



United Nations
Educational, Scientific and
Cultural Organization



UNESCO Chair on Gender and Vulnerability
in Disaster Risk Reduction Support,
Kobe University, Japan

Keynote lecture: Formulating Integrated Flood Management Policy within Context of Gender Equality

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Learning Outcomes

- To explain the Integrated Flood Management (IFM) concept
- To outline the challenges and opportunity of women participation in IFM policy making process

What flood means?

What is a flood disaster ?

Introduction

- Floods are natural disaster occurred frequently over worldwide including Malaysia.
- Settling on flood plains has enormous advantages, as is evident from the very high densities of human settlement in, for example, the Netherlands, Bangladesh, Thailand, Malaysia and Cambodia.



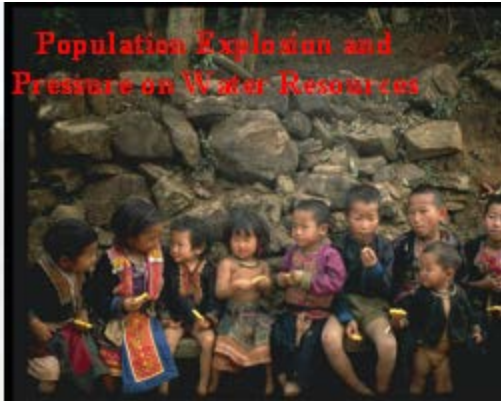
Kuala Lumpur hits by flood, 1971

Shortcomings of past Flood Management Practices

- Ad-hoc and sectoral
- Lack of proactive action
- Inappropriate defined objective
- Emphasis on structural measures

