

**DRH Consortium International Workshop toward Implementation
Science for Disaster Risk Reduction
12-16 October, Kyoto, Japan**

**SS 14 – 10/14 (Wednesday) 9:00-10:30- Theme-
Implementing IDRIIM in Asian Mega cities:
Mumbai Hot Spot Case Study.**

**Presentation by B.Misra
“Purpose and Importance of Hot Spot case studies in
IDRIIM: Mumbai”**

IDRiM

**Everybody's concern- risks engulf us all and hazards and disasters
impact all**

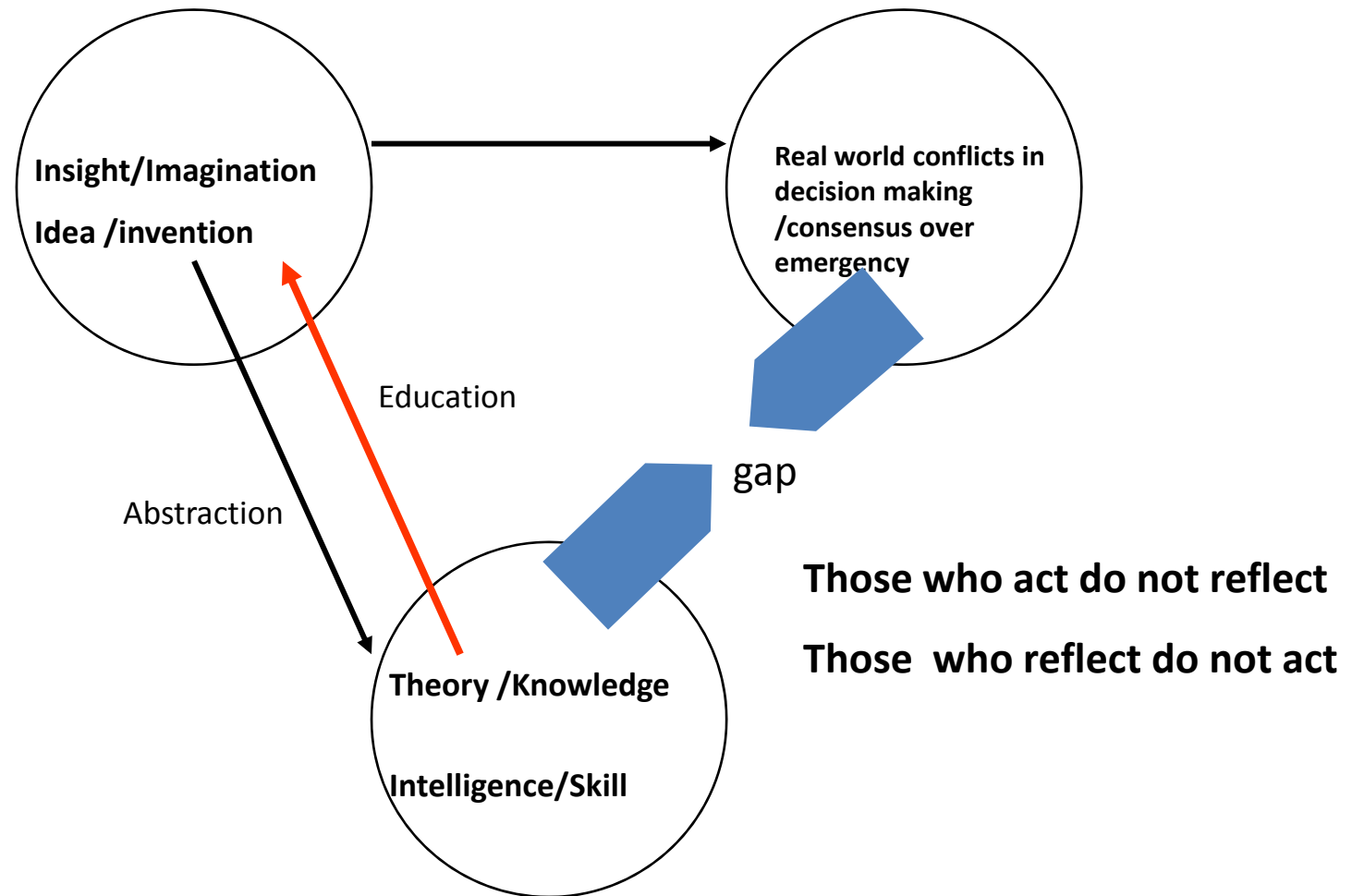
How do we move from CONCEPT TO REALITY

**From lab to evidence based practice & to find useful
& transferable technologies**

From ideas to implementation

Learning through doing & develop success models

IMPLEMENTATION SCIENCE AND THE REAL WORLD DILEMA



IDRiM- Building up its architecture

We are not DOING enough

And not at the most challenging scenarios – the **HOT SPOTS**

Hence,

Much of our knowledge remains isolated NOT integrated

Much of our technology remains inadequately tested OR untested.

Result,

Over promise and under achieve

We do not win hearts and minds over disaster reduction deliveries.

PURPOSE OF HOT SPOTS IN BUILDING IDRiM ARCHITECTURE

Hot Spots present most challenging scenarios but also opportunities to innovate and generate new ideas. From technology only solutions to Social solutions & better Management solutions.

Hot Spots urge us to be sensitive to human values and emphasize the human face of technology.

Hot Spots provide opportunities to work and learn together with the stakeholders and on-the –ground feed back.

