

## FRAMEWORK FOR THE IMPLEMENTATION OF IFI

TOPICS		INITIAL PARTNERS AND LEAD	RESEARCH	EDUCATION AND TRAINING	INFORMATION NETWORKING	EMPOWERING COMMUNITIES	TECHNICAL ASSISTANCE
VULNERABILITY	Methodologies to account for multiple stressors	UNU	UNU, WWAP, IAHR	IAHR, UNU	UNU, WWAP		
	Estimating social, political, health, and ecological impacts		IAHR, IHP, UNESCO-IHE	IAHR, IHP, UNESCO-IHE	ISDR, IHP	ISDR	ISDR
	Estimating economic impacts including benefits of floods		UNESCO-IHE	UNESCO-IHE	UNESCO-IHE, ISDR	ISDR	ISDR
	Mechanisms (including financial) to increase coping capacity and resilience		IAHR, UNU, ICHARM	IAHR	ISDR		ISDR
	Indicators		UNU, WWAP, ICHARM	UNU	UNU, WMO, WWAP, ISDR		ISDR
FLOOD RISK MANAGEMENT	Multi-hazard analysis	IAHS, ICHARM, UNESCO, WMO	IAHS, UNESCO, FRIEND, UNU	WMO, IAHS, UNESCO, FRIEND, UNU	WMO, IAHS, UNESCO, FRIEND		WMO, IAHS
	Data for risk assessment		IAHR, IAHS, UNESCO, FRIEND, ICHARM, UNU	IAHR, IAHS, UNESCO, FRIEND, ICHARM, UNU	IAHR, IAHS, UNESCO, FRIEND, ICHARM, ISDR		IAHR, ISDR, IAHS, UNESCO
	Hydrologic, hydraulic and economic modeling		IAHR, IAHS, ICHARM, UNESCO, UNU	IAHR, WMO, IAHS, ICHARM, UNESCO, UNU	IAHR, WMO, IAHS, ICHARM, UNESCO		IAHR, WMO, IAHS, UNESCO
	Flood hazard mapping		IAHS, ICHARM, UNU	IAHS, ICHARM, UNU	WMO, IAHS, ICHARM	WMO	WMO, IAHS
	Structural and non-structural measures		IAHR, IHP, (ICARM), UNU	IAHR, IHP, WMO, ICHARM, UNU	IAHR, (ICARM)		IAHR, WMO
GOVERNANCE AND PARTICIPATION	People networking			ISDR	ISDR, UNU		
	Institutional reform			ISDR	ISDR, WMO		WMO
	Developing stakeholder processes			ISDR	ISDR		

# FRAMEWORK FOR THE IMPLEMENTATION OF THE IFI-IPOA

TOPICS		INITIAL PARTNERS AND LEAD	RESEARCH	EDUCATION AND TRAINING	INFORMATION NETWORKING	EMPOWERING COMMUNITIES	TECHNICAL ASSISTANCE
PEOPLE-CENTRED EARLY WARNING AND EMERGENCY MANAGEMENT	Effective forecasting and early warning	WMO, ISDR, ICHARM	IAHR, UNESCO-IHE, IHP, UNESCO, FRIEND, ICHARM	UNESCO-IHE, UNU, WMO, ICHARM, IAHR	ISDR/PPEW, UNU, WMO, IAHR	ISDR/PPEW, WMO	IAHR, WMO
	Effective communication		ICARM	WMO	ISDR/PPEW	ISDR/PPEW	
	Preparedness			UNU, (ICARM)	ISDR/PPEW, (ICARM)	ISDR/PPEW	
	Response to warning			UNU, (ICARM)	ISDR/PPEW	ISDR/PPEW	

## EXPECTED OUTPUTS OF IFI'S RESEARCH AGENDA

RESEARCH AGENDA OUTPUTS		AGENCIES CURRENTLY INVOLVED
SHORT-TERM PRODUCTS	1. Risk assessment methodologies, risk management tools and risk communication (for objective and subjective risks)	IAHR, UNU, IAHS, WMO, ISDR, ICHARM
	2. Enhanced understanding, forecasting and management of flash floods in urban areas and arid zones as well as those resulting from dam breaks and dike breaks	IAHR, IAHS, WMO, ISDR, ICHARM, UNU
	3. Improved methodologies for estimating flood benefits and flood damages for various land uses (agriculture, urban, peri-urban, industrial)	IAHR, UNU
	4. Establishment of flood susceptibility indicators based on community vulnerability and resiliency	UNU
	5. Comparative assessment of institutional models for flood management	WMO
MEDIUM-TERM PRODUCTS	1. Methodologies for reliable inundation mapping	IAHR, IAHS, WMO, UNESCO, ICHARM
	2. Probabilistic laws for non-stationary extreme events under changing environment (climate variability and change, land use and population change)	(IAHR), IAHS, UNESCO
	3. Understanding trade-offs between structural and non-structural flood management measures under different socio-economic conditions	UNESCO
	4. Improvement of combined physical and stochastic distributed hydrologic models for more reliable real-time runoff forecasting	IAHR, IAHS, UNESCO
	5. Improved methodologies for estimating flood benefits and flood damages for various land uses (agriculture, urban, peri-urban, industrial)	UNESCO, UNU
	6. Tools for group-based multi-objective decision-making with multiple stakeholders	IAHR
	7. Comparative analysis of socio-economic incentives and instruments in flood management	
	8. Understanding flood anthropology for the description of traditional technologies (nature for nature) in flood management	UNESCO
	9. Improved communication strategies for effective flood warning and forecasting	(UNU), IAHR, WMO, (ISDR), ICHARM
	10. Enhanced understanding of psycho-social impacts of flooding on individual and family responses	
	11. Strategies for effective flood mitigation investment scheduling	
LONG-TERM PRODUCTS	1. Improved medium-term flood forecasting incorporating medium- and long-term weather prediction	IAHR, IAHS, WMO, UNESCO
	2. Understanding trade-offs between structural and non-structural flood management measures under different socio-economic conditions	
	3. Tools (data assimilation, downscaling, remote sensing) for warning and forecasting of ungauged basins	UNU, (IAHR), IAHS, UNESCO, ICHARM
	4. Tools for hydro-meteorology triggered land-slide prediction	WMO
	5. Improved management of floods caused by ice jams	WMO
	6. Procedures for ecologically-sound flood management	
	7. New design criteria for non-stationary flood computation	IAHS
	8. Strategies for effective flood mitigation investment scheduling	

