“Advancing human security through knowledge-based approaches to reducing vulnerability and environmental risks“

United Nations University Institute for Environment and Human Security

(UNU-EHS)

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Advancing Knowledge for Human Security and Development

The International Flood Initiative (IFI)

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Major challenges: prominence of water – related disasters

Economic losses due to natural disaster (-2005)

Year	Country, region	Event	Losses* (Bn. US$)	Insur. Losses* (Bn. US$)
1995	Japan, Kobe	Earthquake	100	3
2004	USA, Carribean	Hurricane season	60	30
1994	USA, Northridge	Earthquake	44	15.3
1998	China, Jangtse	Flood	30	1
1992	USA, Florida	Hurricane Andrew	30	17
1996	China, Jangtse	Flood	24	0.5
2002	Europe	Flood	21.5	3.5
1993	USA, Mississippi	Flood	16	8
1990	Europe	Storms	15	10.2
1995	North-Korea	Flood	15	./.
1988	Armenia, Spitak	Earthquake	14	./.
2004	Indian Ocean	Tsunami	10	1
2003	Europe	Drought	13	<1
2005	USA, Ls., Ms. & Fl. + further states	Hurricane Katrina and subsequent extreme floods	125	~60

*non-inflational clear-up

Death tolls due to natural disaster (-2005)

Year	Country	Event	Death toll
1970	Bangladesh	Storm surge	300,000
1976	China	Earthquake	290,000
2004	Ind. Ocean	Tsunami	220,000
1991	Bangladesh	Storm surge	140,000
1970	Peru	Earthquake	67,000
1990	Iran	Earthquake	40,000
1988	Armenia	Earthquake	25,000
1985	Columbia	Vulcano eruption	24,700
1976	Guatemala	Earthquake	22,700
1963	Bangladesh	Storm surge	22,000
2003	Europe	Drought/heatwave	>20,000
2004	USA, Carrib.	Hurricane season	2,000
2005	USA, Ls., Ms. & Fl. + further states	Hurricane Katrina and subsequent extreme floods	1322

Source(s): MunichRe, Topics Geo

Third International Conference on Early Warning (EWC III) – SIDE EVENT ON FLOODS

- Lack of public awareness and preparedness (early warning systems)
- Loss of indegenious knowledge

- Lack of political and public awareness (…but every aspect and all consequences were known by scientists)
- Loss of trust and confidence in decision-makers and scientific community

Why was IFI set up?

- Increasing flood losses, affected people as well as number and magnitude worldwide

- Flood plains play important role for livelihood of large portions of the world‘s population – losses have to be reduced, benefits be strengthened

- 520 million people affected by floods each year
- Today 1bn. people live in path of 100-year flood
- 2bn. people vulnerable to floods in 2050

- Coordinated input to the UN International Decade for Action: „Water for Life“ (2005-2015)

Source: Bogardi, 2005

Long-term strategic goals of IFI

- Development of culturally sensitive flood risk management strategies comprised of optimal structural and non-structural measures and thereby targeting sustainable development

- To be achieved through: the mobilization of resources and networks (UN, NGO, donor agencies, insurance industry) in order to assist communities and governments

- Foreseen lifespan of the initiative: 10 years, coinciding with the “Water for Life” Decade 2005-2015

