

**WORLD METEOROLOGICAL ORGANIZATION**  
**WEATHER, CLIMATE AND WATER**



**WMO FLOOD FORECASTING INITIATIVE**  
**ADVISORY GROUP**

**FIRST MEETING**

**FINAL REPORT**  
*(GENEVA, 7 TO 9 OCTOBER 2013)*



## **1. OPENING OF THE MEETING**

1.1 The WMO Flood Forecasting Initiative Advisory Group (FFI-AG) held its first meeting from 7 to 9 October 2013 at WMO headquarters, Geneva. The list of participants is provided in Annex I to this report.

1.2 The president of the Commission for Hydrology (CHy) and Chair of the FFI-AG, Mr H. Lins, opened the meeting at 9:45 on 7 October 2013. He welcomed the participants and noted the importance of the formation of the Advisory Group in providing guidance and advice on the hydrological forecasting elements of a number of flood-related initiatives and programmes in progress under WMO programmes. He indicated that the intent of the FFI was to improve understanding and collaboration between the meteorological and hydrological communities for improving flood forecasting related practices. Mr Lins also recounted the importance that Congress had placed on this initiative and noted that this meeting would thoroughly review the group's Terms of Reference and outline in detail activities and actions that should be undertaken. Noting that this was the group's inaugural meeting, he indicated that, as such, it was crucial to shaping future activities.

1.3 On behalf of the Secretary-General, the Director of the Climate and Water Department, Mr B. Stewart welcomed the participants. He concurred with the opening statements of Mr. Lins and highlighted the importance placed on this group in enhancing understanding of activities and in increasing collaboration and possible synergy amongst initiatives. Many advances in science and technology have increased modelling and prediction capabilities, and there is a strong requirement for disciplines to work more closely together in taking advantage of these advances to achieve desired outcomes. Mr Stewart noted that this is reflected in the need for increasing capabilities of National Meteorological and Hydrological Services for producing accurate and timely forecasts of flood events. This is in essence the embodiment of the WMO Flood Forecasting Initiative, and underscores the importance placed by WMO Congress on the role of the FFI-AG. He wished the meeting well and indicated that he would be looking forward with interest to the outcomes of and guidance from the meeting.

## **2. ADOPTION OF THE AGENDA**

2.1 The FFI-AG adopted its agenda, which is attached as Annex II. The Group also agreed on its working hours.

2.2 Following the adoption of agenda, participants briefly introduced themselves.

## **3. INTRODUCTION TO THE WMO FLOOD FORECAST INITIATIVE**

### **3.1 Background**

The objective of the WMO Flood Forecasting Initiative (WMO-FFI), established by WMO in 2003, is to *“Improve the capacity of meteorological and hydrological services to jointly deliver timely and more accurate products and services required in flood forecasting and warning and in collaborating with disaster managers, active in flood emergency preparedness and response”*. In 2011, the World Meteorological Congress (Cg) passed Resolution 15 (Cg-16) establishing the WMO Flood Forecasting Initiative - Advisory Group (FFI-AG) with the objective to provide guidance and advice on the hydrological forecasting elements of a number of flood-related initiatives in progress under WMO programmes, and to provide broad-based support to improve collaboration between the meteorological and hydrological communities for improved flood forecasting related practices. The full text of Resolution 15 (Cg-16), including the Terms of Reference for the FFI-AG, is attached as Annex III.

### 3.2 Expected Outcomes of the Meeting

The expected outputs from the meeting during its first constituent session were:

1. Agreement on the scope of work and approach to be taken by the FFI-AG, within its Terms of Reference (ToR);
2. Improved understanding of the current initiatives and activities undertaken in the framework of the WMO Flood Forecasting Initiative;
3. Agreement on specific actions to be undertaken and a Work Plan associated with these actions;
4. Agreement on how the work of the FFI-AG should be undertaken including its outreach to Members, relevant Commissions, Technical Support Partners, and Development Partners (donors);
5. Conclusions and recommendations (including target audience), based on the presentations and discussions.

