed)

This tool aims at introducing the outline of regulations and standards for flood management in selected countries to help flood managers make sound decisions on developing and evaluating flood management approaches. Even as the concepts in flood management approaches, the resulting regulatory frameworks and standards differ from country to country, the basic concept of flood management and examples of technical standards are useful resources for other countries, especially for those planning to develop such regulatory frameworks and technical standards.

In order to collect information on flood management regulations, several interviews were conducted with central and local government officials in France, the Netherlands, USA and Switzerland. The excerpts of key reference materials in French and Dutch languages were translated into English. The case study of Switzerland was prepared by an independent consultant, Prof. Manfred Spreafico, former Director of the Swiss Hydrological Service. Based on the collected information, the final draft was prepared by TSU. The final version of the Tool is attached as Sub-material II (v).

2.3.3. Flood Forecasting and Early Warning (completed)

Flood forecasting and early warning is carried out to reduce risks in flood prone areas. This tool is tailored for use when decision-makers need to establish an effective overview of the flood situation, provide timely and accurate early warnings and flood forecasting services to a variety of users. Many countries have already integrated flood forecasting and early warning measures into their local and national emergency planning systems. This tool provides a concise overview of concepts and approaches in flood forecasting and early warning that help flood managers and practitioners to develop and operate flood forecasting and early warning systems in flood prone areas. The tool has been developed by TSU based on the existing WMO Manual on Flood Forecasting and Warning (WMO No.1072) and other publications both from WMO and other external Institutions/Agencies. The final version of the Tool is attached as Sub-material II (u).



2.3.4. Effectiveness of Flood Management Measures (in progress)

Economic analysis conducted after major flood disasters, such as Hurricane Katrina, showed that flood management measures, if implemented timely, would have avoided losses and damages at a fraction of the cost of effective flood management measures. Because of rapidly growing urbanization and projected climate change, damage potential in floodplains is increasing, as well as the number of lives at risk. In order to cope with this issue, Integrated Flood Management plays an important role in reducing vulnerability to flood disasters and subsequent flood damages. Likewise, Integrated Flood Management has the potential to increase benefits derived from floods such as, for example, through groundwater recharge from flood waters. This tool introduces the theoretical background of measuring the effectiveness and efficiency of measures, with regard to evaluation indicators, the necessary tools and building up an evaluation program. Another complementary Tool will be developed introducing good practices as well as unsuccessful examples of flood management measures and derived benefits from floods collected from various countries in different socio-economic, environmental and development stages. Some key indexes will be derived from readily available socioeconomic data to prove the effectiveness of flood management measures. The advanced draft of this tool was developed by TSU in close cooperation with Dr John Labadie, Emergency Management Consultant at the University of Washington, and is attached as Sub-material II (w).

2.3.5. Transboundary Aspects (completed)

As floods do not recognize borders, transboundary flood risk management is imperative in shared river basins, involving both Governments – as borders are involved – and their people – as risk is involved. However, transboundary flood management is not easy to implement, as joint monitoring, forecasting and early warning, coordinated risk assessment and joint planning of measures, and appropriate legal and institutional frameworks are all necessary. The tool on transboundary aspects of flood management focuses on common problems, objectives and approaches of flood management in transboundary basins, outlines major steps in arranging transboundary cooperation for flood management and presents approaches in sharing knowledge for the management of transboundary flood risks. The final version of the Tool is attached as Sub-material II (r).

2.3.6. Coastal Flood Management (completed)

Coastal flood hazards are diverse as a result of storm surges, tsunamis, tropical storms, seiches etc. and are highly unpredictable. A profound understanding of these hazards, their mechanisms and potential impacts is therefore indispensable in order to derive an appropriate coastal flood risk management approach. Such approach should be selected from the widest range of measures and policies possible, taking due account of the inherent uncertainties both with respect to the probability of hazard and evolving socioeconomic developments. This Tool aims at providing practical guidance to flood management practitioners and other stakeholders to formulate an appropriate (i.e. sustainable, minimum total cost and socially acceptable) coastal flood risk management policy. The Tool serves also as an important contribution to the Coastal Flood Inundation Demonstration Project (CFIDP) that is a joint project undertaken by WMO's Commission for Hydrology and the Joint Commission for Ocean and Marine Meteorology of WMO, UNESCO and IOC. The pilot project is under preparation for Bangladesh and the Dominican Republic. The final version of the Tool is attached as Sub-material II (q).

2.3.7. Health and Sanitation Aspects of Flood Management (Final Draft)

There is a lack of knowledge on how to assess the environmental and health effects associated with exposure to the often complex chemical and biological contamination of water and soil that can follow floods. Water supply and sanitation are crucial determinants of health, especially during emergencies, but failing or compromised water and sanitation services may in themselves pose a risk, and a source of



contamination, the impact of which reaches beyond local and national borders. This tool will provide an overview on why and how flood management practices should consider the vulnerability of water supply and sanitation facilities and new risk elements for health and environment arising from water services management during floods. A first draft has been developed by Ms Micha Lipa, based on an outline from the TSU and assembling inputs from various other agencies involved in the WASH sector. The draft is currently being reviewed by the TSU. The draft is available in Sub-material II (s) and will be finalized by the end of summer.

2.3.8. Role of the Media in Flood Management (First Draft)

According to the theory of “Social Amplification of Risk Framework”, risk perception is amplified or attenuated by filters in the communication chain of hazard events. Thanks to their intermediate position between decision makers and population, mass media can play an essential role in Integrated Flood Management, by acting as such a sieve before as well as during and after the occurrence of floods. This tool is intended to develop a constructive approach toward media, in order to effectively involve them in all phases of the management process, from prevention and awareness raising, emergency warning, to relief measures and restoration. To achieve this goal, it is suggested that flood managers deploy, in close cooperation with their media partners, a comprehensive Communication Strategy, including a Communication Plan, a Dissemination Plan and an Ex-Post Evaluation.

2.3.9. DHI Tool on Preliminary Flood Risk Assessment (completed and linked to APFM website)

The preliminary Flood Risk Assessment Tool-software has been designed by DHI in order to identify where significant fluvial flood risk in river basin would take place. By using objective analysis the tool supports decision makers with reasonable and secure result on the basis of the threshold effect for proper future flood risk management activities in terms of objectives and measures. The tool is part of the DHI/APFM agreement to support the HelpDesk for IFM. The tool is accessible from the DHI website, and is linked to the new APFM website. The use of the Tool requires a license and is not free of charge. However, under specific conditions test licenses can be granted to partners/institutions that cooperate with APFM.

2.3.10. Update of existing publications

As the IFM Tool series is composed by “living documents”, the following existing Tools, as well as other publications released over the past years, are updated to reflect the current state of knowledge and know-how, making use of available resources and expertise.

Conducting Flood Loss Assessments, version 2.0 (completed)

First published in 2007, the Tool has been revised and updated to incorporate recent developments in flood loss assessment and techniques across the world. The examples of the recently practiced flood loss assessment case studies have been compiled and presented in this tool. The updating has been carried out by Ms Oksana Ekzarkho with support from the TSU. The final version of the Tool is attached as Sub-material II (b).

Risk Sharing in Flood Management (completed)

The Risk Sharing in Flood Management Tool, first published in 2009, has been revised and updated in 2012-2013 programme year. The tool has been enhanced with incorporation of recent development and practices in risk sharing mechanisms across the world in flood prone developing countries. The examples for risk sharing methods including crop insurance, catastrophe risk insurance facility, and index based insurance have been added to provide more options in flood risks sharing as an instrument in managing floods. The updates have been carried out by Ms Oksana Ekzarkho with support from the TSU. The final version of the Tool is attached as Sub-material II (h).



Organizing Community Participation for Flood Management (completed)

This Tool, which was first published in 2008 has been largely revised and expanded in scope to cover more comprehensively important aspects of community participation and actual measures that can be undertaken at community level to improve resilience of people towards floods. The Tool has been enriched with practical approaches applied in community based flood management programme in developing countries. In addition, tool has also given due attention on indigenous knowledge practices, institutional and social aspects of the community participation. The update has been carried out by TSU and the final version of the Tool is attached as Sub-material II (d).

Applying Environmental Assessment for Flood Management (completed)

The first version of the Tool was developed in 2007 to provide generic approaches for conducting Strategic Environmental Assessments (SEA) at the basin flood management planning stage and Environmental Impact Assessments (EIA) at the project design stage. The updated Tool includes new content of capacity building and climate change aspects in the environment assessment as well as two new case studies from the Netherlands and India.

2.3.11. Planned development and revision of tools

The development of new tools and the revision of existing tools as documented above has been carried out as recommended during the AC/MC meeting in 2012. The development of Tools in a number of new topics is proposed as outlined below.

Revision of Tools:

1. Formulating a basin flood management plan
2. Urban Flood Management
3. Land use planning in flood management
4. Climate change adaptation in flood management

Development of new Tools:

1. Flood Management for High Risk Facilities
2. Flood Management and Water Quality
3. Crisis Mapping and Crowdsourcing in Flood Management
4. Public Perception of Flood Risk
5. Flood management in a multi-hazard environment
6. Social Impact Assessment

Flood Management for High Risk Facilities

High risk facilities including nuclear facilities, oil refineries, and chemical production plants pose a special challenge for flood management requiring specialized approaches to safeguard people and the environment from hazards as a result of flooding of these facilities. The Tool is envisaged to document specific hazards, risks and mitigation of dispersement of dangerous substances and to provide guidance for the management of floods focussing on high facilities and installations.

Flood Management and Water Quality

Flood events have a large impact on changes in water quality due to the transport of pollutants, but also on sediments and suspended matter that serve as fertilizers in flood plains. Re-mobilization of pollutants in river beds, but also the dilution of pollutants is largely altered by flood events. The Tool is envisaged to describe the basic processes governing the relationship between flood events and water quality and to provide guidance in managing floods in terms of water quality looking at both, positive and negative aspects of water quality changes as a result of floods, and approaches to manage floods with a focus on water quality including sediment transport and suspended matter.



Crisis Mapping and Crowdsourcing in Flood Management

Crisis mapping is the real-time gathering, display and analysis of data during a crisis (i.e. a natural disaster or a social/political conflict), aiming to process and/or produce new geospatial records that would be of value during the emergency. The crowdsourcing of information is usually coordinated via online applications founded on dedicated software, for example Ushahidi or Sahana, or on social technologies, like Skype or Google Drive. Crisis mapping could be of enormous benefit to flood management. By allowing large numbers of people, including the public and crisis responders, to contribute up-to-date reports either remotely or from the site of the disaster, it increases situational awareness. This represents a big advantage in temporal and spatial terms not only for relief decision makers, but also for affected population, to understand the complex dynamics of emergencies and react appropriately based on that highly relevant information.

Public Perception of Flood Risk

The feasibility of flood protection plans is usually evaluated according to technical, economic and administrative analysis, but little attention is paid to how the population affected feels about them. Indeed, the still high numbers of flood victims suggests that the lack of knowledge on public perception and response to mitigation measures needs to be addressed. As societies are increasingly vulnerable but less tolerant of flood risk, social and psychological issues must be taken into account in decision making, especially in risk communication. Therefore, comprehensive flood risk management strategies should be developed based on an integrated approach, involving citizens and experts from social sciences and humanities during all phases of the process.

Flood management in a multi-hazard environment

Flood management in a multi-hazard environment is about simultaneously addressing all hazards as a problem of optimization under Integrated Flood Management. The range of hazards considered includes natural hazards (e.g. floods, landslides, Epidemic outbreak, and windstorms). Concurrent hazard events and interdependent hazard events, such as floods following a hurricane, landslides following a flood, tsunamis following an earthquake, or epidemic outbreak following a flood are addressed as special cases of importance.

Social Impact Assessment

Following the methodology and rationale behind the environmental impact assessment (EIA), the Social impact assessment (SIA) is a methodology to review the social effects of infrastructure projects and other development interventions, among which is included also flood management measures. Initially carried out as part of, or in addition to, environmental impact assessment, it is now adopted in some selected countries (e.g. UK, USA) in formal planning systems: This tool aims at identifying the requirements and the methodologies to perform a correct SIA, in order to minimize the social impact of flood management measures and, on the other hand, to maximize people's participation and active involvement in such measures



2.4 NATIONAL AND REGIONAL SUPPORT ACTIVITIES

Supporting national and regional efforts in implementation of the IFM concept on the ground is one of the priorities of APFM. Such activities are categorized as;

1. Technical support activities to help initiating and promoting IFM in a country or region;
2. New field demonstration projects to show IFM on the ground; and
3. Continuous support for the pilot projects undertaken in APFM to enhance the outreach process of national and regional activities.

National workshops on the Development of National Strategies for Integrated Flood Management have just started in Mexico, as reported below (see section 2.4). Follow up of previous activities are listed in the following.

2.4.1. Pakistan

After the workshop in January 2011, no further request has been received from Pakistan, where national strategies and project concepts were developed with Pakistani authorities on integrated flood and drought management.

2.4.2. Thailand and Lao PDR

Following the workshop on the development of national flood management strategies held in spring 2012 in Thailand and Lao PDR, both countries had requested further assistance in the development of Flood Management Action Plans.