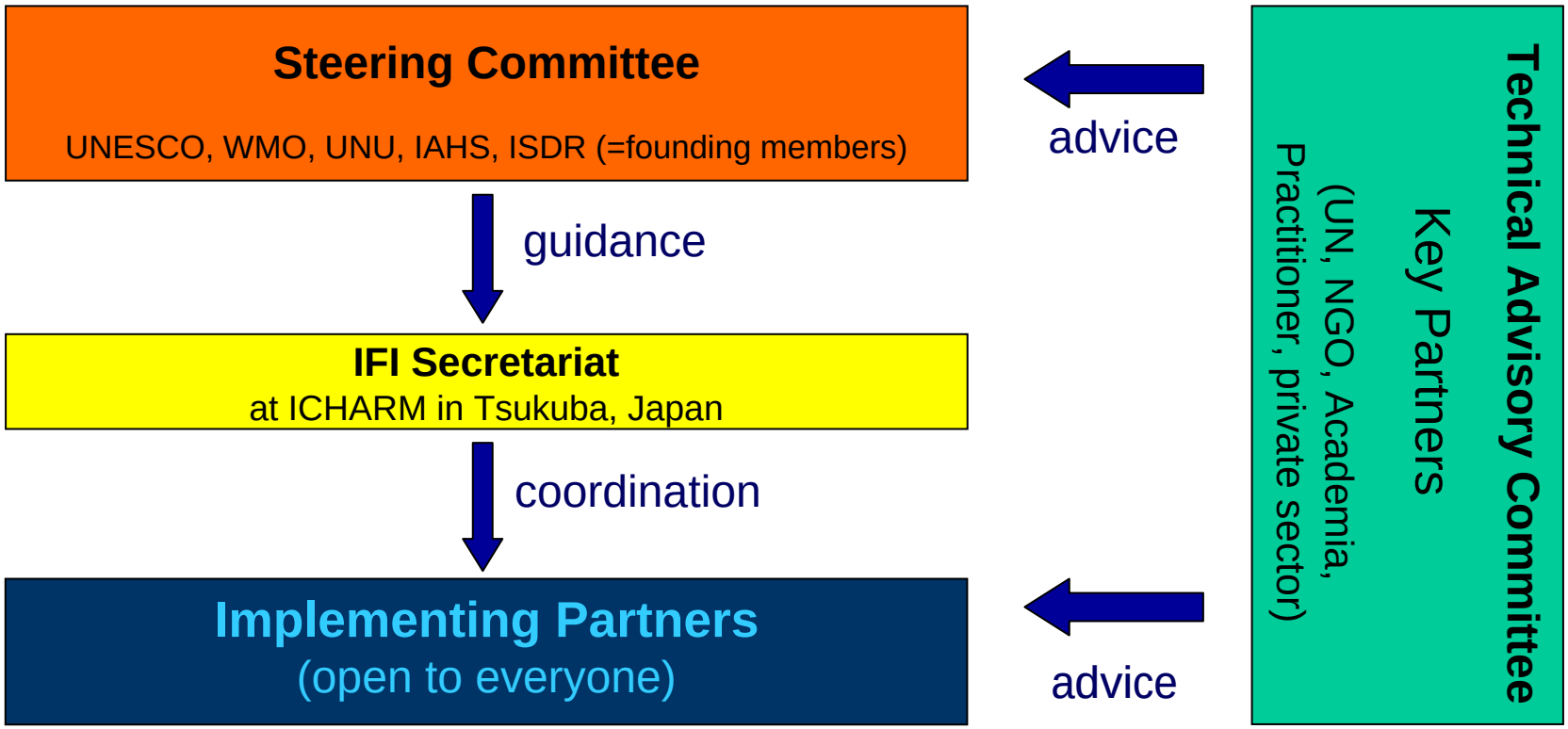
International Flood Initiative (IFI) Mission Statement

„International Flood Initiative (IFI) promotes an integrated approach to flood risk management in order to reduce fatalities, property losses, environmental effects and hardship that result from floods and at the same time consider long-term benefits from floods and use of flood plains“

IFI Programme Components:

- Vulnerability (UNU-EHS, IIASA)
  Estimating social, political, health, ecological & economical impacts
- Flood Risk Management (IAHS, ICHARM, UNESCO, WMO)
  Multi-hazard analysis, data collection, modelling, flood hazard mapping, structural & soft measures
- Governance and Participation (IIASA, USACE, ADPC)
  People-networking, institutional reform, development of stakeholder processes
- People-centred EW and EM (WMO, UNISDR, IFNet)
  Effective forecasting and early warning, effective communication, preparedness, response to warning

