

Inventory of Guidance and Training Materials relevant to End-to-end Flood Forecasting and Early Warning System (E2E FFEW)



Third meeting of the FFI Advisory Group
5 to 7 December 2017

WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

Rationale



- Collection of 3,027 Files divided in 402 Folders
- Still needing “triage”
- Good starting point for the relevant Task Force

- **Manuals/Guidelines/Tool series**
- [Manual on Stream Gauging \(vol. 1\) Field Work](#) (WMO No. 1044)
- [Manual on Flood Forecasting and Early Warning](#) (WMO No. 1072)
- [Crisis Mapping and Crowdsourcing in flood management](#) (APFM tool)
- WHYCOS Guidelines: [Hydrological Information Systems for Integrated Water Resources Management](#) (WMO/TD No. 1282)
- [Technical Regulations \(vol. 3\) Hydrology](#) (WMO No. 49)
- [Water Resource Assessment Handbook for review of National Capabilities](#) (WMO/UNESCO)
- [Guide to Hydrological Practices \(vol. 1\) Hydrology from Measurement to Hydrological Formation](#) (WMO No. 168)
- [Meteorological Systems for Hydrological purposes](#) (OHR 42) (WMO)
- [Precipitation Estimation and Forecasting](#) (OHR 46) (WMO)
- [Hydrological Data Management: Present State and Trends](#) (OHR 48) (WMO)
- [Guidelines on the role, operation and management of national hydrological services](#) (OHR 49) (WMO)
- [Guide to Climatological Practices](#) (WMO)
- [Guide to Meteorological Instruments and Methods of Observation](#) (WMO)



REAL-TIME DATA COLLECTION

1

Training/Workshops

- [IFM training manual and facilitator's guide \(APFM-CapNet\)](#)
- [Integrated Urban Flood Management \(APFM/Malaysia\)](#)
- [Hydrometry Training Materials \(Volta-HYCOS\)](#)

Products/Platform

- ALADIN Forecast ([FFGS](#))
- FMAP ([FFGS](#))
- Water Level Sensor Shaft Encoder with Float ([HYCOS](#))
- Hydrostatic Pressure Sensor (HYCOS)
- Sensor Based on Bubble Principle (HYCOS)
- Ultrasonic Sensors (HYCOS)
- Radar Sensors (HYCOS)
- Low Cost Environmental Sensing Technologies (Camera based runoff measurement, Arduino based meteorological station, Mini Cactus, MIMIO, iMOMO smart stick) ([iMomo Innovation Hub](#))

Inside WMO



Outside WMO

Manuals/Guidelines

- [USBR Water Measurement Manual](#)
- [USGS Stream gauging, Models and Tools](#)
- [Measurement and Computation of Streamflow \(vol. 1\): Measurement of Stage and Discharge \(USGS\)](#)
- [Measurement and Computation of Streamflow \(vol. 1\): Computation of Discharge \(USGS\)](#)
- [Guidance to Water and Adaptation to Climate Change \(UN\)](#)

E-learning

- [Snowmelt Process \(COMET\)](#)
- [Flash Flood Process \(COMET\)](#)
- [Runoff Processes \(COMET\)](#)
- [International Multi Hazard Early Warning System \(COMET\)](#)
- [Basic Hydrological Sciences: International edition \(COMET\)](#)

- [Smart Phone Cithyd](#)
- [COBWEB Sensor Data Viewer, Cobweb APP \(CobWeb\)](#)
- [The TIGER water Information System, Tiger Kit \(Crowd4sat\)](#)
- [NOW-casting under innovative rainfall monitoring tool \(Small Rainfall system\)](#)
- Topnet Flood Forecasting Model
- [AIGA \(Vigicrues\)](#)
- [ADELIE, Paratronic Solutions](#) (Paratronic)
- [Cloud board, Snow board, River board](#) (Tenevia)
- Wireless Meteorological Station, EP 2000 Remote Terminal Unit, EP 1000 Reading Control (PEGASUS)
- [Myfloodrisk, Rainsat, Mijl Hoogwaterstanden, Safetri](#) (HKV)
- Rain Gauge Model TS 220, Wind Sensor Model TS 231/232, Temperature Humidity Sensor TS 251 (Meteortec)