### 4. Current Activities under the Framework of the WMO-FFI

4.1 Mr W. Grabs, Chief, Hydrological Forecasting and Water Resources Division, made a presentation that summarized the various activities that are captured under the WMO-FFI and its Advisory Group. He also mentioned that through this meeting, and the subsequent activities of the FFI-AG, other initiatives upon which enhancements or cooperation could be sought to improve collaboration between the meteorological and hydrological communities for improved flood forecasting related practices could be identified.

4.2 Mr Grabs' presentation also touched upon progress made, challenges that remain, and opportunities for success and synergy with the WMO-FFI. He noted, thus far, that a number of activities, initiatives, projects and efforts have been identified, which are noted below. These include:

- Development of the FFI Strategy and Action Plan (SAP)
- Development of the FFI Activity Plan in Support of SAP
- Implementation of the Flash Flood Guidance System with Global Coverage (FFGS)
- Implementation of projects through the Ibero-American Network on monitoring and forecasting of hydrometeorological phenomena (PROHIMET) (see [Http://www.promimet.org](http://www.promimet.org))
- Associated Programme on Flood Management (APFM) and its HelpDesk
- Demonstration Projects
  - Severe Weather Forecasting Demonstration Project (SWFDP) (CBS)
  - Coastal Inundation Forecasting Demonstration Project (CIFDP) (JCOMM and CHy)
  - Zambezi Flood Forecasting System
- Preparation of Manual, Reports and Training
- International Flood Initiative (IFI) (UNESCO, WMO, UNU, UNISDR, IAHS and IAHR)

4.3 Presentations were provided by some of the meeting participants. These covered aspects of:

- PROHIMET by Mr. Angel Luis Aldana Valverde (Spain)
- CIFDP by Mr B. Stewart (WMO Secretariat)
- SWFDP and Southern African Region FFGS (Mr. Eugene Poolman (South Africa)
- HYdrological Prediction for the Environment (HYPE) by Ms. Cristina Alojnte Eklund (Sweden)
- European Flood Awareness System (EFAS) by Ms. Cristina Alojnte Eklund (Sweden)

4.4 The presentations garnered many questions and prompted discussion. It was apparent that there were many avenues for possibly increasing synergy and accomplishing the overall goal of the Flood Forecasting Initiative, which is to improve collaboration between the meteorological and hydrological communities for improved flood forecasting related practices. It also highlighted that

there was indeed a need for the FFI-AG to provide guidance and advice on the hydrological forecasting elements of a number of flood-related initiatives in progress under WMO programmes.

## **5. Terms of Reference and the FFI-AG Work Plan**

5.1 The presentations provided an excellent introduction for the review of the FFI-AG Terms of Reference. The scope of work of the AG was seen as being very broad and inclusive of various WMO forecasting initiatives as provided by WMO Congress when passing Resolution 15 (Cg-16). Discussions then centred on the development of work related activities as per the FFI-AG Terms of Reference.

5.2 These discussions led to the development of the "Work Plan", which comprises 9 activities, each corresponding to its equivalent item in the Terms of Reference. Annex IV comprises the Work Plan as established by the meeting. It was prepared subsequent to the meeting on November 15, 2013 and was distributed to all participants. Annex V provides a brief overview of work plan activities, experts and estimated start and tentative completion dates. Reference must be made to the FFI-AG Work Plan as provided in Annex IV for additional details on specific activities and tasks.

## **6. ADOPTION OF THE REPORT**

The meeting participants requested the Secretariat to prepare a draft report of the meeting for their review. Once comments from participants have been received by the Secretariat, the participants requested the Secretariat to complete revisions to the draft report and to review it, undertaking an editorial review and consistency check of the material contained therein. The meeting requested that the Secretariat publish the report and its related material on the WMO website.

