



**ASSOCIATED PROGRAMME ON FLOOD MANAGEMENT**



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FLOOD MANAGEMENT**

**FINAL ANNUAL REPORT (2016-2017)**

August 2017  
Geneva, Switzerland

**APFM Report No. 41**



The Associated Programme on Flood Management (APFM) is a joint initiative of the World Meteorological Organization (WMO) and the Global Water Partnership (GWP). Since 2001 it promotes the concept of Integrated Flood Management (IFM) as a new approach to flood management.



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 (2016-2017)

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## ACRONYMS

AC/MC	Advisory Committee/Management Committee
ACCRN	Asian Cities Climate Change resilience Network
ADPC	Asian Disaster Preparedness Center
AECID	Agencia Española de Cooperación Internacional para el Desarrollo - Spanish Agency for International Development Cooperation
AFD	Agence Française de Développement
AMCOW	African Ministers' Council on Water
APFM	Associated Programme on Flood Management
BfG	German Federal Institute of Hydrology
BRACED	Building Resilience And Adaptation to Climate Extremes and Disasters
CBFM	Community-Based Flood Management
CEH	UK Centre for Ecology & Hydrology
CERFE	Centro di Ricerca e Documentazione Febbraio 74
CIMA	International Centre on Environmental Monitoring
CHy	WMO Technical Commission for Hydrology
CLW	WMO Climate and Water Department
CODIA	Conferencia de Directores Iberoamericanos del Agua
CONAGUA	Mexico's Comisión Nacional del Agua
CoP	Community of Practice
CREW	Climate Risk Early Warning System
CSDR	Center for Social Development and Research
CWP	Country Water Partnership
DAC	Development Co-operation Directorate
DFID	Department for International Development
DGRE	General Directorate of Water Resources
DHI	Danish Hydraulic Institute
DRC	Democratic Republic of Congo
DRR	Disaster Risk Reduction (Also a WMO Programme)
E2E EWSs	End-to-End Early Warning Systems
E2E-EWS-F	End-to-End Early Warning System for Floods
EGU	European Geosciences Union
ETH	Eidgenössische Technische Hochschule
EUFD	European Union Floods Directive
EWS	Early Warning System
F2F	Face-to-Face
FFI-AG	Advisory Group on WMO Flood Forecasting Initiative
FFGS	Flash Flood Guidance System
FGG	Flood Green Guide
FHRC	Flood Hazard Research Centre
FHRC-MU	Flood Hazard Research Centre – Middlesex University
FICH/UNL	Facultad de Ingeniería y Ciencias Hídricas/Universidad del Litoral - Faculty of Engineering and Hydro-sciences of the Litoral University
FOEN	Federal Office for the Environment, Switzerland
FRMP	Flood Risk Management Plan
GCF	Global Climate Fund
GEF	Global Environment Facility
GFCS	Global Framework for Climate Services
GIS	Geographic Information System
GWP	Global Water Partnership
HASANI	Hazard Assessment to Structural Analysis
HYCOS	Hydrological Cycle Observing System
IAEA	International Atomic Energy Agency
IAHS	International Association of Hydrological Sciences
ICFM	International Conference on Flood Management



ICHARM	International Centre for Water Hazard
IDB	Inter-American Development Bank
IDMP	Integrated Drought Management Programme
IFM	Integrated Flood Management
IFRC	International Federation of Red Cross and Red Crescent Societies
IGAD	Inter-governmental Authority for Development
INTERCOONECTA	Intercambio y Gestión de Conocimiento para el Desarrollo de la Cooperación Española en América Latina y el Caribe
IPA FLOODS	Programme for Prevention, Preparedness and Response to floods in the Western Balkans and Turkey
IRHA	International Rainwater Harvesting Alliance
ISEF	International Sustainability Education Foundation
IWA	International Water Association
IWRM	Integrated Water Resources Management
LAIF	Latin American Investment Facility
LCBC	Lake Chad Basin Commission
LIMCOMLimpopo	Watercourse Commission
MFA	Ministry of Foreign Affairs
MoU	Memorandum of Understanding
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
NGO	Non-Governmental Organization
NMHS	National Meteorological and Hydrological Service
OECD	Organisation for Economic Co-operation and Development
PA	Practical Action
PEARL	Preparing for Extreme and Rare events in coastal regions
PM	Person Month
Polimi	Politecnico di Milano
PROHIMET	Ibero-American network for the monitoring and forecasting of hydro-meteorological phenomena
PRONACCH	Programa Nacional Contra Contingencias Hidráulicas
RALCEA	Red Latinoamericana de Centros de Conocimiento en Gestión de Recursos hídricos – Latin-American Network of Knowledge Centres on Water Resources Management
RBMP	River Basin Management Plan
SBP	Support Base Partner
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SIDS	Small Island Developing States
SSA	Special Service Agreement
TM	Training Manual
TSU	Technical Support Unit
TUHH	Technische Universität Hamburg-Harburg
TUD	Technische Universität Dresden
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO-IHE	UNESCO Institute for Water Education
UNESCO-IHP	UNESCO Intergovernmental Scientific Cooperative Programme in Hydrology and Water Resources
UNOSAT	United Nations Institute for Training and Research Operational Satellite Applications Programme
USAID	United States Agency for International Development
USAID-RESILIM	Resilience in the Limpopo Basin Program
UNUFLORES	United Nations University Institute for Integrated Management of Material Fluxes and of Resources
VBA	Volta Basin Authority
WACDEP	GWP Water, Climate and Development Programme



WBG	World Bank Group
WMO	World Meteorological Organization
WRG	Western Regional Group
WWF	World Wildlife Fund
YHS	Young Hydrologic Society

## LIST OF SUB MATERIALS

Bold indicates materials that are newly added or updated in this report. For the following materials, only new publications are mentioned.

- I.
  - (a) [Strategic Plan 2014-2018](#)
  - (b) [Activity Plan of APFM Phase IV 2014-2015](#)
  - (c) **APFM review report (available on demand)**
  
- II. **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, jp, srb)
  - (c) [Environmental Aspects of IFM](#) (en, fr, sp, jp)''
  - (d) [Social Aspects and Stakeholder Involvement in IFM](#) (en, fr, sp)
  - (e) [Economic Aspects of IFM](#) (en)
  - (f) **[Selecting Measures and Designing Strategies for Integrated Flood Management](#)**
  - (g) **[Environmental Aspects of Integrated Flood Management – Case Studies](#)**
  - (h) **[Social Aspects and Stakeholder Involvement in IFM – CBFM in Thailand](#)**
  - (i) **[Legal and Institutional Aspects of IFM – case studies](#)**
  
- III. **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) **[Community-Based Flood Management \(v2.0\)](#)**
  - (e) [Reservoir Operations and Managed Flows \(v 2.1\)](#)
  - (f) [Urban Flood Risk Management](#)
  - (g) **[The Role of Land Use Planning in Flood Management \(v 2.0\)](#)**
  - (h) [Risk Sharing in Flood Management \(v 2.0\)](#)
  - (i) [Flood Management in a Changing Climate](#)
  - (j) [IFM as an Adaptation Tool for Climate Change \(Case Studies\)](#)
  - (k) [Flood Emergency Planning \(v2.0\)](#)
  - (l) [Management of Sediment-related Risks](#)
  - (m) [Conservation and Restoration of Rivers and Floodplains](#)
  - (n) [Urban Flood Management in a Changing Climate](#)
  - (o) [Flood Proofing](#)
  - (p) [Management of Flash Floods](#)
  - (q) [Coastal and Delta Flood Management](#)
  - (r) [Transboundary Flood Management](#)
  - (s) [Flood Forecasting and Early Warning](#)
  - (t) [Flood Mapping](#)
  - (u) [Health and Sanitation Aspects of Flood Management](#)
  - (v) [The Role of the Media in Flood Management](#)
  - (w) [Social Impact Assessment and Public Perception of Flood Risk in IFM-French](#)
  - (x) [Social Impact Assessment and Public Perception of Flood Risk in IFM-English](#)
  - (y) [Effectiveness of Flood Management Measures](#)
  - (z) **[Crisis Mapping and Crowdsourcing in Flood Management](#)**
  - (ab) [Technical Assistance for the Preparation of an Advocacy Strategy - English](#)
  - (ac) [Technical Assistance for the Preparation of an Advocacy Strategy - Spanish](#)
  - (ad) **[Flood Loss Assessments: Case Studies](#)**



**IV. Not a direct publication from WMO but received contributions through APFM:**

- (a) [Nature and Nature-Based Flood Management: A Green Guide \(Flood Green Guide\)](#)-(WWF)
- (b) [Words into actions](#)- paper on Environment and Disaster (UNECE)

**V. National and Regional support activities**

- (a) Concept note for the Implementation of IFM on the Volta River Basin **(available on demand)**
- (b) Guidelines for the Flood Management Needs Assessment of Volta countries **(available on demand)**
- (c) Thailand and Lao Community-Based Flood Management Pilot Project (Final Report) **(available on demand)**
- (d) Mission report-Post project assessment report of the pilot project 'Community-Based Approaches to Flood Management (CBFM)' in Thailand and Lao PDR **(available on demand)**
- (e) Voices from the field of CBFM project in Thailand and Lao PDR **(available on demand)**
- (f) **Concept note for Mainstreaming Gender in End-to-End Early Warning System for Floods and Integrated Flood Management (available on demand)**
- (g) **Pre concept note on the project 'Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin' (available on demand)**

**VI. Outreach**

- (a) Newsletters ([No. 39](#), and [No. 40](#))
- (b) [APFM educational page](#)
- (c) [Infographics](#)

**VII. APFM Past Reports (available at [this link](#))**

- APFM Report No. 1 - Interim Steering Committee meeting Aug 2001
- APFM Report No. 2 - First coordination meeting Jan 2002
- APFM Report No. 3 - First Consultative meeting on Building Partnerships Feb 2002
- APFM Report No. 4 - Inception report
- APFM Report No. 5 - First Steering Committee meeting Mar 2002
- APFM Report No. 6 - Second consultative meeting on Building Partnerships Nov 2002
- APFM Report No. 7 - Annual report 2002-2003 (without annexes)
- APFM Report No. 8 - Second Steering Committee meeting June 2003
- APFM Report No. 9 - Annual Report 2003-2004
- APFM Report No. 10 - APMC meeting Jun 2004
- APFM Report No. 11 - Annual Report 2004-2005
- APFM Report No. 12 - APMC meeting Jun 2005
- APFM Report No. 13 - Annual Report 2005-2006
- APFM Report No. 14 - Activity plan of APFM Phase II
- APFM Report No. 15 - Activity plan 2006-2007
- APFM Report No. 16 - APMC meeting May 2006
- APFM Report No. 17 - Phase I Final report
- APFM Report No. 18 - Annual Report 2006-2007
- APFM Report No. 19 - APMC meeting Jun 2007
- APFM Report No. 20 - Annual Report 2007-2008
- APFM Report No. 21 - APMC meeting Jun 2008
- APFM Report No. 22 - Annual Report 2008-2009
- APFM Report No. 23 - APMC meeting Jun 2009
- APFM Report No. 24 - Annual Report 2009-2010
- APFM Report No. 25 - APMC meeting Jun 2010
- APFM Report No. 26 - Phase II Final report
- APFM Report No. 27 - Annual Report 2010-2011
- APFM Report No. 28 - APMC meeting Jun 2011



APFM Report No. 29 - Annual Report 2011-2012  
APFM Report No. 30 - APMC meeting Jun 2012  
APFM Report No. 31 - Annual Report 2012-2013  
APFM Report No. 32 - APMC meeting Jun 2013  
APFM Report No. 33 - Annual Report 2013-2014  
APFM Report No. 34 - APMC Report 2014  
APFM Report No. 35 - Strategic Plan 2014-2018  
APFM Report No. 36 - Activity Plan of APFM Phase IV 2014-2015  
APFM Report No. 37 - Annual Report 2014-2015  
APFM Report No. 38 - APMC Report 2015  
APFM Report No. 39 - Annual report 2015-2016  
APFM Report No. 40 - APMC Report 2016



## Executive Summary

This Annual Report documents the activities undertaken during the reporting period 1 August 2016 to 31 July 2017.

Following the outcomes of the external review of the Associated Programme on Flood Management (APFM) in 2016 and the consequent decisions taken at the AC/MC last year to develop and implement a new business model for the APFM, during the reporting period the majority of effort has focused on this task. The new business model should allow adoption of “scenario 4.5”, i.e. to integrate communalities and seek synergies between the flood and drought management programs, focusing on development and support to End-to-End Early Warning System for floods (E2E-EWS-F) and building on IFM materials already accessible through the APFM.

The Business model (discussed in detail in section 2) is therefore oriented towards two main directions:

- From one side, it is aiming at securing funding through submission of project proposals to specific financial partners, as well as preparing the implementation phase with appropriate management procedures and coordination capacities to regional and national agencies and other executing partners. This would allow APFM to apply the IFM concept and the various resources available through the HelpDesk (but also through WMO and GWP) and its Support Base Partners in the implementation of projects on the field.
- From the other, it is seeking integration of core functions such as the IFM HelpDesk into the work plan of the WMO Commission for Hydrology (see section 3 for further details) to ensure a minimum of sustainability to the products and know-how developed since 2001 in the APFM, should the other direction prove to be insufficient to maintain a Technical Support Unit.

An important component of the business model is the costing model. Recognizing the need to fund the core activities of the APFM Technical Support Unit in order to allow efficient delivery of services through the HelpDesk and other basic functions of the programme, a detailed costing model has been developed to quantify the costs related to human resources and other indirect costs (such as administrative costs), which prior to this model were considered as in-kind contributions. With an increased work load for the (few) regular WMO and GWP staff involved in APFM, internalization of these costs becomes a necessity to ensure delivery of products and know-how through issuance of project positions, short consultancies, or subcontracting of Support Base Partners.

Some important efforts have been undertaken to start implementing the new APFM business model, among which the most promising seems to be a pre-concept note on the Volta River Basin submitted to the Adaptation Fund on August 7, 2017 (see section 5.2), which would allow synergies with other planned/ongoing activities such as the CREWS Burkina Faso (section 5.4), the Implementation of Integrated Flood Management on the Volta River Basin (section 5.3), or the planned training manuals on mainstreaming gender issues in End-to-End Early Warning System for Floods (E2E-EWS-F) and IFM (section 5.1), and green infrastructures for flood management (section 5.5).

In parallel, during the reporting period, APFM TSU has been striving to complete pending issues from previous reporting periods (mostly related to the finalization of publications and guidance material – see section 1), maintaining its network (see section 6), and assisting in the work plan of the WMO Commission for Hydrology in the integration of materials related to the Flood Forecasting Initiative (see sections 3 and 4).

The new business model and the current absence of an external financial partner to fund core activities of APFM is also reflected in the new governance structure, which is presented in section 9.



## 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 2001 to promote the concept of Integrated Flood Management (IFM) and to help demonstrate the practical steps for putting the concept into practice. The IFM approach aims at maximizing the net benefits from flood plains and minimizing loss of life due to flooding, and at the same time preserving ecosystems within the overall framework of Integrated Water Resources Management (IWRM).

APFM is currently in its fourth phase. The overall goal of APFM Phase IV is to **mainstream IFM into practice**, while keeping active the production of guidance materials and maintaining the services provided through the HelpDesk. With the intent of considerably reducing the size of the Annual Report, the reader is invited to refer to previous Annual Reports (available on the [APFM website](#) archive of reports) for background details about previous publications developed or decisions taken.

This Annual Report documents the activities undertaken during the reporting period from 1 August 2016 to 31 July 2017. Most of the output materials are available via hyper-links as “sub-materials”. Contrary to past years, as the WMO offset has been shut down, sub-materials will not be available in one hard copy at the Advisory and Management Committee meeting. This Annual Report also includes a financial report covering the year 2016, as approved by AC/MC last year (see section 3 of APFM Annual Report 2015-2016 – APFM Report No. 39).

During the reporting period, the following changes have been made to the staff of the Technical Support Unit (TSU):

- Ms Veronica Ruiz Garcia ended her eight months internship in the APFM TSU in late October 2016. She was then issued a consultancy contract by GWP up to January 2017 to continue assisting APFM in the formulation of project proposals.
- Ms Maria del Mar Oliva Rodriguez joined the APFM TSU as an intern from the end of October 2016 till the end of April 2017.
- Ms Caroline Wittwer, former Hydrological Advisor of France, was appointed Project Officer in the APFM TSU in December 2016, with the main task of formulating and implementing a new business model to reflect scenario 4.5. Her position has been secured for 18 months, therefore up to May 2018.
- Mr Ramesh Tripathi joined as an external consultant in the APFM TSU in January 2017 – he is expected to end his special service agreement (SSA) in November 2017 after a period of 11 months.
- Mr Luis Roberto Silva Vara, former intern and short-term Project Officer in the APFM TSU, was appointed Associate Project Support Officer in the Climate and Water Department in May 2017.
- Ms Brooke Hirsheimer joined as an intern in June 2017 for a period of three months, assisting Ms Celine Novenario in her tasks as the Communication Officer.
- Ms Nilay Dogulu joined the APFM TSU as an external consultant in June 2017 for a period of three months – she will return to her PhD studies in late September 2017.
- Mr Shrijwal Adhikari also joined the APFM TSU as an external consultant from July 2017 to October 2017
- Ms Maud Poissonnier-Lescuras will leave the APFM TSU from October 2017, moving on to her next position in a Basin Authority for the French Government. The TSU is grateful to her for the enthusiasm and professionalism she provided during her two years in the TSU as a Junior Professional Officer sponsored by France.



## 1. Major Achievements

### 1.1 Publication series

A new guidance document has been developed to support the design of well-balanced strategies for Integrated Flood Management. *Selecting Measures and Designing Strategies for Integrated Flood Management* serves as the operational link between the Policy Series and the Tool Series, and is intended for persons responsible for planning flood management activities, designing flood-defence systems and operating flood-control systems in the public and private sectors.

The Environmental aspects of IFM – case studies has been also finalized and published as part of the IFM Policy Series. Similarly, the Thailand Manual for Community Based Flood Management (CBFM) (drafted in Thai language in the framework of the pilot project on CBFM carried out in Thailand during the period 2013-2016) has been published in the IFM Policy Series as case study on Social Aspects of IFM.

The IFM Concept Paper has not yet been revised into a 4<sup>th</sup> edition taking into consideration post-Sendai scenario, but the TSU has been involved in the drafting of the “Words into actions” paper on environment and disasters led by UNECE.

In addition, the following IFM Tools were finalized during the reporting period:

- *Crisis Mapping and Crowdsourcing in Flood Management*
- *Case Studies in Loss Assessments*
- *Community-Based Flood Management* – 2<sup>nd</sup> edition
- *The Role of Land-Use Planning in Flood Management* – 2<sup>nd</sup> edition

The planned revision of the Emergency planning tool was dropped, having not received any further feedback from the designated reviewer.