**Land-use policy is a neglected in flood management plan
water policy issue**

Challenges of Flood Management



Population growth

Securing livelihoods – food security



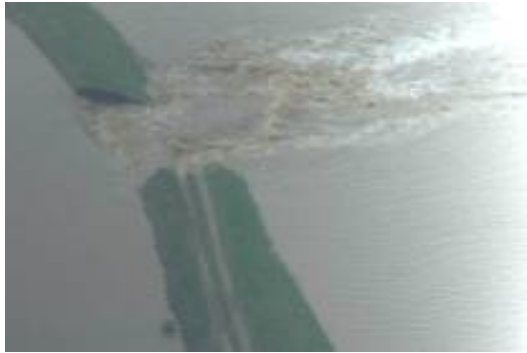
Ecosystem Conservation

Challenges of Flood Management

Climate Variability and Change



www.awitness.org



Absolute safety from flooding is a myth

**Changes in the decision
making processes**

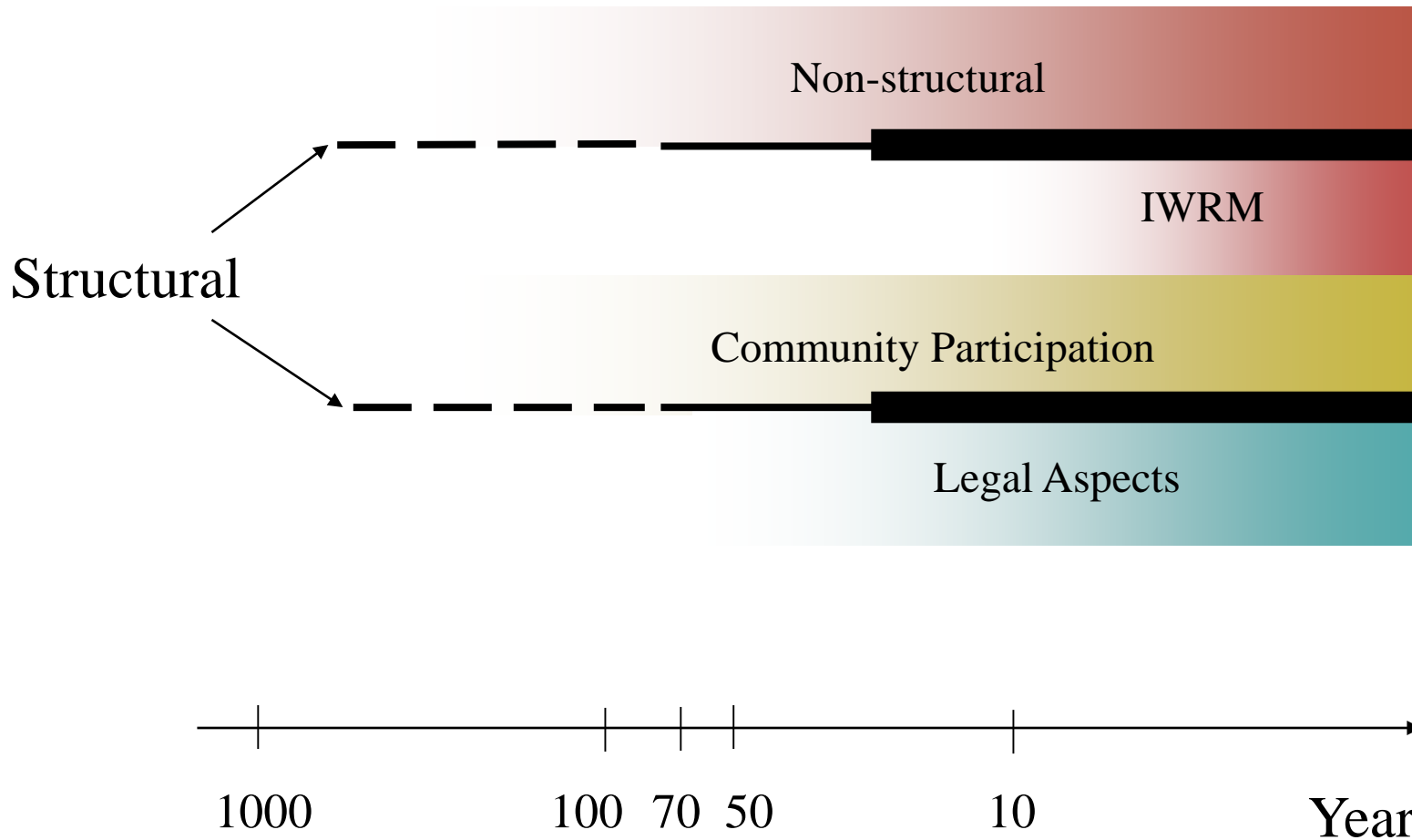
(Community Participation)



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- Flood disasters are the results of interaction between this natural phenomenon with the environmental, social and economic processes.
- Flood management must be carried out within the context of integrated approach- economic, legal, social and environment.