Hot Spots help to observe disaster reduction structures as those emerge and function under stressful conditions.

REDEFINING IDRiM ARCHITECTURE

Disasters examined more as social problems than just a technology problem- Emphasis on social and spatial vulnerability.

Redefine economic impact of disasters.

Reframe the educational context- Risk-Resilience based transformational learning model- Emphasis on small group problem based 'non-linear' learning process.

Realize that a simple idea in IDRiM can change lives of many and make them safer from risks.

Objectives of Hot Spot approach

PLAN AND REACH A ROLE MODEL

ENGAGE CULTURALLY DIVERSE COMMUNITIES-

Locate and protect their livelihood base

Promote their activities & welfare

Enhance their capabilities through training & trained agents

PROMOTE CREATIVE ADAPTATION-

Promote community think-tank groups

**Facilitate adaptation through blend of indigenous and modern
knowledge.**

EXPLORE WAYS OF CREATIVE CO-LEARNING –

Non-linear learning with manageable groups

Nine Critical Steps Proposal for successful IDReM implementation in Mega city Hot spots in Asia

Secure sustainable entry point

Raise Awareness

Create Enabling Environment of acceptance and trust.

Develop Tools – IDReM Tool Kit to influence and possibly change sub-optimal decisions taken on urban structure and land use.

Build Training & Technical Support to make intervention sustainable.

Manage Operational Systems better and enhance management capabilities.