WMO OMM

Training/workshops

- [Flood Risk Mapping and Assessments \(APFM/Ethiopia\)](#)
- [Data Mining for flood mapping \(WMO\)](#)
- The Development of Flood Forecasting and Early Warning Services (WMO/USAID)
- [Urban flood Management \(APFM/France\)](#)
- [Measures of Flood Management \(APFM/Vietnam\)](#)
- [Best Practice guidelines for Flood Risk Assessment \(APFM/Vietnam\)](#)
- [Flood Measures and Management Plans \(APFM/Cuba\)](#)
- [Integrated Urban Flood Management Planning \(APFM/Malaysia\)](#)
- [Urban Flood Management in Changing Climate \(APFM/Malaysia\)](#)
- [Structural and Non Structural Measures in Flood Risk Mapping \(APFM/Austria\)](#)
- [Monitoring and Forecasting \(APFM/Austria\)](#)
- [Flood Loss Assessments \(APFM/Balkan and Turkey\)](#)
- [Flood forecasting and Warning System; System Development-Warning Issued Dissemination of Messages \(APFM/Croatia\)](#)
- [Flood Defense Measure Pluvial Flash and Urban Flooding Erosion \(APFM/Croatia\)](#)
- [Decision Making Financial Strategies \(APFM/Croatia\)](#)
- [Data collection and Use for Flood and Drought Management \(APFM/ETHZ\)](#)
- [IFM training manual and facilitator's guide \(APFM-CapNet\)](#)
- [Integrated Urban Flood Management \(APFM/Malaysia\)](#)
- [Training Session on Calibration of Rating curve \(Volta/HYCOS\)](#)
- [Case Study on Rating Curve \(Volta/HYCOS\)](#)
- [Training Manual on Best Practice in Flood Forecasting and Warning \(APFM/Antalya\)](#)

Products/Platform

- Topnet Flood Forecasting Model
- SWE, MELT, ASM Average Soil Moisture, Flash Flood Guidance, IFFT Imminent Flash Flood Threat, FFFT Forecast Flash Flood Threat, Multi Linear Regression (MLR), Daily rainfall runoff model (SPLASH) ([FEFS](#))
- Knowledge & Decision Support Tools ([Water Balance Modelling](#), [River runoff Forecasting](#), [Informing the Agricultural Calendar](#), [Demand side irrigation Calculator](#), [Water Stress monitor \(iMoMo Innovation Hub\)](#))

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(WMO resources)

Manuals/Guidelines/Tool series

- [Crisis Mapping and Crowdsourcing in flood management \(APFM tool\)](#)
- [WMO Manual on Estimation of Probable Maximum Precipitation](#)
- [Manual on Flood Forecasting and Warning \(APFM tool\)](#)
- [IFM Flood Forecasting and Early Warning \(APFM tool\)](#)
- [IFM Flood Mapping \(APFM tool\)](#)
- [Management of Water Resources and Application of hydrological practices \(WMO\)](#)
- [Manual on Low flow Estimation and Prediction \(APFM\)](#)
- Technical Regulations (vol. 3) (WMO)
- [Guide to Hydrological Practices \(vol. 2\) Management of Water Resources and Application of Hydrological Practices \(WMO\)](#)
- [Guide to Hydrological Practices \(vol. 1\) Hydrology from Measurement to Hydrological Formation \(WMO\)](#)
- [Water Resource Assessment Handbook For Review of National Capabilities \(WMO/UNESCO\)](#)
- Meteorological Systems for Hydrological purposes ([WMO](#))
- [Precipitation Estimation and Forecasting \(WMO\)](#)
- [Flood Mapping Manual \(WMO\)](#)
- [Guidelines on Multi Hazard Impact based forecast and Warning Service \(WMO\)](#)
- [Hydrological Data Management: Present State and Trends \(WMO\)](#)
- [Guidelines on role, operation & management of national hydrological services \(WMO\)](#)
- [Guide to Climatological Practices \(WMO\)](#)