2.4.3. Iowa State

With the essential support and coordination of Prof. Marian Muste, Vice-President of the International Association for Hydro-Environment Engineering and Research (IAHR), from 19 to 21 September 2012, APFM conducted a three-day exploratory mission to Iowa State, USA, in order to assess the current applications of IFM concepts at the State level, learn about ongoing initiatives, identify synergies and establish new contacts for future activities. High-level contacts were established to propose a flood management strategy at the State level, a proposal which received promising feedback. The activity is currently on hold.

2.4.4. Mali

ANADIA Mali project – flood component: Based on the outcome of the test phase conducted on ten villages in the Ségou region in 2010-2011, a methodology for the development of Village Plans for the Reduction of Flood Risk (PVRRI) has been developed. Presentation of the project outcomes were planned for late 2012, but have been postponed in view of the prevailing security situation on Mali.

2.4.5. Assessment of phase I activities (Kenya, India, Nepal and Bangladesh)

Due to other activities to be undertaken with a higher priority, it was not possible to perform an ex-post analysis of the impacts of the project during the reporting period.

2.4.6. Mexico

Following the new national program on prevention of water related emergencies (PRONACH) launched in December 2012 by the President of Mexico, CONAGUA has been mandated to produce guidelines for the development of flood management strategies at the State level in Mexico. In order to ensure proper integration of the IFM principles in these guidelines, CONAGUA requested APFM assistance and technical supervision in the drafting of the guidelines.

A first training course for the experts appointed to write the guidelines was held in Mexico City in late April 2013; once the guidelines finalized, it is expected to have another round of training workshops on IFM for



each of the 13 administrative provinces of CONAGUA (expected in July 2013) and, once a need assessment performed in August in each of the provinces, a third round of workshops to present possible solutions to the gaps identified. Particularly in this last phase, the involvement of the various SBP would be crucial.

2.4.7. PEARL project participation

In November 2012 TUHH invited APFM to take part in a consortium for submitting a project proposal in the framework of the EU-FP7 project on “Coasts at threat in Europe: tsunamis and climate-related risks”. The proposed project PEARL, “Preparing for Extreme And Rare events in coastal regions”, is coordinated by Dr. Zoran Vojinovic (UNESCO-IHE). The main objective is to develop adaptive, socio-technical risk management measures and strategies for coastal communities against extreme hydro-meteorological events minimising social, economic and environmental impacts and increasing the resilience of Coastal Regions in Europe.

Other SBPs, such, DHI, TUHH, Euroaque Consortium, and ICHARM are also taking part in the consortium. The proposal had to undergo two different stages of evaluation, and is currently waiting for a final decision for funding, having scored 13.5 on 15.

To refine the project proposal, a meeting of the consortium partners was held in Hamburg in early January 2013. Items discussed at the meeting included sharing of roles, tasks and responsibilities, and in this framework APFM committed to take care of the project outcomes dissemination. An upcoming meeting is envisaged at the ICFR conference in September 2013, Exeter, UK, to further discuss financial issues and plan any next steps.

2.5 NEW FIELD DEMONSTRATION PROJECTS TO BE PLANNED AND IMPLEMENTED

To meet the objective of APFM activities in Phase III, Field Demonstration Projects are mentioned amongst the expected outputs. It is foreseen that APFM provides technical support for on-going or planned field projects implemented by other organizations. In this context, the following three field demonstration projects are foreseen to be complemented by an APFM Tool, or – in the case of community-based approaches to flood management – with an updated tool:

Community-based approaches to Flood Management

Building on the successful implementation of this project in earlier years in Bangladesh, Nepal and India, it is envisaged to extend the project to other countries. In close cooperation with the Asian Disaster Preparedness Centre (ADPC) and based on a project concept developed in October 2012, country consultations have been successfully organized with main stakeholders in Thailand (November 2012) and Lao PDR (March 2013). The aim of the pilot project is to showcase the utility of integrated flood management measures in small towns located in river flood plains and flash flood prone communities in hilly regions in both countries. The areas have been selected. Funding is provided through USAID as SBP and a Letter of Agreement is under development between WMO and ADPC to implement the project over a period of 30 months.

Integrated Coastal Flood Management

This project will be taken up in the framework of the existing Coastal Integrated Flood Demonstration project (CIFDP), a joint undertaking of the Joint Commission for Ocean Meteorology (JCOMM) and the WMO Commission for Hydrology (CHy) currently coordinated by the WMO Marine Meteorology Division. From an APFM viewpoint, coastal flood management is seen in the context of flooding caused by storm surges and involves early warning as well as land management and flood preparedness. Current countries under consideration are: Bangladesh, Vietnam, Dominican Republic and possibly Mozambique. Funding is expected to be provided through USAID. The project concept is under development based on the Tool on Coastal Flood Management, prepared by Deltares.



Transboundary Flood Management

Within the context of integrated river basin management in transboundary basins, integrated flood management has become a prime issue as both flood risks and opportunities are shared by riparian countries and should be addressed in an appropriate manner. In cooperation with the United Nations Economic Commission for Europe (UNECE) and the newest SBP Zoï Environment Network, the project area is located in the Dniester Basin in Moldova and Ukraine. Under the framework project on “Reducing vulnerability to extreme floods and climate change in the transboundary Dniester basin”, started in 2011 and implemented by UNECE, OSCE and UNEP (through Zoï), APFM’s activities with regard to the pilot project will be in close cooperation with UNECE and Zoï; the objectives are to

- a) facilitate the modelling and mapping of extreme flood risks;
- b) foster real-time exchange of data and information, transboundary flood forecasting and early warning;
- c) promote and strengthen the use of flood information to enable the basin authorities and population to effectively respond to flood risks at different levels.

For project planning and promotion of APFM’s role in the overall project, TSU attended major project meetings with the Working Group on Flood Management and Climate Change Adaption, in December 2012, February 2013 and May 2013. A first project proposal on the activities planned was produced with contributions from Zoï and submitted to USAID.

A “Workshop on Flood Communication and Information Exchange in the Dniester River Basin” will be held in Lviv, Ukraine on 27-28 May 2013, concerning communication and information exchange for flood management. The meeting represents a good occasion to exchange experiences, further discuss, plan and promote APFM’s communication strategy and role in the project, as well as get important inputs for drafting of the Tool on the Role of the Media in Flood Management.

2.6 CAPACITY BUILDING

2.6.1. Training materials

Extended vocational training (in-service) together with CapNet

As in the past years, Cap-Net has been identified as one of natural partners for capacity building, for jointly developing and implementing training courses. The knowledge and experience gained in implementing the APFM combined with considerable experience and financial support capacity of Cap-Net in support of capacity building for Integrated Water Resources Management with its network of capacity building institutions have proven to be strong assets in pursuit of the joint work programme of both institutions since 2007. Contacts with CapNet were loose during the reporting period, and as opposed to past years no joint work programme was developed. Contacts have however been re-established recently, and discussions were undertaken to finalize the ongoing activities and mutually supporting training activities. Development of Training Material in the framework of collaboration with Cap-Net has been undertaken on four topics for different target groups, namely

Training manual on IWRM as an adaptation to climate change

Target of this manual are water/flood managers and decision-makers, not necessarily with a strong background on climate sciences: following the development of the training manual “IWRM as a tool for Adaptation to Climate Change” APFM has coordinated with Cap-Net on the development of a self learning web-based tutorial derived from this publication; the tutorial’s contents have been finalized, and the web-design was developed by the NGO Metameta, also in charge of the management of the web-based multimedia platform called “the Waterchannel”. The tutorial is currently on line as a trial on the waterchannel website (<http://www.thewaterchannel.tv/tutorial/>), and it will soon be hosted also on the



Cap-Net and APFM websites. The tutorial is also currently undergoing the web-design to make it available in multiple languages. Newly translated versions of the Tutorial are available in Spanish, French and Portuguese. The tutorial is attached on a CD as Sub-material IV (e)

Revision of presentation materials

Following the different presentations held during trainings and workshops, and sharing experiences with former members of the TSU still active in advocating for IFM in their current positions, it was noted that the power point presentations of the modular course listed above need comprehensive revision and shortage. TSU will continue revision and update of the available power point presentations aiming at reducing size and updating content. The available power point presentations will be updated in joint cooperation with the PAGASA project. Revision on presentations on flood mapping and use of the media has already been started and will be undertaking in line with the according Tools currently under development. Spanish presentations are being refined and updated, particularly with regard to the recent capacity building activities in Mexico.

2.6.2. Training activities

Capacity building workshop on Integrated Flood Management, Santa Fe, Argentina, 27 Nov - 1 Dec 2012

A capacity building workshop took place from 27 November to 1 December 2012 at the Faculty of Engineering and Hydrological Sciences (Facultad de Ingeniería y Ciencias Hídricas - FICH) of the Universidad Nacional del Litoral in Santa Fe, Argentina. It was jointly organized by APFM, the FICH, the Centro Regional Litoral (CRL) and the Centro de Economía, Legislación y Administración del Agua (CELA) of the National Water Institute (Instituto Nacional del Agua - INA).

The workshop was presented in the framework of the Master's course on Integrated Water Resources Management and saw the participation of 24 alumni of different background, including engineers, agronomists, biologists, lawyers etc. working in various institutions at the national level. The workshop was facilitated by six experts from Argentina and Uruguay, trained in previous IFM workshops such as one held in Lima in 2008 or in Porto Alegre in 2011, with a telephonic presentation by APFM. Moreover, during the course a discussion panel was held, involving local and provincial decision makers such as the State Secretary of Planning and Management (Subsecretario de Planificación y Gestión) from the Ministry of Water, Public Services and the Environment of Santa Fe (Ministerio de Aguas, Servicios Públicos y Medio Ambiente de la Provincia de Santa Fe), and the Director of the Risk Management Municipality of Santa Fe (Gestión de Riesgos de la Municipalidad de Santa Fe).

Training workshop on Flood Risk Management in Senegal, 18-19 Mar 2013

The Training Workshop on Flood Risk Management was organized jointly by the Senegalese Ministry of Restructuring and Rehabilitation of Flood Zones, the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) and the Islamic Development Bank in Dakar, Senegal from 18 to 19 March, 2013.

The aim of the workshop was to facilitate the transfer of knowledge, know-how, experience and best practices of countries and international organizations in the field of flood risk management, as well as, water resources management. The workshop was attended by 70 participants, mostly from Senegal, Mauritania, Benin, Pakistan, Turkey and some international organizations. WMO's role was to inform about WMO's activities with regard to flood management and to promote the concept of Integrated Flood Management. Various APFM dissemination material was distributed such as CDs, pamphlets, flyers and a publication on the Concept of Integrated Flood Management.

Training Workshop on Integrated Flood Management, Flood Forecasting and Early Warning for building resilience to disasters in Western Balkans and Turkey, 8-12 Apr 2013, Antalya, Turkey

With funding from European Commission (DG Enlargement) WMO and UNISDR are implementing the project "Building Resilience to Disasters in Western Balkans and Turkey" involving Croatia, Turkey FYR Macedonia, Albania, Bosnia and Herzegovina, Montenegro and Serbia. The project overall objective is to



reduce vulnerability of beneficiary countries to disasters caused by the impact of natural hazards in line with the Hyogo Framework for Action (HFA) and increase their resilience to climate change with focus on: (a) building/enhancing regional networking and coordination in the area of disaster risk reduction, and (b) strengthening the cross-border cooperation in the area of disaster risk management.

WMO, through APFM, organized a workshop divided in three main thematic areas: I) promotion of the IFM concept for implementation at national and transboundary levels, II) Presenting topics related to flood forecasting & early warning systems and practices, making use of the according WMO manual, and III) illustration of a hands-on demonstration of the DEWETRA platform as an example of an integrated system for real-time monitoring and natural risks prevision and prevention.

2.6.3. E-learning, multimedia, education

E-learning with Technical University of Hamburg-Harburg

Contacts with TUHH have been re-established. The joint long-term plan for producing e-learning tutorials on the IFM tools, discussed in 2010 with late Prof. Pasche, has been re-discussed. TUHH currently hosts a platform disseminating two INTERREG projects, which could also serve for further dissemination of e-learning projects and other activities of mutual interest.

New opportunities for the development and promotion of multimedia applications came up, such as the new development and/or revision of e-learning and e-lecture platforms. It is envisaged to closer link APFM's and TUHH's websites to increase visibility.

Multimedia capacity building materials on IFM

Contacts have been established with Metameta, a NGO from the Netherlands currently managing the waterchannel.org website. Preliminary agreement on expanding the flood component of the website, linking it to the APFM website, has been reached. The proposal should be further discussed and concretized, in view of a dedicated section in the new APFM website.

Educational programme for kids and wider public

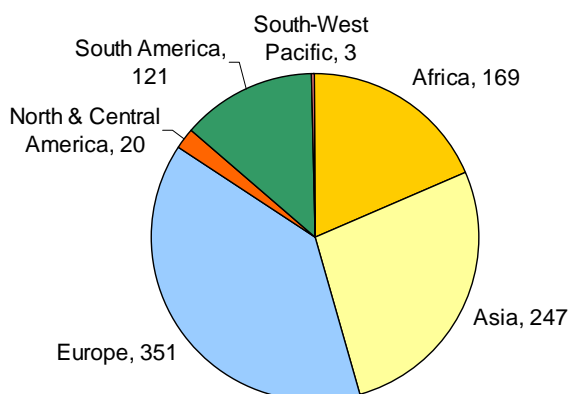
APFM developed in 2007 with "Project-WET: Water Education for Teachers", a US based non-profit Foundation, two publications "Discover Floods KIDs (Kids In Discovery Series) Activity Booklet" for children/youth ages 8-12, and "Discover Floods Educators Guide" targeted at teachers for use as teaching material. After an informal meeting at the 6th World Water Forum with the Senior Vice President of ProjectWET, it was agreed that the two publications could be made freely available from the new APFM website.

