

Establishing a Community of Practice for Flood Forecasting

Third Meeting of the FFI Advisory Group
(FFI-AG 3)
Geneva - 5 to 7 December 2017



WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

CHy-XV instructions

From Res 9 (Chy-15):

- **Requests** the Advisory Working Group and the Secretariat to consider developing open-source and community of practice solutions to promote the transfer of technology for the value chain of the most important products and services of the National Hydrological Services;

From Strategy on Capacity Building in HWR:

- **Mechanisms for technology transfer and knowledge management**

CHy-14 decided to change its approach by focusing on developing a thorough system of technical support to a limited number of activities. This has been implemented through the establishment of a series of CHy Communities of Practice and Help Desks.

Building on the lessons learned in implementing these mechanisms, it is proposed during the 2017–2020 period to develop at least two Communities of Practice to support the whole value chain of particular NHSs products, and to actively promote increased participation of NHSs in these communities.

What is a Community of Practice?

A Community of Practice is a group of people who share a concern or a passion for something they do and who interact regularly to learn how to do it better (Etienne Wenger).

Communities of practice are formed by people who engage in a process of **collective learning** in a **shared domain** of human endeavour, e.g.:

- a band of artists seeking new forms of expression
- soccer moms and dads, who take advantage of game times to share tips and insights about the subtle art of parenting
- a group of engineers working on similar problems
- a network of surgeons exploring novel techniques
- **a group of hydrologists improving FF methods and sharing their findings**



Components of a Community of Practice

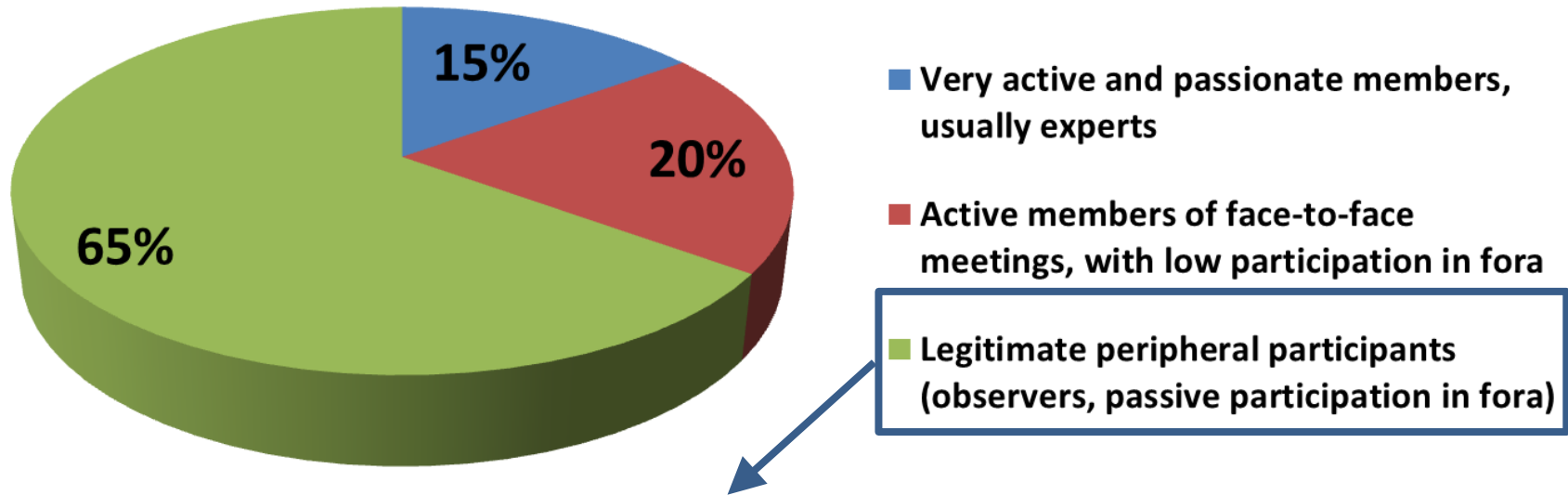


The domain: members are brought together by a learning need they share

The community: their **collective learning** becomes a bond among them over time

The practice: their **interactions** produce resources that **affect their practice** (whether they engage in actual practice together or separately).

Levels of Participation in a Community of Practice



Legitimate peripheral participation (LPP) describes how newcomers gradually become experienced members of a community of practice. Newcomers initially participate in simple tasks. Through peripheral activities, novices become acquainted with the tasks, vocabulary, and organizing principles of the community.

Gradually, as newcomers become old timers, their participation takes forms that are more and more central to the functioning of the community.

If newcomers can directly observe the practices of experts, they understand the broader context into which their own efforts fit. Conversely, if newcomers are separated from the experts, they have limited access to their tools and community and therefore have limited growth.

Agreements

- To keep the name “Community of Practice on E2E EWS for Flood Forecasting”.
- To use several means of engagement to allow members of the CoP to exchange ideas and to achieve its goals;
- To designate a CoP facilitator, to be selected by CHy AWG and Task Team (TT) members;
- To postpone member recruitment until a minimum amount of content has been prepared, organized and put in place;



Agreements

- Defined the desirable properties of the supporting software
- Defined access and membership composition
- Defined linkages to be established between the CoP and the IFM HelpDesk
- Launch of the CoP before the next CHy (end of 2020);
- Identified action items and agreed on timelines and resource requirements



STRUCTURE

DATA	MODELLING AND FORECASTING	WARNING PRODUCTS AND SERVICES	COMMUNICATION AND DECISION SUPPORT
I. Observations/data acquisition/real-time data	M/P Selection	Deterministic / Probabilistic / Ensemble	Formats
Collection	Model cal / val	Product V&V	Media
Management / Quality control	<i>Research to operations</i>	Data Assimilation / updating	Communication of uncertainty
Field measurements		Uncertainty analysis	
II. Historical and ancillary data		Assessment Guidelines (capabilities of NHS)	
Data rescue			
Remote sensing data			
GIS / Raster processing			
Data Post-processing			
III. Data management			
Data base Administration			
<i>Research to operations</i>			
		FORUM	

Example of one of the sections

Preliminary expansion of the Modelling and Forecasting Subsection of the CoP Structure of Annex 8
(This structure is not final).

2. Modelling & Forecasting

- Models
 - o Inventory of models
 - o By type of flood
 - o Training material for models
 - o [Use Task team on interop. Outcomes for further categorization]
- Calibration, validation, verification
- o Tools
 - Updating (Forecast adjustments, corrections, simulations, etc.)
 - Platforms
- o Inventory of platforms
- o Training material for platforms
 - Training material
 - Case studies
 - Test your model
 - Reference materials
- o Manual on Flood Forecasting and Early Warning -1072
- o Guide to Hydrological Practices-168
- o CHy [documents and statements]