Manual/Guidelines

- [Sub Seasonal to Seasonal forecasting project for water management \(BoM\)](#)
- [Complementing Monitoring with Prediction for Water Management \(CSUF/GWP\)](#)
- [Remote Sensing applications to Water Resources Exploration and Management to Enhance Resiliency to climate Change and promote Economic Development \(USGS\)](#)
- [USGS Stream gauging, Models and Tools](#)
- [Flood Mapping: A point of departure for Flood Risk Management \(ICHARM\)](#)
- [Approaches to flood vulnerability assessment \(UNU\)](#)
- [Planning for Flood Mapping \(UNU\)](#)
- [Extreme Events and Disaster Management \(UFRGS/Brasil\)](#)
- [Urban Storm Water Management Manual for Malaysia: Adding Value to Vision \(USMD/Malaysia\)](#)
- [Manual on Stream Gauging \(Vol 2\) computation of discharge \(USGS\)](#)
- [Flood Risk Management- A strategic Approach \(WWF/UNESCO\)](#)
- [Guidance on Water Supply and Sanitation in Extreme Weather Events \(WHO/UNESCO\)](#)
- [Guidance to Water and Adaptation to Climate Change \(UN\)](#)

Products/Platform

- [Hydrocore \(Tenevia\)](#)
- [The TIGER water Information System, Tiger Kit \(Crowd4sat\)](#)
- [ADELIE, Paratronic Solutions \(Paratronic\)](#)
- [RISC-KIT, SUDSLOC \(FHRC\)](#)
- [MyPredict \(Predict Services\)](#)
- [NOW-casting under innovative rainfall monitoring tool \(Small Rainfall system\)](#)
- [AIGA \(Vigicruces\)](#)
- [Myfloodrisk, Rainsat, Mijn Hoogwaterstanden, Safetrip \(HKV\)](#)

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(non WMO resources)

E learning (COMET)

- [Flood Frequency Analysis](#)
- [Snowmelt Process](#)
- [Flash Flood Process](#)
- [Runoff Processes](#)
- [International Multi Hazard Early Warning System](#)
- [Basic Hydrological Sciences](#)
- [Stream Flow routing](#)
- [Unit Hydrograph Theory](#)



WMO OMM

Trainings/Workshops

- [Urban flood Management \(APFM/France\)](#)
- [Measures of Flood Management \(APFM/Vietnam\)](#)
- [Flood Risk Maps \(APFM/Cuba\)](#)
- [Flood Measures and Management Plans \(APFM/Cuba\)](#)
- [Integrated Urban Flood Management Planning \(APFM/Malaysia\)](#)
- [Urban Flood Management in Changing Climate \(APFM/Malaysia\)](#)
- [Training Manual on Best Practice in flood Forecasting and Warning \(APFM/Antalya\)](#)
- [Flood forecasting and Warning System; System Development- Warning Issued Dissemination of Messages \(APFM/Croatia\)](#)
- [Raising Awareness and Capacity Building Flood Disaster Risk Reduction \(APFM/Croatia\)](#)
- [Data collection and Use for Flood and Drought Management \(APFM/ETHZ\)](#)
- [IFM training manual and facilitator's guide \(APFM-CapNet\)](#)
- [Integrated Urban Flood Management \(APFM/Malaysia\)](#)

Products/Platform

- [RISC-KIT, SUDSLOC \(FHRC\)](#)
- Knowledge and Decision Support Tools ([Water Balance Modelling](#), [River runoff Forecasting](#), [Informing the Agricultural Calendar](#), [Demand side irrigation Calculator](#), [Water Stress monitor \(iMoMo Innovation Hub\)](#))

- [Hydro Alert, River board \(Tenevia\)](#)
- AIGA ([Vigicruces](#))
- SafeTrip ([HKV](#))
- MyPredict ([Predict Services](#))

E-learning (COMET)

- [Flash Flood Early Warning System Reference](#)
- [International Multi Hazard Early Warning System](#)

Manuals/Guidelines/Tool series

- Meteorological Systems for Hydrological purposes ([WMO](#))
- [Institutional Partnership in Multi Hazard Early Warning System](#) (WMO)
- [Guidelines on Multi Hazard Impact based forecast and Warning Service](#) (WMO)
- [Guidance on water supply and sanitation in Extreme Weather Events](#) (WMO/UNECE/WHO)
- [The Role of Media in Flood Management \(APFM tool\)](#)
- [IFM Flood Forecasting and Early Warning \(APFM tool\)](#)
- [IFM Flood Mapping \(APFM tool\)](#)
- [IFM Crisis Mapping and Crowdsourcing in Flood Management \(APFM tool\)](#)
- [IFM Risk sharing in Flood Management \(APFM tool\)](#)
- Flood Risk Management Draft (twinning partnership between France, Turkey, Romania etc)
- [Community based Flood Management Manual \(APFM tool\)](#)