IFI manangement structure



(ICHARM - International Center for Water Hazard & Risk Management, Tsukuba, Japan, under the auspices of UNESCO, established 3rd Mar 2006, Founding director: Prof. Takeuchi)

Promoting the International Flood Initiative (IFI)

Recent milestones of IFI

- June/Oct. 2005: WMO Council & UNESCO General Assembly. Endorsement of IFI.
- Jan. 2006 International Workshop on Flood Risk Management, Tsukuba, ICHARM -> UNU session chairing
- Mar. 2006: Opening of ICHARM under the auspices of UNESCO, start of operation IFI Secretariat.

Staff and some associates of ICHARM lined up after inauguration on 6 March, 2006

- Mar. 2006: ICHARM & IFI at WWF4, Mexico
- Jul. 2006: IFI meeting at IHP/UNESCO, Paris

International Flood Initiative (IFI)

UNU ‘s Contribution

- The technical orientation of the “vulnerability focal area” calls mainly but not exclusively for the involvement of UNU-ESD and UNU-EHS.

- UNU-EHS will contribute mainly through its planned and ongoing case studies on flood vulnerability in the context of indicator development.

- UNU-EHS develops vulnerability indicators regarding: Social, Environmental, Economic & Institutional aspects

UNU-EHS's Contribution – Vulnerability Indicators:

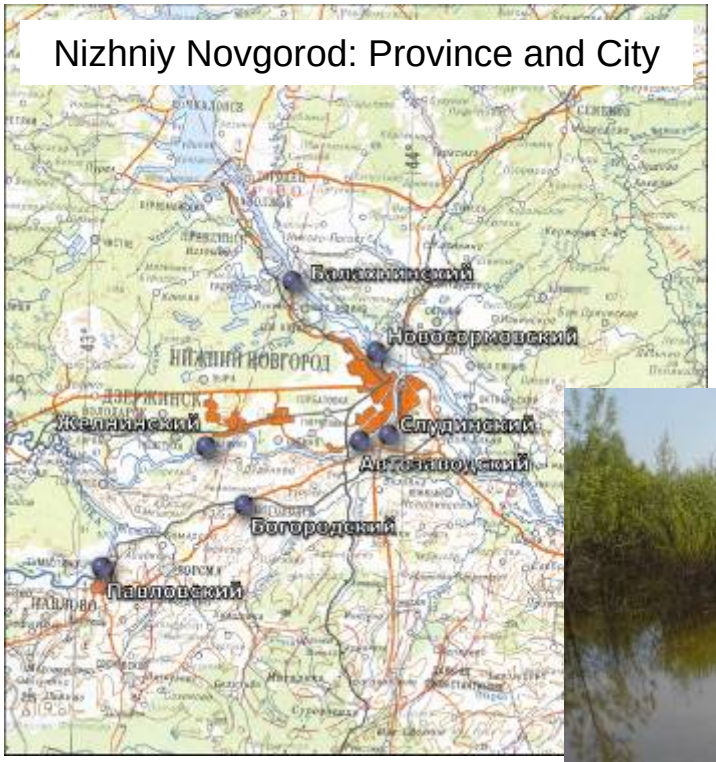
Socio-environmental tsunami impact:

- Contamination of ground water wells in Galle
- Outlook for coastal agriculture in Batticaloa (environmental, social, economic)

Socio-economic baseline data:

- Quantification of the tsunami impact & recovery
- Comparison between Batticaloa (Tamil) and Galle (Singhalese) communities

UNU-EHS‘s Contribution – Vulnerability Indicators:



NN province population is 3,6 mn.
NN city population is 1,3 mn.

Characteristics of vulnerabilities in various communities (local level) to floods & under-flooding in the Volga Basin

- How to measure the “light” but very frequent impacts of under-flooding?
- How effective are the different mitigation strategies? (dams, dykes, building codes etc.)

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Thanks for your kind attention!

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