Development Stages in Flood Management

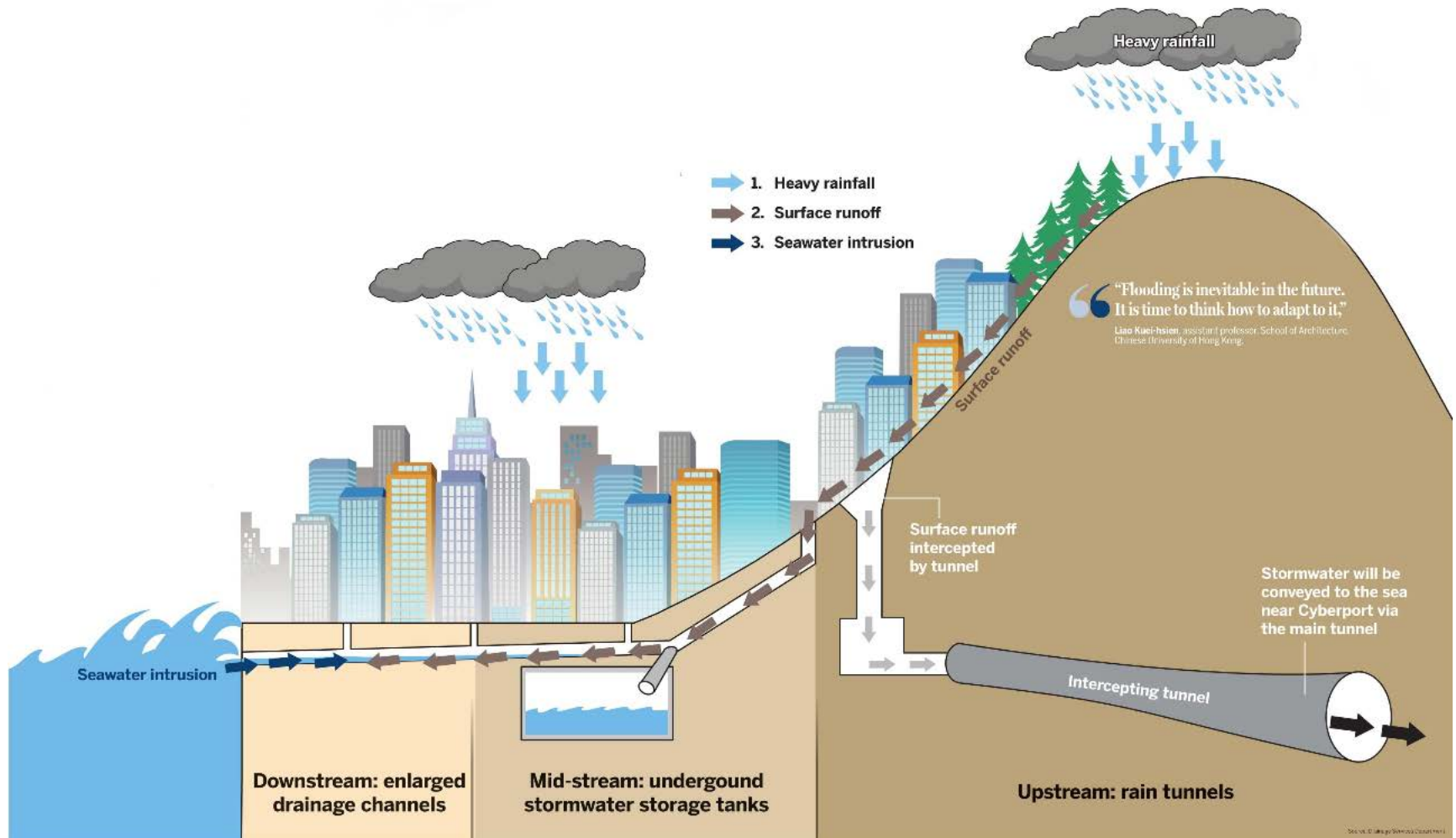


Integrated Flood Management (IFM)