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EARLY WARNING
DISSEMINATION

Manuals/Guidelines/Tool series

- [Sub Seasonal to Seasonal forecasting project for water management \(BoM/Australia\)](#)
- The Development of Flood Forecasting and Early Warning Services (WMO/USAID)
- [Complementing Monitoring with Prediction for Water Management \(CSUF/GWP\)](#)
- [Remote Sensing applications to Water Resources Exploration and Management to Enhance Resiliency to climate Change and promote Economic Development \(USGS\)](#)
- [USGS Stream gauging, Models and Tools](#)
- Extreme Events and Disaster Management (UFRGS/Brasil)
- Disaster Preparedness and Telecommunication (International Centre for Theoretical Physics)
- Weather Telecommunication in Developing Countries ([International Centre for Theoretical Physics](#))
- [Flood Risk Management – A strategic Approach \(WWF/UNESCO/ADB\)](#)

Trainings/Workshops

- [Social and Institutional Aspects of IFM \(APFM/Antalya\)](#)
- [Social Aspects and Stakeholder Involvement \(APFM/Jakarta\)](#)
- The Development of Flood Forecasting and Early Warning Services (WMO/USAID)
- [Urban flood Management \(APFM/France\)](#)
- [Measures of Flood Management \(APFM/Vietnam\)](#)
- [Perception of Risk \(APFM/Cuba\)](#)
- [Flood Measures and Management Plans \(APFM/Cuba\)](#)
- [Integrated Urban Flood Management Planning \(APFM/Malaysia\)](#)
- [Urban Flood Management in Changing Climate \(APFM/Malaysia\)](#)
- [Training Manual on Best Practice in flood Forecasting and Warning \(APFM/Malaysia\)](#)
- [Flood forecasting and Warning System; System Development- Warning Issued Dissemination of Messages \(APFM/Croatia\)](#)
- [Raising Awareness and Capacity Building Flood Disaster Risk Reduction \(APFM/Croatia\)](#)
- [Data Collection and Use for Flood and Drought Management \(APFM/ETHZ\)](#)
- Capturing Vulnerability of Floods (WMO/UNU)

Case studies

- [Community Preparedness and Public Participation in Flash Flood Management \(APFM\)](#)
- Elements of Flash Flood Management (APFM)
- Flood Crisis Preparedness (France/Floodsite)
- [Case studies for Community Based Flood Management \(APFM\)](#)
- [Social and Institutional Aspects of Integrated Flood Management: Experiences from Pilot Projects \(APFM\)](#)

E learning (COMET)

- [Flash Flood Early Warning System Reference](#)
- [International Multi Hazard Early Warning System](#)

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Manuals/Guidelines/Tool series

- [DEWETRA Platform](#)
- [Community Based Disaster Risk Management for Local Authorities \(ADPC/EU\)](#)
- [IFM Management of Flash Floods \(APFM tool\)](#)
- [IFM Coastal and Delta Flood Management \(APFM tool\)](#)
- [Water Resource Assessment Handbook For Review of National Capabilities \(WMO/UNESCO\)](#)
- Guidelines on Participative Flood Risk Management Planning (EU twinning project for Turkey and Balkan region)
- [Legal and Institutional Aspects of Integrated Flood Management \(APFM tool\)](#)
- [Organizing Community Participation for Flood Management \(APFM tool\)](#)
- [Community based Flood Management \(APFM\)](#)
- [Institutional Partnership in multi-hazard early warning system \(WMO\)](#)
- [Multi-hazard Impact based forecast and Warning Service \(WMO\)](#)
- [IFM training manual and Facilitators' guide \(APFM-CapNet\)](#)

Products/Platform

- Knowledge and Decision Support Tools ([Water Balance Modelling](#), [River runoff Forecasting](#), [Informing the Agricultural Calendar](#), [Demand side irrigation Calculator](#), [Water Stress monitor \(iMoMo Innovation Hub\)](#))

- [RISC-KIT, SUDSLOC \(FHRC\)](#)
- [MyPredict \(Predict Services\)](#)

Trainings/Workshops

- [Remote Sensing applications to Water Resources Exploration and Management to Enhance Resiliency to climate Change and promote Economic Development \(USGS\)](#)
- Extreme Events and Disaster Management (UFRGS/Brasil)
- Disaster Preparedness and Telecommunication ([International Centre for Theoretical Physics](#))
- Weather Telecommunication in Developing Countries (International Centre for Theoretical Physics)
- [Flood Risk Management – A strategic Approach \(WWF/UNESCO/ADB\)](#)