## EXPECTED OUTPUTS OF IFI's EDUCATION AND TRAINING AGENDA

EDUCATION AND TRAINING AGENDA OUTPUTS		AGENCIES CURRENTLY INVOLVED
SHORT-TERM PRODUCTS	1. Synthesized flood preparedness guidelines on flood emergency for communities (country-specific)	WMO, ISDR
	2. Training courses and manuals for community leaders, decision makers, technical persons on various aspects of flooding, such as preparedness planning, flood fighting and flood recovery	UNU, (IAHR), WMO, UNESCO-IHP-IHE, ISDR, ICHARM
	3. Post-evaluation conferences/lessons learned of case studies highlighting best practices on all aspects of flood issues	UNU, IAHS, ISDR
	4. International network of flood-related institutions to cooperate on producing training materials for various user groups	UNU, UNESCO-IHE, ICHARM
MEDIUM-TERM PRODUCTS	1. Production of teaching material for training courses at various levels	IAHS, UNESCO-IHE, ICHARM, UNU
	2. Training courses and manuals for community leaders, decision makers, technical persons on various aspects of flooding, such as preparedness planning, flood fighting and flood recovery	UNU, WMO, UNESCO-IHE, ICHARM
	3. Post evaluation conferences/lessons learned of case studies highlighting best practices on all aspects of flood issues	UNU, IAHS
	4. International network of flood-related institutions to cooperate on producing training materials for various user groups	(UNU), (IAHR), ICHARM
	5. Popularized publications, books, videos and public education programs dealing with different aspects of flood preparedness, flood fighting and flood recovery in different cultural and socio-economic settings	WMO, UNESCO-IHP, ISDR
LONG-TERM PRODUCTS	1. Introducing the concept of living with floods in school programs through text books and teaching materials	WMO, UNESCO-IHP, ISDR
	2. Curricula for undergraduate disciplinary programs and integrated curricula for inter-disciplinary graduate programs promoting inter-disciplinary thinking	WMO, UNESCO-IHE, ICHARM
	3. Enhanced public awareness through various international events on various aspects of flood management (campaign, media, web)	(UNU), WMO, UNESCO, ISDR, (ICHARM)

## EXPECTED OUTPUTS OF THE IFI's INFORMATION NETWORKING AGENDA

INFORMATION NETWORKING AGENDA OUTPUTS		AGENCIES CURRENTLY INVOLVED
SHORT-TERM PRODUCTS	1. Global hydrological database on extreme flood events	IAHS, ICHARM, UNU
	2. Database for the description of the various aspects of floods (physical, economic and social)	IAHS, ICHARM, UNU
	3. Open access multi-lingual CDS/ISIS-based international bibliographical database on flood literature and reports (published and informal)	IAHS, ISDR
	4. Open access and reviewed depository of proven methodologies and tools for flood prediction, analyses and management	IAHS, WMO, ISDR
	5. Network between IFI and relief and humanitarian agencies	ISDR
MEDIUM-TERM PRODUCTS	1. Database of data-type relevant to the various aspects flood management	IAHS
	2. Compilation of available DEM data and other spatial datasets (land use) in the appropriate resolution for flood management	(IAHS), UNU
	3. Open access international depository of flood-related legal instruments, policies and comparative studies	WMO
	4. Cooperative network between IFI and the insurance industry	UNU
	5. Network between IFI and relief and humanitarian agencies	ISDR
LONG-TERM PRODUCTS	1. Global hydrological database on extreme flood events	IAHS, ICHARM
	2. Compilation of available DEM data and other spatial datasets (land use) in the appropriate resolution for flood management	(IAHS)
	3. Cooperative network between IFI and the insurance industry	UNU, ISDR

# EXPECTED OUTPUTS OF THE IFI’S TECHNICAL ASSISTANCE

TECHNICAL ASSISTANCE OUTPUTS		AGENCIES CURRENTLY INVOLVED
SHORT-TERM PRODUCTS	1. Help design cooperative agreements for flood-related activities in transboundary watersheds	WMO
	2. Flood emergency management manuals and procedures	WMO, ISDR
	3. Flood relief and recovery manuals and procedures	ISDR
MEDIUM-TERM PRODUCTS	1. Facilitation of jointly coordinated flood fighting in transboundary watersheds	WMO
	2. Design and construction of appropriate methodologies for flood mitigation measures at local scale	WMO
	3. Assessment of individual and community flood vulnerability exposure	UNU (case by case)
	4. Provide assistance to governments in designing national strategies for flood reduction	UNU (case by case), WMO
LONG-TERM PRODUCTS	1. Provide assistance to governments in designing national strategies for flood reduction	UNU (case by case), WMO