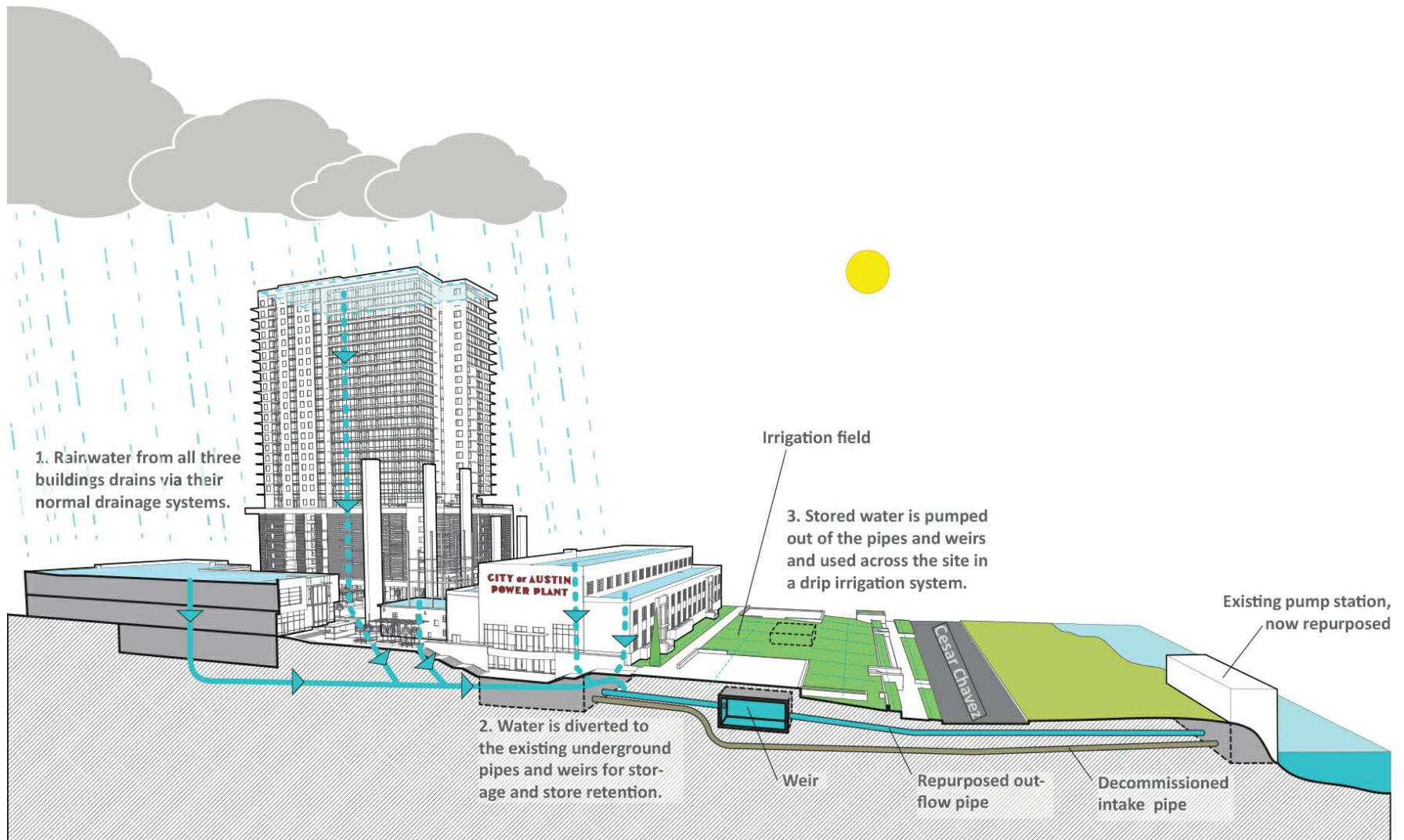


Water resources management

- Integrated Water Resources Management (IWRM) is considered as one of the main policy paradigms in water resources management.
- Water allocation for domestic and agricultural uses
- Wise use the stormwater – rainwater harvesting



Hong Kong flood Mitigation conceptual model

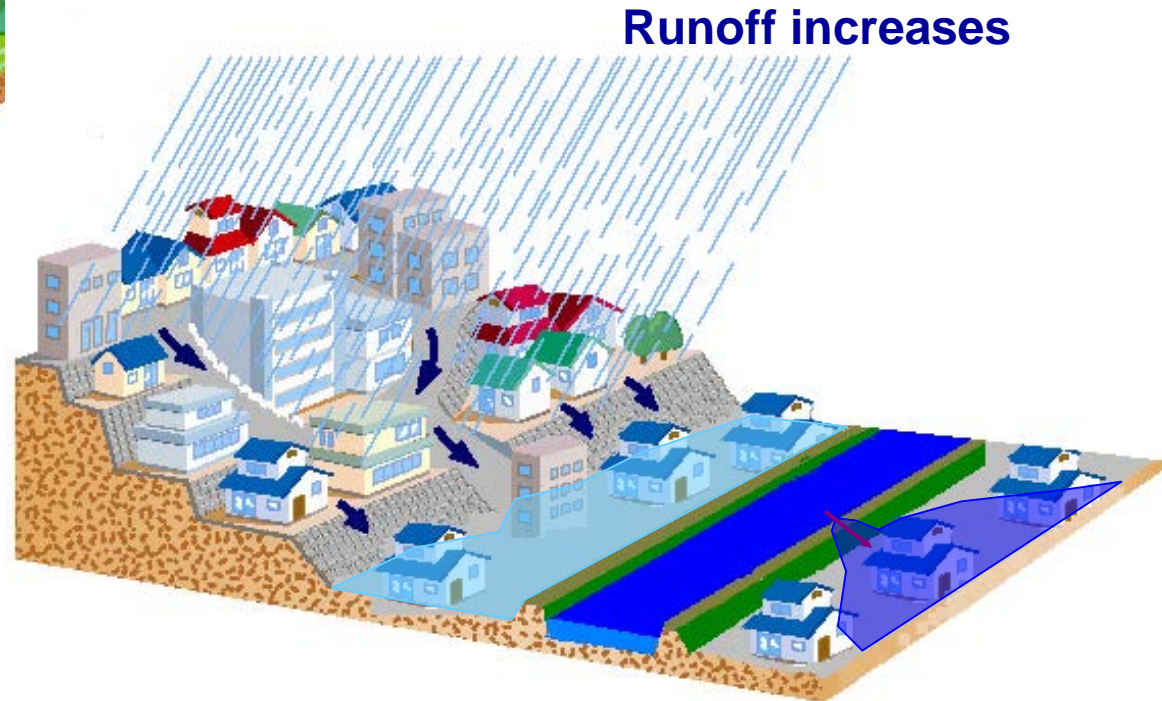


Seaholm Power Plant Re-Development plan in Austin, Texas, United States

Land use Management



Rainwater infiltrates
into the ground



Runoff increases

MANAGING FLOOD DISASTER RISK



Ensure a Participatory Approach

- The definition of sustainable development adopted at the 1992 Rio Earth Summit- the involvement of the public at all levels of decision-making and recognizes the role of women.
- Sustainable Development Goal (SDG) **Goal 5: Achieve gender equality and empower all women and girls**
 - ✓ Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life

Importance of women role in IFM

- In early century, decision-making related to flood risk reduction was predominantly done by men
- However, women are always affected during and after a flood disaster – vulnerable
- Women have to still carry out their habitual responsibilities similar to preparation of food, collection of fuel and water, often under unfeasible situation

- According to the United Nations (2009), male survivors from the Indian Ocean tsunami in 2004 outnumbered the female survivors by three or four to one in Sri Lanka.
- It is stated that the women's death toll was equivalent to as much as 80 per cent in some parts of the country (Ariyabandu, 2009; APWLD, 2005).