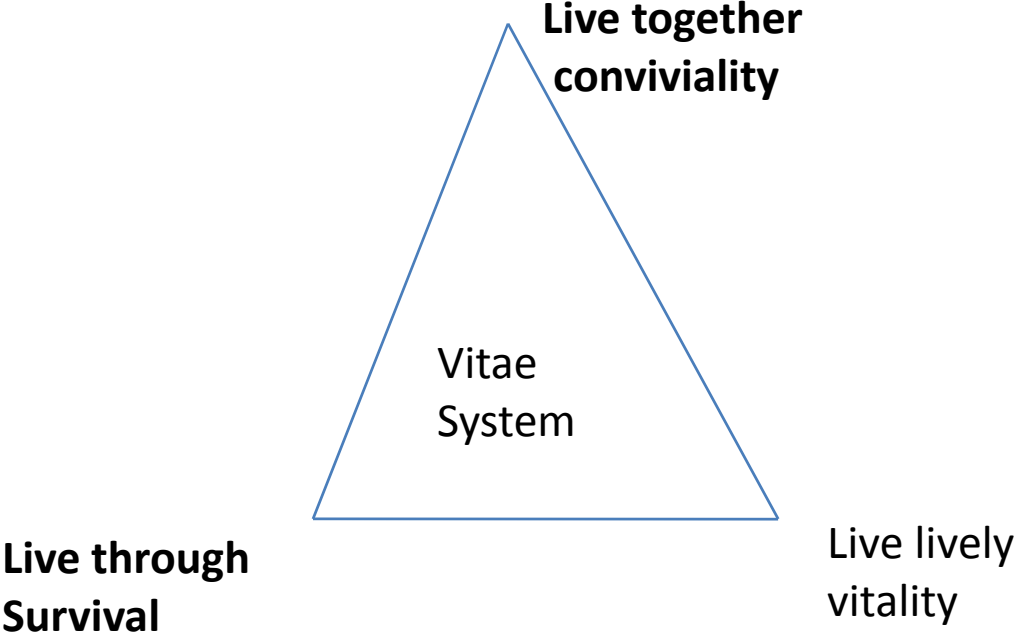
Measure and Evaluate Progress

Progressive Use of Feedback Learning and Sharing Knowledge

Redefine & Remodel intervention

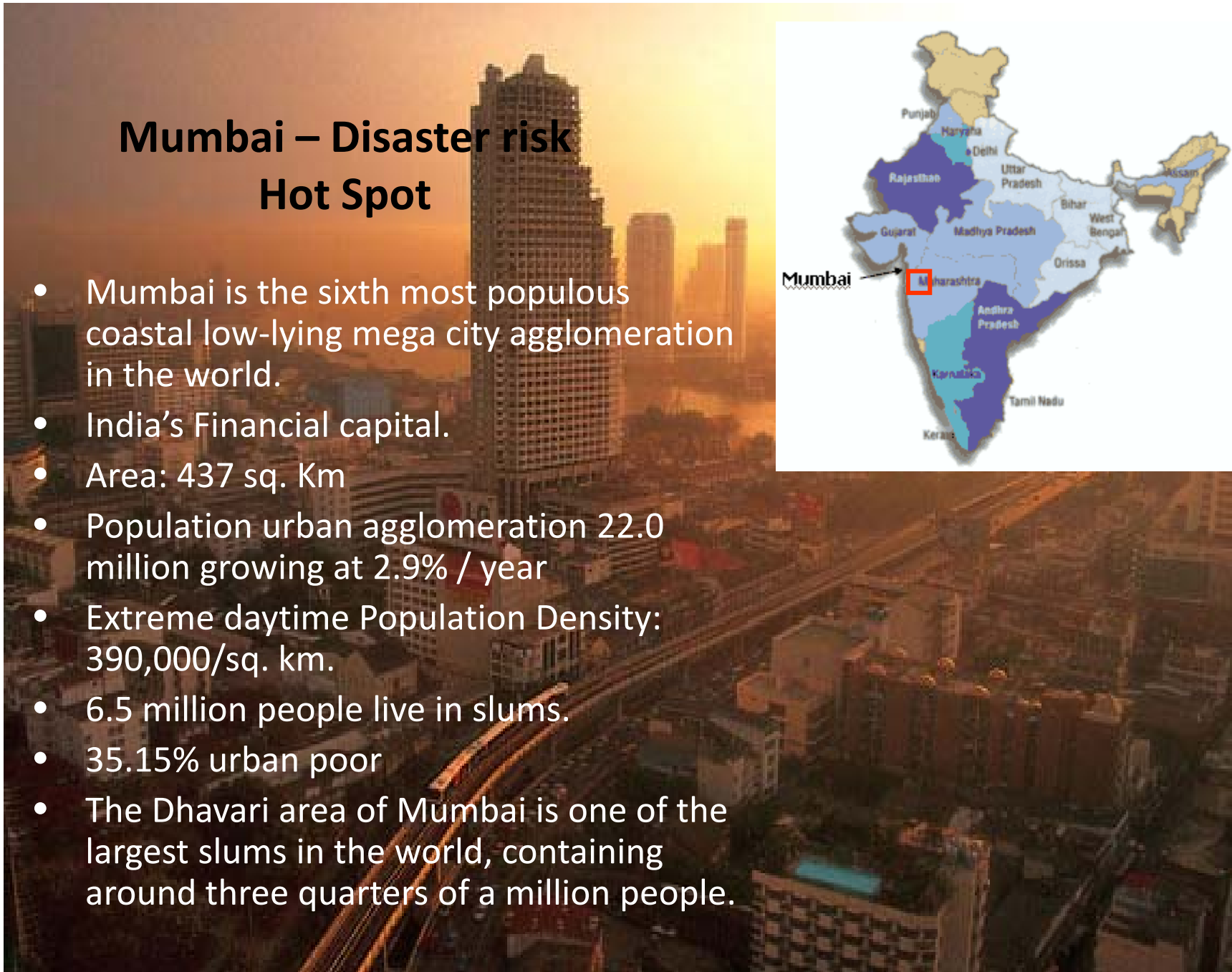
**The challenge is to change the MINDSET
Perhaps, with convincing basic rationale for sustainable development**