Trainings/Workshops

- [Social and Institutional Aspects of IFM \(APFM/Antalya\)](#)
- [Social Aspects and Stakeholder Involvement \(APFM/Jakarta\)](#)
- [Urban flood Management \(APFM/France\)](#)
- [Measures of Flood Risk Management \(APFM/Vietnam\)](#)
- [Flood Measures and Management Plans \(APFM/Cuba\)](#)
- [Integrated Urban Flood Management Planning \(APFM/Malaysia\)](#)
- [Urban Flood Management in Changing Climate \(APFM/Malaysia\)](#)
- [Flood forecasting and Warning System: System Development- Warning Issued Dissemination of Messages \(APFM/Croatia\)](#)

Case studies/Manual

- [Case studies for Community Based Flood Management \(APFM\)](#)
- [Case Studies in Flood Management \(APFM\)](#)
- [Community Preparedness and Public Participation in Flash Flood Management in Europe \(APFM\)](#)
- [Elements of Flash Flood Management \(APFM\)](#)
- [Social and Institutional Aspects of Integrated Flood Management: Experiences from Pilot Projects \(APFM\)](#)
- [Flood Crisis Preparedness \(France/Floodsite\)](#)
- [Flood Risk Management – A strategic Approach \(WWF/UNESCO/ADB/GWP\)](#)

E learning (COMET)

- [Flash Flood Early Warning System Reference](#)
- [International Multi Hazard Early Warning System](#)

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Manuals/Guidelines/Tool series

- [Field Practitioners' Handbook \(ADPC\)](#)
- [Institutional Partnership in multi-hazard early warning system \(WMO\)](#)
- [Guidelines on multi-hazard impact based forecast and warning service \(WMO\)](#)
- [Management of Flash Flood \(APFM tool\)](#)
- [Institutional and Legal Aspects of Flash Flood Management \(APFM tool\)](#)
- [IFM Flood Emergency Planning \(APFM tool\)](#)
- [IFM Flood Forecasting and Early Warning \(APFM tool\)](#)
- [Water Resource Assessment Handbook For Review of National Capabilities \(WMO/UNESCO\)](#)
- [Legal and Institutional Aspects of Integrated Flood Management \(APFM tool\)](#)
- [Social Aspects and Stakeholder Involvement in Integrated Flood Management \(APFM tool\)](#)

Companies

- [RISC-KIT, SUDSLOC \(FHRC\)](#)

Case studies/Literatures

- Commission on Climatology Guidelines on Capacity Development for climate services draft report ([WMO](#))
- [Socio-economic Study on improved Hydro meteorological Services in the Kingdom of Bhutan \(DHMS/Bhutan\)](#)
- [A European Research and Innovation roadmap for Climate Services \(GFCS\)](#)
- [Modernizing weather, water and climate services: A roadmap for Bhutan \(World Bank\)](#)
- [Manual of standard operating procedures for hydrometric surveys in British Columbia \(Province of British Columbia\)](#)
- [Drought Conditions and Management Conditions in Cambodia \(IDMP\)](#)
- [Drought, Vulnerability and Risk Reduction: the UNCCD Context \(IDMP\)](#)
- [Drought Preparedness, Mitigation and Response \(IDMP\)](#)
- [Drought Condition and Management Strategies in India \(IDMP\)](#)
- [Capacity Development to Support National Drought Management Policies \(IDMP\)](#)
- [Overview of regional climate conditions in 2015 and the associated national water management responses \(FFGS\)](#)
- [How to advance sub-seasonal to seasonal prediction for water management in south Asia establishing a way forward \(FFGS\)](#)
- [Weather Forecasts and Early Warnings Activities at TSMS \(FFGS\)](#)

Other resources not fitting in 1-5 but potentially related to the E2E EWS for FF topic