- The significance to recognise the different roles, capacities, vulnerabilities and needs of women in disaster risk reduction (DRR).
- It should always be emphasised by policy makers and Government due to the higher disaster vulnerability of women.

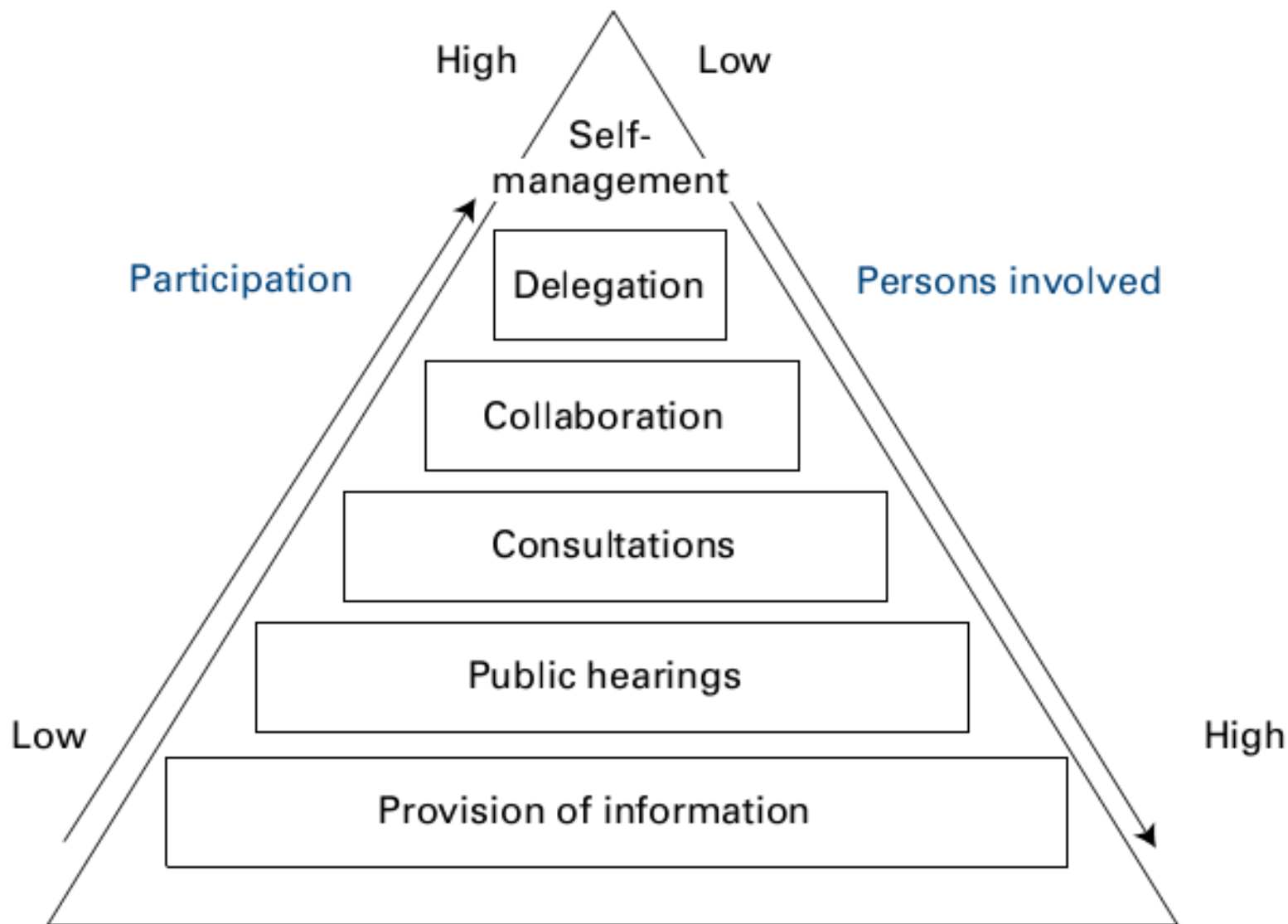
- For emergency preparedness, it is essential that the community is made aware of the flood risks and the factors that determine them.
- Special requirements and capabilities of women during emergency situations should be incorporated into flood preparedness and management strategies

- It has not been adequately recognized that the continuous stay of women at home gives them a special stake in protecting the house and the family properties.
- Together with the intimate knowledge of the surroundings and ability to monitor the flood situation, it can be put to beneficial use in developing preparedness strategies at the household level.