## **7. CLOSURE OF THE SESSION (*agenda item 10*)**

The session of the FFI-AG was closed at 17:00 on Friday 9 October 2013. The president of CHy thanked all of the participants for their contributions. He stressed that they should contact him and the Secretariat for any assistance required over the coming year as work commences on the work plan items. A date was not set for the next meeting of the FFI-AG, but it was felt that meeting in the next year might be appropriate given that this event was its inaugural meeting. He thanked the Secretariat for their support, cooperation and hospitality during the meeting.

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**FIRST MEETING OF THE FLOOD FORECASTING INITIATIVE ADVISORY GROUP  
(Geneva, 7 – 9 October 2013)**

**LIST OF PARTICIPANTS**

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**WMO FLOOD FORECASTING INITIATIVE**  
**FIRST MEETING OF THE ADVISORY GROUP**  
**Geneva, 7 to 9 October 2013**

**AGENDA**

**Monday 07 October**

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|-------|---|
| 09:30 | Registration  |
| 09:45 | Opening of the Meeting  |
| 10:00 | Adoption of the Agenda  |
| 10:15 | Introduction of participants  |
| 10:30 | Break   |
| 11:00 | Introduction to the WMO Flood Forecasting Initiative  |
| 11:30 | Discussion on Congress Resolution 15(Cg-XVI) as the base for the establishment of the FFI-AG  |
| 12:00 | Discussion and presentations on current activities under the framework of the WMO-FFI including progress made, challenges and opportunities             |
| 12:30 | Lunch   |
| 13:30 | Discussion and presentations on current activities under the framework of the WMO-FFI including progress made, challenges and opportunities (continued) |
| 15:00 | Break   |
| 15:30 | Presentations from participants/commissions on other flood-related activities relevant to the WMO-FFI   |
| 17:00 | Session adjourns  |



## Tuesday 08 October

- 09:30 Discussion and definition of the scope of work of the FFI-AG and addressing the ToR of the FFI-AG
- 10:45 Break
- 11:15 Addressing the ToR of the FFI-AG (continued)
- a) Consider and advise on the concept, objectives, expected benefits/costs, strategy, action plan and future development of the WMO FFI;
  - b) Review and assess the status of the WMO FFI and progress towards its objectives, and propose strategies for any necessary remedial action;
- 12:30 Lunch
- 13:30 Addressing the ToR of the FFI-AG (continued)
- c) Advise on approaches (including, but not limited to, methodologies, techniques, technologies, applicable standards etc.) for the sustainable implementation of the WMO FFI;
- 15:00 Break
- 15:30 Addressing the ToR of the FFI-AG (continued)
- d) Review the relationship of the WMO FFI with other relevant international programmes, particularly from the point of view of coordination and avoidance of overlap, and propose any necessary actions;
  - e) Identify and evaluate constraints on, and potential risks to, the future implementation and sustainability of the WMO FFI, and propose strategies to minimize those risks. Risks include, inter alia, those of a financial, technical, operational and institutional/political nature;
  - f) Consider and propose plans for effective advocacy of the WMO FFI (as appropriate), and ways and means to assure its future sustainability and appropriate expansion;
- 17:00 Session Adjourns

## Wednesday 09 October

- 09:30 Addressing the ToR of the FFI-AG (continued)
- g) Promote awareness about raising the social and economic benefits and value of flood forecasting systems, including a community development approach;
  - h) Advise on the mode of work of the WMO-FFI
- 10:45 Break
- 11:15 Development of the initial Work Plan and an appropriate monitoring and evaluation mechanism
- 12:30 Lunch
- 13:30 Adoption of the main conclusions and recommendations from the first FFI-AG meeting
- 14:00 Adoption of the FFI-AG Work Planplan and individual responsibilities
- 14:30 Break
- 15:30 Adoption of the Report of the FFI-AG – Session 1
- 16:30 Next Meeting of the FFI-AG
- 17:00 Closure of the Meeting