As suggested during the AC/MC meeting 2016, the programme has not dedicated further resources in the development of new tools; however, contributions from SBPs interested in developing them would be accepted. With the exception of the WWF Flood Green Guide (see section 1.5 below), none of the IFM Tools for which SBPs volunteered at the last AC/MC was received. The list below is reported to assess renewal of interest:

Title	Volunteering SBP
Flood Management in a Multi-hazard Environment	BfG
The Contribution of Geospatial Sciences to Flood Management	CIMA (leading with others)
Rapid Legal Assessment 2nd edition	University of Dundee
Green Infrastructures for Flood Management	WWF/ Deltares
Formulating a (transboundary) Basin Flood Management Plan – 2nd edition	University of Dundee, University of Geneva
Project Cycle in Flood Management	Pegasys (see section 5.3)
Economic Aspects of IFM 2nd edition	UNUFLORES



## 1.2 Training

### 1.2.1 IPA FLOODS Workshop in Ankara, Turkey

APFM participated in a three-day workshop held from 8 to 10 November 2016 in Ankara, Turkey, under the programme for Prevention, Preparedness and Response to Floods in the Western Balkans and Turkey (IPA FLOODS). The objectives of the workshop were to support the preparation of River-Basin Management Plans (RBMP) and Flood Risk Management Plans (FRMP) in Turkey; to increase the capacity of national experts to combine structural and non-structural measures in flood management; and to share data related to Flood Risk Management and the EU Floods Directive (EUFD) within the IPA FLOODS Flood Risk Information System. The workshop was organized by the Turkey Ministry of Forestry and Water Affairs, together with partners including CIMA Foundation and the Italian Civil Protection. During this workshop, APFM facilitated three sessions on the topics of structural and non-structural measures for flood risk management and their impact when combined; cost/benefit and multi-criteria analyses (theory and application); and the FRMP and RBMP taking the environmental aspects into consideration.

### 1.2.2 Integrated Flood Management in Montevideo, Uruguay

Plan de Transferencia, Intercambio y Gestión de Conocimiento para el Desarrollo de la Cooperación Española en América Latina y el Caribe (INTERCOONECTA) is a key initiative of the Agencia Española de Cooperación Internacional para el Desarrollo (AECID) geared towards responding to the needs and contributing to the institutional strengthening of the Latin America and Caribbean region.

Under this plan, the Red Latinoamericana de Centros de Conocimiento de Gestión de Recursos Hídricos (RALCEA) and AECID organised a training workshop on Integrated Flood Management, held in the Centro de Formación de la Cooperación Española de Montevideo, Uruguay from 17 to 21 October 2016. This activity was financed with resources from Latin American Investment Facility (LAIF) of the European Union and AECID. APFM provided a facilitator to the workshop and technical backstopping through the provision of training materials to FICH, which took the lead in the organization and delivery of the workshop.

The course aimed at developing an integrated and interdisciplinary vision of flood management and urban flooding. It also sought to provide people in charge of water management and decision making with useful knowledge in sustainable and integrated flood management. Moreover, the course was aimed at those who can act as multipliers of this knowledge: technical and professional personnel of the various institutions integrated within the Conferencia de Directores Iberoamericanos del Agua (CODIA); technical and professional staff of state/provincial, national and local levels agencies; and professionals in water resources management, disaster management, land use management and land use planning, particularly in the areas of civil defense, security forces personnel, representatives of non-governmental organizations and community leaders, among others.

### 1.2.3 International Atomic Energy Agency (IAEA) in Pavia, Italy

In July 2016, WMO was asked by IAEA to participate in an Expert Meeting at IAEA Headquarters to provide support in developing training modules on flood hazard assessment and protection of nuclear facilities against floods. WMO was then invited by IAEA to participate in the regional training course on Flood Safety for Nuclear Installations: from Hazard Assessment to Structural Analysis "HASANI" from 28 November to 2 December 2016 in Pavia, Italy. Supported by the APFM TSU, Dr Yuri Simonov, WMO Commission for Hydrology (CHy) Advisory Working Group member, facilitated training sessions on the following modules: 1) "DATABASES including necessary information and investigations", where flood studies and available data (hydro-meteorological data, historical data (past events), existing flood maps, land cover, water control structures and relevant infrastructure etc.) were shared with the participants. 2) "Assessment of hydrological hazards and design flood parameters" providing knowledge about flood hazard assessment



and procedures for deriving flood design parameters. The training course was a success in general with very good feedback regarding WMO's facilitation.

#### **1.2.4 Training materials for the civil protection of Paraguay and Mexico**

Following up on the development of the Training Modules on IFM for Civil Protection and Local Decision-makers in Latin America (see section 2.3.1.9 in Annual Report 2015-2016 – APFM Report No. 39), during the reporting period Dr Viñas finalized a set of presentations in Spanish with the contribution of WMO. Due to lack of funding, however, application of these training materials and their further development has been put on hold.

#### **1.2.5 ETH Zurich course Water Resources Seminars**

APFM facilitated a half-day seminar on the topic “Data collection and use for flood and drought protection”. The Seminar Series is aimed at offering students the opportunity to learn about water resources in a multi-disciplinary fashion, with a focus on international examples. Selected topics included: Water & Sanitation, Urban Water Management, Politics & International Water Management, Water Resources & Agriculture, Water Hazards (floods), Water Resources & Ecosystem Services, Integrated Water Resource Management, and Adaptation to Climate Change. The seminar received a positive feedback (based on results of the survey performed by ETH) and APFM has been requested to replicate it for the 2017 season (scheduled for 21 November).

#### **1.2.6 Training on Disaster Risk Reduction (DRR) in the context of the Limpopo Disaster Preparedness Action Plan 2016-2030**

GWP Southern Africa has supported the Limpopo Watercourse Commission (LIMCOM) in the development of a Disaster Preparedness Action Plan, which focuses on building resilience to floods and droughts. As reported last year, APFM and IDMP have provided inputs to this Action Plan. Based on this support, training material has been developed and provided to GWP Southern Africa who is leading the process.

#### **1.2.7 Training of Trainers on Flood Forecasting and Disaster Management for Atlantic and Indian Ocean SIDS in Comoros**

Following a request to GWP (in the framework of a GEF/UNDP/UNEP project) for a Training of Trainers on Flood Forecasting and Disaster Management for Atlantic and Indian Ocean SIDS in Comoros on 22 – 24 May 2017, APFM facilitated contact for APFM SBPs UNU FLORES and TU Dresden to conduct the training. After discussions no further response from the requesting party was received.

#### **1.2.8 Other activities recommended by AC/MC 2016**

Due to other commitments and priorities, no advance is to be reported for the following points: Finalization of the IFM training manual; preparation of power point presentations on topics related to the IFM Tools series; finalization of the CBFM training manual; development of e-learning action plans with TUHH, TUD, UNUFLORES, University of Dundee and University of Geneva.

Other activities for which SBPs volunteered included the use of APFM training materials in UNESCO centers; and a training of trainers on flood management based on the APFM booklet “Discover Floods”, targeted to teachers of primary schools in Mexico and implemented by CIMA under the umbrella of EGU. No feedback has been received on these two issues from the relevant partners.



## 1.3 Ongoing Projects

### 1.3.1 Finalization of CBFM project in Thailand and Lao

During July 2017, a post-implementation assessment was carried out in the pilot project communities of Thailand and Lao PDR to determine the progress and outcomes of the CBFM activities including the relevance and fulfilment of objectives, impact and sustainability one year after completion of the project.

During the assessment visit to the pilot communities, it was found that the communities have improved awareness and capacities for better response in emergency situations, particularly in community-based flood preparedness and early warning infrastructures/services. The project activities were helpful in the flood situations of 2015 and 2016 as there has been no casualties and severe damage to the individual asset. However, communities have not carried out any additional activities after the completion of the project such as updating CBFM plan with lessons learnt or challenges faced during the floods of 2015 and 2016, risks maps, vulnerable groups etc. None of the communities, or the relevant local government authorities, has carried out mock drills or simulation exercises to practice the knowledge and skills disseminated through the project. Post-project assessment visit have now made pilot communities and local/provincial/national agencies realised the gaps and need to build on the existing capacities develop through the CBFM project. APFM is presently finalizing the assessment report with recommendations and checklists to attain long term sustainability. Once finalized, the assessment report will be shared with the donor and the implementing agencies. It will also be included in the final publication report “Voices from the field”, which was provided earlier by the Asian Disaster Preparedness Center (ADPC).

Also, two manuals (in Thai and Lao) on “Community-Based Approaches to Flood Management (CBFM)” were developed by ADPC in the framework of the CBFM pilot project in Thailand and Lao PDR. APFM took care of translating the Thai manual into English, which has been published as APFM Social Aspects of Flood Management - Case Studies, Thailand (see section 1.1 above). APFM is also going to provide ADPC with the standard APFM Layout, to allow ADPC to publish both Thai and Lao version of the manual with the APFM visual identity.

### 1.3.2 PEARL Project

During the reporting period two Project Committee Meetings were held: the 7th Project Committee Meeting at Technische Universität Hamburg-Harburg (TUHH) in Hamburg, Germany from 25-27 January 2017; and the 8th Project Committee Meeting in Genoa from 28 to 30 June 2017. Both meetings discussed the progress made over the past year, in particular with the 10 case studies and the tools under development. Details regarding PEARL’s final symposium, which is scheduled to be held before the end of the year, are still to be finalized.

### 1.3.3 Initial exchanges with GWP South-east Asia

Exchanges with the GWP network in South-east Asia highlighted the following needs and interest to apply the APFM developed guidance by the partnership:

- Thailand: Urban Flood Management where communities are involved as well as land use mapping is implemented (Thai Water Partnership highly involved in Community Based Flood Management and currently in the process to release a case study with GWP support)
- Myanmar: Every monsoon season floods are causing extensive damage, and the Government is engaged in multiple institutional reforms impacting flood management in which trans-boundary management is also an issue. GWP is well placed to support Myanmar through its Country Water Partnership (CWP). CWP members are involved in a World Bank project on institutional reforms. A link is seen mutually beneficial and is being explored by GWP colleagues in South-east Asia.
- Malaysia: Known for its Living in Floods policy that needs to be further documented and shared with other neighbouring countries, which the Malaysian Water Partnership is exploring.



- Indonesia: Flooding is a major challenge in Java, and integrated approaches are gradually being put into place, but need further support to be implemented in all basins and in urban centres.

### 1.3.4 Project Preparation for Early Warning System for the Lake Chad Basin

APFM has been requested through the GWP Central Africa throughout 2016 to provide inputs for the preparation of a project for an Early Warning System in the Logone basin, a part of the Lake Chad Basin. This work is carried out under the auspices of the Lake Chad Basin Commission (LCBC). In response to the requests received, inputs to the inception report, several drafts and the final report have been provided.

## 1.4 Support Base Partner (SBP) activities related to APFM

### 1.4.1 Flood Green Guide Training Materials

World Wildlife Fund has released [Natural and Nature-Based Flood Management: A Green Guide \(Flood Green Guide\)](#), introducing an integrated framework for flood management, and drawing on policy, green infrastructure and conventional engineering to help communities adapt to and better manage growing flood risk. The Flood Green Guide is an open-source resource supported by training and a resource library, and drew from the APFM IFM Tools during its development.

### 1.4.2 IHE-Delft simulation games

IHE-Delft, Support Base Partner of APFM developed interesting simulation games on the flood issue (SIMBASIN <http://simbasin.hilab.nl/>, MAVILLA-GAMINA, etc.) and shared reference documents about these games with APFM. They directly implement these during workshops and trainings for stakeholders involved in flood management activities. APFM could collaborate more closely with them for workshops on IFM. As IHE-Delft is a SBP, it would be free of charge to use these educational games. IHE-Delft could provide a short training to the APFM so that APFM can independently facilitate the simulation games and operate the model during future workshops on IFM. However, IHE-Delft mentioned it would be very difficult to adapt games to local contexts and to make the simulation for a specific river. They also plan to develop online trainings in the next months which will be an interesting tool to add to the [APFM education page](#) and Catalogue of Services.

### 1.4.3 Other activities recommended by AC/MC 2016

- APFM received at least two requests for support related to H2020 proposals. Of these, one was rejected as it was out of APFM scope, whereas for the second a letter of support was provided.
- APFM has been involved during the reporting period in the activities of the WMO Cross-cutting team on urban issues. In this context, APFM facilitated participation of an expert from CIMA to attend a side event on Urban Issues at the Multi-Hazard Early Warning Conference held in Cancun in May 2017.
- APFM activities in the framework of PRONACCH were not requested by CONAGUA during the reporting period.
- No opportunity for funding of the Dniestr project proposal arose during the reporting period
- Support given in previous periods to RwB led to the finalization of the publication [“We and the Amur Floods: Lesson \(Un\)Learned?”](#), in which IFM and APFM TSU members are acknowledged as contributors (in Russian).
- The IGAD-HYCOS project ended and no additional request to provide training was received.
- Similarly, neither GWP Caribbean nor GWP Asia activities were realized during the reporting period.



## 1.5 Outreach (newsletters, infographics, etc.)

### 1.5.1 GIS Mapping

WMO is in the final stages of acquiring a group license for the online mapping tool ArcGIS, which will be used to visualize APFM pilot projects, capacity building initiatives and case studies on the website. In view of the ArcGIS introduction, relevant data has been collected and organized on a spreadsheet to be uploaded to the new mapping tool once available.

### 1.5.2 Newsletter

The publishing and distribution method of the APFM newsletter was upgraded from direct emails of a PDF file to HTML-based newsletters sent through the marketing automation platform Mailchimp. This tool enables accurate measurements of subscriber engagement, which were not possible with the former method of directly emailing subscribers. The new tool removed emails that were no longer valid from the subscriber list, which reduced the total number of subscribers from 1,700 to 1,159. Two newsletters were published during the period ([September 2016](#) and [June 2016](#)). However, MailChimp's metrics revealed that newsletters were only opened by 188-211 of subscribers (16.8-18.9%), which may suggest that the person-hours used for publishing newsletters may not be commensurate with the channel's reach.

### 1.5.3 Articles and outreach material (infographics)

APFM coordinated major news launches with partners to maximize outreach during the reporting period. Press releases, images and social media posts were prepared and distributed together by WMO, GWP and Deltares for the launch of the IFM Guidance document, *Selecting Measures and Designing Strategies for Integrated Flood Management*; and by WMO, GWP and the Water Youth Network to promote the Global Competition for Youth-Led Projects on Flood and Drought. Articles published include 11 news items on the APFM website, 2 news items on the WMO website, 3 news items on the GWP website, 1 news item on PreventionWeb, and 1 guest post on the Asian Cities Climate Change Resilience Network (ACCRN) website.

During the reporting period, 8 infographics were designed to promote IFM Tools and publications. A new infographics section was added to the website with an interactive element that allows users to click through to the relevant section on the tool. The infographics were most effective on social media, where posts featuring infographics reached a total of 16,707 users on Facebook and 27,722 users on Twitter for the APFM accounts. APFM infographics were regularly featured on the WMO social media accounts, reaching 51,653 users on Facebook, 8,699 users on Twitter and 19,028 users on LinkedIn.

### 1.5.4 Website

The APFM website was moved to floodmanagement.info, following recommendations from the previous year's meeting to use a URL with better name recall. Subsequently, however, the apfm.info domain was poached by an unknown user, whom TSU has not been able to reach. An old version of the website remains on the domain and links continue to be valid for the majority of publications. The shift in domain names resulted in a 32% decline of sessions and 33% decline in users, but traffic is already steadily increasing for the new domain.

A method for counting the number of downloads for publications has been identified but has not yet been implemented due to competing priorities. We can estimate that number of downloads for publications at 3041, based on the assumption that sessions leading to the download page of each publication have led to the download of the Tool. For this period, the IFM Guidance document has been the most popular publication, with approximately 790 downloads.

Keywords leading to the APFM website are being tracked on Google Analytics, however, 50.6% of sessions are listed as "not provided" because Google encrypts secure searches from users who are either logged in

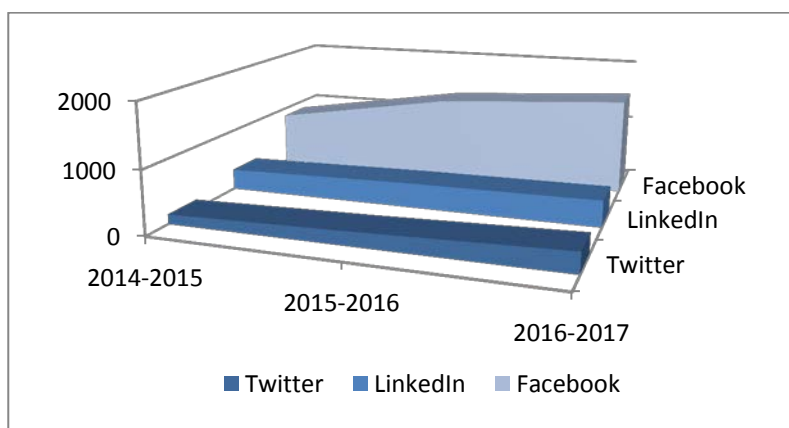


to their Google Accounts or using the Firefox search bar. The remaining keywords that appear in the report each represent less than 0.2% percent of total sessions, which is too small to be meaningful.

### 1.5.5 Social Media

Followers continue to increase for the APFM Facebook, Twitter and LinkedIn profiles, as shown in the table and Figure below.

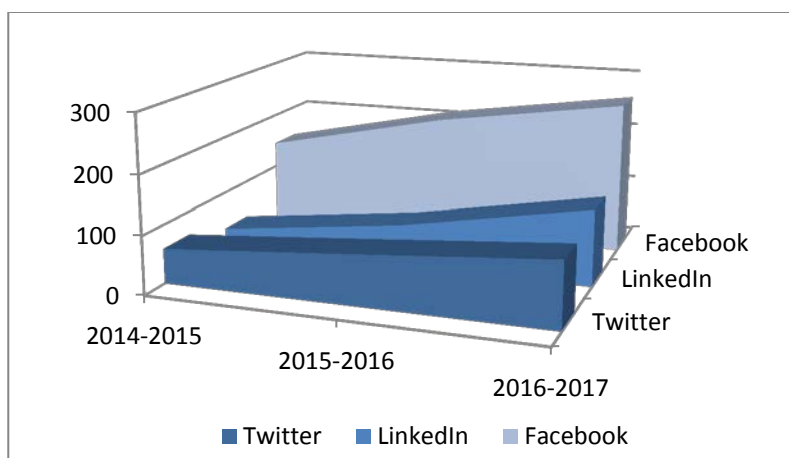
SOCIAL NETWORK	FOLLOWERS	TREND from 1 August 2014
Facebook	1528	+14% (+183)
Twitter	322	+43% (+97)
LinkedIn	421	+7% (+29)



### 1.5.6 PEARL Social Media

APFM continues to manage the project's profiles on Facebook, Twitter and LinkedIn. These accounts have also recorded an increasing number of subscribers as shown in the table and Figure below.

SOCIAL NETWORK	FOLLOWERS	TREND from 1 August 2014
Facebook	262	+22% (+48)
Twitter	113	+31% (+27)
LinkedIn	132	+81% (+59)





### 1.5.7 Catalogue of services

During the reporting period, forms were circulated to the SBPs to collect information on the workshops, training courses, tools and services that SBPs were willing to contribute to the IFM HelpDesk. A beta version of the Catalogue of Services is currently under development, taking into account information collected during the tour de table at last year's meeting and the input received so far from 14 SBPs.

### 1.5.8 GWP Communication network

GWP's network of over 3000 partner organizations, 86 Country Water Partnerships and 13 Regional Water Partnerships is engaged on an as-need basis by the WMO/GWP APFM. New APFM publications and tools are pushed out through the network's communication channels at the global, regional and national level. At the same time, the APFM responds to requests that are received through GWP and is thus fostering an integrated approach to flood management through the GWP network.

### 1.5.9 European Geosciences Union General Assembly

APFM attended the European Geosciences Union (EGU) General Assembly 2017 in Vienna, Austria from 23-28 April 2017 to participate in a special session on Hydrological risk under a gender and age perspective. APFM gave a presentation on the WMO's gender mainstreaming in geosciences, with a special focus on IFM. Through this event, APFM found opportunities for testing and linking with potential donors and beneficiaries for its Training Manual for Mainstreaming Gender in End-to-End Early Warning System for Floods (E2E-EWS-F) and IFM, which is currently under development (see section 5.1).