One such idea is VITAE SYSTEM guide to Development.



Mumbai – Disaster risk Hot Spot

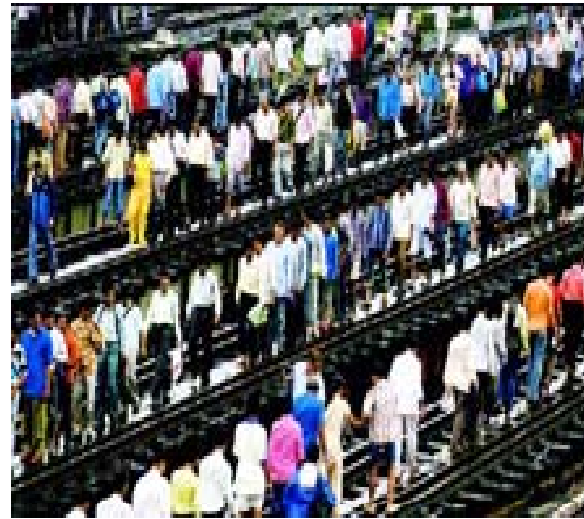
- Mumbai is the sixth most populous coastal low-lying mega city agglomeration in the world.
- India's Financial capital.
- Area: 437 sq. Km
- Population urban agglomeration 22.0 million growing at 2.9% / year
- Extreme daytime Population Density: 390,000/sq. km.
- 6.5 million people live in slums.
- 35.15% urban poor
- The Dhavari area of Mumbai is one of the largest slums in the world, containing around three quarters of a million people.



2005 disaster(97 cm rain in a day and 70 cm in next 2 days) is followed by successive lower but very high concentrated rainfall causing also disaster floods.

Mumbai disaster floods 2005, 2006, 2007 The trend shows climate change impact makes Mumbai more vulnerable and has triggered serious flood hazards.

Vital water escape routes collapsed or failed. Besides extensive property and livelihood loss floods triggered serious water borne diseases health hazards.





Act together with Local Government, the main stakeholder / actor

Mindset on post disaster response. BUT, disasters trigger Development action towards mitigation response.

However, change toward proactive mitigation response is rather slow.

The major reason-

Political acceptance to commit significantly higher resources to implement IDRIIM.

How to facilitate and quicken the change?

Clear and convincing cost benefit analysis of resource commitments.

Focus on building TRUST with the political and administrative bureaucracy

Steps in building trust with the local government and to work together.

Lessons from Mumbai

- 1. Convincing Idea / Approach / technology**
- 2. Supporting evidence that it works & support from experts**
- 3. Incorporating into the DRM framework (Plan) of the local government at the city level**
- 4. Operate within the existing Law**
- 5. Select areas for demonstration**
- 6. Implement with the government and the affected community**
- 7. Review and evaluate- create new knowledge in implementation.**
- 8. Fine tune and remodel to go back to DO.**

Approach to Mumbai Hot Spot GCOE Project

Focus on :

Enhance IDRiM awareness and acceptance among stakeholders.

Strengthening Implementation of DRR projects through use of useful technologies.

Promote co-learning & create field based knowledge for education & research.

Establish operable collaboration between

DPRI – GCOE, Kyoto University

The City Government, Mumbai (MCGM)

School of Planning & Architecture, New Delhi

Supporting agencies

Indian Institute of Technology, Mumbai

Mithi River Development Authority

Mumbai Metropolitan Regional Development Authority