**Resolution 15 (Cg-XVI)****ESTABLISHMENT OF AN ADVISORY GROUP FOR THE WMO FLOOD FORECASTING INITIATIVE**

THE CONGRESS,

**Noting:**

- (1) Resolution 21 (Cg-XV) – Strategy for the Enhancement of Cooperation between National Meteorological and National Hydrological Services for Improved Flood Forecasting,
- (2) The Action Plan that was developed at the request of the Commission for Hydrology (CHy) in December 2009 in support of the Strategy and Action Plan of the WMO Flood Forecasting Initiative,

**Recalling:**

- (1) That both Resolution 3 (CHy-XIII) – Hydrological forecasting and flood management and Resolution 21 (Cg-XV) called on the president of the Commission to establish an appropriate management mechanism in support of the WMO Flood Forecasting Initiative (FFI),
- (2) That the objective of the WMO FFI is to: “Improve the capacity of meteorological and hydrological services to jointly deliver timely and more accurate products and services required in flood forecasting and warning and in collaborating with disaster managers, active in flood emergency preparedness and response”,

**Considering:**

- (1) That improved hydrological forecasting, including the provision and promotion of flash floods guidance, seasonal flow prediction and coastal storm surge flood forecasting activities require close collaboration among the experts from various technical commissions,
- (2) The need to improve flood early warning system capabilities,
- (3) The need to make use of seasonal climate outlooks being produced on an operational basis and being strengthened through the Global Framework for Climate Services,
- (4) That an overarching Technical Group is required to provide guidance and advice on the hydrological forecasting elements of these initiatives,
- (5) That such an Advisory Group will provide broad-based support to improve collaboration between the meteorological and hydrological communities for improved flood forecasting practices,

**Decides:**

- (1) To define the scope of the WMO Flood Forecasting Initiative to include all the hydrological forecasting activities, such as those related to flash floods and riverine floods, including seasonal forecasts and coastal flooding due to storm surges;
- (2) To establish the WMO Flood Forecasting Initiative Advisory Group (FFI-AG) with terms of reference as per the annex to this resolution;

**Requests** the Secretary-General, as appropriate and within the available budgetary resources, to take all necessary actions to support the establishment of the WMO FFI-AG and its activities;

**Requests** the president of the Commission for Hydrology to report periodically to the Executive Council on the progress of the activities of the WMO FFI-AG;

**Invites** Members:

- (1) To actively support the tasks of the Advisory Group, including by facilitating the participation of dedicated experts in sessions of the Group;
- (2) To ensure that National Meteorological Services and National Hydrological Services work in close collaboration in the provision of critical inputs to the Group;
- (3) To promote recommendations of the Group on a national basis;
- (4) To contribute to the Voluntary Cooperation Programme Fund and the Hydrology and Water Resources Trust Fund in support of the implementation of activities recommended by the Group.

## **Annex to Resolution 15 (Cg-XVI)**

### **FLOOD FORECASTING INITIATIVE ADVISORY GROUP TERMS OF REFERENCE AND COMPOSITION**

Developed in 2003, the WMO Flood Forecasting Initiative (FFI) is based on an analysis of the weaknesses of current forecasting systems, with a view to enhancing the ability of National Meteorological and Hydrological Services (NMHSs) to cooperate in an effective manner to provide improved flood forecasting services.

The Fifteenth World Meteorological Congress in 2007 endorsed the Strategy and Action Plan for the Enhancement of Cooperation between National Meteorological and National Hydrological Services for Improved Flood Forecasting. At its thirteenth session in 2008, the Commission for Hydrology (CHy) recognized a range of other initiatives associated with the FFI, such as the Flash Flood Guidance System (Resolution 3 (CHy-XIII) – Hydrological forecasting and flood management). Subsequently the Coastal Inundation Forecasting Demonstration Project (CIFDP) was initiated jointly by CHy and the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM). Seasonal hydrological flow forecasting based on regional climate outlooks has also been initiated by CHy and the Commission for Climatology.