### 1.5.10 F2F Event 2016: Urban DRR and Urban Resilience

APFM participated in the [F2F Event 2016: Urban DRR and Urban Resilience](#) organized by the Swiss NGO DRR Platform in Thun, Switzerland from 6-8 December 2016. The objective for APFM was to network with NGOs (Save the Children, Swiss Red Cross, Slum Dwellers International, Caritas Switzerland, IFRC, etc.) and international organizations (UN-Habitat) working in the field on DRR and flood management issues, as well as to understand the needs of NGOs on flood management issues and find out how to better collaborate. APFM moderated a 40-minute session with the participation of about 10 participants on the topic of IFM in urban areas. An infographic based on the [IFM Tool: Urban Flood Management in a Changing Climate](#) was presented during the session to convey the main challenges related to flood risk management and possible actions in urban areas, the concept of IFM, as well as the role and activities of APFM.

One of the main outcomes of the discussion during the workshop is that NGOs could help APFM to implement projects at local and regional levels and better identify needs of communities at risk, their challenges and capabilities. On its side, APFM could disseminate IFM information to NGOs and help them to link with National Meteorological and Hydrological Services (NMHSs), national, regional and local and River-Basin authorities as well as provide support on data and observation systems, flood forecasting and early warning. One of the main challenges that remains, however, is that most NGOs consider WMO a potential donor and very high-level institution but not a technical support partner. Another challenge is that APFM should create more visual, shorter and contextualized materials that can be used easily in the field by international and local organizations.

### 1.5.11 European Conference on Flood Risk Management 2016

The APFM TSU attended FLOODrisk 2016, the third European Conference on Flood Risk Management, held in Lyon, France from 18-21 October 2016. The conference was a good opportunity for APFM to learn about innovations and touch base with current partners, as well as to enhance its visibility among and explore synergies with potential partners (research centres, private companies, French Public Services, etc.).

Discussions with the Flood Hazard Research Centre (FHRC) during and after the conference led to FHRC becoming a SBP of the HelpDesk (Letter of Engagement currently under finalization).



During the conference APFM managed to facilitate discussions between SBPs (Deltares, DHI, CIMA, PoliMi, etc.) and Prof. Marian Muste, presenting the FLOODSS proposal (see section 4.3.2 in APFM Annual Report 2015-2016 – APFM Report 39). APFM participation in the conference helped also the WMO Global Innovation Hub to identify potential partners (such as TENEVIA and HKV Consultants) and collect case studies (e.g. Seine Gare Vitry project) to be showcased through the APFM website.

#### **1.5.12 Presentation of APFM in UN High-Level events**

The GWP Chair, Dr Oyun Sanjaasuren was invited to the United Nations World Water Day - Special Event: Priority Actions for Water and Disasters in the next Decade as part of the planning of the 2018-2028 International Decade for Action “Water for Sustainable Development” on 22 March 2017. She presented APFM and IDMP as a panellist in the discussion.

The GWP Chair and the Chair of the GWP Technical Committee, Dr Jerry Delli Priscoli were also invited to the third UN Special Thematic Session on Water and Disasters “Adaptation to Climate Change, Boosting Financing and Investment, and Advancing Science and Technology” on 20 July 2017 at UN Headquarters in New York. APFM and IDMP were also presented to UN Member States in this forum.

#### **1.5.13 GWP DFID High Level Meeting on Gender Equality and Social Inclusion in Water Resources Management**

The High-Level Meeting on Gender Equality and Social Inclusion in Water Resources Management was organized by GWP in Stockholm on 19 June 2017. APFM was invited to network with high-level partners and donors for its work on gender and IFM, in particular with regard to the Training Manual for Mainstreaming Gender in End to End Early Warning System for Floods (E2E-EWS-F) and IFM.

Participants of the meeting were mainly donors (DFID, African Development Bank, World Bank, Green Climate Fund, Asian Development Bank) and development aid agencies (Swiss Development Cooperation), or from civil society (Women for Water Partnership), universities/institutes (University of Brasilia, Ecole de Gouvernance et d’Economie de Rabat, Stockholm International Water Institute) and river basin authorities. The discussion included the outcomes of the GWP study (funded by DFID) about Gender Equality and Inclusion in Water Resources Management. Several case studies and exercises have made the workshop very dynamic, with the discussion enriched by the various backgrounds and experiences of participants. GWP will try to continue this “Community of Practice” (CoP), which APFM would like to be part of, especially if there are some sessions specific to floods organized with donors and other practitioners with whom APFM wants to better collaborate.

In addition, APFM participated in this meeting mainly to discuss with DFID funding opportunities for the Training Manual for Mainstreaming Gender in E2E-EWS-F and IFM, a discussion that is still ongoing with the donor. Additional contacts were established with other donors (African Development Bank, Swedish International Development Cooperation Agency, etc.) but no positive feedback has yet to be received

#### **1.5.14 Global Competition for Youth-Led Projects on Flood and Droughts**

In an effort to engage more closely with youth to disseminate the IFM concept at the grass root level, a competition was organized by the Water Youth Network in collaboration with APFM and IDMP. There were two categories for which proposals were submitted. The winners are:

##### *Category 1: Ongoing youth projects*

Winner: Prakash Khadka (Center for Social Development and Research (CSDR)). The project in Nepal engages young social mobilizers and volunteers by training them to integrate community-based participatory mapping processes with internet-based collaborative digital mapping technologies. The main objective is to map key information pertaining to flood hazard, exposure and vulnerability at the household and community level across lower Karnali river basin before the 2017 monsoon, and to develop a transdisciplinary approach that can be replicated in similar regions across Nepal. So far, 54 communities in



Kailali and Bardiya districts have been remotely mapped (including more than 2500 houses and over 100km of roads/trails) by volunteers from around Nepal.

#### *Category 2: New project proposals*

Winner: Lily Yumagulova, Casey Gabriel, Sandy Bernice and students from the “Preparing our Home” program (Xetólacw Community School and International Sustainability Education Foundation - ISEF Canada). “Preparing our Home” is a community-based disaster resilience program developed and implemented by Canada’s First Nations communities. Beginning with developing multiple grade school curriculum, it creates intergenerational, multi-stakeholder opportunities to understand risk and develop context-specific youth-led and community implemented risk management and planning activities. Training activities in their project implementation pipeline, focus on understanding risk, developing flood and drought resilience strategies, and developing emergency management plans and preparedness planning.

The winning projects were presented at the Global Platform for Disaster Risk Reduction Conference, in Cancun, Mexico from 22 to 26 May 2017. The winners received a small amount of direct financial support (3,000 € through a Letter of Undertaking to support their activities) and an opportunity for collaboration with APFM and IDMP drawing on the HelpDesks capacities.

#### **1.5.15 Meeting with the Young Hydrologic Society (YHS)**

Contacts have been established with the YHS to identify possible synergies between the society (which has a network of around 7,000 young hydrologists involved mostly in the academia) and APFM. Various proposals are being considered to benefit from YHS for increasing awareness about IFM among future generations of hydrologists.

#### **1.5.16 Seventh International Conference on Flood Management (ICMF7)**

APFM supported GWP China in a special session on Urban Flood Management and Mitigation in the ICMF7 with technical advice based on APFM publications drawing on IFM Tool 14 “Urban Flood Management in a Changing Climate”. Deltares will also attend the conference to present the Guidance document on behalf of APFM (see section 1.1)

#### **1.5.17 Organisation for Economic Co-operation and Development (OECD) initiative on Flood Risk Governance - Call for case studies**

APFM invited its SBPs to contribute the experiences they have to this call for case studies by the OECD initiative on Flood Risk Governance more broadly, and highlighted the wealth of publications developed by APFM in the past 15 years.

#### **1.5.18 Unrealized recommendations:**

Due to remarkable workload the following recommendation from AC/MC 2016 could not be properly followed:

Recommended activity	Reason for lack of follow up
Engage Palais de Nations press corp	Other priorities – experts on mission or unavailable when press conferences were held immediately after major flood events
Try to involve diplomatic environment to advocate for IFM	Lack of opportunities and other priorities
Consider having materials/webpages translated in Spanish and French	Lack of resources and other priorities
Consider advertising HelpDesk available facilities in Spanish and French	Lack of resources and other priorities
Link repository of know-how assembled by BoM on Flash Floods to the HelpDesk	Other priorities – will be taken over by CHY activity on inventory of flood forecasting models and platforms



## 1.6 Helpdesk statistics

### 1.6.1 Institutional Arrangements and Mechanism for the IFM Helpdesk

One new SBP, Alterra-Wageningen University, joined during the reporting period. Three more are currently under the final stage of agreement to become SBPs of APFM. These are Flood Hazard Research Centre – Middlesex University (FHRC-MU - Their areas of cooperation will be on flood risk mapping, coastal and fluvial risk assessment (loss component), multi-criteria Analysis and flood forecasting and early warning tools.), PoliMi and International Rainwater Harvesting Alliance (IRHA), who will also be supporting the efforts of IFM and enhancement of the APFM TSU.

### 1.6.2 Operational status of the IFM Helpdesk

Forty-seven requests were received through the HelpDesk during the reporting period. From the last AC/MC meeting, HelpDesk requests will now be counted independently from the channel through which they reached the TSU. Therefore, the 51 requests include requests received through the HelpDesk website, directly by TSU members, or through other programmes of GWP or WMO. Of these 51 requests, 44 were completed, 2 are ongoing, 1 is pending and 4 were discarded or rejected due to being spam or out of scope. A detailed analysis and description of the requests is provided in Annex I.

## 2. Business Model, costing model, list of potential donors

### 2.1 Business model and costing model

The main findings of the 2016 APFM review stressed that APFM should shift from mainly producing concepts and guidelines on IFM to the implementation of project oriented activities. Moreover, in order to respond to the concerns and needs of WMO Member countries, the group of experts consulted during the review and the members of the Advisory Committee recommended enlarging the scope of the programme to the complete chain of products, called End-to-End Early Warning System (E2E EWS), necessary to provide efficient warning (including vulnerability mapping, data acquisition, forecasting, decision making and warning dissemination). The challenge is to provide knowledge in line with the increasing expectations of the national risk reduction programs, therefore achieving greater visibility and impact for APFM.

This change of priorities allows APFM to build on the current knowledge gained from the past 15 years while targeting more applied and operational activities. Such a shift of focus must be connected to a new way of conducting the programme tasks, as project implementation calls for dedicated capacities and funding sources. The technical, organizational and financial feasibility of this new approach needs to be supported not only by an appropriate restructuring of the existing APFM TSU, but also by additional interactions with stakeholders and funding agencies. Indeed, project culture and highly professional fund raising capacities are key elements to make a convincing case to the major funding sources.

The new phase of the APFM has been defined by confronting these principles to the step by step design of a business model, in order to identify and summarize the strength and added value of the WMO network and know-how, as well as the major gaps.

One important point is that the usual business models are built for for-profit organisations, which sell a product or a service to paying customers. In the case of APFM, services are provided to NMHS and WMO Member countries (as well as to international organizations), and indirectly to the general public, but the funding is provided either by WMO Member countries (for the general budget of the WMO staff), or other external sources (for the programme activities). APFM finds a position close to the so-called “funding model” of non-profit organizations, which have developed adequate strategies to obtain their funding from donors as substitutes to customers. Successful non-profit organizations seem to follow well identified rules, such as



1) to concentrate on one particular source of funding, 2) to ensure a good match with their particular types of work, 3) to build highly professional fundraising capabilities, and 4) to follow pre-existing funding markets with established motivations. These criteria should be used when searching for relevant funding sources.

For each of the elements of the business model, strength, needs and main issues were identified and solutions were proposed to be able to implement a project oriented activity within the current WMO organisational structure. Annex V gives an overview of the main points stressed by this approach. We provide in the following a summary of the main issues to be solved in order to successfully implement this new business/funding model. Several areas must go through important modifications of APFM and WMO activities in order to be able to propose and implement projects on IFM and E2E EWS for floods:

- **Self-service platform for E2E EWS project design:** assessing the capacities, data and hydrological infrastructures available on a watershed, country or area, and designing hydrological network have been successfully proposed in the previous projects, such as the WHYCOS programme. Extending the projects scopes to E2E EWS calls for a complete chain of products (equipment, software, methodologies) that embed flood forecasting into a series of operational steps making the link between the field observations and the users' response. Currently, only few of these tools are open-source and available free of charge, criteria particularly relevant for developing countries. Efforts must therefore be devoted to the identification of a number of technologies that APFM will include into the project design and tested in the field.

Contribution of the expert teams of the CHy and the FFI activities are a major source of support on this issue. Additional funding for the development of this self-service platform of tools for E2E EWS design could be envisaged to speed up the process and extend to all aspects of water, including flood and drought, management.

As the field of E2E EWS is in fast evolution, mainly due to the outbreak of new communication technologies, technical experts must stay in close relationship with innovation, as well as with the methodologies under development inside the NMHS. APFM should propose the establishment of a Community of Users to improve technology transfer between producers of knowledge on E2E EWS and operational services.

- **Fundraising and lobbying:** coordination inside the CLW department and with the other WMO departments and regional offices must be improved to benefit from the external inputs of WMO member countries. Better communication between the staff in contact with the funding agencies and potential partners (for project and development of new methodologies or approaches) is a very effective way to ensure that APFM projects will be in line on one side with the donors priorities and on the other side with the national, and regional, needs. Simple means, such as directory of focal points and experts, information on criteria of funding agencies and donor mapping, outreach documentation and internet presence, need to be shared to benefit from mutualisation and exchanges within the branches of CLW department in a first place and then extended. The partnership with GWP is also an effective way to search together for funding opportunities. Project implementation provides opportunities to build closer relationships with the GWP regional offices, but improved communication is also necessary upstream between WMO main offices, the regional offices, the Regional Associations as well, and GWP network to promote the strength of the partnership.
- **Costing model:** changes of accounting procedures needs to be defined together with WMO Budget office in order to be able to ensure viable proposals covering the total costs of the project cycle. Developing analytical accounting within WMO will call for a change of practice in the daily life of the staff as time needs to be assigned to each project. All staff costs, technical, IT and outreach support, administrative, must be considered while drafting project budgets. Effective working days must be defined that can be billed to the projects. Indirect costs must be assessed with the Budget



office, even though most of the funding agencies apply their own rules in that matter. Mutualisation of methodologies, inside of CLW at least, must also cover this field. This approach is already put in place as a Department Project Management team is now formed, but transverse coordination still needs to be understood and applied.

The value proposition of the new business/funding model is based on the knowledge and on the network of partners developed over the past 15 years of APFM. Floods, and droughts, attract the attention of a large group of agencies, industrial partners, research centres due to their high level impact on the societies and economic development. The implementation of national and regional projects, in line with the policies of the funding agencies, will become the major activities of the APFM team. Through project funding, a major goal of the new APFM management will be reached, but this model will only survive in the medium term if constant improvements are provided by searching for innovative solutions and investing into new areas (for example IT, crowdsourcing, micro-sensors, high resolution satellite images...). This component should be seen as a complementary area to mainly nationally or regionally oriented activities, and therefore be supported by a percentage (10% for example) of the APFM team activities.

## 2.2 APFM – IDMP donor mapping

Jointly with the GWP Resource Mobilization function the APFM and IDMP TSU embarked on an effort to better map the funding landscape. The aim was to support APFM and IDMP quest for resource mobilization as part of the above described efforts of developing a new business model.

Two outputs have been developed as part of this effort:

### 1. Donors database

A database of strategic platforms and donor categories at the global and regional levels, including corresponding entry points and rationale for these potential donors to support the APFM and IDMP, has been developed. At this stage, it includes 104 entries. It builds on information provided by GWP regarding existing donors and looks systematically at the 29 DAC members, development banks, multilateral organizations, private sector foundations and other funding platforms.

The database captures donor information in the following fields and filters:

- Donor type
- Sector
- Water commitments/initiatives (e.g. WRG 2030 members, CEO Water Mandate members)
- Geographic emphasis (by GWP region)
- Water themes emphasized by the donor
- Brief donor profile
- GWP (including APFM and IDMP) comparative advantage for donor / donor's advantage for GWP (including APFM and IDMP)
- Contact point and contact info

### 2. Power mapping tool

With the support of GWP staff and sector-specific research, a power mapping questionnaire for top donor prospects was designed. The tool combines strategic information about donor prospects with GWP history and current programming to suggest tailored and strategic entry points for engagement with these prospects. The questionnaire is being used to map 30 top prospective donors for GWP (including bilateral, regional banks and foundations), with a specific focus on GWP, APFM and IDMP.

The questionnaire has been pre-filled for 13 of the 30 donors and is being circulated within GWP. Once feedback has been collected, the questionnaire input will be streamlined into short, easily digestible power maps.

The 30 donors are: 1. Asian Development Bank (ADB) 2. African Development Bank-African Water Facility (AfDB-AWF) 3. Austria 4. Bill and Melinda Gates Foundation 5. Canada 6. Coca-Cola 7. Denmark 8. European Investment Bank (EIB) 9. European Union (EU) 10. Finland 11. Ford Foundation 12. France 13. Global Climate Fund (GCF) 14. Global Environment Fund (GEF) 15. Germany 16. Hilton Foundation 17. Inter-



American Development Bank (IDB) 18. Islamic Development Bank 19. Japan 20. Netherlands 21. Nordic Development Fund 22. Norway 23. OPEC Fund for International Development (OFID) 24. Rockefeller Foundation 25. Republic of Korea 26. Spain 27. Sweden 28. Switzerland 29. United Kingdom 30. United States Agency for International Development (USAID).

### 3. Integration of WMO activities with APFM

As reported last year (see section 2.3.2.8 of APFM Annual Report 2015-2016 – APFM Report No. 39), in December 2015 the Flood Forecasting Initiative Advisory Group (FFI-AG) expressed willingness to work with APFM on the provision of guidance and training material on E2E-EWS-F through the IFM HelpDesk, and other topics such as preparation of guidelines on how to formulate numerical weather forecast information for use in flood forecasting, consistent with the FFI Work Plan of 2016-2019. This plan was endorsed by the WMO Executive Council 68 through Decision 7, and consequently by CHy its 15<sup>th</sup> session in Rome in December 2016 through Resolution 10. This should ensure continuity for the IFM HelpDesk should the programme fail to identify financial contributions to ensure its sustainability, as it would become an essential platform to showcase products and results of the CHy Flood Forecasting Initiative. Possibly the HelpDesk would also be functional to support the core activity of the FFI, hosting the forum that provides the backbone of the Community of Practice for the E2E-EWS-F.

In line with this objective, during the reporting period the APFM TSU has started to support the work plan of the CHy Focus Area on Hydrological Applications, Products and Services. This translated in: A) revising the proposed checklist for assessment of national capabilities (see also section 5.4); B) assembling preliminary information on available models and platform for flood forecasting; and C) collecting the training and guidance material available in WMO on the topic of E2E-EWS-F. This also reflects partially the idea presented at the last AC/MC regarding the FLOODSS (see section 4.3.2 of APFM Annual Report 2015-2016 – APFM Report No. 39) of having a decision support tool for flood management. The purpose of this activity would be to offer WMO Members the possibility to self-assess their capabilities (through the checklist listed under A), and make use of the tools (models and platforms under point B) to fill in the identified gaps in their E2E-EWS-F. Availability of guidance material (listed under C) would provide an additional asset for a self-sustaining approach to capacity building, which could eventually be complemented by APFM through training workshops (if needed).

### 4. Integration of HelpDesks (APFM, IDMP, HydroHub, GFCS)

In line with the work plan of the FFI-AG, and the necessity to make use of the IFM HelpDesk as the main platform for showcasing the products of the FFI and hosting the Community of Practice on E2E-EWS-F, APFM started during the reporting period preliminary discussions with other programmes in the WMO Climate and Water (CLW) Department (Global Framework for Climate Services (GFCS), HydroHub, IDMP) to restructure the IFM HelpDesk in a coordinated manner.