TSU received an invitation to a meeting to jointly develop and implement a new module on flood management, which is envisaged to be implemented into the existing e-learning platform for kids www.discoverwater.org. The meeting is scheduled June 2014 in Montana, USA; the reply is currently pending.

2.6.4. Alumni of APFM Workshop and Training

For the past five years, APFM organized or participated in 37 workshops and trainings on IFM-related topics. In these occasions, about 979 alumni were exposed to the IFM concepts. Regional composition of these alumni is detailed in the figure below. The email addresses of those alumni were added to the list of APFM Newsletter subscribers. A survey to assess the activities implemented by past alumni in the field of IFM after having received the training is under planning. Also, in the framework of the communication strategy, APFM profiles were developed on major social networks such as Facebook or LinkedIn, in order to establish a platform where the alumni network could exchange information about their activities. However, although the profiles have been established, the activities connected to them (e.g., survey, discussion for a, etc.) could not be developed due to unexpected shortage of staff.

**APFM Workshop & Training Participants
(since 2007, total 911)**



2.7 FLOOD MANAGEMENT REFERENCE CENTRE

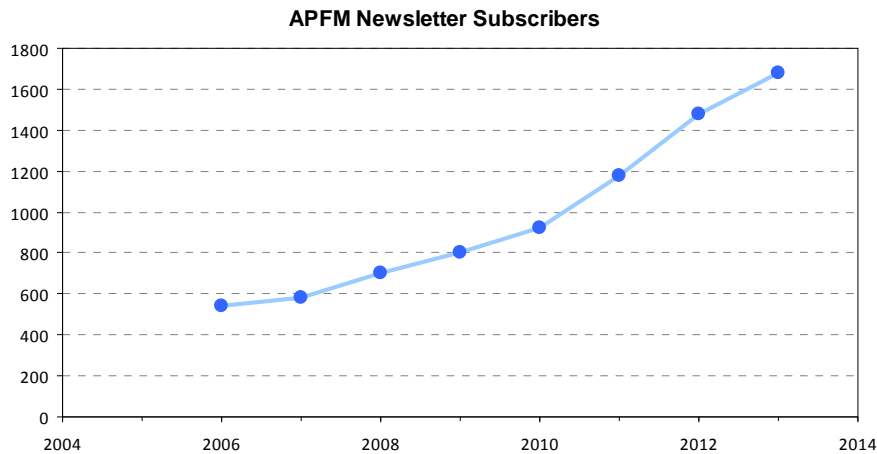
The Flood Management Reference Centre consists of three databases on Flood Management Institutions, Literature, and Policy and Law. In conjunction with migration of APFM website, the database system is currently under a complete review. TSU focused its effort on updating the literature database especially in the light of reference publications used to develop IFM Tool Series. The database of institutions involved in flood management has been updated and corrected; former institutions, that were merged or closed, are given an according note. The number of new and total entries in each database, at the reporting time, is as follows.

| | Number of new entries | Number of total entries |
|--|-----------------------|-------------------------|
| Institutions and Agencies involved in Flood Management | 0 | 388 |
| Literature on Flood Management | 550 | 1107 |
| Flood Management Policy and Legislation | 0 | 240 |

2.8 DISSEMINATION OF INFORMATION

2.8.1. Newsletter

APFM Newsletters have been published since June 2002 to inform an interested audience about APFM activities. The newsletter is sent via email to subscribers of APFM newsletters, with a number of subscribers which is approximately 1680 at the reporting time. Detailed outcomes of events and conferences which APFM participates in or organizes can be obtained on the APFM and other related websites. During the reporting period, three newsletters (No.28, 29 and 30) were published as scheduled (Sub-material V (a)).



2.8.2. Conferences

IDRiM International Society for Integrated Disaster Risk Management, 7-9 September 2012, Beijing

The Third Conference of the International Society for Integrated Disaster Risk Management (IDRiM) was held in Beijing, China. Mr Makoto Hyodo, former APFM TSU member, contributed with a presentation and according conference paper on “Roles played in various sectors in Integrated Risk Management”. He presented in a special panel on “Integrated Risk Governance and Global Change”, further promoting the IFM concept. Special emphasis was put on the role the IFM HelpDesk and the need for an integrated approach in flood management with regard to the role of international flood initiatives in risk management. Presentation material and focus of the presentation was developed in close cooperation between Mr Hyodo and TSU.

14th Session of the WMO Technical Commission for Hydrology (CHy), Geneva, 6 -14 November 2012

The fourteenth session of the Commission for Hydrology (CHy) was convened from 6 to 14 November 2012 at the World Meteorological Organization (WMO) Headquarters, Geneva, Switzerland. A total of 151 participants attended the session, representing 51 member countries and territories of WMO and nine international organizations.

The Commission specifically recognized the substantial achievements made through the Associated Programme on Flood Management (APFM) and commended the operationalization of the demand-based outreach strategy of the IFM HelpDesk. It suggested APFM to consider documenting the implementation of flood management practices especially in developing countries. The Commission appreciated the wide scope of the target audience of APFM, reaching beyond National Meteorological and Hydrological Services while fully integrating these in the activities of APFM. It was recommended that APFM continues promoting its activities to increase field effectiveness and to attract resources for its activities.

The contribution of APFM to the planned Coastal Inundation Forecasting Demonstration Project (CIFDP) was recalled and efforts were noted to develop a field demonstration project on coastal flood management. During its deliberations, the Commission welcomed the initiative of Italy to further contribute to the Flood Forecasting Initiative (FFI) of WMO and APFM activities by providing the DEWETRA system for real-time weather-related risk monitoring and warning.

During the session, the Commission approved a resolution on the establishment of an Integrated Drought Management Programme (IDMP) that will be developed along the successful example of APFM.



FLOODrisk 2012 Conference, Rotterdam, The Netherlands, 20-22 November 2012

At the 2nd European Conference on FLOODrisk Management, held in Rotterdam, the Netherlands from 20 to 22 November 2012, APFM was provided the opportunity to support the conference as an exhibitor. Co-organized by Deltares, HR Wallingford, Samui and Flood Control 2015, a total number of 20 exhibitors were present at the exhibition.

More than 500 participants attended the conference, coming from 37 different countries from all regions of the world. The conference was targeted on challenges in flood risk management and facilitated the discussion between policy makers and scientists. Major focus was therefore laid on science-policy interfacing, research agendas and lessons learned from recent flood events. In this context, 34 technical sessions, 13 special sessions and four plenary sessions, as well as three poster sessions were attended. Participants of the special sessions debated on the applicability of new technologies in small, interactive workshops, for example, on serious gaming and decision support systems. APFM presented, in one of the poster sessions, the poster titled "Achievements of APFM and its support interface HelpDesk" and furthermore informed about the pilot projects and new Tools currently under development.

The exhibition constituted an essential part of the conference, at which APFM was present with a booth informing about its fields of activities and future projects. The booth provided an excellent opportunity to meet people, establish new contacts and coordinate with partners to discuss ongoing activities. A wide range of APFM materials were disseminated, including CDs, Concept Papers, Policy Series, Training materials on Integrated Flood Management as well as information on the Global Framework for Climate Services (GFCS). A number of visitors requested for subscription to the APFM Newsletter.

The next European Conference on FLOODrisk Management is scheduled in 2016.

Workshop on the UNESCO / WMO International Flood Initiative, Paris, 7-8 February 2013

A workshop on the UNESCO / WMO IFI was held at the UNESCO Headquarters in Paris, France. The main objective had been to plan IFI activities for the near future, and prepare what was presented at UN Special Thematic Session on Water and Disaster side event on 5 March 2013 in New York. In conjunction with the water-related work programme of WMO and the specific objectives of the APFM, an IFI flagship project was conceptualized to support benchmarking flood risk reduction at global, national and local levels. The project aims to develop standardized methodologies to identify flood hazards, as well as benchmarking and creating risk and risk profiles to facilitate decision-making and monitoring for flood risk reduction.

United Nations Special Thematic Session on Water and Disasters and its side event, New York, 5-6 March 2013

Prior to the UN Special Thematic Session on Water and Disasters on 6 March, a technical discussion on key topics on water and disasters was conducted as a Side Event of the Special Thematic Session on 5 March, 2013. The Side Event facilitated a common understanding and shared vision on key topics on water and disasters, leading to enhanced awareness and deepened discussion in the Special Thematic Session. A presentation was made by UNESCO and WMO on the International Flood Initiative (IFI) successes and future plans.

Global Platform on Disaster Risk Reduction, Geneva, 19-23 May 2013

Within the overall goal to improve implementation of disaster risk reduction, the GPDDR constitutes a critical forum for information exchange, discussion of latest development and knowledge and partnership building across sectors. Its Fourth Session, taking place in Geneva, Switzerland, aims to continue the momentum of the prior Global Platform meetings and to seize the opportunity to progress on the Hyogo Framework for Action (HFA). APFM contributed to the Global Platform by attending numerous sessions and events featured by WMO. Information material was distributed at WMO's booth throughout the meeting and APFM staff was present to inform about and promote its activities in flood risk reduction and to enhance linkages with participants and other stakeholders. GPDDR provided a great opportunity to meet with partners and consultants and to establish new linkages with other organizations and NGOs.



2.8.3. Articles and outreach materials

Scientific paper

The Third Conference of the International Society for Integrated Disaster Risk Management (IDRiM) was held in Beijing, China, in September 2012. Mr Makoto Hyodo, former APFM TSU member, contributed with a presentation and according conference paper on “Roles played in various sectors in Integrated Risk Management”. Special emphasis was put on the role the IFM HelpDesk and the need for an integrated approach in flood management with regard to the role of international flood initiatives in risk management. The International Association of Hydrological Science (IAHS) released in February 2013 a new publication “Floods – From Risk to Opportunity,” which is the volume of papers selected from the 5th International Conference on Flood Management (ICFM5) in 2011. Mr Masahiko Murase, former APFM TSU member contributed the paper “Risk Sharing in Practice for Integrated Flood Management” to this publication with support from APFM TSU.

APFM Poster

In order to participate in the poster session of the FLOODrisk 2012 conference in Rotterdam, APFM developed a new A0 size poster which succinctly introduces the concept of IFM, the achievements of APFM and IFM HelpDesk, and its planned activities.

New APFM CD

A new version of the APFM CD, normally distributed during trainings, workshops or other events, has been developed. The official APFM CD is continuously being updated to ensure that the latest achievements and publications from APFM and related guidelines/manuals from WMO will be available. The last version has been developed in August 2012, whereas the next updated CD will be available in July 2013 including the recently developed publications. The CD is attached as Sub-material V (d).

New Tool Series Design

In support of the implementation of the APFM communication strategy and endorsed by the AC/MC meeting 2012 to improve readers’ assimilation of APFM publications and therefore maximize their impact, a complete redesign and re-layout of the IFM Tool Series has been finalized within the reporting period. The new layout follows the WMO Corporate Visual Identity Guidelines. The Tools already containing the new layout are attached as Sub-material II.

2.8.4. Website

During the Phase I of APFM, the APFM website was established as the central access point for information on flood management. All publications and materials produced, as well as the flood management reference centre, were made available on the website. Since its launch in December 2004, the number of website visits has shown the upward trend in general. However, the annual average number of visits decreased from 271 visits/day in the last reporting period to 240 visits/day in this period. The new APFM website is expected to contribute to the increase of visit numbers.