Both Resolution 3 (CHy-XIII) – Hydrological forecasting and flood management and Resolution 21 (Cg-XV) – Strategy for the Enhancement of Cooperation between National Meteorological and National Hydrological Services for Improved Flood Forecasting called on the president of CHy to establish an appropriate management mechanism in connection with these initiatives. Considering the cross-cutting nature of the guidance required for providing technical oversight, it is proposed to establish an overarching Advisory Group for the Flood Forecasting Initiative (FFI-AG) to advise on the hydrological forecasting elements of these initiatives.

#### **Terms of reference**

The WMO Flood Forecasting Initiative Advisory Group (WMO FFI-AG) shall:

1. Consider and advise on the concept, objectives, expected benefits/costs, strategy, action plan and future development of the WMO FFI;
2. Review and assess the status of the WMO FFI and progress towards its objectives, and propose strategies for any necessary remedial action;
3. Review and assess the progress of specific WMO FFI projects upon request;
4. Advise on standards (including, but not limited to, methodologies, techniques, technologies, and so forth) for the robust and sustainable implementation of the WMO FFI;
5. Review the relationship of the WMO FFI with other relevant international programmes, particularly from the point of view of coordination and avoidance of overlap, and propose any necessary actions;
6. Identify and evaluate constraints on, and potential risks to, the future implementation and sustainability of the WMO FFI, and propose strategies to minimize those risks. Risks include, inter alia, those of a financial, technical, operational and institutional/political nature;
7. Consider and propose plans for effective advocacy of the WMO FFI (as appropriate), and ways and means to assure its future sustainability and appropriate expansion;
8. Promote awareness about raising the social and economic benefits and value of flood forecasting systems, including a community development approach;

9. Review and advise on its terms of reference and composition.

### **Composition**

The WMO FFI Advisory Group shall be composed of:

1. The president of the WMO Commission for Hydrology (chair);
2. One representative with flood forecasting experience from CHy, and representatives of other WMO Technical Commissions as and when needed;
3. One representative from each active financial partner involved in the WMO FFI projects.

### *Observers*

1. Representatives from WMO FFI operational projects invited on an ad hoc basis;
2. Representatives from relevant WMO Programmes as required;
3. Regional Hydrological Advisers and/or representatives of regional association working groups on hydrology;
4. Representatives of potential financial partners that could contribute to the WMO FFI.

The Director of the Climate and Water Department of the WMO Secretariat shall act as secretary to the WMO FFI-AG.

Resolution on the web (please see page 200 of Cq(16) Abridged final report with resolutions, WMO-No. 1077):

[ftp://ftp.wmo.int/Documents/PublicWeb/mainweb/meetings/cbodies/governance/congress\\_reports/english/pdf/1077\\_en.pdf](ftp://ftp.wmo.int/Documents/PublicWeb/mainweb/meetings/cbodies/governance/congress_reports/english/pdf/1077_en.pdf)

## ANNEX IV

### Work Plan (2013-2016) Version 1.0 – November 15, 2013

*This Work Plan was developed from the Scope of Work as prepared at the First Session of the Flood Forecasting Initiative – Advisory Group (FFI-AG), held October 7-9, 2013, Geneva, Switzerland. The Activities relate to the Terms of Reference for the FFI-AG as documented in the Annex to Resolution 15 (Cg-XVI). The expected deadlines of individual tasks are agreed upon by the FFI-AG and the person(s) responsible for it. The Work Plan will be periodically updated as the status of the implementation of Tasks change.*

#### Activity 1 - Consider and advise on the concept, objectives, expected benefits/costs, strategy, action plan and future development of the WMO FFI