Internal discussions about the HelpDesks are ongoing in the CLW Department. It has been agreed that multiple entry points should be retained, acknowledging that each HelpDesk focuses on a specialized topic and addresses a specific audience. However, it has been proposed that the terminology, functionality, and look and feel of the different HelpDesks should be streamlined to provide a consistent user experience on the front-end and prepare for the possibility of integration on the back-end.

Integrating the IFM, IDM and HydroHub HelpDesks into a similar structure seems to be advancing well, as per the rationale described above.

The integration might prove to be more difficult with the GFCS HelpDesk, due to the fact that GFCS should also accommodate the needs of its partners as identified at the Scoping Workshop for the development of the GFCS HelpDesk held in Offenbach in June 2017 (to which APFM participated remotely).



## 5. Project Proposal Development

### 5.1 Training Manual for Mainstreaming Gender in End-to-End Early Warning System for Floods (E2E-EWS-F) and Integrated Flood Management (IFM)

APFM has developed a concept note on “Training Manual for Mainstreaming Gender in End-to-End Early Warning System for Floods and IFM” and is currently looking for potential donors/funding partners. The overall objective of the training manual is to increase practical knowledge and active participation of men, women and other vulnerable groups in End-to-End Early Warning System for Floods (E2E-EWS-F) and IFM activities. The training manual will strive to incorporate gender sensitive needs, strategies and actions/approaches in every phase of flood management cycle through a participatory design approach.

The target participants include local policy-makers and members of flood-affected communities. Additionally, the training manual can enhance the capabilities of NMHS professionals (hydrologists, meteorologists, communication and IT experts etc.) to have a gender sensitive approach in the application and services of E2E EWS.

This manual will be available for worldwide use and will contain effective gender sensitive case studies applicable in different regions/countries. The facilitator’s guide will support trainers/instructors to test the content of the manual with objectives, procedures and guidelines. It will also encourage instructors to adapt the material with local case studies for conducting short exercises and role-playing with the participants (women and men). To verify the applicability of the training manual and the facilitator’s guide, it will be first tested through pilot workshops in flood-prone communities of three countries/regions, i.e. Volta Basin, South Asia and Latin America.

The pilot testing of the training manual in three different regions of the world will provide the opportunity to integrate feedback from participants and flood management experts, which will help in developing a refined training manual.

APFM proposes that the pilot testing would be implemented by Asian Disaster Preparedness Centre (ADPC) in South Asia, Global Water Partnership in Volta basin region and WMO Regional Head Office in Paraguay.

### 5.2 Adaptation Fund

APFM has developed a pre-concept note on the project “Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin” and submitted it to the Adaptation Fund in early August 2017. The overall objectives of the project is to assist the six riparian countries of the Volta Basin in the implementation of joint measures for flood and drought management at regional, national and local levels and to build on the lessons learned from the past and current projects related to disaster risk reduction and climate adaptation. The six riparian countries will therefore benefit not only from a coherent basin-wide transboundary management framework to ensure long-term environmental and economic development, but also from concrete solutions to alleviate a potential increase of poverty (reducing risks and vulnerabilities) and to build an effective network of actors along with increased capacity to prepare bankable projects to access finance from traditional and non-traditional sources.

The Volta Basin programme has the ambition to provide the first large-scale and transboundary implementation of these well-recognized strategies by empowering the NMHSs of the six riparian countries with robust and innovative solutions for disaster risk reduction and climate adaptation.

The result of the pre-concept note submission is expected to come out in October 2017. The workshop that will be conducted with GWP-West Africa, Permanent Representatives and Hydrological Advisors from the 6



riparian countries in Ouagadougou, Burkina Faso on 30 October-3 November 2017 will provide useful information that will be integrated in the Concept Note (next stage after the submission/review of the pre-concept note).

### 5.3 Project Preparation for the Implementation of IFM on the Volta River Basin

The Country Water Partnerships of Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali and Togo reached out to APFM for support in 2013. A series of activities were planned already in 2014 in response to the expressed need to build capacity on the principles of IFM and support the countries in preparing projects that address their needs. The identified objectives were twofold: (a) to develop the capacity of key personnel in applying IFM concepts and (b) to prepare projects on IFM in these countries that can attract funding ("bankable projects"). For this pilot project activities have been grouped into four areas: (1) Flood Management Needs Assessment; (2) IFM Capacity Development; (3) IFM Project Preparation Capacity Development; and (4) Project Formulation.

This project is mutually reinforcing with the African Ministers' Council on Water (AMCOW) and GWP's Water, Climate and Development Programme's (WACDEP) ongoing work on project preparation. The activities are being jointly organized by the Country Water Partnerships of the countries in partnership with NMHSs, WMO and GWP as part of APFM, as well as with the support of Volta Basin Authority (VBA). Financial partners have been contacted to participate in order to (i) ensure that the projects are well-designed and attractive for soliciting financial support from potential donors and (ii) to allow them to consider financially supporting this process.

While progress has been slow in the beginning, the second half of 2016 and the beginning of 2017 saw the completion of the IFM needs assessment reports in Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali, and Togo and for the whole Volta basin. APFM reviewed all of these reports, providing its comments and questions to the countries.

Following these needs assessment reports, a workshop will be implemented in Ouagadougou, Burkina Faso, on 30 October-3 November 2017, involving Country Water Partnerships and other stakeholders of Volta Basin regions, to develop the capacity of key Volta Basin and country institutions in applying the concepts of IFM and develop priority projects to implement IFM at Volta basin and country scales that will be likely to attract funding. For this activity, APFM will continue to provide its technical assistance to the countries at the national and regional levels (by facilitating sessions related to IFM capacity development) and will financially support them to attend the workshop.

Significant efforts are being undertaken by the APFM TSU to develop a funding opportunity through the Adaptation Fund (if the pre-concept note is accepted) for the priority project proposals that will be developed after the workshop in Ouagadougou. This activity is seen as being central in putting the APFM Strategic Plan 2014-2018 of implementing IFM into action.

### 5.4 Burkina Faso-Climate Risk Early Warning System (CREWS)

WMO, through the Climate and Water Department, is involved in the Burkina Faso component of the Climate Risk Early Warning System (CREWS), in order to improve operational capabilities of the country to produce and deliver hydro-meteorological services for early warning, thus, contributing to risk reduction regarding floods, agriculture and food security. APFM is working on component 1c) (iii) Hydrological observation assessment and flood forecast modelling of the CREWS-Burkina Faso that aims to develop short-term forecast capabilities and risk information and forecast products for flood Early Warning Systems (EWS) for the country. Outputs of this component are:

- Introduction to IFM and the Flash Flood Guidance System (FFGS)
- FFGS plan proposal and initiate pilot (concurrent with component 2 a)



- Capacity developed on IFM project proposal formulation (see Part 5.3)
- Outline of IFM project proposals available

APFM will organize a field mission (expected to take place in October 2017) to assess the needs of the country with regards to flood forecasting and early warning, based on a preliminary needs assessment that has been conducted (see part 5.3) with GWP-West Africa and preliminary discussions that have been undertaken with the General Directorate of Water Resources (DGRE) of the country. The exploratory mission will also provide an opportunity to apply the checklist for the assessment of national forecasting capabilities developed in the framework of the Flood Forecasting Initiative.

It is planned to adapt a preliminary version of the Training Manual for Mainstreaming Gender in Flood Management to provide support to the operations of CREWS Burkina Faso, with the possibility to replicate the experience in other CREWS components such as Niger, Mali, West Africa and Democratic republic of Congo (DRC).

Other CREWS components (Niger, Mali, West Africa and DRC) are also presently being developed with World Bank Group (WBG) and APFM support might be needed in the development of those projects.

## 5.5 Training material for Flood Green Guide (FGG)

APFM is currently working with WWF for developing a training curriculum based on the Flood Green Guide (FGG). GWP supported a consultancy for the development of a preliminary proposal on the implementation of the Flood Green Guide.

The overall objective of the project is to use and test the content and methodology of the FGG that introduces the key design elements to flood risk management. Target participants include municipal governments, local policy-makers, community groups and non-governmental organizations worldwide, providing support for adopting natural and nature-based solutions into their flood management strategies/approaches. Discussions are currently ongoing between APFM and WWF to better define roles and responsibilities regarding implementation and fundraising.

## 6. Networking

### 6.1 Approach to Donor

#### 6.1.1 Swedish International Development Cooperation Agency (SIDA)

APFM reached out to SIDA in June 2017 and presented the Concept Note (along with estimated budget plan) on the training manual for mainstreaming gender in E2E-EWS-F and IFM. The SIDA representative provided feedback on the Concept Note and also highlighted that SIDA global units typically provide core support to organisations with the main purpose of supporting the implementation of their respective strategies. Discussions are ongoing within WMO (and namely with the Director of Resource Mobilization) to possibly set up a wider agreement between WMO and SIDA, also including a core contribution for APFM.

#### 6.1.2 Department for International Development (DFID)

Following APFM participation in the high level meeting on Gender Equality and Social inclusion in Water Resources Management (see section 1.5.13), discussions are ongoing with DFID about the possibility to fund the training manual for mainstreaming gender in E2E-EWS-F and IFM. DFID representatives provided a response after going through the Concept Note and budget proposal, mentioning that they will not have funds to support this project (they generally support bigger projects). However, they shared the Concept Note with their colleagues at DFID who might be interested in the project and suggested that APFM connect with the BRACED programme (funded by DFID), supporting similar activities. APFM will continue to stay in contact with DFID for potential funding prospects.



### **6.1.3 World Bank Group (WBG)**

WBG recently signed a Memorandum of Understanding (MoU) with WMO to develop capacities that build resilience to extreme weather events, climate and disaster impacts. Due to this, WBG officials recently visited WMO Headquarters in Geneva to understand the on-going and pipeline projects of WMO in South Asia and South-east Asia. The concept note on training manual for mainstreaming gender in flood management was presented with other on-going and planned activities of the WMO Hydrology and Water Resources Department. In parallel, APFM also approached the CREWS Secretariat at WMO working with WBG in CREWS Burkina Faso and other components of CREWS in West Africa regions. The concept note and estimated budget plan of the training manual for mainstreaming gender in E2E-EWS-F and IFM was shared and response from the CREWS secretariat is awaited.

### **6.1.4 Agence Française de Développement (AFD)**

APFM has developed preliminary contact with Agence Française de Développement (AFD) to gather information on on-going/future hydrological operations and technical experts working in the regions of France. This will help in developing knowledge and opportunities for possible future collaboration to work in the concept of IFM and E2E EWS services.

### **6.1.5 WMO Secretary General Reserve Fund**

APFM presented the concept note on the training manual for mainstreaming gender in E2E-EWS-F and IFM to the focal point of Strategic Planning Office under the WMO Secretariat. The strategic planning office is the concerned department responsible for developing WMO gender equality policies and gender action plan for the year 2016-2019. As the concept note aligns with WMO gender action plan priority area, APFM proposed to the strategic planning office to fund the total project cost through the Secretary General Reserve Fund. Alternatively, the Reserve Fund could be used only for the first phase (development of Training Manual and Facilitator's guide) while in the meantime APFM will identify other external donors to fund the remaining phases of the project. The discussion with the Strategic Planning Office is still ongoing.

## **6.2 Reaching to Partners**

### **6.2.1 World Wildlife Fund (WWF)**

APFM reached out to WWF in the reporting period to discuss a potential collaboration for the development of the Training Manual for Flood Green Guide (FGG). APFM has shared the concept note and is awaiting feedback from WWF. APFM will proactively continue to approach WWF to acquire their support for this initiative.

### **6.2.2 Asian Disaster Preparedness Center (ADPC)**

APFM contacted ADPC to provide support in the post-implementation assessment of CBFM project in Thailand and Lao PDR. Also, APFM shared the concept note on training manual for mainstreaming gender in E2E-EWS-F and IFM with ADPC. ADPC shared their feedback on the concept note and will also search for funding opportunities with their funding partners/agencies. ADPC agreed to provide support for the pilot testing of the training manual in Bangladesh (ADPC Bangladesh is presently implementing capacity development projects on flood management at several locations in Bangladesh) including the selection of training participants and identification of flood prone communities.

### **6.2.3 Practical Action (PA)**

During the EGU conference (see section 1.5.9), APFM connected with Practical Action (United Kingdom). Practical Action (PA) was interested in the project concept of training manual for mainstreaming gender in E2E-EWS-F and IFM. This training manual will be useful to PA, in their ongoing research study of gender in flood management, with special focus on early warning systems. PA agreed to provide support in the development of the training manual through gender inclusive case studies on flood management, being part



of the training manual review committee, support in gender sensitive policy development and implementing the pilot testing of training manual in Latin America (Ecuador and Peru) and West Africa where PA projects are currently operational. APFM will update PA about any progress on the training manual project.

APFM was further requested to review the PA research concept note and provide feedbacks. APFM reviewed the research concept note and provided some important comments which were highly appreciated by PA. APFM also shared some gender sensitive case studies on flood management and early warning systems which would be beneficial to them during collection of secondary data.

## 7. Financial Report – 2016

The financial statement of the APFM Trust Fund with income and expenditure from 1st January 2016 to 31 December 2016 is presented below. NOTE: as decided in previous AC/MC meetings, the financial reporting period and the activities reporting period are not the same: the first spans the calendar year (2016 in this case) whereas the second covers the period from 1 August 2016 to 31 July 2017.

REPORTING STANDARDS: WMO  
- TRUST FUNDS -

## WMO OMM

World Meteorological Organization  
Organisation météorologique mondiale  
Organización Meteorológica Mundial  
Всемирная метеорологическая организация  
المنظمة العالمية للأرصاد الجوية  
世界气象组织

Secretariat  
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### Trust Fund for Associated Programme for Flood Management Trust Fund no. 421331 Statement of Income and Expenditure For the period 1 January to 31 December 2016 (Amounts in Swiss Francs)

<b>1. Balance as at 1 January 2016, excluding obligations</b>	(a)	<b>373'814</b>
2. Contributions		100'000
3. Interest		151
4. Total funds available		473'965
5. Expenditure		
5.1 Direct expenditure		203'785
5.2 Indirect expenditure		
5.2.1 Support costs	14'510	
5.2.2 Loss in currency exchange	1'414	
5.2.3 Bank Charges	93	
5.2.4 Total Indirect expenditure		16'017
5.3 Total Expenditure		219'802
6. Balance as at 31 December 2016, net of obligations		<b>254'163</b>
7. Less outstanding obligations including support costs		12'960
<b>8. Balance as at 31 December 2016, net of obligations</b>		<b>241'203</b>

(a) 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. Accordingly, contributions amounting to CHF 17,954 were pledged and recognized as income in 2014, but remain unpaid as of the date of signature of this statement. Therefore the opening and closing balances include this amount which is not available for commitments.

Certified correct:


  
Luckson Ngwira  
Chief, Finance Division  
16 August 2017

Figure 1 - Financial statement of the APFM Trust Fund (January-December 2016)



## 7.1 Financial Support and Performance

During the course of 2016, Switzerland pledged 100,000 CHF. It has to be noted that the agreement between WMO and the Swiss Federal Office for the Environment (FOEN) on a long-term partnership to support countries in IFM expired on 31 December 2016, therefore this constituted the last pledge from FOEN.

France contributed to APFM activities through in-kind support, as did WMO and GWP. GWP continues to provide part of the staff time of a Senior Programme Officer seconded to WMO to support the APFM in its strategic goal of implementing IFM. Interest matured over the reporting period amounts to 151 CHF.

Expenditures of the APFM Trust Fund for the reporting period from 1 January 2016 to 31 December 2016 are presented in Annex IV. In total, an expenditure of 219,802 CHF has been incurred over the income of 100,000 CHF (representing FOEN contribution). The difference (119,802 CHF) between income and expenditure was supplemented by the balance of APFM fund carried over from the last period.

The financial statement for the period 1 January 2016 to 31 December 2016 (Figure 1) prepared by the WMO Finance Division shows that of the total expenditures (219,802 CHF) 203,785 CHF were direct expenditures, whereas 16,017 CHF were indirect expenditures, such as support costs (7% of direct expenditures), bank charges and loss in currency exchange.

The pie charts in Figures 2 and 3 represent the distribution of expenditure per activity from the APFM Trust Fund, and the amount of time allocated by the TSU for each activity.

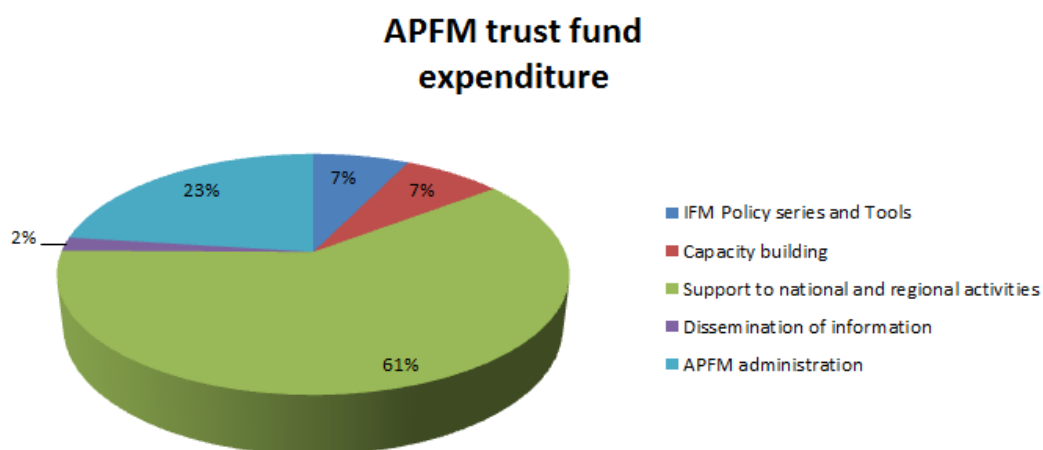


Figure 2 - APFM Trust Fund expenditure 1 January – 31 December 2016

The expenditure can be summarized by categories as follows:

Actual expenditure	Budgeted for 2016	Description
<b>IFM Policy series and Tools</b>		Production, editing, design, printing
15,954.91	21,500	
<b>Capacity building</b>		Bangkok, Montevideo, Ankara
16,326.81	30,000	
<b>Support to national and regional activities</b>		PEARL, Pilot CBFM, IPA Floods, FLOODSS, Ukraine
132,975.35	12,000	
<b>Dissemination of information</b>		Website, Venice, Milan, USB Keys
4,038.74	4,000	
<b>APFM administration</b>		AC/MC, APFM Review, indirect
50,505.95	36,000	
<b>Total (including indirect expenditures)</b>		
219,801.76	103,500	

### ***Explanatory note for over-expenditure in support to national and regional activities:***

The excess expenditure involves the in-part payment contribution to the below activities:

- 1) ADPC was credited with 69,236.31 CHF for the final instalment of pilot project on CBFM in Thailand and Lao PDR. An LoA signed in June 2013 between APFM and ADPC for CBFM project during the period of 2013-2016 translated during the financial period April 2013 – July 2014 into an expenditure (called obligation) of 105,000 USD, i.e. the totality of the LoA (because of the IPSAS accounting system adopted by WMO). However during that same financial period, only an advanced payment was performed to ADPC, therefore at the end of WMO financial year (31 December 2013) the remaining balance (difference between the initial obligation and the first instalment) was credited back to the APFM trust fund. When the CBFM project activities were completed in March 2016 and project report was received by WMO from ADPC in July 2016, the final and remaining payment of 69,236.31 (i.e. difference between the initial obligation and the first instalment) was debited to the APFM trust fund account.
- 2) Similarly, the PEARL project activities involved common staff and short-term temporary staff costs for the period between 1<sup>st</sup> January 2014 and 31<sup>st</sup> December 2016. The initial staff costs (from 1<sup>st</sup> January 2014-November 2016) were covered through regular budget. When in December 2016 WMO released a financial statement to the European Commission (according to the reporting modalities of the PEARL project), 58,649.05 CHF were reported as staff costs for the PEARL project. Finance Department therefore recovered this amount from APFM trust fund (where funds for the PEARL project have been assigned) to be re-injected in WMO regular budget.