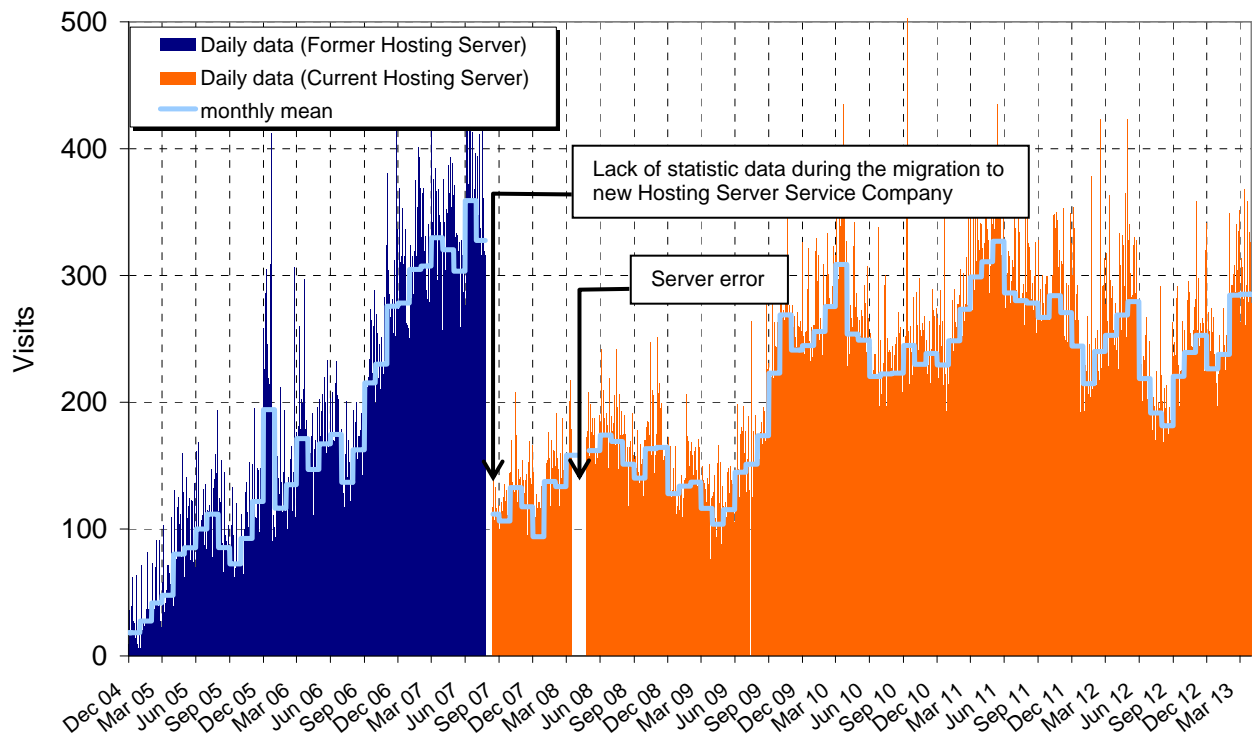


Figure 1: APFM Web Visits (from 1 December 2004 to 31 March 2013)

Migration of website

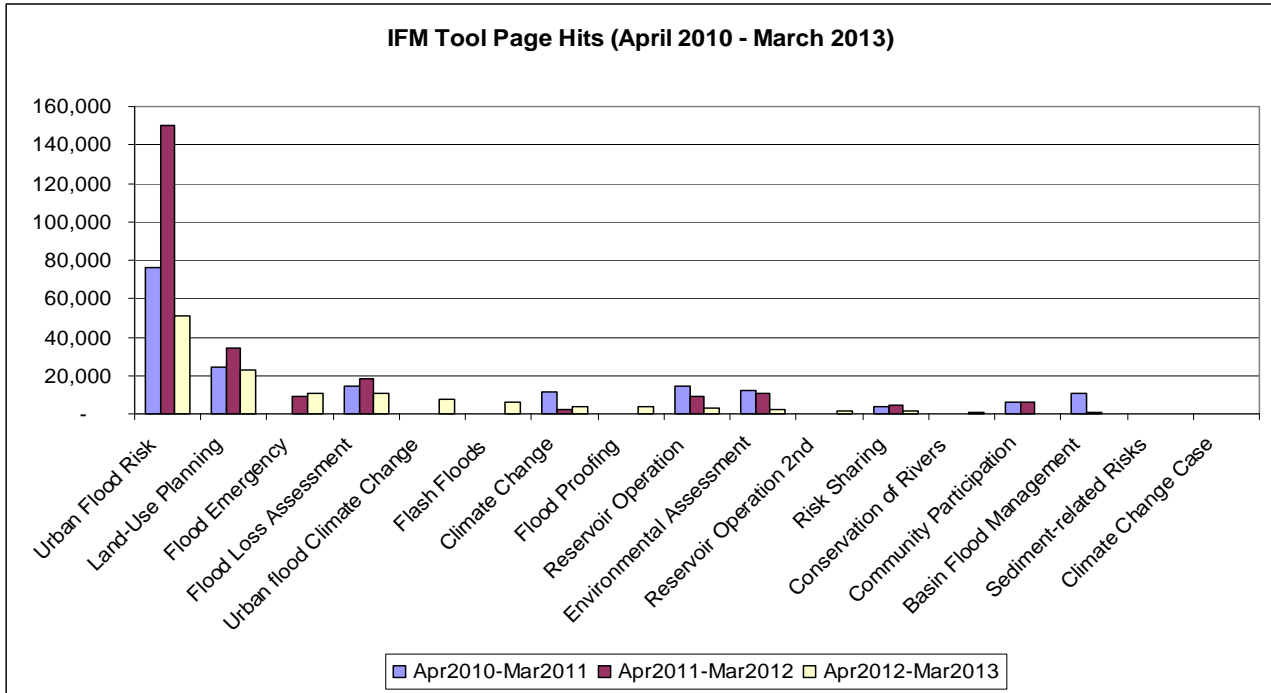
The migration of the APFM website has been initiated. The website has been migrated from the former web hosting provider DFi, and the website maintenance support company GoldenNet, to Infomaniak. The new website has included GoogleAnalytics to keep track of web visits and demand of publications.

The main reasons of the migration were the following:

- Security issues – former web hosting provider (DFi) not recommended by WMO security standards;
- new design to ensure an intuitive and user-friendly platform;
- entirely revised architecture to better maintain and update content both in short and long term;
- higher flexibility in terms of communication, promotion and inclusion of new technologies;
- better backup and assistance with the new web provider in terms of “self-assist” options and hotline help, and reduced fees compared to the previous GoldenNet services.

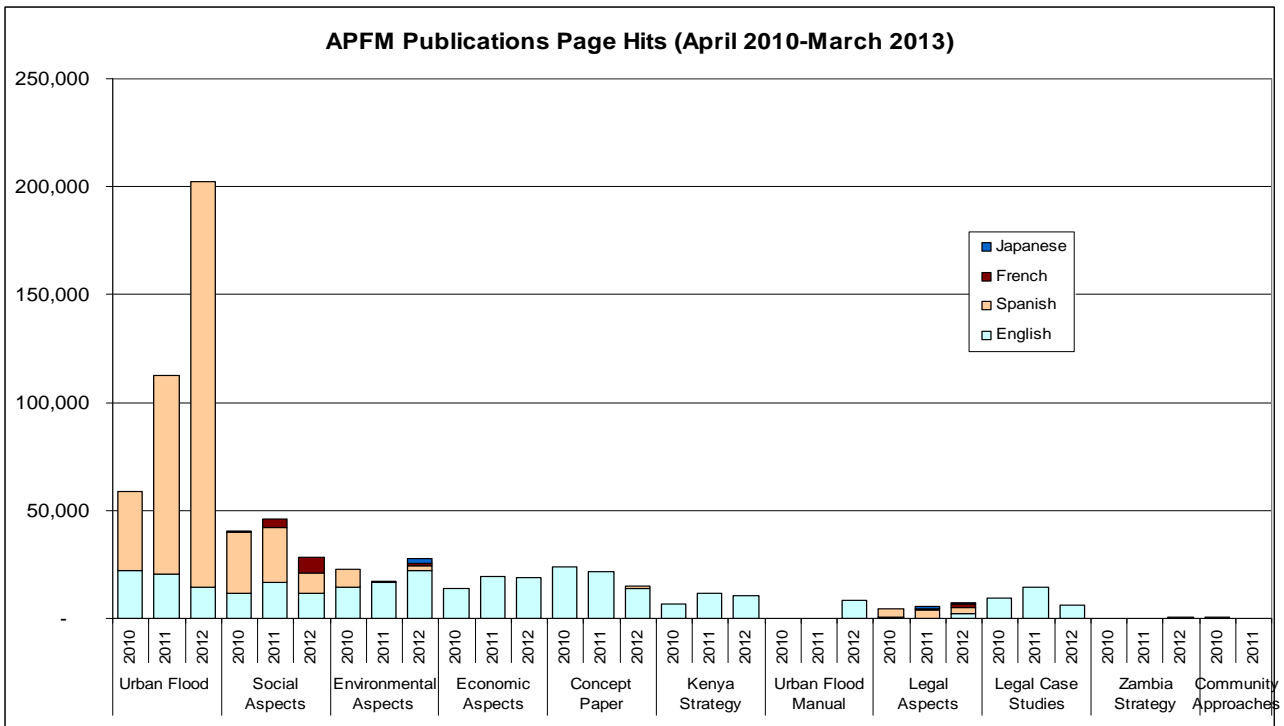
Usage of APFM Publications on Website

The number of web page hits for the past three years is summarized below regarding nine IFM Tools published before April 2010, four in 2011 (*Flood Emergency, Sediment-related Risks, Climate Change Case Studies, and Reservoir Operation 2nd*), and four in 2012 (*Urban Flood Climate Change, Flood Proofing, Flash Floods, and Conservation of Rivers*). According to the record, “Urban Flood Risk” Tool (2008) has been by far the most read material followed by “Land-Use Planning” Tool (2007). This tendency remained the same for the past three years. Although the number of Tool publication is steadily increasing, the total number of Tool page hits in this reporting period (127,000 hits) is lower than the previous two periods (174,000 hits and 245,000 hits).



NOTE: Because these page hits are counted based on the top 30 top webpage hits every month, it is not possible to quantify precise number of hits for all publications.

Regarding other APFM publications except IFM Tools, “Urban Flood” management manual and “Social Aspects” policy series are the most widely read material. In addition to the original English edition, Spanish translations are also referenced by many readers; however other-language editions are hardly used. With regard to the Pilot Project in the Dniester Basin, the newly Russian version of the IFM Concept Paper was highly demanded at the undertaken workshops and meetings.



NOTE: Because these page hits are counted based on the top 30 top webpage hits every month, it is not possible to quantify precise number of hits for all publications.

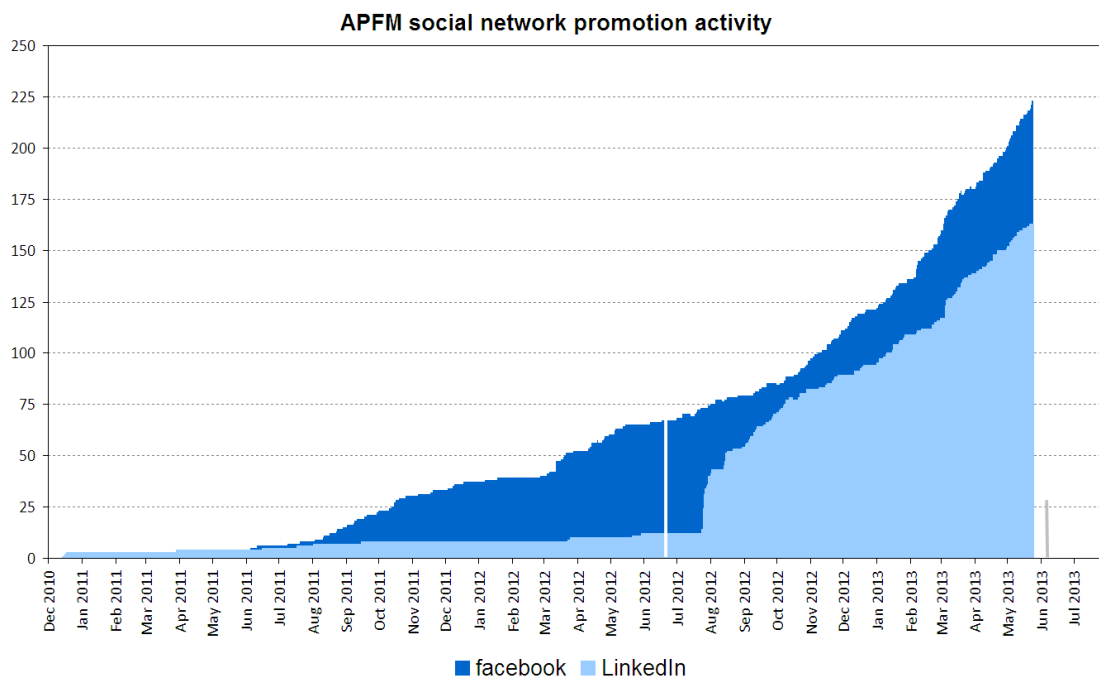


2.8.5. Social Networks

In the framework of the communication strategy, APFM profiles on social networks, such as facebook and LinkedIn, were further developed and updated. Target groups and the way of communicating to and with the audience differs from network to network. In general, the APFM profiles inform about most recent activities of the APFM, news in the field of integrated water resources management related to floods, newest tools or publications related to integrated flood management, as well as activities of the Global Water Partnership and SBPs.

Both have become a valuable path for promoting the IFM concept and the HelpDesk, not only to the wider public, but also to other organizations, or companies involved and interested in flood management. Close connection via social networks have been established with the pages of UN-organization, water partnerships and networks, NGOs and national projects. Requests received were so far categorized as rapid guidance requests or facilitated new contacts. By establishing new contacts and informing about upcoming events, social networks will support meetings, workshops and conferences in the future, both prior and after the event.

The number of subscribers to the social networks of APFM increased within the reporting period of 2012/13. Facebook noted a number of 223 subscribers (2012: 67), the LinkedIn network has shortly after the previous AC/MC meeting started and now has a number of 163 subscribers (2012: 12). The figure below visualizes this development (white and grey columns represent last AC/MC meetings).



Social networks, particularly facebook, keep detailed track of the disseminated message. The highest impact of the APFM network since its launch came with the announcement of the “Training workshop on IFM, Flood Forecasting and Early Warning” (April 2013) in Turkey, which reached more than 1850 people. This number is a result of many subscribers re-posting the initial message, and thus distributing the message.