- Women are more likely to share information, ideas and resources as they build networks of families and friends at work, in schools and in their neighborhoods.
- Often women groups take the lead in helping rebuild community solidarity after a disaster.
- A participatory and transparent approach which includes a representative range of stakeholders in the decision making process is another key component of IFM.

Levels of Participation

- The objectives of women participation in IFM are as follows:
 - Provide them an opportunities to share their views and influence the outcome;
 - Build consensus and public support for the outcomes;
 - Ensure sustainability of IFM plans and associated decisions;
 - Build resilience of flood-prone communities



Participation methods	Purpose	Description
Provision of information	To spread knowledge about decisions	The authorities or decision makers make the final decision. These decisions are shared with the public/ stakeholders before implementation. The stakeholder involvement is limited to receiving information. No further involvement is envisaged.
Public hearings, conferences	To be heard before decisions are taken	The authorities make the initial decisions and the public/ stakeholders are informed of the plan/decisions and their feedback or agreement is sought. A public hearing is announced, welcoming all participants. Final decisions are based on the opinions expressed in the public hearing. Stakeholders are involved in implementation.
Consultation through workshops	To influence the decision-making process	The authorities, decision makers, development agencies or RBOs draw up a plan which is shared with the public and other stakeholders. Objections and suggestions are sought, modifications are made accordingly and implementation is carried out with their consent through consensus.
Collaboration through advisory groups	To influence the decision-making process	Community leaders or special representatives and stakeholder institutions make up an advisory group and work closely with the authorities or decision makers. Increased interaction among people leads to an open, informal, atmosphere and enhanced information sharing. The advisory group is informed regularly of progress made during the development and the implementation of plans. Advisors offer suggestions and recommendations based on needs and gaps identified at the community level.
Delegation (community cooperatives, development trusts, local councils)	To make decisions jointly, agree on decisions	<p>Stakeholders' needs are determined from the onset by the stakeholders themselves and the authorities / RBOs and the communities through their representatives decide means of intervention together.</p> <p>Stakeholder involvement is extensive and continues beyond the implementation stage and includes monitoring and evaluation to help pinpoint the plan's shortcomings for future improvements.</p>
Self-management (local communities, individual)	To make their own decisions	A community or an individual makes its own decision with or without support from the outside. Community. flood management committees organize themselves to respond to emergency situations.

Improving women participation in IFM policy making process

Opportunities

- Provide training and education – build up women capacity in flood management
- Enhance information sharing technique – women magazine, social media and etc
- Partnership with Local NGOs to promote women participation on IFM policy making process

Challenges

- Lack of political will and commitment
- Lack of resources
- Attitude towards flood management
- Risk perception

References

- Avinash C Tyagi. 2005. Integrated Flood Management : the way to Harmonious coexistence with floods. International Commission on Irrigation and Drainage*
- AVINASH TYAGI. 2009. Floods and the Development: Towards Integrated Flood Management. Training Workshop on Integrated Flood Management for countries in Western Asia and the Arab region.
- Ariyabandu, M.M. (2009), "Sex, gender and gender relations in disasters", in Enarson, E. and Chakrabarti, P.G.D. (Eds), Women, Gender and Disaster – Global Issues and Initiatives, Sage Publications India Pvt Ltd, New Delhi, pp. 5-17
- APWLD (2005), "Why are women more vulnerable during disasters? Violations of women's human rights in the tsunami aftermath", Asia Pacific Forum on Women, Law and Development, Chiangmai.
- Kanchana Ginige. 2016. Mainstreaming women into disaster reduction in the built environment: A guideline for Sri Lanka. DISASTER PREVENTION AND MANAGEMENT: AN INTERNATIONAL JOURNAL (25)5
- United Nations (2009), Making Disaster Risk Reduction Gender Sensitive, UN/ISDR, UNDP and IUCN, Geneva.
- World Meteorological Organization (WMO)