So the expenditure out of previous obligations for *support to national and regional activities* in the period of 1<sup>st</sup> January 2016-31<sup>st</sup> December 2016 is found to be only 5,089.99 (132,975.35-127,885.36), and relates to the participation in the IPA Floods workshop in Sarajevo in March 2016, and to a mission to Kiev in support of UNECE in April 2016. Therefore the “new” expenditures in support to national and regional activities in 2016 were way below the budgeted expenditure for 2016 approved during last AC/MC (i.e. 12,000 CHF).

### **Time allocated in the TSU to the different activities (in PM)**

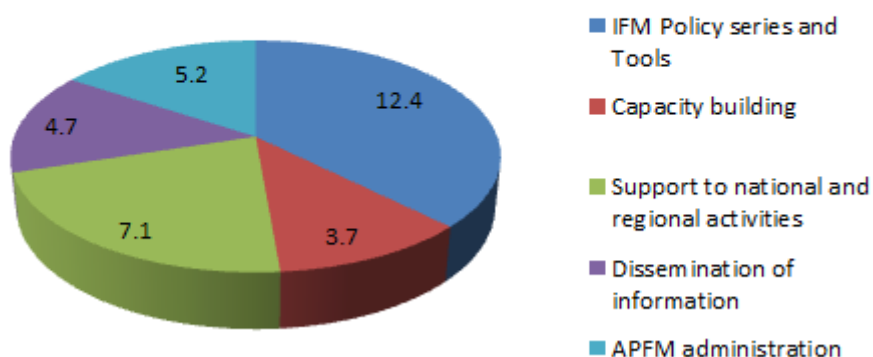


Figure 3 - Time allocation during 1 January – 31 December 2016 to APFM activities by category



## 7.2 Contributions from WMO, GWP and other partners

During the reporting period, APFM activities were supported from the APFM Trust Fund, GWP regular budget, WMO regular budget and other trust funds. WMO funded the costs of two TSU staff members, a part time Senior Secretary, and a part time Communication Officer. The Ministry of Foreign Affairs of France funded a Junior Professional Officer, and GWP continued the secondment of a Senior Programme Officer. Missions related to the support of IAEA and FLOODSS (both held in July 2016 – see section 2.3.1.17 and 2.4.3.2 in APFM Report No. 39) and participation of the CHy President to the AC/MC were supported directly from the WMO regular budget for a total of 13,873 CHF. GWP also contributed directly (i.e expenditures reported as APFM in the GWP Annual Report) and indirectly (expenditures reported under another category in the GWP Annual Report, such as IDMP or WACDEP) to APFM, for a total of discretionary costs of 164,392 CHF.

Staff in the Hydrology and Water Resources Branch, Climate and Water Department, WMO also support APFM-related activities, such as training and pilot projects.

The table below summarizes the contributions to APFM (both in-kind and financial) of WMO, GWP and other Partners (1 January – 31 December 2016)

Period	Staff/Activity	Source of Funds	Contribution
<b>In-kind Contribution</b>			
1 Jan - 31 Dec 2016	Head of Technical Support Unit (TSU) (75%)	WMO Climate and Water Department (CLW)	9 Person-Month (PM) =144,541.5 CHF
1 Jan - 31 Dec 2016	Chief HFWR Division (25%)	WMO CLW	3 PM =58,890 CHF
1 Dec - 31 Dec 2016	TSU Project Officer	WMO CLW	1 PM = 13,479.1 CHF
1 Jan - 31 Dec 2016	TSU JPO (paid 100% through France Ministry of Foreign Affairs (MFA) JPO programme)	France MFA	12 PM = 128,876.6 CHF
1 Jan - 31 Dec 2016	TSU Outreach Officer (25%)	WMO CLW	3 PM = 32,588.5 CHF
1 Jan - 31 Dec 2016	TSU Senior Secretary (20%)	WMO CLW	2.4 PM = 23,542.5 CHF
1 Jan - 31 Dec 2016	Senior Programme Officer (part-time)	GWP	31,309 CHF
<b>Financial Contribution</b>			
July 2016	Support to IAEA in preparation of the training course held in December	WMO CLW	1,274 CHF
July 2016	Support to the FLOODSS initiative	WMO CLW	7,254 CHF
September 2016	Support cost to AC/MC meeting	WMO CLW	5,345 CHF
January - December 2016	Support costs to ACMC Meeting, work programme development and liaison with GWP	GWP*	18,348 CHF
January - December 2016	Malaysia community rainwater harvesting, flood proofing and various climate change adaptation measures	GWP*	9,810 CHF



January - December 2016	Thailand capacity building on community-based adaptation in the risk and vulnerable areas to extreme weather at Sakaekrung, Pasak, and Chao Phraya basins	GWP*	16,895 CHF
January - December 2016	Southern Africa supporting LIMCOM under the USAID RESILIM project for the development of a DRR Strategy for Limpopo	GWP*	17,768 CHF
November - December 2016	Project proposal and funding sources development	GWP*	8,233 CHF
January - December 2016	Integrated Flood Management Project Preparation Initiative in the Volta Basin Countries	GWP*	64,637 CHF
* Includes GWP direct and indirect expenditures related to the APFM			

The summarized contributions by Partner are as follows:

	Staff costs	Discretionary costs	Total contribution by Partner
WMO	401,918 CHF	13,873 CHF	415,791 CHF
GWP*	31,309 CHF	164,392 CHF	195,701 CHF
MFA France	128,876.6 CHF	-	128,876.6 CHF

\* Includes GWP direct and indirect expenditures related to the APFM.

The pie charts in Figures 4 and 5 represent the distribution of expenditure by major activity area for WMO Regular Budget and that of the GWP:

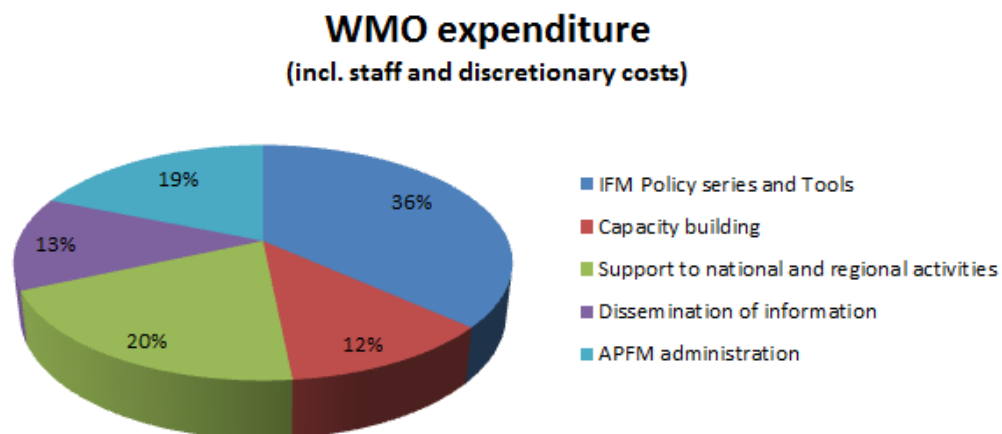


Figure 4 - WMO expenditure

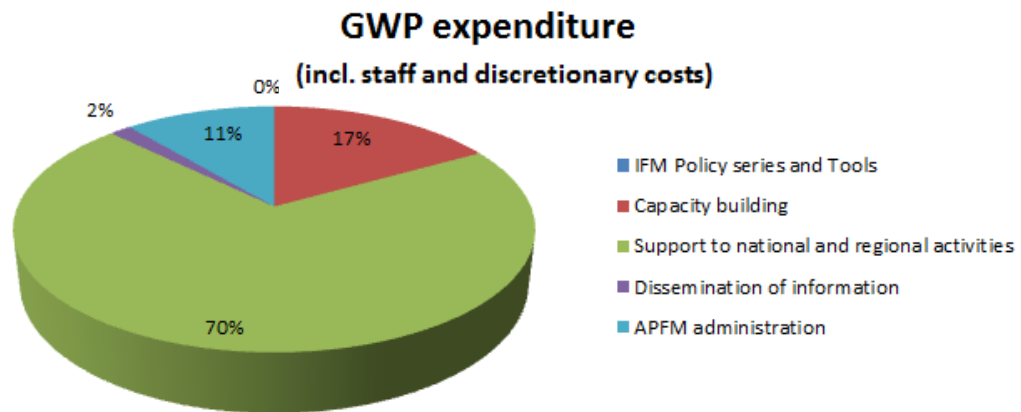


Figure 5 - GWP expenditure

Considering the three different sources (APFM, WMO and GWP), overall distribution of expenditure is summarized in Figures 6 and 7:

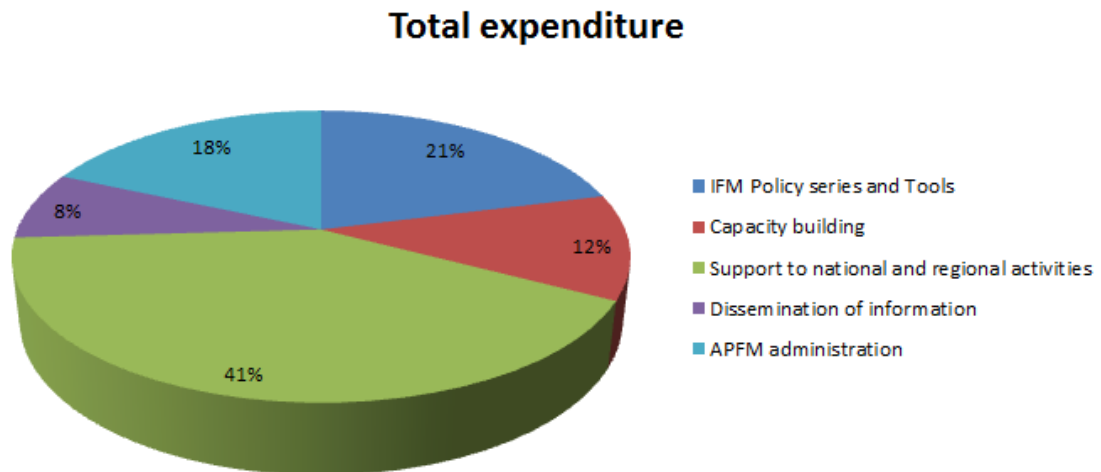
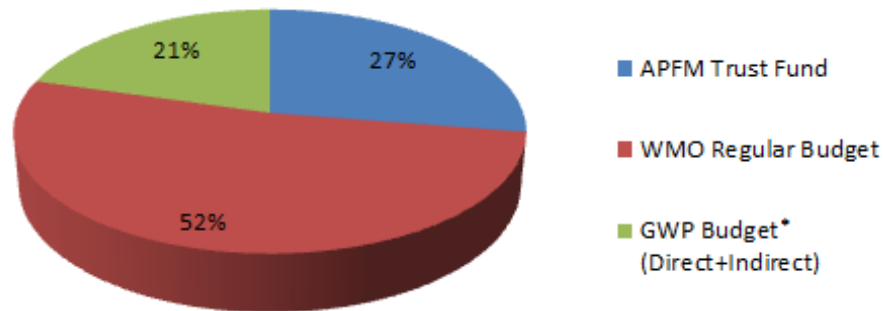


Figure 6 - Total expenditure

## Expenditure by source of funding



\* GWP Direct Budget is the budget reported as APFM in the GWP Annual Report  
GWP Indirect Budget includes APFM related budgets reported under another heading in the GWP Annual Report (such as IDMP or WACDEP)

Figure 7 - Expenditure by source of funds (WMO budget includes contributions by France)

In-kind contributions from SBPs for the period 1 January to 31 December 2016 are listed in the table below:

Activity	Partners	Contribution from Partners
2016 AC/MC meetings in Geneva (2 days)	ADPC	2 person days
	Alterra	2 person days
	Australia BoM	2 person days
	BfG	2 person days
	CEH	2 person days
	CERFE	2 person days
	CIMA	2 person days
	Deltares	2 person days
	DHI	2 person days
	FICH	2 person days
	France MFA	2 person days
	IAHS	2 person days
	ICHARM	2 person days
	Italy MFA	2 person days
	PROHIMET	2 person days
	PoliMi	2 person days
	TUDresden	2 person days
	UniDundee	2 person days
	USAID	4 person days
	Zoë Env.	2 person days
Community-Based Flood Management in Thailand	ADPC	5+ person days (implementation of pilot project)
Development/revision of 3 IFM Tools (and article)	CERFE	6+ person days
Revision of IFM Tool	PoliMi	5+ person days
Project Proposal on training material for FG	WWF	5+ person days
Contribution to the development of the Tool on Crowdsourcing and crisis mapping	UNOSAT	5+ person days



Revision of the IFM training manual	ADPC	5+ person days (revising the manual)
	Australia BoM	
	BfG	
	DHI	
Development of the Guidance document	Deltares	10+ person days (preparation of publication)

Besides WMO and GWP time, already reported at the beginning of this section, the following table summarizes the contribution in person days from SBPs and other financial partners. As decided at the last AC/MC, the approximate cost of 1,000 CHF per person/day is also given.

Summary SBPs	Contribution from Donors		Summary Donors	Contribution from Donors	
	(in Person Days)	(in CHF)		(in Person Days)	(in CHF)
ADPC	5 (max)	5,000	MFA France	2	2,000
Alterra	2	2,000	MFA Italy	2	2,000
Australia BoM	7	7,000	USAID	4	4,000
BfG	7	7,000	<b>TOTAL</b>	<b>8</b>	<b>8,000</b>
CEH	2	2,000			
CERFE	6 (max)	6,000			
CIMA	2	2,000			
Deltares	10 (max)	10,000			
DHI	5 (max)	5,000			
Dundee Univ.	2	2,000			
FICH	2	2,000			
IAHS	2	2,000			
ICHARM	2	2,000			
PoliMi	7	7,000			
PROHIMET	2	2,000			
TU Dresden	2	2,000			
UNOSAT	5	5,000			
WWF	5 (max)	5,000			
Zoï EN	2	2,000			
<b>TOTAL SBPs</b>	<b>77</b>	<b>77,000</b>			

Note that all contributions of SBPs in the framework of the PEARL project, the Montevideo workshop, the IPA project proposal for the Balkans, etc. have not been included, as in these cases, the APFM is contributing rather than asking for a contribution.

The cumulative maximum amount of available days volunteered by SBPs as of 31 December is 248, therefore a usage of 31% of this resource is to be reported.



## 8. Proposed Budget

With the new business model being proposed, and the absence of a regular financial core contribution by donors, presenting a budget plan similar to the one of past reports would not make much sense. If the balance in the APFM trust fund (as seen in section 7) amounted to 241,203 CHF, it has to be noted that the balance as of July 2017 is around 166,000 CHF. These funds will be used mainly to cover expenditures related to project proposal formulation (e.g. through SSA of consultants dedicated to this task) or to identifying opportunities (e.g. visits to major potential financial partners, attendance to events to network with potential consortia partners, etc.).

At the time of finalizing this report, as illustrated in section 5.2, a pre-concept note has been presented to the Adaptation Fund. Together with this pre-concept note, a Project Formulation Grant (PFG) of 20,000 USD has been submitted; to be invested in the development of a concept note should the initial proposal be retained. Similarly, a second PFG of 80,000 CHF would be requested should the concept note be accepted in January 2018. In line with the rationale presented in the previous paragraph, these grants can be invested either in subcontracting project proposal developers, or to organize consultative meetings with relevant stakeholders at the local level. Should all levels of proposals (pre-concept note, concept note and project proposal) be approved by the Adaptation Fund, this will translate into an income up to 900,000 USD for APFM in its capacity as implementing agency (670,000 USD) and as executing agency (250,000 USD) during the period 2019-2023, plus the management of the remaining 6 million USD currently listed in the project pre-concept note.

Should other project proposals listed under section 5 receive the approval of donors, this would imply additional income for the programme. All of this income would contribute to covering indirect expenditures which APFM would incur (e.g. expenditures related to finance services, HR management, office space, etc.). Moreover, in order to be able to implement the activities of the different projects, direct costs for the project implementation (i.e. personnel cost for TSU Staff) will be included in each project's budget to ensure cost-recovery and possibly to create a reserve to be re-invested in the formulation of future project proposals. This new cost-recovery model is subject to compliance with the funding entity's rules and procedures.

All this, however, would need a proper mechanism in WMO administration allowing this flexibility. Currently the situation is radically different (especially in terms of budgeting and human resources management) and not tailored to accommodate project management needs. Discussions are ongoing with WMO management to fill this gap.

Besides extra-budgetary resources, with the increased level of synergy between APFM and WMO Commission of Hydrology activities (see sections 3 and 4) it is expected to have expenditures related to these activities covered directly through WMO Regular Budget, especially for issues related to the HelpDesk and the Flood Forecasting Initiative.

## 9. Governance of the APFM

Since 2004, the Advisory and Management Committees have been the governing bodies of APFM. Their mandate and responsibilities are reflected in the document titled "Constitution of the Advisory and Management Committees", last updated in 2011.

The guidance and advice provided by the Advisory Committee on the implementation of APFM activities (particularly after inclusion of the wider network of SBPs) has been one of the major points of strength for the programme's success, allowing APFM to meet users' needs and showcase know-how and good



practices made available by the SBP network. It has also provided a platform for expert entities in flood management to come together to develop the IFM approach, fill gaps and realize synergies.

On the other hand, in light of the absence of core funding donors for APFM, the role of the Management Committee has now become obsolete. It is true that the previous structure of the Management Committee allowed all major contributing partners (i.e. WMO, GWP, MLIT, FOEN, USAID, SBP representatives, etc.) to contribute to the decisions regarding future activities in a participatory and democratic way; however, the implementation of the new business model sees the relation between the overall activities of APFM and the donors as much more mediated and “filtered” by the entities legally contracting the commitments with the donors, i.e. WMO and GWP. In other words, discussions regarding the implementation of specific project proposals will have to be held in a separate, ad-hoc context, with the directly involved stakeholders. Accordingly, financial and progress reporting will have to be done in compliance with the modalities and formatting of the relevant donor agency. For example, should the Adaptation Fund proposal be funded in 2019, any discussion related to the implementation of this project will be held between the implementing agency (WMO) and the Adaptation Fund; and project reporting will be done in accordance with the Adaptation Fund’s standards and requests. As such, the Management Committee meeting will be replaced by bilateral discussions between WMO and GWP to compare and coordinate efforts in approaching selected donors/identify possible focus areas. This might translate to the need to officially formalize the agreement between WMO and GWP, therefore it is planned to explore and identify the most appropriate legal instruments to reach this objective in the next reporting period.

Notwithstanding the importance of the contribution of SBPs, and the advice provided by them both in terms of identifying users’ needs and making available know-how and resources to meet these needs, it is proposed to transfer the role of the Advisory Committee to a new “Support Base Partner Forum”. This Forum, which would meet on an annual basis either physically (in Geneva, Stockholm, or any other place that would optimize financial resources of participants) or virtually (through WebEx or another e-meeting platform), would provide the opportunity to explore possible synergies in the development of project proposals and formulation of consortia to share expertise and know-how on ad-hoc activities. APFM would still present an annual activity report to the SBP Forum, to keep SBP’s informed of recent activities and to share opportunities identified at the international level.