2.8.6. Dissemination of publications

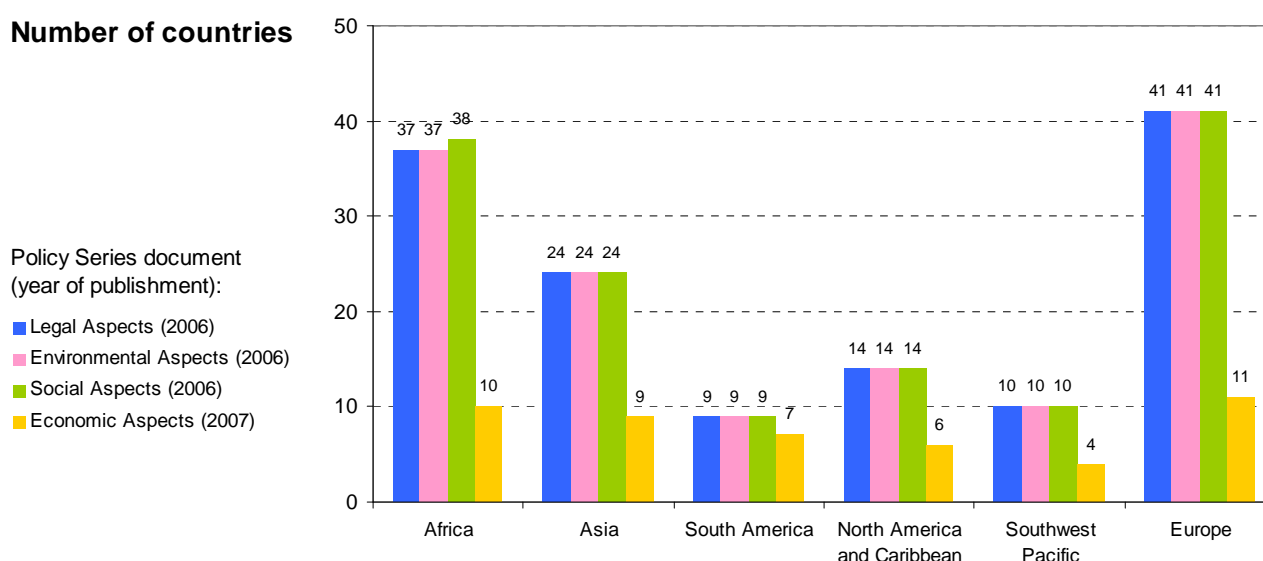
During the reporting period, publications were delivered and distributed upon request of NGOs and government organizations. A total of 1,040 APFM CDs, mainly “old” versions including all APFM website contents, were distributed from April 2012 to March 2013 on the occasion of various training, conferences, exhibitions, etc. At the international conferences and workshops, sample copies are displayed, and requests from interested parties are collected and fulfilled upon return of TSU to the WMO headquarters. This reduces waste of resources both in terms of printed publications and in transport charges. The following table shows the number of countries reached, and copies dispatched for the reporting period and since their launch.

| | Number of countries reached | | Number of copies dispatched | |
|---|-----------------------------|--------------------|-----------------------------|--------------------|
| | Apr2012-Mar2013 | Total since launch | Apr2012-Mar2013 | Total since launch |
| Legal and Institutional Aspects of IFM (2006) | 10 | 135 | 137 | 1623 |
| Environmental Aspects of IFM (2006) | 11 | 135 | 138 | 1708 |
| Social Aspects and Stakeholder Involvement in IFM (2006) | 9 | 136 | 136 | 1647 |
| Economic Aspects of IFM (2007) | 9 | 47 | 128 | 822 |

A detailed inventory of the publications in stock has been done during the reporting period. The inventory list is available as sub-material V (g).

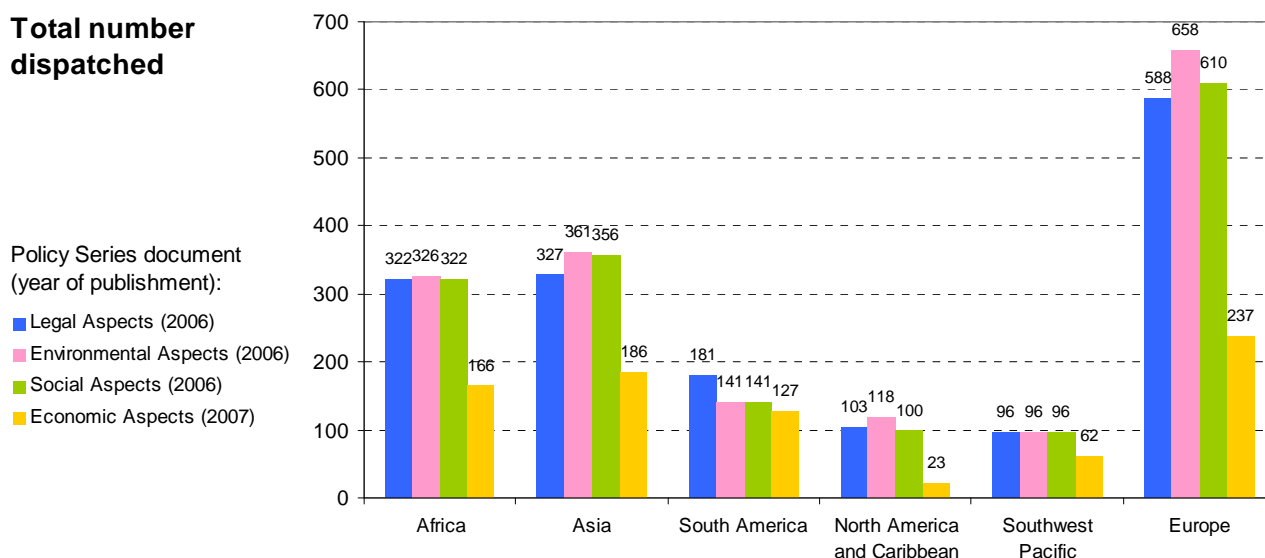
Dissemination of flood management Policy Series (since their publication, status: March 2013)

1) Number of countries reached



2) Number of publications dispatched

Total number dispatched



2.8.7. Contacts with Regional and Country Water Partnerships

The APFM is revitalizing contacts with GWP Regional Coordinators and Country Focal Points, with the objective not only to strengthen existing linkages, but also to launch new collaboration with local offices. The idea behind this communication drive is that, drawing inspiration from previous activities; Country Water Partnerships could develop original projects as well as export successful ideas from other regions and states. By contacting regional coordinators in particular, APFM aims to give a boost to the enactment of transboundary programmes, which are essential for an effective management of floods in basins shared by multiple countries.

At the beginning of April 2013, a general letter was sent to all 13 Regional Coordinators and Secretariats along with 80 Country Focal Points. It briefly introduced the mission and activities of the APFM, while soliciting engagement in the promotion of Integrated Flood Management at regional and national level. Following on from the several positive answers, it was possible to establish a personalized correspondence with interested countries, informing them more in detail of past and ongoing initiatives in their territories. Although the process is still in its starting phase, it holds great promise for building new constructive cooperation. A second attempt to get in touch with the non responding regions and countries will be considered in the next months.

Hereunder a table is given to summarize the progression of communication and response until end of May 2013.

| Regional Coordinators | | | |
|-----------------------|-----|--------------|--------|
| LETTER | RWP | READ RECEIPT | ANSWER |
| General letter | 13 | 4 | 1 |

| Country Focal Points | | | |
|----------------------------|-----|--------------|--------|
| LETTER | CWP | READ RECEIPT | ANSWER |
| General letter | 80 | 10 | 17 |
| First personalized letter | 15 | 2 | 8 |
| Further exchange of e-mail | 2 | | |



2.9 IFM HELP DESK

2.9.1. Institutional arrangements and mechanism for the IFM HelpDesk

The TSU places continuous emphasis on the establishment and consolidation of the support base of the IFM HelpDesk, the partner institutions expected to actively support the operation of the IFM HelpDesk. The formal process of becoming an IFM HelpDesk Support Base Partner is signing a “Letter of Engagement (LoE).” The first LoE was signed in August 2008 and 21 institutions have signed as of May 2013. This year, APFM has renewed LoE with eight SBPs maintaining 100% retention, and a new LoE was signed with the NGO Zoi Environment Network. At the time of LoE renewal, the areas of mutual interest with the SBPs have been reviewed and amended based on the 2012 SBP survey result on mutual consent between SBP and WMO. The current list of IFM HelpDesk Support Base Partners and LoE validity date is shown below:

| | SBP NAME | WMO REGION | DATE OF SIGNATURE | Validity Date | |
|----|---|------------------------|-------------------|---------------------------|--------------|
| | | | | Initial date | Renewed date |
| 1 | The Stockholm International Water Institute (SIWI) | VI (Europe) | 18-Aug-2008 | 17-Aug-2012 | 16-Aug-2016 |
| 2 | CAP-NET/UNDP | I (Africa) | 19-Mar-2009 | 18-Mar-2013 | 17-Mar-2017 |
| 3 | DELTARES | VI (Europe) | 19-Mar-2009 | 18-Mar-2013 | 17-Mar-2017 |
| 4 | The International Association of Hydrological Science (IAHS) | VI (Europe) | 19-Mar-2009 | 18-Mar-2013 | 17-Mar-2017 |
| 5 | UNESCO-IHE Institute for Water Education | VI (Europe) | 19-Mar-2009 | 18-Mar-2013 | 17-Mar-2017 |
| 6 | International Center for Water Hazard and Risk Management (ICHAHM) | II (Asia) | 21-Mar-2009 | 20-Mar-2013 | 19-Mar-2017 |
| 7 | EuroAqua Consortium – Sophie Antipolis University | VI (Europe) | 25-Mar-2009 | 24-Mar-2013 | 23-Mar-2017 |
| 8 | Korea Water Forum | II (Asia) | 9-Jun-2009 | 8-Jun-2013 | |
| 9 | Asian Disaster Preparedness Center (ADPC) | II (Asia) | 17-Jun-2009 | 16-Jun-2013 | |
| 10 | Korea Water Resources Association | II (Asia) | 17-Jun-2009 | 16-Jun-2013 | |
| 11 | Czech Hydrological Institute | VI (Europe) | 19-Jun-2009 | 18-Jun-2013 | 17-Jun-2017 |
| 12 | Institute of River & Coastal Engineering at the Hamburg University of Technology (TUHH) | VI (Europe) | 30-Jun-2009 | 29-Jun-2013 | |
| 13 | DHI Group | VI (Europe) | 18-Aug-2009 | 17-Aug-2013 | |
| 14 | UNESCO Center for Water Law, Policy and Science – Dundee University | VI (Europe) | 18-Aug-2009 | 17-Aug-2013 | |
| 15 | UNITAR operational satellite applications programme “UNOSAT” | VI (Europe) | 18-Aug-2009 | 17-Aug-2013 | |
| 16 | Japan Institute of Construction Engineering (JICE) | II (Asia) | 7-Dec-2009 | 6-Dec-2013 | |
| 17 | Japan Water Agency | II (Asia) | 30-Apr-2010 | 29-Apr-2014 | |
| 18 | United Nations Economic Commission for Europe (UNECE) | VI (Europe) | 13-Sep-2010 | Undetermined ¹ | |
| 19 | CIMA Foundation | VI (Europe) | 5-Feb-2011 | 4-Feb-2015 | |
| 20 | Bureau of Meteorology, Australia | V (South West Pacific) | 14-Mar-2013 | 13-Mar-2017 | |
| 21 | Zoi Environment Network | VI (Europe) | 2-May-2013 | 1-May-2017 | |

NOTE: 1. Due to bureaucratic complication, not allowing them to sign the official Letter of Engagement, UNECE committed to support the HelpDesk through a letter from the director of the Water Convention. This letter does not specify the duration of the agreement.



Other potential partners, who have expressed interest in the first phase after the launch of the HelpDesk, and contributed sporadically to the HelpDesk activities, include:

- Centro de Estudios y Experimentacion de Obras Publicas (CEDEX)
- International Association of Hydraulic Research (IAHR) – active cooperation
- Nile Basin Capacity Building Network (NBCBN)
- Ramsar Convention
- UNISDR
- International Telecommunication Union (ITU)

2.9.2. Operational Status of the IFM HelpDesk

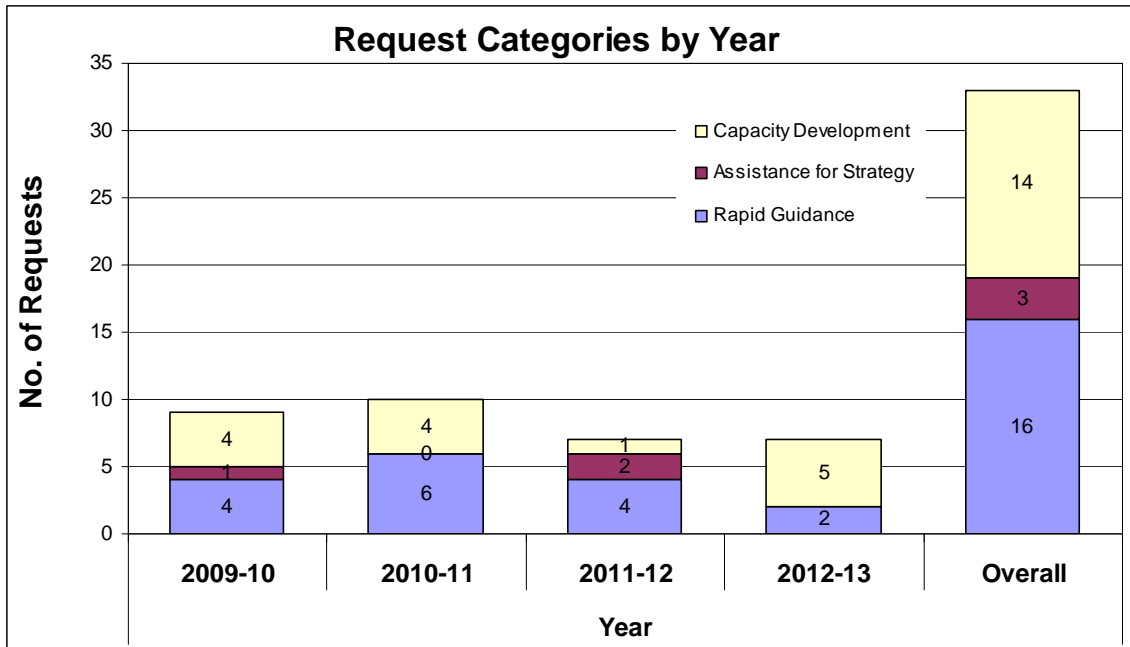
Since the official launch of the IFM HelpDesk at the UN-ISDR Global Platform on Disaster Risk Reduction on 17 June 2009, the requests for “Get Help” part and the state of response is shown in the table below. (Shaded requests were already reported at the last AC/MC). Within four years of operation, and as of March 2013, the IFM HelpDesk has received 33 requests from 23 countries.