Task	Expert (s)	Estimated Start Date	Tentative Completion Date
(a) Establish criteria for the review of the SAP considering, among other things: its scope (limits of domain – what we do and don't do); perceived priorities; technological adequacy (appropriateness, suitability); approaches (actions) to be taken.	H. Lins	14/10/2013	15/11/2013
(b) According to the proposed criteria, review the SAP (WMO, 2006) and subsequently the Activity Plan (WMO, 2010) which is Annex 6 in the report of the Workshop on the Strategy and Action Plan of the WMO FFI. Assess the validity of the concept, objective, and Strategy and Action Plan (SAP); and advise on adjustments, where necessary. Document changes that need to be made, considering, for example, whether some domains and actions have been achieved by others, such as international organizations, and implications thereof.	J. Maina & Y. Simonov	15/11/2013	SAP: 30/5/2014 Activity Plan: 27/6/2014
(c) Based on the review, the FFI-AG affirms or decides on the process to revise and update the SAP (July 2014) that has to be completed by the end of 2014, for consideration of the CHY AWG.	FFI-AG	30/5/2014	Decision - 25/7/2014 Update SAP – 15/12/2014
(d) Pursue a regionally-based implementation of the SAP, working closely with countries, ensuring that mechanisms of cooperation amongst NMSs, NHSs and Disaster Management Agencies are adequately reflected therein.	FFI-AG		On-going.
(e) Establish a mechanism and methodology for assessing the added value of the WMO FFI.	E. Poolman	14/10/2013	15/12/2014
(f) Develop guidance material to assist interested parties in developing prospective WMO FFI components or projects. The guidance material should also include the need to establish a methodology for assessing the added value before commencing an initiative to demonstrate if it is a wise expenditure of resources.	WMO Secretariat	3/10/2014	15/12/2014

\*: Note this item is linked to Activities 4 (a) and 6 (a)

#### Activity 2 - Review and assess the status of the WMO FFI and progress towards its objectives, and propose strategies for any necessary remedial action

Task	Expert (s)	Estimated Start Date	Tentative Completion Date
(a) Provide an initial status report of past and on-going activities and how well they met or are meeting the objective of the FFI. It should be done considering the findings of the review of the SAP, under item 1 above. This will include assessing the performance of the FFI and its component programmes and activities, such as the APFM (flood forecasting aspect), GFFGS, CIFDP; ascertaining conformance with the FFI objective and the identification of missing elements.	J. Maina & Y. Simonov	30/5/2014	3 months after completion of 1 (b)
(b) When necessary, advise on remedial actions regarding the implementation of the SAP and its component programmes and activities.	J. Maina & Y. Simonov	14/10/2013	Ongoing and in conjunction with item 2 (a).

### Activity 3 – Review and assess the progress of specific WMO FFI projects upon request

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
(a) The review represents a detailed evaluation of specific WMO FFI projects to be undertaken by members of the FFI-AG or identified experts. Requesters could include CHy, other WMO constituent bodies, donors, WMO Secretariat, component managers, or the FFI-AG itself.	TBD*		To be undertaken when requested to do so.
(b) Criteria for the review need to be established by the requesting organization or body with guidance from the FFI-AG and should reflect the objectives of the project.	Requesting body & FFI-AG		To be undertaken when review is requested.
(c) The Secretariat will prepare a list of completed and on-going components and projects under the guidance of the FFI-AG and post same on the FFI-AG website, which will be regularly reviewed and updated.	G. Arduino	15/11/2013	On-going.