These changes will also entail an update of the “Framework document for the establishment of a HelpDesk for Integrated Flood Management”, which currently constitutes the Annex to all Letter of Engagement with SBP’s. A renewal of expression of interest of the existing SBPs is therefore also envisaged for the next period, based on a new framework document that will be elaborated in the next months by the TSU and presented to existing SBPs.

## 10. Annexes

### I - Helpdesk request

### II - Log Frame

### III - Checklist of recommendations of last AC/MC meeting (2015-2016)

### IV - Financial Report

### V - Detailed business/funding model elements



## Annex I – List of IFM HelpDesk Requests

As per the recommendations of the Advisory and Management Committees of 2015, the lists of HelpDesk requests have been aggregated in a single list, independently from the channel through which the request has been received. Criteria on the consistency of aggregated data are provided at the beginning of Annex I in the APFM Annual Report 2015-2016 (APFM Report No. 39).

Since 2009, and as of July 2017, 268 requests have been received with an average of 33 per year. Of these 268, 22 were not fully addressed due to inappropriate requests (e.g. request for conference sponsorship), withdrawal, spam or lack of follow-up from the requesting party. This translates into a rate of fulfilment of HelpDesk requests of more than 92%.

As shown in Figure 1 the most abundant type of request has been the "rapid guidance" (123 requests - 45.22%), followed by capacity building (93 requests - 34.19%). The category "assistance for strategy" covers almost one- fifth of the total requests 20.59% (56 requests) from 2009 to July 2017.

Regarding the requesting institutions, "International Organizations" (95 requests - 34.93%) is the category that made the most use of the HelpDesk, as shown in Figure 2. The remaining requests were from governmental agencies (18.75%), universities or academic institutions (25.74%) and NGOs or private consulting companies (20.59%).

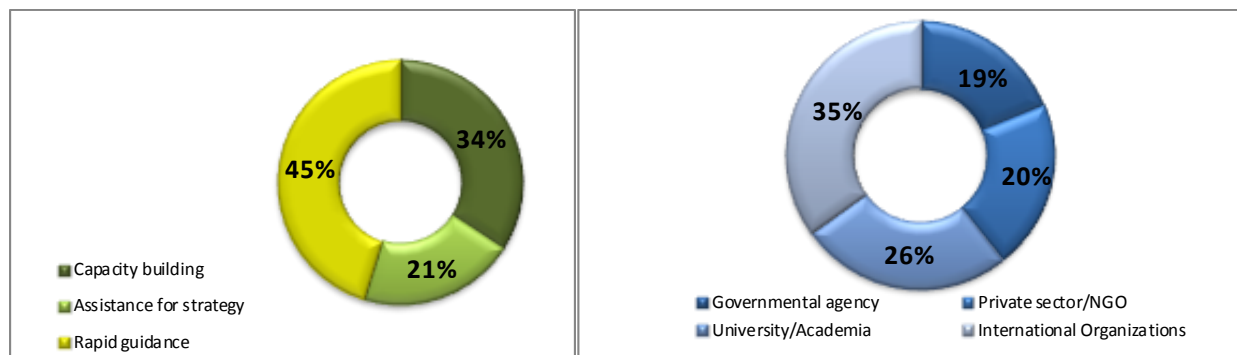


Figure 1: Percentage of requests by type between 2009-2017

Figure 2: Percentage of requests by institution type between 2009-2017

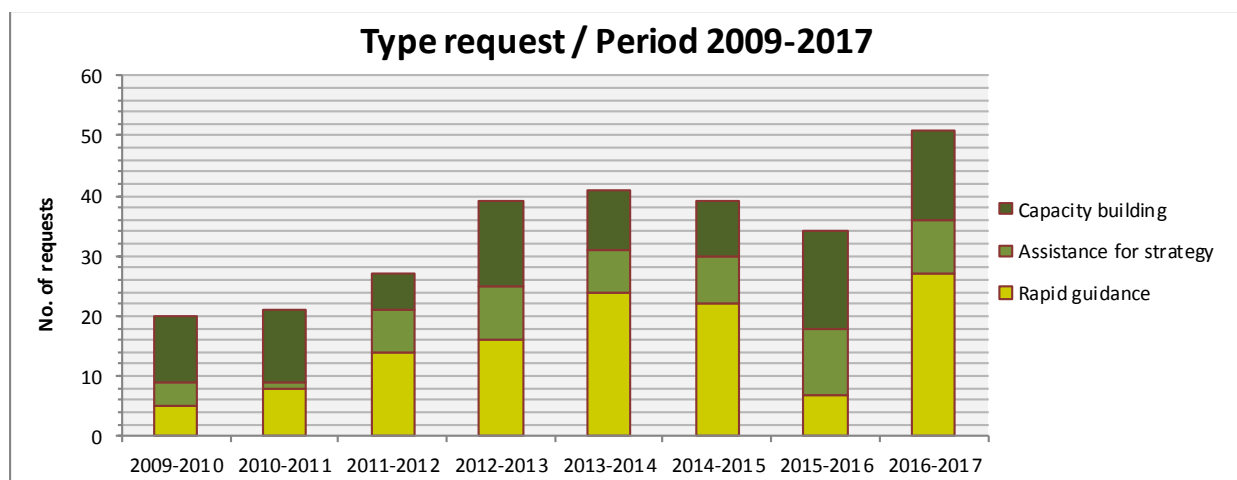


Figure 3: No. of requests by type and reporting period (2009-2017)

Likewise, this trend is perfectly represented during the three periods with the highest number of requests, i.e. 2016-2017 (51 total requests), 2013-2014 (41 total requests) and 2014-2015 (39 total requests), as shown in Figures 3 and 4.

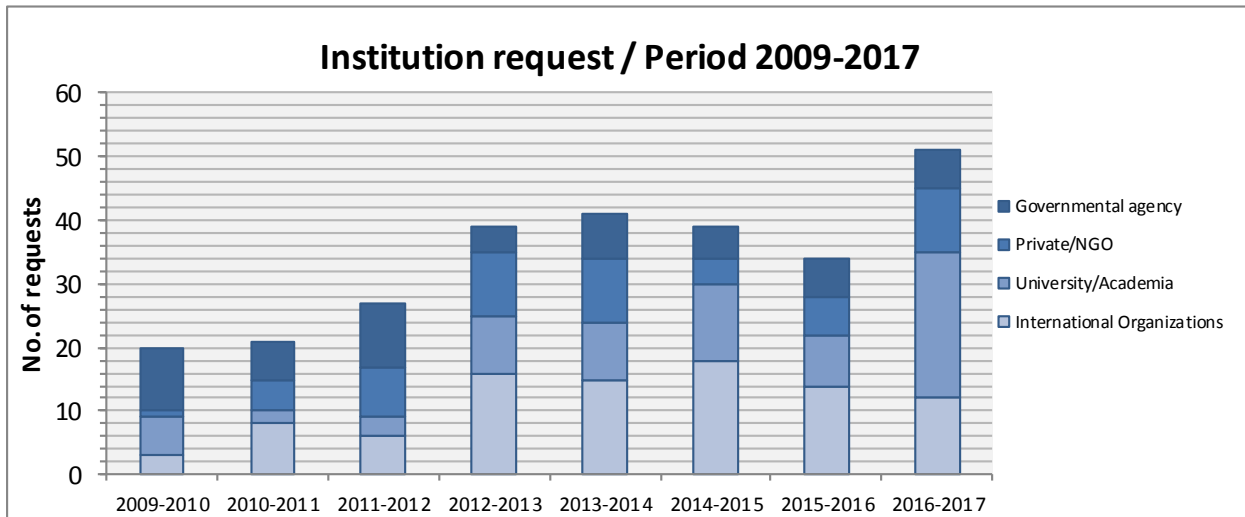


Figure 4: No. of requests by Institution requesting and reporting period (2009- 2017)

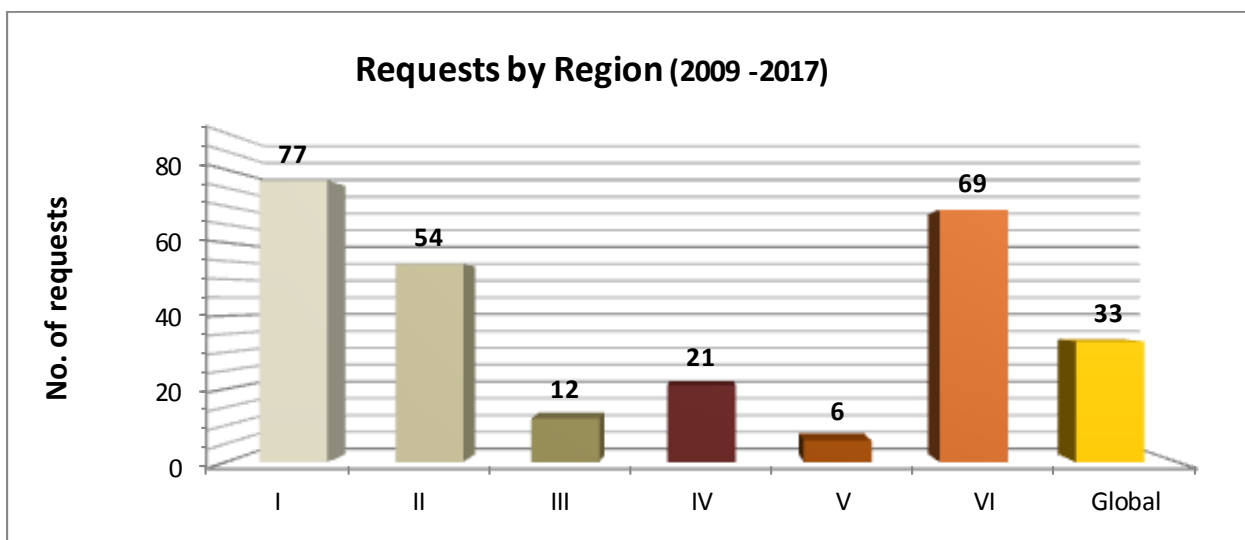
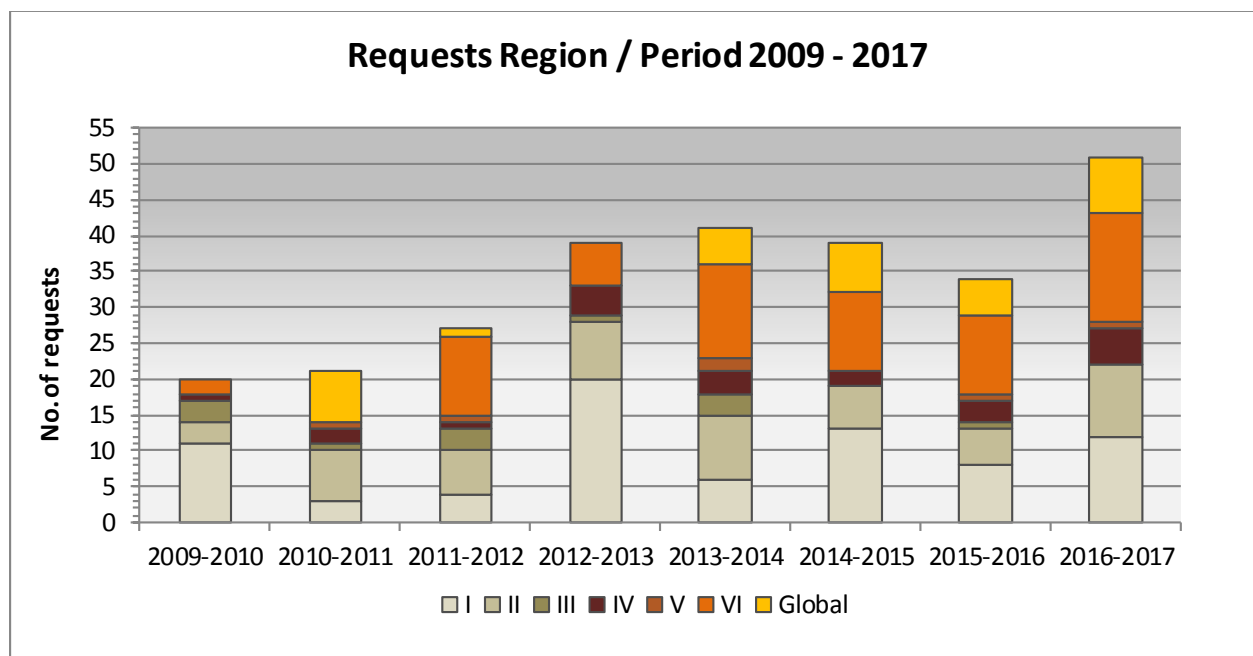


Figure 5: No. of requests by geographical distribution since 2009

In terms of countries targeted as a result of HelpDesk requests, Figure 5 shows RA I – Africa as the region that has mostly benefitted from APFM interventions (77 requests since HelpDesk inception), followed by RA VI - Europe (69 requests), RA II – Asia (54 requests), RA IV (21), RA III (12) and RA V (6). In addition, 33 requests fall under the new category “Global”, which might reflect activities impacting the global, regional or transboundary level. A distribution by year is also provided in Figure 6.



**Figure 6: No. of requests by geographical distribution and reporting period**

During the reporting period (August 2016-July 2017) 51 requests were received: of these, 4 requests were discarded/rejected, and 3 are ongoing implementation.

A brief summary of the 51 HelpDesk requests received in the reporting period is provided in the table below. Prior to this reporting period, 221 requests were made and documented in previous annual reports. The majority of the 51 requests have been addressed. Three requests are either ongoing or action is planned for the next reporting period.

Requests received by TSU in the framework of the HelpDesk						
Requests (No 1-221) not displayed)		Received from 06/2009 to 07/2016 (see previous annual reports)			Status: 203 Completed, 18 discarded	
No.	Date	Institution, Country	Category	Impact (Region or Global)	Type of request	Status
222	Aug-16	Secretaría de Gobernación (SEGOB) Mexico ( <i>Governmental Agencies</i> )	Rapid Guidance (GWP)	IV	Request on typologies of floods	Completed
223	Aug-16	Student, Nepal ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	II	Request for material/information on Flood Management	Completed
224	Aug-16	Student, Nigeria ( <i>Universities and Academia</i> )	Capacity Building (WMO)	I	Request for training assistance on Integrated Flood Management	Completed



225	Aug-16	Student, AIT, Nepal (Universities and Academia)	Rapid Guidance (WMO)	II	Request for reference material	Completed
226	Sept-16	Data, Research and Policy, UNICEF (International Organizations)	Rapid Guidance (WMO/GWP)	Global	Requesting information for the number of people at risk from future sea-level rise	Completed
227	Sept-16	GWP Ghana (NGO)	Assistance for Strategy (GWP/WMO)	I	Request for comments on the flood management needs assessment for the IFM Project Preparation initiative	Completed
228	Sept-16	GWP Mali (NGO)	Assistance for Strategy (GWP/WMO)	I	Request for comments on the flood management needs assessment for the IFM Project Preparation initiative	Completed
229	Sept-16	EU Education Committee- EGU (Brussels), CIMA (Universities and Academia)	Capacity Building (WMO)	VI	Request for education material on primary and intermediate schools	Completed
230	Sept-16	Water Resources Department, Assam, India (Governmental Agencies)	Rapid Guidance (WMO)	II	Request for guidance material on community based flood management	Completed
231	Sept-16	Ecole Polytechnique, Lausanne, Switzerland (Universities and Academia)	Rapid Guidance (WMO)	VI	Request for guidance on rainfall modelling	Completed
232	Sept-16	GWP Central Africa (International Organizations)	Assistance for Strategy (WMO/GWP)	I	Request to review the project proposal on Early Warning System in the Chari-Logone Basin	Completed
233	Sept-16	IAEA (Government Agencies)	Capacity Building (WMO)	Global	Request to facilitate workshop	Completed
234	Sept-16	World Bank (International Organizations)	Rapid Guidance (WMO)	II	Request for feedback on capacity development issues in Central Asia	Completed
235	Oct-16	Teens4safety, USA (NGO)	Rapid Guidance (WMO)	Global	Request to add 'Flood safety guide' tool in APFM website	Completed



236	Oct-16	Post-graduate student, Zimbabwe ( <i>Universities and Academia</i> )	Capacity Building (WMO)	I	Request APFM to provide hydrology related work opportunities	Completed
237	Oct-16	RUC university, Denmark ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	VI	Request for publication	Completed
238	Oct-16	WaterLex, Switzerland ( <i>NGO</i> )	Rapid Guidance (WMO)	VI	Requested information on water issues in the Haitian context	Completed
239	Oct-16	Central Water & Power Research Station, Pune, India ( <i>Government Agencies</i> )	Rapid Guidance (WMO)	II	Request for reference material	Completed
240	Oct-16	Student, India ( <i>Universities and Academia</i> )	Capacity Building (WMO)	VI	Interested in hydrology related work opportunities	Completed
241	Oct-16	OECD, France ( <i>Government Agencies</i> )	Rapid Guidance (GWP)	Global	Request for APFM publications	Completed



242	Nov-16	DisasterWeb (helping communities prepare for natural disasters), California, USA ( <i>Private Companies</i> )	Rapid Guidance (WMO)	IV	Request to add guest article (winter weather preparation tips and advice) in the APFM website	Discarded (Spam)
243	Nov-16	UNDP India ( <i>International Organizations</i> )	Assistant for Strategy (WMO)	II	Request for project proposal development	Discarded
244	Nov-16	ETH Zurich ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	VI	Request for presentation on IFM	Completed
245	Nov-16	Ecologic Institut gemeinnützige GmbH, Berlin ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	VI	Permission to use APFM material in the RISC-KIT	Completed
246	Nov-16	GWP china ( <i>International Organizations</i> )	Rapid Guidance (GWP)	II	Request for technical advice on Urban Flood Management	Completed



247	Dec-16	GWP Togo (NGO)	Assistance for Strategy (GWP/WMO)	I	Request for comments on the flood management needs assessment for the IFM Project Preparation initiative	Completed
248	Dec-16	GWP and Volta Basin Authority ( <i>International Organizations</i> )	Assistance for Strategy (GWP/WMO)	I	Request for comments on the basin wide flood management needs assessment for the IFM Project Preparation initiative	Completed
249	Dec-16	IRHA ( <i>International Organizations</i> )	Assistance for Strategy (WMO)	VI	Request for developing a proposal for EU-DIPECHO	Rejected (Out of scope) Liaised with relevant partner
250	Dec-16	Researcher, USA ( <i>Academia</i> )	Capacity Building (WMO)	IV	Interested in hydrology related work opportunities	Completed
251	Jan-17	PAVE, Nigeria ( <i>NGO</i> )	Rapid Guidance (WMO)	I	APFM collaboration and support to promote and replicate the ICT based flood risk management project in Nigeria and Africa	Completed
252	Jan-17	Student, Erasmus Mundus, Nepal ( <i>Universities and Academia</i> )	Capacity Building (WMO)	II	Interested in hydrology related work opportunities	Completed
253	Feb-17	FLOODDEX UK and EUROPE ( <i>Private Companies</i> )	Capacity Building (WMO)	VI	Presentation of APFM and IFM applications at the FLOODDEX Conference/workshop in Amsterdam	Discarded