A brief summary of the requests received through the HelpDesk in the year 2012-13 is provided in the table below. Twenty six requests made till last reporting dates from its operation were already reported in previous years (please refer to past annual reports). Details of current year request and response through helpdesk are presented in the table below. Requests are mainly come from African regions seeking support on classified categories of rapid guidance and capacity development. Off the seven requests, five have been responded while the remaining two requests require further information to response.

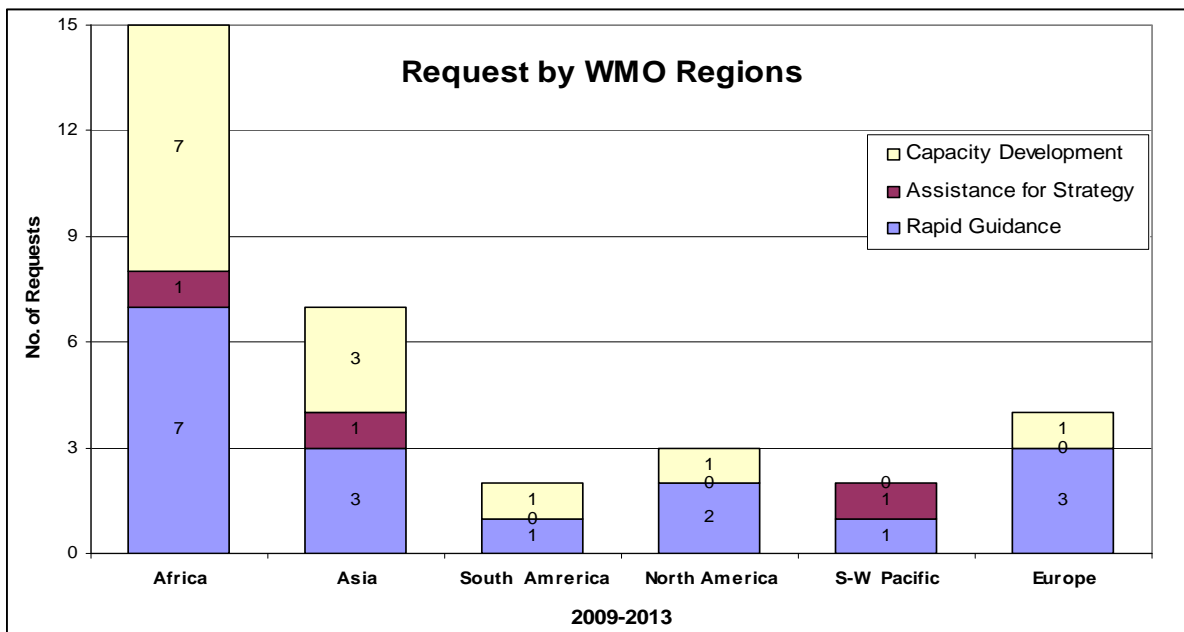
| Requests No 1-26 not displayed | | Received from 06/2009 to 03/2012 (see previous annual reports) | | Status: 22 Completed, 4 discarded, | |
|-----------------------------------|---------|--|--------------------------|---|-------------------------|
| No. | Date | Institution, Country | Category | Type of request and state of response | Status |
| 27 | 11/2012 | Department of Health, Ministry of Public Health, Thailand | Rapid Guidance | Provided requested on materials and tools on IFM | Completed |
| 28 | 11/2012 | Prolix Nigeria Limited, Nigeria | Technical supervision | Request for reviewing funding proposal to UNCRD Africa for training on National Emergency Relief | Completed |
| 29 | 01/2013 | University of Nairobi Kenya | Rapid Guidance | Request for information on WMO publications and APFM tools | Completed |
| 30 | 03/2013 | Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) Senegal | Capacity Development | Request for expert presentation in training workshop on Flood Risk Management in Dakar, Senegal | Completed |
| 31 | 03/2013 | Ambo University Ethiopia | Capacity Development | Request for fellowship to pursue master degree in flood Risk Management under UNESCO- IHE programme Referred to WMO fellowship programme | Completed |
| 32 | 03/2013 | Environment Bearers (NGO), Nigeria | Capacity Development | Request for (individual) Course on Flood Management | Clarification needed |
| 33 | 03/2013 | Prolix Nigeria Limited, Nigeria | Capacity Development | Request for training program on flood emergency planning and flood proofing | Wait for response |



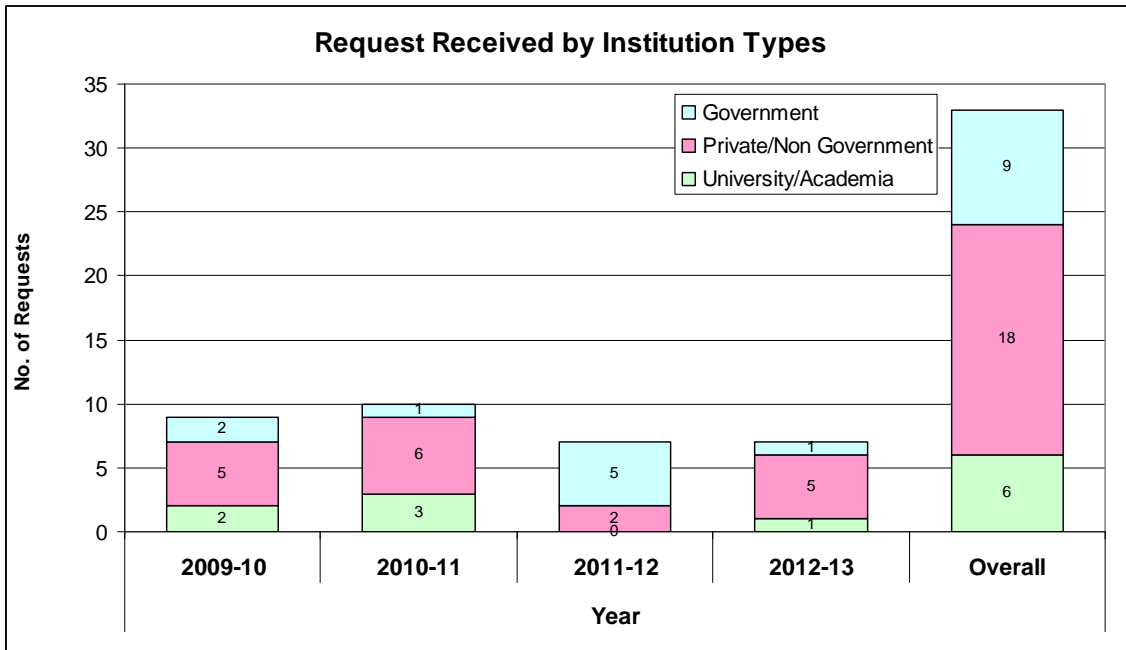
Numbers of requests received in the year 2009-10 (April 2009 to March 2010), 2010-11, 2011-12 and 2012-13 are nine, ten, seven and seven respectively. In the figures below, the requests are sorted into the three main request categories: rapid guidance, assistance for strategy and capacity building. Overall, rapid guidance requests (48%) and capacity development (42%) make up the majority of all requests received.



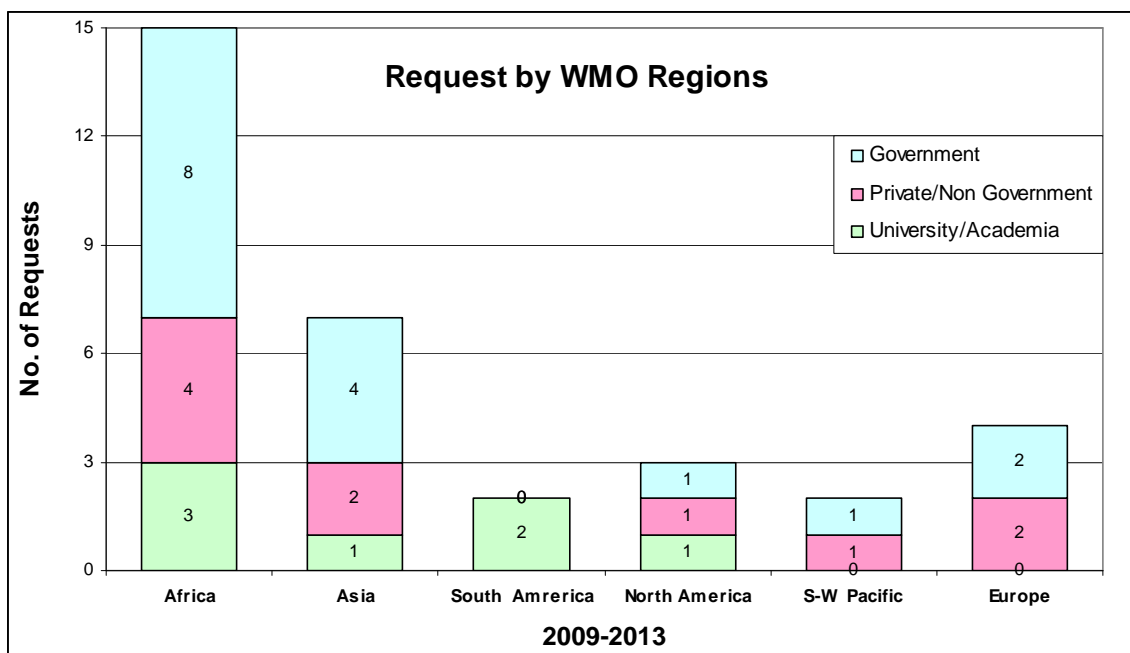
The following figure illustrates the total requests received via the IFM HelpDesk since its launch in 2009 segregated by request categories and WMO regional associations countries. Considering geographic distribution of the WMO Regional areas, APFM received the highest number of requests (45%) from RA I - Africa.



Similarly, the following figure represents the request received by type of institutions. It is noted that around 55% of the requests came from private/non-governmental organizations. The requests received from government and University/academia were 27% and 18% respectively. Nonetheless, all requests were originated from different institutions except one from private/non government institution of Nigeria made twice.



Finally, last figure below shows type of institutions submitted requests to the HelpDesk from WMO regional association member countries. This reflects a first impression on the typology of the HelpDesk users, and provides hints on where it would be possible to further develop HelpDesk's visibility to increase the APFM field of activity.