Manuals/Guidelines/Toolseries

- [Flood Risk Sensitive and Land Use Planning \(World Bank\)](#)
- [Sustainable Urban Land Use Planning \(World Bank\)](#)
- [Social Aspects of IFM \(APFM tool\)](#)
- [Environmental Aspects of IFM \(APFM tool\)](#)
- [Legal Aspects of IFM \(APFM tool\)](#)
- [Economic Aspects of IFM \(APFM tool\)](#)
- [Transboundary Flood Management \(APFM tool\)](#)
- [International and Trans boundary aspects of IFM \(APFM/Jakarta\)](#)
- [Climate change Adaptation and IFM \(APFM/Jakarta\)](#)
- [Formulating IFM Strategies \(APFM/Jakarta\)](#)
- [Traditional Flood Management Practices \(APFM/Jakarta\)](#)
- [Flood Proofing \(APFM/Vietnam\)](#)
- [Integrated Urban Flood Management \(APFM/CapNet/ Brasil\)](#)
- [Flood Plain Management \(APFM/Brasil\)](#)
- [Sustainable Urban Flood Management \(APFM/Brasil\)](#)
- [Design of Temporary Shelters in Flooded areas \(APFM/Paraguay\)](#)
- [Flood Intervention \(APFM/Cuba\)](#)
- [Flood Risk Management \(APFM/Malaysia\)](#)
- [IFM from Theory to Practice \(APFM/France\)](#)
- [Disaster Risk reduction exemplar to the user interface platform of the global framework for climate services \(GFCS\)](#)
- [Water Exemplar to the user interface platform of the Global Framework for Climate services \(GFCS\)](#)
- [Development of the global framework for climate services at the national level \(GFCS\)](#)
- [Guidelines for national meteorological services in the establishment of national climate services \(WMO\)](#)
- [Use of climate predictions to manage risks \(GFCS\)](#)
- [Priority needs for the operationalization of the global framework for climate services \(2016-2018\) \(GFCS\)](#)
- [Valuing weather and climate: economic assessment of meteorological and hydrological services \(GFCS\)](#)
- [Climate services for supporting climate change adaptation -supplement to the technical guidelines for the national adaptation plan process \(GFCS\)](#)
- [Design and Optimization of Hydrometric Networks \(HYCOS\)](#)
- [Management and Valorization of Hydrological data for IWRM \(HYCOS\)](#)
- [Participation, Consensus building and Conflict management training course \(HYCOS\)](#)
- [Water Resource Assessment Handbook for review of national capabilities \(WMO/UNESCO\)](#)
- [Flood and Coastal Erosion Risk Management: A Manual for Economic Appraisal \(2013\) \(FHRC\)](#)
- [Flood and Coastal Erosion Risk Management: Handbook and Data for Economic Appraisal \(2013\) \(FHRC\)](#)
- [Flood Risk Science and Management \(FHRC\)](#)



Gaps and Recommendations

Real time Data Collection

- Sufficient guidance and training material related to this module

Covered	Missing
<ul style="list-style-type: none">• Crisis mapping and crowdsourcing• Hydrological data management• Stream Gauging• Instrumentation and monitoring	<ul style="list-style-type: none">• Instrumentation on Extreme Events

Modelling and forecasting

- Sufficient guidance and training materials,

Covered	Missing
<ul style="list-style-type: none">• Estimation of Probable Maximum Precipitation• Precipitation and Flow Estimation in Forecasting• Flood Risk Mapping• Rating Curve• Flood Mapping• Rainfall runoff model• Remote sensing application in modelling and forecasting	<ul style="list-style-type: none">• Data management and Processing

Early Warning Dissemination

- Fairly Sufficient materials available,

Covered	Missing
<ul style="list-style-type: none">• Multi hazard Early Warning system• System development and Warning Dissemination,• Disaster Preparedness and Telecommunication	<ul style="list-style-type: none">• Consistency in Warning Messages• Accuracy and Clarity in Messages• An interactive two way (bottom up) communication for efficient warning



Decision Support

- Barely adequate information available

Covered	Missing
<ul style="list-style-type: none">• Social and Institutional Aspects• Stake holder Involvement/Community Preparedness in Flood Management• Capacity building for Flood Disaster Risk Reduction• Vulnerability of Floods	<ul style="list-style-type: none">• Flood Plain Management• Adaptation and mitigation solutions to flood Inundation• Flood Response routing

Response to warning

- Insufficient materials on the topic

Covered	Missing
<ul style="list-style-type: none">• Community Preparedness• Legal and institutional aspects• Transboundary issues• Flood emergency planning	<ul style="list-style-type: none">• Role of Public Education in disaster Preparedness• Response to concurrent hazardous events• Response to fast moving events

Thank you Merci

Special thanks to Shrijwal Adhikari

*Young Consultant in the
Climate And Water Department
During Summer 2017*



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World Meteorological Organization
Organisation météorologique mondiale