254	Feb-17	GWP, Central Africa ( <i>International Organizations</i> )	Assistance for Strategy (WMO/GWP)	I	Request on EWS project proposal development for lake Chad	Completed
255	Feb-17	WFP ( <i>International Organizations</i> )	Rapid Guidance (WMO)	I	Request for contact of Limpopo basin	Completed
256	Feb-17	Student, USA ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	II	Request for Hydrograph Information	Completed
257	Mar-17	Darches, France ( <i>NGO</i> )	Rapid Guidance (WMO)	Global	Request to provide information related to resilient infrastructure tool and details of partners interested in collaboration	Completed
258	Mar-17	SMHI / Swedish Meteorological and Hydrological Institute ( <i>Universities and Academia</i> )	Assistance for Strategy (WMO)	VI	Request for letter of support for Horizon 2020 proposal	Completed
259	Apr-17	UNEP/UNDP/GEF, Comoros ( <i>International Organizations</i> )	Capacity Building (GWP)	I	Request for facilitator on an individual contractor agreement For Training of Trainers on Flood Forecasting and Disaster Management for Atlantic and Indian Ocean SIDS in Comoros	Completed
260	Apr-17	United Nations University ( <i>Universities and Academia</i> )	Rapid Guidance (WMO)	Global	Request for material on Global flood risk and flood hazard maps	Completed
261	Apr-17	International Telecommunication Union ( <i>International Organizations</i> )	Capacity Building (WMO)	Global	presentation in "IoT week" event; Sharing experiences of IoT on environment	Completed



262	May-17	University college London (UCL), London (Universities and Academia)	Rapid Guidance (WMO/GWP)	VI	Request for information on Flood and Drought Exposure Indicators	Completed
263	May-17	PreventionWeb, UN Office for Disaster Risk Reduction, Geneva (International Organizations)	Capacity Building (WMO)	Global	Featuring 'Selecting measures and designing strategies for integrated flood management' on preventionweb website	Completed
264	May-17	Student, UCAR, Spain (Universities and Academia)	Rapid Guidance (WMO)	VI	Request for reference material	Completed
265	Jun-17	Indonesia Water Partnership (Governmental Agencies)	Rapid Guidance (WMO/GWP)	V	Request for training material and technical guidance describing the indicators for the occurrence of extreme climate events especially for floods.	Pending
266	Jun-17	Environmental Policy Group, Wageningen University (Universities and Academia)	Capacity Building (WMO)	VI	Request for information on using delta flood management report with IFM, or with new programmes or initiatives of the APFM	Completed
267	Jun-17	ETH Zurich (Universities and Academia)	Capacity Building (WMO)	VI	Request for seminar lecture	Ongoing
268	Jun-17	Student, Wageningen University, Netherlands (Universities and Academia)	Capacity Building (WMO)	VI	Interested in hydrology related work opportunities	Ongoing
269	July-17	Student, Thailand (Universities and Academia)	Rapid Guidance (GWP/WMO)	II	Opportunity related to urban flood management	Completed
270	July-17	Private consultant, USA (Private Companies)	Rapid Guidance (WMO)	IV	Review of paper on Transboundary governance	Completed
271	July-17	University of Iowa, USA (Universities and Academia)	Rapid Guidance (WMO)	IV	Rapid guidance on networking	Completed
272	July-17	Researcher, Cameroon (Academia)	Capacity Building (WMO)	I	Interested in hydrology related work opportunities	Completed

					08/2014 - 12/2015	2016	08/2014 - 12/2015	2016	08/2014 - 12/2015	2016	2017				
Level	Description	Impact, Outcome and High Level Outputs	NB	Performance Indicators	Targets	Achieve.	Targets	Achieve.	Comments Targets	Comments Achieve.	Comments Targets	Comments Achieve.	Comments Targets	Comments Achieve.	
Impact															
Vision	Attaining water security and sustainable development through integrated flood management	Enhanced flood management supports prosperity and sustainable development.	I1	Number of <b>people</b> benefiting from integrated flood management interventions											
			I2	Total <b>value of investment</b> directed to integrated flood management interventions influenced by APFM											
			I3.a	% of decrease in life losses in comparison with past events											
			I3.b	% of decrease in economic losses in comparison with past events											
Outcome															
Mission	To advance the implementation of Integrated Flood Management (IFM) within the overall framework of Integrated Water Resources Management (IWRM) to maximize net benefits from the use of their floodplains and minimize loss of life and impacts.	Sustainable development and management of floods at all levels (global, regional, national, local)	O1	Number of <b>policies, programmes, plans and projects</b> which include <b>integrated flood management approaches</b>					Outcome and Impact indicators not actively measured, but still reported, where possible. The indicators reflect the outcomes and impact the APFM hopes to contribute to through its activities.			Malaysia flood management initiative			
			O2	Number of <b>countries using an IFM approach</b> for their national water management											
			O3	Number of <b>countries establishing</b> flood management plans								Propose to delete it as it is included already in O2			
			O4	Number of <b>approved investment plans</b> associated with policies, programmes, plans, and projects which include IFM											
			O5	Number of <b>agreements/commitments</b> on enhanced flood management at transboundary/regional level influenced by APFM											
			O6	Number of <b>investment strategies coherent with</b> policies and programmes on integrated flood management											
			O7	Number of enhanced <b>legal frameworks / policies / programmes</b> reflecting Integrated Flood Management approaches											
			O8	<b>Percentage of women</b> benefiting from interventions to improve flood management (min %).								Propose to combine this with O9 and O10			
			O9	<b>Percentage of youth</b> benefiting from interventions to improve flood management (min %).											
			O10	<b>Percentage of disabled people</b> benefiting from interventions to improve flood management (min %).											
			O11	Number of flood management decision making bodies, whose <b>representation of women</b> corresponds, at least, to their proportion of the local population								Propose to delete it as extremely difficult to measure			
			O12	Number of flood management decision making bodies, in which <b>youth is well represented</b> .											
			O13	Number of flood management decision making bodies, in which <b>disabled people are well represented</b> .								Propose to delete it as extremely difficult to measure			
Outputs															
GOAL 1. Help Countries maximize benefits and minimize loss of life and damage in floodplains	Assist countries, regions, and communities in the implementation of IFM. Support the implementation of IFM at all levels (global, regional, national, local)	Work Package 1: Support to global, regional, national and local organizations/communities in developing agreements/commitments /investment options and tools for integrated flood management	OT1.1	Recognition of IFM in relevant global debates measured by number of <b>references to IFM in official documents</b>	2	6			1) WCDRR in Sendai, 2) WMO Congress	1) Sixth International Conference on Flood Management 2) WMO Conference on the Gender Dimensions of Weather and Climate Services 3) WCDRR in Sendai (background brief on water and DRR) 4) Second Transboundary Flood Management Workshop 5) Seventeenth World Meteorological Congress 6) Flood Forecasting Initiative Advisory Group		2) 15th session of Commission for Hydrology endorsed FFI decision to make use of IFM HelpDesk to showcase products related to End-to-End early warning for flood forecasting  UNISDR Sendai working group on Ecosystems words into action  Submission of APFM to official Partnerships for SDGs initiative but database appears not to be online.		Presentation of APFM and IFM concept in third UN Special Thematic Session on Water and Disasters "Adaptation to Climate Change, Boosting Financing and Investment, and Advancing Science and Technology" (20 Jul 2017)	
			OT1.2	Number of <b>regional organisations</b> supported in developing agreements/commitments/investment options and using tools that include integrated flood management approaches.	3	10			1-2) West Africa workshop (VBA, ECOWAS) 3) ICIMOD	1-3) EU consortia 4) PEARL Consortium 5) SDC (+14 NGOs in the training course) 6-9) GWP SAS, SEA, CACENA, China (GWP Pan-Asian workshop in China) 10) Working Group on Hydrology RA III		Support of Limpopo River Basin Disaster Preparedness action plan  Support to LVBC and GWP Central Africa in developing a project on early warning system			
			OT1.3	Number of <b>national organisations</b> supported in developing agreements/commitments/investment options and using tools that include integrated flood management approaches.	1 (+5 continued)	16			1-3) Mexico PRONACH - (GASIR-CONAGUA, IMTA, UNAM) 3-5) Bangladesh (IWM, BWDB) 6) Cuba	1-3) Mexico PRONACH - (GASIR-CONAGUA, IMTA, UNAM) 3-5) Bangladesh (IWM, BWDB) 6-12) Cuba (INRH, EARH, INSMET, CIH, CAP, CIINA, Planning authority)		CHECK HELPDESK RESPONSES			
			OT1.4	Number of <b>local organisations</b> supported in developing agreements/commitments/investment options and using tools that include integrated flood management approaches.	(5 continued)	9			1-4) continued Thailand & Laos (2 community committees each) 5) Nepal	1-4) continued Thailand & Laos (2 community committees each) 5-6) EIPH (Pinar del Rio and Havana), <i>still pending</i>		Finalization of Thailand and Laos (2 community committees each) - already reported in 2015			
		Work Package 2: Align implementation needs with financial partners for the development of integrated flood management projects	OT1.5	Number of <b>countries</b> supported in the development of capacity and projects on integrated flood management <b>to access finance</b> to improve flood management.	8	0			1-7) Benin, Burkina Faso, Cote d'Ivoire, Ghana, Mali, Nigeria and Senegal	FOEN contribution for projects		FOEN contribution for 2016		Consider CREWS	
			OT1.6	Amount of <b>funding</b> through voluntary and extra-budgetary resources for projects	100.000 CHF	100.000 CHF			100.000CHF						
		Work Package 3: Demonstrated innovative, sustainable solutions for flood management. Solutions in place that address critical flood management challenges.	OT1.7	Number of <b>demonstration projects</b> new and under way	2	1		0	1) continued Thailand 2) Bangladesh	1) continued Thailand and Lao		Change of strategy, demonstration projects not of high priority, but 3 project proposal on (WWF FGG training, Gender training manual, Civil Protection modules)			
			OT1.8	Number of <b>demonstration projects</b> completed	0	0		1				Community based flood management in Thailand			
			OT1.9	Percentage of <b>demonstrations projects documented</b> outlining the lessons from IFM applications and guidance for replicating solutions	0%	50%		100%	demonstration projects will only be completed later on	Thailand and Lao interim reports		For Thailand and Laos project the following publications have been completed - final report - voices from the field - two manuals developed in the framework of the project (one of the manuals translated in English)		Postimplementation assessment of Thailand and Laos project	
			OT1.10	Number of <b>beneficiaries &amp; stakeholders (communities)</b> supported in demonstration projects on integrated flood management	1 (+4 continued)	4 continued		4 continued	1-4) continued Thailand & Laos: 2 communities each 5) Nepal	1-4) continued Thailand & Laos: 2 communities each		(already reported in 2015)			
		Work Package 4: Capacity building initiatives for institutions and stakeholders on integrated flood management.	OT1.11	Number of <b>trainings and workshops</b> outlining the lessons from IFM applications and guidance for replicating solutions	4	10			1) Mexico 2) Cuba 3) Nepal 4) West Africa	1) SADC WaterNet and GWP Southern Africa Training Jun 2015 2) Cuba Jul 2015 3) SDC Mar 2015 4) Bangladesh Oct 2014 5) China Oct 2014 6) UNECE Transboundary Flood Management Workshop Feb 2015		World Bank E-learning on land-use and floods (feedback from WB pending)  Training for Turkey on European Flood Directive Montevideo			
			OT1.12	Number of <b>government institutions and other stakeholders / individuals</b> with demonstrably enhanced capacity to include integrated flood management approaches in the design and implementation of policies, programmes, plans & projects	20/100	137/303 +FIRAS			Estimating 25 People and 5 institutions participating per workshop	see above: 1) 20 people (10 inst.) 2) 21 people (8 inst.) 3) 33 people (15 inst.) 4) 90 people (23 inst.) 5) 12 people (5 inst.) 6) 50 people (41 inst.) 7) 15 people (1 inst.) 8) 14 people (14 inst.) 9) WAITING FOR FIRAS 10) 46 people (20 inst.)		Remember: World Bank E-learning on land-use and floods			
			OT1.13	<b>Beneficiaries satisfaction</b> with the provided trainings and/or workshops	80%	90.6			Counted with questionnaire	Feedback documented from Cuba only		Montevideo Verbal feedback Turkey: More examples from the application of the European Directive would have been appreciated			
		Work Package 5: Compilation of knowledge	OT2.1	Number of new/revised <b>knowledge products</b> developed	9	18		2	1) Health and Sanitation 2) Rules and Regulation 3) Media 4) Social Impact Assessment 5) Effectiveness 6) Loss Assessment case studies 7) Crowdsourcing 8) Community Based Flood Management (revision) 9) Abstract for Stockholm World Water Week	1) Health and Sanitation 2) Media 3-4) Social Impact Assessment (E+F) 5) Effectiveness 6) Reservoir operation 7-8) Science-Policy Interface or "How to Talk to Decision Makers" (E+S) 9) Guest Editor initiative by UNISDR 10) Post in the World Bank's Development Dialogue on Urban Flood Risk Management 11) Article on Adapting to climate change: The case of Santos Harbor metropolitan area (Brazil) in Latin America 12) Article on Integrated policies and practices for flood and drought risk management – in Water Policy Journal, issue 17, 2015 13-16) Two new presentations based on tools, plus one updated; full set translated in		1- The Role of Land-Use Planning in Flood Management 2- article crowdsourcing for Venice		Remember: 1- Environmental Aspects of IFM - Case Studies 2- Organizing Community Participation for Flood Management 3- Loss Assessment Case Studies 4- Crisis Mapping and Crowdsourcing in Flood Management 5- Primer for IFM - from theory to implementation 6- Gender Training Manual (draft) 7- Training modules Paraguay (Draft) 8- World Bank E-learning on land-use and floods (need to check) 9- Provision of inputs and revision of WFF Flood Green Guide	
			OT2.2	<b>Mean time (in months) for a tool to be completed</b> from the beginning of the drafting until the publication	15	31						Not an output. Propose to delete it			

GOAL 2. Advance (and enhance) the development of the IFM approach	Collecting and disseminating knowledge on IFM	Work Package 6: Dissemination of knowledge	OT2.3.a	Reach: number of unique visitors on the APFM Website	24000	60427		59,325	20 000 visitor per month for 17 months	~3500 visitors per month per 17 months; +6% compared to the monthly average of the previous period.		~4943 visitors per month for 12 months; +41% compared to monthly average of previous period.		
			OT2.3.b	Reach: number of times Tools are downloaded		2258		3562	Metrics not yet available	This represents the number of sessions on the specific tool page.		This represents the number of sessions on the specific tool page.		
			OT2.3.c	Reach: number of times APFM was mentioned in press articles	2	2		2		1) SDC newsletter 2) Journal of the Taiwan Disaster Prevention Society		1) WMO Bulletin 2) WMO Chy Press Release		1) Reliefweb
			OT2.3.d	Reach: number of new Facebook fans	400	368		490		+10% compared to 2013/2014		+53% compared to 2014/2015		
			OT2.3.e	Reach: number of new Twitter followers	100	84		74		+13% compared to 2013/2014		+40% compared to 2014/2015		
			OT2.3.f	Reach: number of new LinkedIn connections	50	60 (at 31 July 2016)		58		+18% compared to 2013/2014		+16% compared to 2014/2015		
			OT2.4	Number of <b>disseminated knowledge products</b> for knowledge sharing	1000 prints	~2200 print			Dissemination at Sendai, WMO Congress and Stockholm [Note 2.3b counts downloads of tools]	Dissemination at WWW, WMO Gender Conference, WCDRR, WMO Congress, sent to Paraguay ~2100 prints: 817 CDs 712+175 PEARL's brochures 125 Policy Series 302 Tools (7) Concept Papers (7) Others Digital dissemination: technically unfeasible to track	with a paperless policy being implemented in WMO and GWP, and indicators from OT2.3a to OT2.3f dealing with the softcopy dissemination, content of this indicator is covered. Propose to delete it			
			OT2.5	% of increase in <b>website users from non-English speaking countries</b> relative to past year		~+10%		-13.88%	Translation of website not secured	Increase partly due to the creation of a page collecting Spanish documents including also Russian, Chinese, French and other speaking countries		Decrease due to lack of resources to develop materials in other languages		
	Advocating for IFM	Work Package 7: Effectively communicate the IFM approach	OT2.6.a	Number of <b>media features</b> issued by the APFM.	7	7			1-3) APFM newsletter 4-7) Articles and press releases	1-3) APFM Newsletter 4) PreventionWeb Guest editor initiative 5) World Bank's Development Dialogue on Urban Flood Risk Management 6) Latin America Geospatial Portal 7) Water Policy Journal	Began using Mailchimp for APFM newsletters to better monitor engagement and facilitate keeping subscriber list up-to-date; focused on developing infographics (instead of articles) to promote IFM tools	1) APFM Newsletter 3) Infographics 12 articles		1) APFM Newsletter ACCRN guest post 5) Infographics
			OT2.6.b	Number of <b>people reached</b> by each media feature (radio, television, print, internet) (in the case of Newsletters, number of subscribers)	200000	~200000			trying to keep same level as 2013-2014	APFM+PEARL: Website (39877+6273), Social Networks (40673+20850)(61148+49802)(7), Newsletter (1677+81)	Social media reach increased by taking advantage of WMO's social media channels; newsletter subscribers went down because switching to Mailchimp entailed a cleanup of the subscriber list to remove emails that are no longer	APFM social media, WMO social media, Newsletter subscribers (1,231)		Newsletter subscribers (1,198)
			OT2.7	Number of <b>public events</b> attended for sharing knowledge	2 events	2 events			Stockholm WWW, Sendai	1) Stockholm WWW 2) ICFM6 3) Gender and Climate Services 4) Sendai WCDRR 5) Second Transboundary Flood Management Workshop 6) XV IWRA World Water Congress 7) XVII World Meteorological Congress 8) GWP Regional Days 9) Thun FZF Helvetas		Annual Report - St Louis - Lyon		
			OT2.8	Number of <b>south-south knowledge exchange</b> initiatives with commitments for concrete follow up	1	2			1) Cuba - Argentina	1) Cuba - Argentina 2) SADC WaterNet and GWP Southern Africa		Annual Report - Montevideo		
GOAL 3. Sustain an effective and well governed programme with active partners	Growing and reinforcing a network of partners for cooperation on IFM	Work Package 8 : Increased cooperation with partners, including reaching out to NMHS and GWP RWPs and CWPs	OT3.1	Total number of (and new) <b>Support Base Partners</b>	25 (2+)	25 (2+)			Approached by Milan	New: BIG, CEH		remember: 4+		
			OT3.2.a	Percentage of <b>maximum volunteer time</b> contributed as specified in Support Base Partners agreements	50%	61%				139+ days over 226 available		Annual Report		
			OT3.2.b	Percentage of <b>viable requests fulfilled in cooperation</b> with one or more SBPs (requests viable for cooperation)	100%	52% (28/53)				See Annex I - All four tables considered		Annual Report		
			OT3.3	<b>Number of NMHS engaged</b> in activities	1	9			1) Bangladesh 2-8) West Africa 9) Mexico 10) Nepal 11) Cuba	1) Bangladesh 2) Mexico 3) Cuba 4) Thailand 5) Lao PDR 6) Czech Republic 7) Cameroon 8) Nigeria		Annual Report		
			OT3.4	<b>Number of R&amp;CWP engaged</b> in activities	10	11			1) Bangladesh 2-9) West Africa (8 CWPs and RWP) 10) Nepal	1) Gwanamaw 2) Bangladesh 3) South Africa 4) Central Africa 5) Mozambique 6) Pakistan 7) China 8) Caribbean 9) CACENA 10) SEA 11) FAP		Annual Report		
	Efficiently and effectively managing APFM	Work Package 9: Efficiently managed and implemented APFM.	OT4.1	Use of <b>Results-Based Framework and associated Management &amp; Evaluation</b> by the APFM.	1	1			Yes			Yes		
			OT4.2	<b>Amount of funding (in CHF)</b> raised for activities including core functions of APFM (including WMO and GWP contributions)	CHF 196500	CHF 353,764			APFM Trust Fund CHF 100,000 FOEN; WMO CHF 70,000 (excluding staff costs); GWP CHF 26,500 (excluding staff costs)	APFM Trust Fund CHF 100,000 FOEN; WMO CHF 118,700 (excluding staff costs); GWP CHF 135,064 (excluding staff costs)		Annual Report		
			OT4.3	Percentage of <b>HelpDesk requests</b> acted upon from total viable requests received	90%	100% (14/14)				See Annex I - 185/201		Annual Report		
			OT4.4	Percentage of <b>new funding</b> over total funding	60%	107%			At 08/2014 CHF 328000; expected to raise CHF 196500 (see OT4.2)	Raised: 100,000 CHF from FOEN; 118,700 CHF from WMO 135,064 CHF from GWP		Annual Report		
			OT4.5	Undergo an <b>External revision</b> of past performance	No	No			No funding available			Yes		