Besides the requests received through the HelpDesk, a series of other requests related to the services of the HelpDesk have been received by the TSU either through direct contacts from the requesting party, or through other WMO channels, as summarized in the following tables:



| Requests received by TSU members through direct contact | | | | | |
|--|-------------|---|-------------------------|--|-----------------------------------|
| Requests No. 1-25 not displayed | | Received from 01/2010 to 05/2012 (see previous annual reports) | | Status: 18 Completed, 7 discarded | |
| No. | Date | Institution, Country | Category | State of response | Status |
| 26 | 07/2012 | Ergo Net – USA | Rapid Guidance Request | Request for general information on IFM | Completed |
| 27 | 07/2012 | Wageningen University – the Netherlands | Rapid Guidance Request | Seeking information on delta flood mgmt for a PhD thesis | Completed |
| 28 | 09/2012 | Aon Benfield Asia Pte Ltd - Thailand | Rapid Guidance Request | Request for information about current strategy in Thailand | Completed (redirected to the TMD) |
| 29 | 09/2012 | Regione Piemonte - Italy | Rapid Guidance Request | Review of paper and terminology issues | Completed |
| 30 | 10/2012 | K-water - Thailand | Rapid Guidance Request | Request for information about current strategy in Thailand | Completed (redirected to the TMD) |
| 31 | 11/2012 | The Nature Conservancy - USA | Rapid Guidance Request | Seeking information on global expenditures to manage floods | Completed |
| 32 | 11/2012 | Nigeria Meteorological Agency - Nigeria | Assistance for strategy | no follow up from the requesting party | Discarded |
| 33 | 12/2012 | Universidad del Litoral - Argentina | Rapid Guidance Request | Looking for information on reservoir operation | Completed |
| 34 | 1/2013 | Nick Lim – Thailand | Rapid Guidance Request | Request for information about current strategy in Thailand | Completed (redirected to the TMD) |
| 35 | 02/2013 | TUHH - Germany | Rapid Guidance Request | Request for information on Social aspects of IFM | Completed |
| 36 | 02/2013 | OECD – France | Rapid Guidance Request | Request for information on economic impact of flooding | Completed |
| 37 | 04/2013 | UN-HABITAT - Uganda | Capacity Building | Request for facilitation of training session on urban flood management and technical supervision of ongoing projects | Discarded (conflicting dates) |

| Requests received by HelpDesk through other WMO divisions/departments | | | | | |
|--|-------------|---|-------------------------|--|---------------|
| Requests No. 1 to 16 | | Received from 07/2009 to 05/2012 (see previous annual reports) | | Status: 14 Completed, 2 discarded | |
| No. | Date | Institution, Country | Category | State of response | Status |
| 17 | 08/2011 | Building Resilience to Disasters in Western Balkans and Turkey | Capacity Development | See 2.6.2 | Completed |
| 18 | 10/2011 | CONAGUA - Mexico | Assistance for strategy | See 2.4 | In progress |



| Requests received through Social Networks | | | | | |
|---|----------|---|-----------------------|---|-----------|
| Requests | | Received from 06/2012 to 05/2013 | | Status: 4 Completed | |
| No. | Date | Institution, Country | Category | State of response | Status |
| 1 | Jun-2012 | Rathika Murugiah, University of Jaffna, Sri Lanka | Rapid Guidance | Request for technical support on mapping and GIS (ArcView) | Completed |
| 2 | Aug-2012 | Soil Conservation and Watershed Management Research Institute, Iran | Rapid Guidance | Request for information on flood hazard assessments, particularly intangible hazard ass. methods. | Completed |
| 3 | Aug-2012 | IFIS, Iowa University, USA | Contact Establishment | Contact established after seen a post on Flood Professionals-group on IFIS, meeting initiated | Completed |
| 4 | Sep-2012 | Bayzoo Energy Traiding, Adebayo Alao, Nigeria | Rapid Guidance | Organizations willing to train government staff on National Emergency Relief | Completed |

| Requests received through GWP | | | |
|--|---|---|---|
| Summary of the progression of communication and possible follow-up until end of May 2013 | | | |
| Country | Workshop | Pilot Project | Other |
| Bangladesh | <i>CWP Internal Consultations</i> | <i>CWP Internal Consultations</i> | |
| Benin | <ul style="list-style-type: none"> WS on flood events of Benin main rivers (Niger, Oueme, Mono) Jump-start WS on IFM in Benin, including experiences from PVRRI in Mali | | |
| Bhutan | Training on Flash Floods | | |
| Cameroon | Training of trainers | PP in collaboration with a local NGO | |
| Côte d'Ivoire | | Study about risks for the population living along main rivers and following identification of preventive actions for the mitigation of consequences | |
| Ghana | <i>(Training for management of possible spill from Volta dam. Possible partner: Volta River Authority - VRA)</i> | | |
| Mali | 3-days-WS on PVRRI, including field visit | | |
| Moldova | | | Participation to WS in Lviv, Ukraine |
| Nepal | | IFM in Lakhandehi Basin (see Concept Note) | |
| Sudan | <ul style="list-style-type: none"> Regional ToT for Nile Basin countries National workshop | Demonstration project | <ul style="list-style-type: none"> Joint national focal points National tech. committees Assessment of the legal and institutional framework Development of IFM strategy and action plan on participatory basis Periodic communication (i.e. newsletter) |
| Vietnam | <i>CWP Internal Consultations</i> | <i>CWP Internal Consultations</i> | |



2.9.3. Survey on Support Base Partners

Support Base Partners capability assessment survey was conducted in 2012-2013. The main objective of this survey is to assess the different functionalities and expertises available among the SBPs for possible collaborative venture in APFM activities. TSU circulated the “Support Base Partner’s Capability Assessment Survey-2012” assessment sheet to SBPs (SBP listed till last reporting). Twelve of them have responded. The information provided by SBPs has been used to ascertain activities of mutual areas of cooperation between SBPs and APFM while renewing LoE.

Information were sought in four main aspects of IFM i.e. legal & institution, social, environmental, and economic along with others that comprises flood assessment, modelling, mapping, forecasting and early warning, urban flood, climate change and adaptation, coastal flood, dams and reservoirs, flood preparedness, response and recovery. The information have been processed and analysed to get a picture of SBPs capacities and areas of interest for mutual cooperation between SBPs and APFM. The capabilities have been categories in following six prospects of IFM programme: overall, planning, implementation, evaluation, training and capacity building and guidance development. The outcome of this survey is presented below.



Associated Programme on Flood Management
World Meteorological Organization

Support Base Partner's Capability Assessment Survey- 2012

| IFM Aspect | Field of Activity | FOEN | DHI | EuroAqua | GWP | Ramsar | Cap-Net | IAHS | IFRC | JICE | Japan | UNESCO- | UNECE |
|-------------------------|---|------|-----|----------|-----|--------|---------|------|------|------|-------|---------|-------|
| Legal and institutional | Institutional Framework | | | | | | | | | | | | |
| | Legal Framework | | | | | | | | | | | | |
| | Flood Management Strategy | | | | | | | | | | | | |
| | Trans-boundary | | | | | | | | | | | | |
| | Land Use Planning | | | | | | | | | | | | |
| Social | IWRM | | | | | | | | | | | | |
| | Community Based Approach | | | | | | | | | | | | |
| | Risk Perception and Mainstreaming | | | | | | | | | | | | |
| | Engagement of Stakeholders | | | | | | | | | | | | |
| Environmental | Public Health Issues (disease outbreak, sanitation) | | | | | | | | | | | | |
| | Environmental Impact Assessment | | | | | | | | | | | | |
| | Strategic Environmental Assessment | | | | | | | | | | | | |
| Economic | Conservation of Ecosystems | | | | | | | | | | | | |
| | Economic Analysis (general) | | | | | | | | | | | | |
| | Economic Analysis (Ecosystem Services) | | | | | | | | | | | | |
| Others | Flood Insurance and Risk Sharing | | | | | | | | | | | | |
| | Flood Risk Assessment | | | | | | | | | | | | |
| | Flood Modeling | | | | | | | | | | | | |
| | Flood Mapping | | | | | | | | | | | | |
| | Flood Forecasting and Early Warning | | | | | | | | | | | | |
| | Urban Flood Management | | | | | | | | | | | | |
| | Climate Change and Adaptation | | | | | | | | | | | | |
| | Coastal Flood Management | | | | | | | | | | | | |
| | Dams and Reservoir | | | | | | | | | | | | |
| | Flood Preparedness | | | | | | | | | | | | |
| | Flood Response | | | | | | | | | | | | |
| | Flood Recovery | | | | | | | | | | | | |
| Others (please specify) | | | | | | | | | | | | | |

Note: Number and Color Coding for phase wise Capacities

| | |
|------------------------------|--|
| Overall | |
| Planning | |
| Implementation | |
| Evaluation | |
| Training & Capacity building | |
| Guidance Development | |



2.10 FINANCIAL SUPPORT AND PERFORMANCE

The financial statement of the APFM Trust Fund with income and expenditure from April 2012 to March 2013 is summarized below.

2.10.1. Financial support

During the reporting period 2012-13, CHF 228,608 was contributed by Japan, CHF 100,000 by Switzerland, and CHF 120,900 by USAID to APFM as a direct financial support. In addition, Switzerland and Germany contributed to APFM activities through in-kind support.

Contribution from Japan

| | | | | |
|-----------------------------|------------|----------------|------------------|-------------|
| 1 st instalment: | CHF | 169,274 | (JPY 14,000,000) | 25 Oct 2012 |
| 2 nd instalment: | CHF | 59,334 | (JPY 6,000,000) | 25 Mar 2013 |
| | CHF | 228,608 | | |

Contribution from Switzerland

| | | | |
|---|------------|----------------|---------------|
| 2 nd instalment for 2011-12: | CHF | 30,000 | 10 Aug 2012 |
| 1 st instalment for 2012-13: | CHF | 70,000 | 12 Dec 2012 |
| | CHF | 100,000 | ^{*1} |

Contribution from USAID

| | | | | |
|-----------------------------|------------|----------------|---------------|------------|
| 1 st instalment: | CHF | 120,900 | (USD 130,000) | 6 Mar 2013 |
|-----------------------------|------------|----------------|---------------|------------|

| | | |
|----------|-----|-------|
| Interest | CHF | 1,466 |
|----------|-----|-------|

| | | | |
|---------------------|------------|----------------|---------------|
| Total Income | CHF | 450,974 | ^{*1} |
|---------------------|------------|----------------|---------------|

After receiving the last instalment from Switzerland (CHF 30,000), the total contribution during this reporting period amounts to CHF 450,974 (CHF 228,608 from Japan + CHF 100,000 from Switzerland + CHF 120,900 from USAID + CHF 1,466 interest).

2.10.2. Financial performance

Expenditure and income for the reporting period 2012-13 are presented in the table below. In total, an expenditure of CHF 463,105 has been incurred over the income of CHF 450,974 (all contributions plus interest). The difference (CHF 12,131) between income and expenditure was supplemented by the balance of APFM fund carried over from the last period. The table also indicates the comparison of the two accounting methods by APFM and by the Finance Division of WMO. The financial statement below prepared by the Finance Division shows the total income recorded as CHF 466,024 and the expenditure as CHF 443,454. The differences between the two accounting methods are also shown in the table and explained below.

| | APFM Calculation | Financial Statement | Difference |
|---|------------------|---------------------|--------------|
| Balance as at 1st April 2012 | | CHF 523,507 | |
| Total income | CHF 450,974 | CHF 466,024 | - CHF 15,050 |
| Total expenditure | CHF 463,105 | CHF 443,454 | CHF 19,651 |
| Balance as at 31st March 2013 | | CHF 546,077 | |

¹ Number does not include the last instalment from Switzerland after 31/03/2013.



The new WMO accounting system (IPSAS) introduced in 2010 registers a contribution at the time of pledge and also regards obligation of spending as expenditure. The income difference (- CHF 15,050) between APFM calculation and the financial statement is accounted for by exchange rate adjustment in the contributions from Japan. When APFM receives the contribution, the pledged contribution amount is kept as it is in the IPSAS system. Instead, the same amount of exchange difference is deducted from the expenditure. The expenditure difference (CHF 19,651) derives mainly from the different timing of recording expenditure, that is, at the time of obligation in the IPSAS system or at the time of payment in APFM calculation. Because some of expenditure items were already regarded as expenditure at the state of obligation in the previous reporting period, the financial statement shows the smaller amount of total expenditure than APFM calculation.

**TRUST FUND FOR
ASSOCIATED PROGRAMME FOR FLOOD MANAGEMENT
STATEMENT OF INCOME AND EXPENDITURE
FOR THE PERIOD 1 APRIL 2012 TO 31 MARCH 2013
(amounts expressed in Swiss Francs)**

| | | | | | |
|--|-----|---------|-------|--|---------|
| 1. Balance as at 1 April 2012 | | | | | 523,507 |
| 2. Income (contributions + interest): | | | | | |
| 2.1 Contributions | (a) | | | | |
| 2.2 Interest | (b) | 464,558 | | | |
| 2.3 Total Income | | | 1,466 | | 466,024 |
| 3. Total funds available | | | | | 989,531 |
| 4. Expenditure | (a) | | | | 443,454 |
| 5. Balance as at 31 March 2013 | | | | | 546,077 |

(a) Data during the period 1 January to 31 March 2013 is provisional, as the three months had not been closed financially at the time this report was compiled.

(b) Effective 1 January 2010, the World Meteorological Organization implemented International Public Sector Accounting Standards (IPSAS), which requires, inter alia, that pledged income be recognized as income. To the extent there were pledges of contributions to this Fund during the twelve-month period on which the report is based, the total contributions of CHF 464,558 include such pledges.

Certified correct:

Luckson Ngwira
Chief, Finance Division
1 May 2013



2.10.3. Contributions from WMO, donors, and partners

Along with the APFM Trust Fund, the APFM activities were supported from WMO regular budget and the other trust funds. The personnel costs of three TSU staffs were financed not by APFM but by WMO and the Governments of Germany, as shown in the table below. Regional training workshop in Turkey was supported directly from WMO regular budget (CHF 4,022). Staffs in the Hydrology and Water Resources Branch, Climate and Water Department, WMO also support APFM-related activities, such as training and pilot projects.

Contribution from WMO and Germany to APFM (2012 June - 2013 May)

| Period | Personnel/Activity | Source | Contribution |
|-------------------------------|---------------------------------------|------------------------------------|----------------------------------|
| In-kind Contribution | | | |
| Jun-May | Head of Technical Support Unit (TSU) | Climate and Water Department (CLW) | 6 Man-Month (MM) =129,000 CHF |
| Jun-April | TSU Staff | CLW | 5.5 MM =85,000 CHF |
| Jun-May | TSU Staff | Germany | 12 MM =145,000 CHF |
| Financial Contribution | | | |
| April | Regional Training Workshop in Antalya | CLW | Staff participation 4,022 CHF |

Note: The personnel costs are estimated based on 2012-2015 WMO standard staff costs in July 2010.

When workshops and conferences are organized, APFM often asks for the participation of partners (donors, SBPs, etc.) as speakers or resource persons. Such contributions from partners for the past year are listed in the following table.