\*: To Be Determined (TBD)

### Activity 4 - Advise on standards (including, but not limited to, methodologies, techniques, technologies, and so forth) for the robust and sustainable implementation of the WMO FFI

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
(a) Advice on standards should be viewed broadly and should include:			On-going and in conjunction with item 3 (a) above.
<ul style="list-style-type: none"> <li>Reviews, such as mentioned under item 3 (a) above;</li> </ul>	P. Pilon		
<ul style="list-style-type: none"> <li>Identification of deficiencies in the implementation of components and projects under the guidance of the FFI-AG;</li> </ul>	J. Maina & Y. Simonov		
<ul style="list-style-type: none"> <li>Consideration of new components or project proposals.*</li> </ul>	FFI-AG		
<ul style="list-style-type: none"> <li>Practices and procedures used within CHy and other Technical Commissions, for example, with CAS on advances in NWP QPF/QPE, with CIMO for instrumentation, CBS on linkages with operational weather forecasting, and so forth, taking into the consideration the needs of participating countries.</li> </ul>	P. Pilon		

\*: Note link with development of guidance material Activity 1 (f).



**Activity 5 - Review the relationship of the WMO FFI with other relevant international programmes, particularly from the point of view of coordination and avoidance of overlap, and propose any necessary actions**

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
(a) Secretariat shall prepare an inventory (name, brief description, current role of FFI) of the existing international programmes (WMO and non-WMO) and highlight coordination/interaction mechanisms, providing recommendations to the FFI-AG on the improvements to those mechanisms. Draft recommendations to be considered by the FFI-AG.	G. Arduino		Inventory – 22/11/2013 Draft recommendations – 16/12/2013
(b) Should functional overlaps and unnecessary duplication be identified, draft recommendations should be provided to the FFI-AG on how to address them.	WMO Secretariat		Prior to the next meeting of the FFI-AG
(c) The FFI-AG, with the assistance of the WMO Secretariat, will identify opportunities for possible synergies with other relevant international programmes (WMO and non-WMO) to further the implementation of the WMO FFI objective.	FFI-AG & WMO Secretariat		On-going.
(d) Where mechanisms for coordination with international programmes (WMO and non-WMO) do not exist, provide advice on necessary actions to CHy.	WMO Secretariat		On-going.

**Activity 6 - Identify and evaluate constraints on, and potential risks to, the future implementation and sustainability of the WMO FFI, and propose strategies to minimize those risks. Risks include, inter alia, those of a financial, technical, operational and institutional/political nature**

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
(a) Through the established mechanisms of component and project monitoring by the WMO Secretariat and on the established methodologies of risk management (such as ISO 31000:2009), the FFI-AG, with assistance from the Secretariat, will assess potential risks to the future implementation and sustainability of the WMO FFI by:	FFI-AG & WMO Secretariat		2016+
<ul style="list-style-type: none"> <li>Ensuring the guidance material addresses sustainability in the design of a component or project*;</li> </ul>	WMO Secretariat		
<ul style="list-style-type: none"> <li>Identifying risks for existing components and projects based on feedback received from them;</li> </ul>	WMO Secretariat		
<ul style="list-style-type: none"> <li>Identifying issues and weaknesses that need to be addressed;</li> </ul>	WMO Secretariat		
<ul style="list-style-type: none"> <li>Identifying areas-of-success in certain components and projects that may help overcome risks identified in others.</li> </ul>	WMO Secretariat		

\*: Note link with Activity 1 (f).

## Activity 7 – Consider and propose plans for effective advocacy of the WMO FFI (as appropriate), and ways and means to assure its future sustainability and appropriate expansion

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
<p>(a) Develop an outreach strategy for promoting the development of sustainable components and projects to fulfil the objective of the WMO FFI, (October 2014) which could include:</p> <ul style="list-style-type: none"> <li>o Initiating a high-level dialogue with governments, donors and non-governmental organizations.</li> <li>o Engagement of the media.</li> <li>o Use workshops to promote the benefits of implementing projects to national services and disaster management agencies, and to highlight the importance of sustainability. <ul style="list-style-type: none"> <li>▪ Workshops could illustrate the advantages of improved cooperation and working arrangements between NMSs and NHSS.</li> <li>▪ Workshops could also further promote the implementation of the SAP towards improving the service capabilities of NMHSs.</li> </ul> </li> </ul>	D. Jayasuriya, J. Maina & R. Ceron Pineda	14/10/2013	31/10/2014
<p>(b) Actively identify high-priority locations requiring focused attention, building sustainable solutions with concerned government agencies, organizations and donors. Take advantage of the Regional Working Groups on Hydrology.</p>	H. Lins & RHAs		On-going.