### Annex III – Checklist of recommendations of last AC/MC meeting (2015-2016)

Recommendations – AC-MC Meeting 2016	Priority	Status		
		completed	on-going	pending
<b>1. Publications and Tools</b>				
Track process to know how Tools cover actual needs, expectations and what is their impact	●		X	
APFM will not be engaged with the same level of effort in finalizing publications. The idea is rather to assist the SBP in securing resources necessary for the development of publications, and assist them in showcasing the final result	●	X		
All the editorial process (including the visual identity), however, will not be dealt with by APFM TSU	●	X		
Deltares institute offered to lead the development of a new Tool on Green Infrastructures for FM, linking to the mentioned WWF/USAID publication on “Green Flood Risk Management Guidelines” (provisional title) – GWP is keen to contribute	●			X
WMO is working to scaling back their responsibility for tool and publication development, by subcontracting to partners. WWF and WMO are considering a joint publication of summary of the FGG with additional case studies as a APFM publication	●			X
“Primer for Integrated Flood Management from Theory to Implementation”	●	X		
“Environmental Aspects of IFM Case Studies ”	●		X	
“IFM Concept Paper 4th edition”	●			X
“Economic Aspects of IFM-2 <sup>nd</sup> Edition”	●			X



The Role of Land-Use Planning in Flood Management 2.0	●	X		
Organizing Community Participation for Flood Management 2.0	●	X		
Crisis Mapping and Crowdsourcing in Flood Management	●	X		
Flood Emergency Planning-2 <sup>nd</sup> Edition	●			X
Loss Assessment Case Studies	●	X		
Flood Management in a Multi-hazard Environment	●			X
The Contribution of Geospatial Science to Flood Management – CIMA volunteered to take the lead, consulting other SBPs (e.g. UNOSAT)	●			X
Rapid Legal Assessment 2 <sup>nd</sup> edition – University of Dundee volunteered to take the lead	●			X
Green Infrastructures for Flood Management	●			X
Natural and Nature-Based Flood Management- A Green Guide (FGG)	●	X		
Formulating a (transboundary) Basin Flood Management Plan-2 <sup>nd</sup> Edition	●			X
Project Cycle in Flood Management	●			X
<b>2. Capacity building</b>				
Develop training manual on Gender issues of Flood Management	●		X	
Develop training modules in Spanish for local Civil Protection authorities in Paraguay (CONAGUA interested to participate and use)	●		X	
Develop IFM training manual based on the review of the feedback collected from SBPs	●			X
Prepare Power Point presentations on remaining IFM Tool Series – University of Dundee and Geneva volunteered for transboundary and legal assessment tools	●		X	



Develop training materials on the Organizing Community Participation for Flood Management tool	●			X
Develop an action plan on e-learning with TUHH, TUD, UNU-FLORES, University of Geneva and University of Dundee, to enrich the current e-learning webpage on the APFM website with other existing platforms from partner institutions. UNU-FLORES, having strong links with TUD, would therefore encourage building synergies and working collectively on the development of further courses	●			X
Develop an action plan of training materials for WWF Flood Green Guide (FGG) wherein WWF will consider how the DSS in the Primer might be used in training for the FGG	●		X	
<b>Specifically concerning planned training workshops, precedence should be given to:</b>				
West Africa, Training on IFM and Project Preparation in the Volta Basin for relevant authorities, including NMHS, in the 6 riparian countries and basin authority with support of GWP Country and Regional Water Partnerships and GWP/AU WACDEP	●		X	
Montevideo, Uruguay, in the framework of the INTERCOONECTA Plan, RALCEA and AECID, in cooperation with FICH, organize a course on IFM	●	X		
Zurich, Switzerland, lecture on Data collection and use for flood and drought protection in the framework of the ETH Water Resources Seminars	●	X		
Antalya, Turkey, training on Basin Flood Management planning in the framework of IPA-FLOODS with CIMA	●	X		
UNESCO is committing to make use of the training materials in its centers;	●			X
Mexico, CIMA is going to held ToT for primary school teachers based on APFM materials	●			X
Discuss needs in support IGAD-HYCOS activities	●			X



Follow up on IAEA training materials	●	X		
Support to develop “bankable” IFM projects in the Volta basin with GWP Regional and Country and NMHS	●		X	
Support PEARL – Preparing for Extreme and Rare events in coastal regions (with UNESCO-IHE, TUHH, Euroaque, DHI, ICHARM and others)	●	X		
Review the Community Based Flood Management (CBFM) in Thailand and Lao	●	X		
Instrument for Pre Accession (IPA) and Horizon 2020 support to consortia	●	X		
Support the PRONACH in Mexico	●			X
Enhance linkages with GFCS, CIFDP, FFGS and SWFDP – Flood Forecasting Initiative	●	X		
Seek synergies with RA II and other WMO activities (e.g. WGH-RA III, Malawi/GFCS, DRR, GHSE, TCP, CIFDP/Bangladesh) – especially DRR.	●	X		
Follow developments on CBFM in Iowa State and FLOODSS – DHI, Deltares, CIMA, PoliMi, UNU-FLORES should be involved in discussion	●	X		
Seek funding opportunities for transboundary issues in the Dniester and other activities	●			X
Support GWP Caribbean by providing knowledge products on flood management	●			
Support GWP South-Asia, S-E Asia, in issues related to community-based flood management	●	X		
Support GWP Regions in Asia to develop work stream on flood management	●		X	
Support GWP Central Africa and Lake Chad Basin Commission for early warning system project preparation in Logone basin (part of Lake Chad basin)	●	X		



Feedback on the Limpopo Disaster Preparedness Action Plan 2016-2030 through GWP Southern Africa	●	X		
Enhance WMO urban cross-cutting issues	●	X		
Support IFM in the Amur River Basin and in Siberia	●	X		
Support China through GWP China in adopting IFM planning and practices	●	X		
<b>3. Outreach</b>				
Support Base Partners: Possible collaboration and cross-promotion with SBPs with an active social media presence	●		X	
Draw attention to existing tools and publications	●		X	
Catalogue of Services	●		X	
Engage Palais de Nations press corps	●			X
Try to involve the diplomatic environment to advocate for IFM	●			X
Continue the publication of the Newsletter (3 issues per year)	●	X		
Consider to increase the Social Media (e.g. Facebook, Twitter) activity to increase the APFM visibility	●		X	
Develop short videos devoted to non-technicians (elevator speeches)	●			X
Participate and advocate for the concept of IFM at International events	●	X		
Consider having materials/webpages translated in Spanish and French	●			X
Consider advertising HelpDesk available facilities in Spanish and French as well	●			X
Try to track keywords leading to APFM website	●		X	
Volunteering SBPs to act as outreach antennas in their region/country	●		X	



Try to link the Repository of know-how assembled by BoM on Flash Floods to the HelpDesk	•			X
SBPs should share relevant information with Outreach Officer regarding ongoing/future activities, particularly when this involves use of APFM materials	•		X	
Include in the catalogue of services findings from the Tour de Table	•	X		
UN-HABITAT III, joint session with UNESCO-IHP (APFM to provide materials)	•			X
<b>4. Other issues</b>				
Zoï Environment Network proposed to send updated information regarding its training activities in the Dniester river basin.		X		

**Annex IV - APFM Financial Report [1 Jan 2016 - 31 Dec 2016]**

Item	Description		APFM Trust Fund (CHF)	WMO Budget (CHF)	GWP Direct Budget* (CHF)	GWP Indirect Budget** (CHF)	TOTAL budgeted (CHF)
<b>1</b>	<b>IFM Policy series and Tools</b>	<b>Total</b>	<b>15,955</b>	<b>152,332</b>			<b>168,286</b>
		Discretionary costs	15,955				15,955
		Staff cost		152,332			152,332
<b>2</b>	<b>Capacity building</b>	<b>Total</b>	<b>16,327</b>	<b>49,039</b>	<b>10,842</b>	<b>16,895</b>	<b>93,102</b>
		Discretionary costs	16,327	1,274	8,233	16,895	42,729
		Staff cost		47,765	2,609		50,374
<b>3</b>	<b>Support to national and regional activities</b>	<b>Total</b>	<b>132,975</b>	<b>82,758</b>	<b>23,482</b>	<b>92,215</b>	<b>331,430</b>
		Discretionary costs	132,975	7,254		92,215	232,444
		Staff cost		75,504	23,482		98,986
<b>4</b>	<b>Dissemination of information</b>	<b>Total</b>	<b>4,039</b>	<b>53,430</b>	<b>2,609</b>		<b>60,078</b>
		Discretionary costs	4,039				4,039
		Staff cost		53,430	2,609		56,039
<b>5</b>	<b>APFM administration</b>	<b>Total</b>	<b>50,506</b>	<b>78,233</b>	<b>7,650</b>	<b>10,698</b>	<b>147,087</b>
		Discretionary costs	50,506	5,345	5,041	10,698	71,591
		Staff cost		72,888	2,609		75,497
<b>TOTAL</b>			<b>219,802</b>	<b>415,791</b>	<b>44,583</b>	<b>119,808</b>	<b>799,985</b>



## Annex V Detailed business/funding model elements

Business / Funding model elements	New Flood programme focusing on E2E EWS	Issues	Proposed solutions (major issues in bold)
<b>Value proposition</b> What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? Which customer needs are we satisfying?	Get funding and implement projects on IFM and E2E EWS to decrease flood risk and contribute to national safeguard plans, including: <ul style="list-style-type: none"> <li>• Technical know-how, incl, procedures and standards</li> <li>• Networking, fundraising</li> <li>• Project implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Existing knowledge is made of guidelines but <b>concrete solutions</b> must be identified, especially related to E2E EWS (flood risk mapping, forecasting models and platforms to integrate diversity of watersheds, visualization tools, warning procedures, dissemination tools, post crises return of experience...).</li> <li>• Need to be organised and coordinated</li> <li>• Project management need to be established inside WMO</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Develop a series of tools (equipment, software, methodologies...) to cover the whole range of services related to IFM and E2E EWS (to be coordinated with FFI and CHy activities)</b></li> <li>• <b>Work with other CLW teams and DRA at WMO, also discuss with GWP</b></li> <li>• <b>Work with WMO/Project Management Team</b></li> </ul>
<b>Key partners</b> Who is creating the Value proposition?	WMO and GWP	<ul style="list-style-type: none"> <li>• Existing partnership covers desk studies but no project implementation</li> <li>• enlarging to E2E EWS could call for additional partners</li> </ul>	<ul style="list-style-type: none"> <li>• Check if a formal agreement is necessary for projects activities and funding</li> <li>• Check if an enlarged partnership would be beneficial (GFDRR?)</li> </ul>
<b>Key suppliers</b> Who is providing know-how and contributing to the Value proposition?	<ul style="list-style-type: none"> <li>• Network of Support Base Partners</li> <li>• National agencies as NMHSs, Ministries,</li> <li>• Technical experts and companies</li> </ul>	<ul style="list-style-type: none"> <li>• The network of Support Base Partners (SBP) need to be assessed to cover the full spectrum of E2E EWS</li> <li>• SBP dedicate only few days to APFM but project activities call for larger sub-contracting agreements</li> <li>• Availability and level of commitment need to be assessed. Governance responsibility also important</li> <li>• To be identified, selected and hired (or partnered)</li> </ul>	<ul style="list-style-type: none"> <li>• To be checked by TSU</li> <li>• Need to be organised and coordinated when projects are drafted</li> <li>• <b>Need to be assessed case by case when projects are planned</b></li> <li>• Will be assessed case by case, but list of accredited partners could be envisaged</li> </ul>



<b>Key activities</b> What Key Activities do our Value Propositions require?	<ul style="list-style-type: none"> <li>• Networking (member countries, UN agencies, others)</li> <li>• Fundraising capabilities for project activities</li> <li>• Project management</li> <li>• Project execution activities</li> </ul>	<ul style="list-style-type: none"> <li>• Need to be adapted and documented</li> <li>• Need to be developed together with other WMO departments</li> <li>• Need to be developed and staff trained, as current capacities are scattered within CLW and WMO departments</li> <li>• Need to be organised with sub-contractors and partners</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Directory of focal points and contact experts to be created</b></li> <li>• <b>Donor mapping and focal points to be coordinated</b></li> <li>• <b>CLW should identify a cross-cutting team, with staff from the various branches to cover the whole spectrum of project fields in line with DRR, climate adaptation, water management...</b></li> <li>• <b>Will need a strong coordination team to liaise with national executing partners</b></li> </ul>
<b>Key resources</b> What Key Resources do our Value Propositions require?	<ul style="list-style-type: none"> <li>• APFM staff costs for networking, fundraising, project drafting</li> <li>• APFM staff for project implementation</li> <li>• WMO administrative staff (CLW, HR)</li> <li>• Other WMO project related staff (outreach, IT..)</li> <li>• GWP staff (networking and project activities)</li> <li>• In-kind contributions (JPO, temporary staff..)</li> <li>• Temporary project related staff</li> </ul>	<ul style="list-style-type: none"> <li>• WMO Core budget need to be secured</li> <li>• Need to be identified and trained</li> <li>• To be organised and coordinated</li> <li>• To be organised and coordinated</li> <li>• To be secured with GWP secretariat</li> <li>• Need to find funding and search for candidates</li> <li>• To be selected and hired when project are accepted</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Need of support from CLW Director to clarify role of WMO staff and personal needs for drafting, managing and executing programmes</b></li> <li>• <b>Agreement to be prolonged with GWP, incl. project execution capabilities</b></li> <li>• <b>Survey Member countries for additional budget/in-kind</b></li> <li>• <b>List of potential experts need to be prepared</b></li> </ul>
<b>Beneficiaries segments</b> For whom are we creating value? Who are our most important beneficiaries?	<ul style="list-style-type: none"> <li>• NMHSs of Member countries</li> <li>• Other environmental ministries of Member Countries</li> <li>• Civil Security</li> <li>• Communities</li> <li>• International organizations (SDG)</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of information about the new APFM goals to our beneficiary segments</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Information strategy must be defined to reach our beneficiaries</b></li> </ul>
<b>Funding sources segments</b>	<ul style="list-style-type: none"> <li>• Disaster Risk Reduction programmes</li> <li>• Climate adaptation funds</li> <li>• World Bank</li> <li>• National and International development aid programmes (incl. European Comm.)</li> </ul>	<ul style="list-style-type: none"> <li>• APFM is not seen as a major player in the field of DRR and E2E EWS</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Lobbying must be coordinated with DRA department and WMO representatives</b></li> </ul>



<b>Beneficiaries relationships<sup>1</sup></b> What type of relationship does each of our beneficiary Segments expect us to establish and maintain with them?	<ul style="list-style-type: none"> <li>• Personal contacts, workshops and meetings</li> <li>• Information through WMO and GWP regional focal points</li> <li>• Information via WMO technical commissions</li> <li>• Community of users</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of these relationships must be ensured</li> <li>• These persons are not informed of the new APFM goals</li> <li>• Link with CHy provided by HWR branch but not with other relevant commissions</li> <li>• Not yet identified</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Mutualisation of this type of contacts to be organised with CLW and related departments</b></li> <li>• <b>Information documents/internet pages to be designed to inform about the new APFM goals</b></li> <li>• Role of ambassadors of the technical commissions needs to be stressed</li> <li>• <b>CoU need to be created on E2E EWS</b></li> </ul>
<b>Funding sources relationships</b>	<ul style="list-style-type: none"> <li>• Personal contacts, meetings</li> <li>• WMO representatives (EC, WB...)</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of coordination within CLW and with other WMO departments</li> <li>• Lack of contacts with them</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Fundraising coordination needs to be advocated by CLW Director</b></li> <li>• <b>WMO representatives must be lobbied</b></li> </ul>
<b>Channels<sup>2</sup> to beneficiaries</b> Through which Channels do our beneficiary Segments want to be reached?	<ul style="list-style-type: none"> <li>• Workshops and meetings</li> <li>• Help Desk to get support and access to technical know-how</li> <li>• Dissemination of success stories</li> <li>• Post assessment reports</li> </ul>	<ul style="list-style-type: none"> <li>• Help Desk is not sufficiently used by our beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Advertising for the HelpDesk is needed. Reaching more users will be provided by joint Drought, Hydrohub...HelpDesks</b></li> </ul>
<b>Channels to funding sources</b>	<ul style="list-style-type: none"> <li>• Call for proposals or deadlines</li> <li>• Success stories</li> </ul>	<ul style="list-style-type: none"> <li>• No CLW strategy for selecting calls and drafting teams</li> <li>• Outreach must be optimized</li> </ul>	<ul style="list-style-type: none"> <li>• <b>CLW Director must coordinate the strategy</b></li> <li>• To be organised with outreach officer</li> </ul>
<b>Cost structure</b> What are the most important costs inherent in our business model? Which Key Resources/activities are most expensive?	<ul style="list-style-type: none"> <li>• Staff costs</li> <li>• Other direct costs (travel, equipment, hard/software...)</li> <li>• Percentage of indirect costs</li> <li>• Consultants, experts</li> <li>• Sub-contracting</li> </ul>	<ul style="list-style-type: none"> <li>• No procedure for analytical accounting</li> <li>• Rules for indirect costs is necessary (for donors)</li> <li>• Delays to hire them must be shortened</li> <li>• No directory of potential sub-contractors available</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Develop the costing model for WMO staff (technical, support, administrative) and time sheets allocated to projects</b></li> <li>• <b>Get input from Budget office</b></li> <li>• <b>Modify procedures</b></li> <li>• <b>Directory of potential sub-contractors should be elaborated</b></li> </ul>

<sup>1</sup> **Examples of relationships:** Personal assistance, Dedicated Personal Assistance, Self-Service, Automated Services, Communities, Co-creation

<sup>2</sup> **Channel phases:**

1. Awareness: How do we raise awareness about our company's products and services?
2. Evaluation: How do we help customers evaluate our organization's Value Proposition?
3. Purchase: How do we allow customers to purchase specific products and services?
4. Delivery: How do we deliver a Value Proposition to customers?
5. After sales: How do we provide post-purchase customer support?



<b>Revenue streams</b> For what value are our donors really willing to pay?	<ul style="list-style-type: none"><li>• Services (Risk reduction, Early Warning, Integrated management, Preparedness and response, Improved Governance) allowing protection of private and industrial assets, safeguard of natural and urbanized areas, improved resilience and preservation of price of land, insurance premium for economic development</li><li>• Contribution to SDG</li></ul>	<ul style="list-style-type: none"><li>• Pricing of the services (project on IFM and E2E EWS) is dependent on local situation, needs, existing infrastructures, national in-kind contributions ...and must be evaluated case by case</li><li>• Methodology to measure the benefits and cost efficiency of these services is not well developed within WMO</li></ul>	<ul style="list-style-type: none"><li>• <b>Metrics for project evaluation and impact should be developed</b></li></ul>
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