Contribution from Partners to APFM (2012 June - 2013 May)

| Month | Activity | Partners | Contribution from Partners |
|----------|---------------------------------------|----------|----------------------------|
| June | ACMC meetings in Geneva | GWP | 3 persons |
| | | MLIT | 1 person |
| | | JICE | 1 person |
| | | FOEN | 1 person |
| | | USAID | 1 person |
| | | CHy | 2 persons |
| | | GMS | 1 person |
| | | DHI | 1 person |
| | | Italy | 1 person |
| | | TUHH | 1 person |
| | | IAHS | 1 person |
| | | IHP-HWRP | 1 person |
| | | Deltares | 1 person |
| | | CIMA | 1 person |
| UNECE | 2 persons | | |
| April | Regional Training Workshop in Antalya | Ramsar | 1 person |
| April | Regional Training Workshop in Antalya | CIMA | 2 persons |
| Dec-May | IFM Tool on Coastal Flood Management | Deltares | Developing the Tool Draft |
| On-going | Tutorial on Climate Change and IWRM | Cap-Net | Translation costs |



3. ACTIVITY PLAN FOR THE PERIOD 2013/2014

3.1 POLICY SERIES AND IFM TOOLS

TSU will continue to develop and finalize the following Tools – find according information on the stage of each document in section 2.2.

- Flood Mapping
- Effectiveness of Flood Management Measures
- Effectiveness of Flood Management Measures (Case Studies)
- Health and Sanitation Aspects of Flood Management
- Role of the Media in Flood Management

It is understood that except for the first 2-3 tools, the other proposed new tools will be started but not finalized in the period 2012/2013.

3.1.1. Flood Mapping

Further input and review was offered by the two Support Base Partners UNOSAT and CIMA Research Foundation; contacts have also been established with UN-SPIDER who proposed support towards July 2013.

3.1.2. Effectiveness of Flood Management Measures

The provided draft of the document needs further input. Coordination between and support from both the consultant and the TSU will continue in the reporting period. After finalization of the Tool, the identified evaluation and assessment measures and indicators will be transferred and tested in selected areas and countries. Literature review and collection of related material is ongoing with the reporting period of 2012/13. The outcomes will be collected in another Tool on the “Effectiveness of Flood Management Measures – case studies”.

3.1.3. Health and Sanitation Aspects of Flood Management

There is a lack of knowledge on how to assess the environmental and health effects associated with exposure to the often complex chemical and biological contamination of water and soil that can follow floods.

Water supply and sanitation are crucial determinants of health, especially during emergencies, but failing or compromised water and sanitation services may in themselves pose a risk, and a source of contamination, the impact of which reaches beyond local and national borders. This tool will provide an overview on why and how flood management practices should consider the vulnerability of water supply and sanitation facilities and new risk elements for health and environment arising from water services management during floods.

3.1.4. Role of the Media in Flood Management

According to the theory of “Social Amplification of Risk Framework”, risk perception is amplified or attenuated by filters in the communication chain of hazard events. Thanks to their intermediate position between decision makers and population, mass media can play an essential role in Integrated Flood Management, by acting as such a sieve before as well as during and after the occurrence of floods. This tool is intended to develop a constructive approach toward media, in order to effectively involve them in all phases of the management process, from prevention and awareness raising, to emergency warning, to relief measures and restoration. To achieve this goal, it is suggested that flood managers deploy, in close cooperation with their media partners, a comprehensive Communication Strategy, including a Communication Plan, a Dissemination Plan and an Ex-Post Evaluation.



3.2 NATIONAL AND REGIONAL SUPPORT ACTIVITIES

3.2.1. Iowa State

In the framework of the project proposal developed with the Cedar River Basin Coalition, aiming at the development and implementation of an IFM strategic framework plan for Iowa, an exploratory mission towards formulation of an IFM strategy is scheduled to take place in autumn 2012. The mission will consist in a high level meeting, organized under the coordination of the local UNESCO-Help centre' counterpart, to further decide on the implementation of the IFM strategic framework plan for Iowa,.

3.2.2. Thailand and Lao PDR

Consultations are ongoing with both countries with the objective to develop Flood Management Action Plans on the basis of the workshop results. These Action Plans need to be embedded in national flood management plans. As this had taken more time than anticipated, the Action Plans have not yet materialized and follow-up activities in the development of these Action Plans are envisaged for the upcoming reporting period.

3.2.3. Cambodia, Vietnam

Both countries voiced interest in principle for the conduct of workshop on the development of national flood management strategies. This could not be accomplished in the present reporting period but as consultations on actually organizing these workshops are ongoing, these activities are proposed for the upcoming period 2013/14.

3.2.4. Pakistan

APFM will continue seeking opportunities for implementation of the action plan developed for Pakistan.

3.2.5. Mali

APFM planned to provide support for the national workshop tentatively scheduled to take place in late 2012. Due to the prevailing insecurity in Mali, especially close to the project pilot area Ségou, there was no activity carried out by the ANADIA project

3.2.6. Senegal

Following a training workshop on Flood Risk Management, held in Senegal from 18-19 March, 2013, participating countries expressed interest for further consultation of APFM support. The TSU has not yet received any question, but will seek opportunities for follow-up.

3.2.7. South-East Europe

As a follow up to the workshop held in Antalya, four countries expressed interest in having national workshops (Turkey, Macedonia, Lebanon, Montenegro). Among these four, for Turkey and Lebanon activities leading to project digests for organizing the workshops leading to national strategies have already been started. APFM will continue its support to the EC-funded project.



3.3 NEW FIELD DEMONSTRATION PROJECTS TO BE PLANNED AND IMPLEMENTED

To meet the objective of APFM activities in Phase III, Field Demonstration Projects are mentioned amongst the expected outputs. It is foreseen that APFM provides technical support for on-going or planned field projects implemented by other organizations. In this context, the following three field demonstration projects are foreseen to be complemented by an APFM Tool, or – in the case of community-based approaches to flood management – with an updated tool:

Integrated Coastal Flood Management

Based on the completed Tool on Coastal Flood Management in May 2013, a project concept note will be prepared in cooperation with Deltares as SBP and consultations are planned with Bangladesh, Vietnam and potentially other countries – based on opportunities – to implement this project. This project is a contribution to the Coastal Flood Inundation Demonstration Project (CIFDP) that is being undertaken jointly by the Technical Commission for Hydrology (CHy) and the Joint Commission for Oceans and Marine Meteorology (JCOMM). Funding is being sought from USAID within the funding ceiling earmarked by USAID for APFM Field Demonstration Projects.

Community-based approaches to Flood Management

Building on the successful implementation of this project in earlier years in Bangladesh, Nepal and India, it is envisaged to extend the project to other countries. Based on the Project Concept Note developed by APFM and ADPC in December 2012, and after signing of a Letter of Agreement between WMO and ADPC in May 2013, the project has actually started in both Thailand and Lao PDR. An inception meeting is foreseen later in 2013, based on the results of the rapid assessment of capabilities and requirements to be undertaken in all participating communities in both countries before and during the upcoming monsoon period. Further implementation is foreseen to take place as outlined in the Concept Note of the project. Duration of the project is envisaged to be 30 months. Funding is provided through USAID.

Transboundary Flood Management

Based on the completed Tool on Transboundary Flood Management in May 2013, a project concept note is currently under preparation by WMO in close cooperation with ZOE as new SBP. The project is planned to be implemented in the Dniester River Basin, shared between the Ukraine and Moldova and will focus on information sharing and data exchange, capacity building on flood modelling and mapping, and community services especially related to flood warnings. Funding is being sought from USAID within the funding ceiling earmarked by USAID for APFM Field Demonstration Projects.



3.4 CAPACITY DEVELOPMENT

3.4.1. Development of training material

Vocational training materials together with Cap-Net

The “Collaborative Work Programme” of Cap-Net and WMO on Integrated Flood Management would be updated for the activity after 2012 on the allocation of activities and budget expected after the AC/MC Meetings. This program will focus on jointly organized, ad-hoc demand-driven capacity building workshops. The development of IFM Training Material in the framework of collaboration with Cap-Net will be carried on and finalized undertaken on two topics for different target groups, such as on a Policy Course on IFM, and on a community flood management course. However, the cooperative program needs to be renewed in the next reporting period.

Multimedia capacity building materials on IFM

The development of new e-learning and e-lecturing applications in collaboration with Technical University of Hamburg-Harburg will be discussed. New opportunities might come up in light with the proposed PEARL project. Links of existing e-learning will be continued to be linked to the APFM website.

Contacts with MetaMeta need to be re-established. The proposal to jointly develop a flood related multimedia platform needs be further discussed and concretized, in view of a dedicated section in the new APFM website.

Contacts have been established to contribute to a script of a movie by the Franco-German TV network ARTE on methodologies of coastal flood management. Case studies could be used for presentation of such methodologies. The movie would provide an opportunity to increase visibility of the IFM concept, the HelpDesk, the Support Base Partners SBPs to a larger community

Educational programme for kids and wider public

The joint development of a module on flood management in the framework of the already developed e-learning platform for kids www.discoverwater.org could be further discussed and implemented.

3.4.2. Training courses

Argentina & Cuba

Following the training workshop held in Paraguay in October 2011, one of the facilitator, Prof. Carlos Paoli from Argentina, managed to promote the activity among the Ministry of Water, Public Services and Environment in the Provincial Government of Santa Fe, Argentina. After a training workshop in November 2012 at the Universidad Nacional del Litoral in Santa Fe, the university is interested in becoming a SBP for the IFM HelpDesk and to facilitate another training on IFM.

Through Argentinian contacts, and the network of CapNet, there is an opportunity to contribute in an exchange programme between Cuba and Argentina in early 2014, which could form as an entry point to introduce the IFM concept in Cuba.

Colombia

A first contact with UNOCHA in Bogotá has been established by TSU. UNOCHA is often facing problems related to humanitarian crisis rising from flood events in Colombia, and a first overlook on the major APFM publications (concept paper and policy series) has confirmed a mutual interest in cooperating in the country. Training could therefore be envisaged under the coordination at the local level of UNOCHA during the next year.



3.5 REFERENCE CENTRE DATABASE

The update of information contained in the Reference Centre Database is accelerated to include latest references and in particular including all references made in the Tools series. For this purpose, TSU will continue updating information as well as adding new information, particularly in light of the newly developed and revised Tool publications. Moreover, a selection of useful publications, policies and institutions dealing with flood management will be done through newsletters and notifications received through the APFM mailbox.

3.6 DISSEMINATION OF INFORMATION

Dissemination of information continues to be on the basis of the Communication Strategy.

3.6.1. Conferences

Participation at conferences is largely opportunity-based and prioritized in accordance with availability of resources.

Stockholm World Water Week 2013, 1-6 September

The Stockholm WWW 2013 is hosted and organized by the Stockholm International Water Institute (SIWI), Sweden. This year's World Water Week will focus on "Water Cooperation – Building Partnerships". The APFM is convening a side-event on "Stakeholders' Contribution to Drought and Flood Management", together with the recently launched Integrated Drought Management Programme (IDMP).

International Conference on Flood Resilience - Experiences in Asia and Europe, 5-7 September 2013

ICFR will be held in Exeter, United Kingdom organized by University of Exeter, the CORFU project, and supported by CIWEMA, EU's FP7, and the UK Flood Forecasting Centre. The conference also provides an opportunity to deepen and push the PEARL project (see section 2.4.7).

Deltas in Times of Climate Change II, 24-26 September 2014

The International Conference on "Deltas in Times of Climate Change II – Opportunities for People, Science, Cities and Business" will be held in Rotterdam, the Netherlands. As part of the long-term planning, the conference would provide an excellent opportunity to promote the IFM concept, the activities of the upcoming pilot project on Coastal Flood Management, the PEARL project (if successful), as well as the recently developed Tool on Coastal and Delta Flood Management.

3.6.2. Articles

In line with the Communication Strategy, scientific and technical journals will continued to be used as means of diffusion of the IFM concept, through the publishing of articles on IFM-related issues. SBPs assistance and support in this activity will be essential, both in establishing links with editorial boards and in producing high quality level of inputs for the articles. Examples of journals to be considered for this task are International Network of Basin Organizations (INBO) newsletter, ICHARM newsletter, Korean Journal of Hydrologic Environment, International Commission on Irrigation & Drainage (ICID) news, Regional Centre on Urban Water Management (RCUWM) newsletter, Network of Asian River Basin Organizations (NARBO) newsletter.

3.6.3. Website

Maintenance, update and news announcements will be continued and undertaken by the TSU. After its launch in May 2013, the website will be tested throughout June and July 2013. Support Base Partners, donors and users are invited for feedback of the entire website. Further content will be added and fine-tuned and improved upon feedback received from users during the test phase. The inclusion of content on each partner's dedicated webpage will be coordinated; optimization, fine-tuning and necessary changes will be made within this period.



3.7 IFM HELP DESK

The HelpDesk has made the APFM a demand driven programme. Efforts are still needed to make the availability of the IFM HelpDesk known to the foreseen beneficiaries. Focus of further promotion will be the strengthening of the “GetHelp” function of the HelpDesk. The Communication Strategy will also serve for this purpose. Close collaboration with all support base partners in the fine tuning of the functionality of the IFM HelpDesk will be pursued. The momentum of promoting APFM’s new website will be used to further increase visibility and improve the understanding of the resources available through the of the IFM HelpDesk.