## Activity 8 – Promote awareness about raising the social and economic benefits and value of flood forecasting systems, including a community development approach

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
<p>(a) Ascertain what others have done in similar disciplines to promote awareness of social and economic benefits by undertaking a review of literature and through professional contacts.</p>	W.Grabs & APFM	14/10/2013	15/12/2014
<p>(b) Review community development approaches that successfully address flood risk for potential inclusion in the promotional approaches to be undertaken in the WMO FFI.</p>	W.Grabs & APFM		2015
<p>(c) Link closely with the CAS Working Group on Social and Economic Research and Applications (SERA) in support of the two items above.</p>	E. Poolman		On-going.

## Activity 9 – Review and advise on its terms of reference and composition

Task	Expert(s)	Estimated Start Date	Tentative Completion Date
<p>(a) The FFI-AG will operate exclusively as per Resolution 15 (Cg-16).</p>	FFI-AG		On-going.
<p>(b) The FFI-AG will continuously review and advise CHy on the adequacy of its Terms of Reference and composition and will make proposals for revision, as necessary.</p>	FFI-AG		On-going.
<p>(c) Over time, the composition of the FFI-AG will change, with the mandated functions remaining. The FFI-AG recognized the need for some level of membership continuity through intersessional periods.</p>	FFI-AG		On-going.

Brief overview of work plan activities, experts and estimated start and tentative completion dates (refer to Annex IV Work Plan for details on specific activities and tasks).

Activity	Experts	Estimated Start Date	Tentative Completion Date
1 (a)	H.L.	14/10/2013	15/11/2013
(b)	J.M. & Y.S.	15/11/2013	SAP: 30/5/2014 Activity Plan: 27/6/2014
(c)	FFI-AG	30/5/2014	Decision: 25/7/2014 Update SAP: 15/12/2014
(d)	FFI-AG		On-going
(e)	E.P.	14/10/2013	15/12/2014
(f)	Secretariat	3/10/2014	15/12/2014
2 (a)	J.M. & Y.S.	30/5/2014	3 months after 1 (b)
(b)	J.M. & Y.S.	14/10/2013	On-going with 2 (a)
3 (a)	TBD		As needed.
(b)	Requester & FFI-AG		As needed.
(c)	G.A.	15/11/2013	On-going
4 (a)	P.P., J.M., Y.S. & FFI-AG		On-going and with 3 (a)
5 (a)	G.A.		Inventory: 22/11/2013 Draft recs.: 16/12/2013
(b)	Secretariat		Prior to FFI-AG-2
(c)	FFI-AG & Secretariat		On-going
(d)	Secretariat		On-going
6 (a)	FFI-AG & Secretariat		2016+
7 (a)	D.J., J.M., & R.C.P.	14/12/2013	31/10/2014
(b)	H.L. & RHAs		On-going
8 (a)	W.G. & APFM	14/10/2013	15/12/2014
(b)	W.G. & APFM		2015
(c)	E.P.		On-going
9 (a)	FFI-AG		On-going
(b)	FFI-AG		On-going
(c)	FFI-AG		On-going

Note: In order of appearance in the above table: H.L. implies Harry Lins; SAP implies WMO Flood Forecasting Initiative Strategic Action Plan, J.M. implies Johnson Maina; Y.M. implies Yuri Simonov; E.P. implies Eugene Poolman; TBD implies To Be Determined; G.A. implies Gabriel Arduino; P.P implies Paul Pilon; D.J. implies Dasarath Jayasuriya; RCP implies Roberto Ceron Pineda; and WG implies Wolfgang Grabs.