



## **Training Workshop on Integrated Flood Management for the Nile Basin Countries**

23-27 November 2009 Nairobi, Kenya

# Flood processes, management issues and perception of floods

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# Introduction

**THE TIMES**

## WINTER SPRINGS SURPRISE

hundreds of thousands left in cold

Not when it seemed like winter weather would be someone else's problem this year, winter returned to the region today like a cruel ic.

Winds gusting to 40 ft per hour more than inches of wet, icy snow on the roads, closing roads, giving electric power lines, halting winter rail traffic.



**Register SUNDAY**

# OH, NIÑO!

LAGUNA BEACH: The city finds a 100-ft-long basement with traps and mold-making in unexcused feature Page 23

WENTINGTON BEACH: Invitation and 100-year-old mansion public house park, addition to town Page 23

LAKE FOREST: Cheeky and party-throwing storm over at suburban fire, a holiday crowd 20 feet below Page 25

ELSEWHERE: A lightning bolt strikes the dome structure of an apartment building in Los Angeles Page 27



120 muertos en Guerrero y Oaxaca  
Visitas de entre 166 y 200 km por hora  
3 mil 700 damnificados se han registrado

300 carreteras resultaron dañadas  
Es el huracán más devastador del '1888

## Devasta 'Paulina'

PROBLEMA PAULINA



Lodo y Lu

Michael (4)

COMPLETE STORM COVERAGE

**The Virginian-Pilot**

## KNOCKED OUT

225,000 LOSE POWER  
Electricity has been restored for some, but it could be Tuesday before everyone has service

100,000 LOSE WATER  
Portsmouth, small parts of Chesapeake and Suffolk may be without tap water for



**Herald Sun**

NEWS PICTORIAL

## SYDNEY SUBURBS BURN

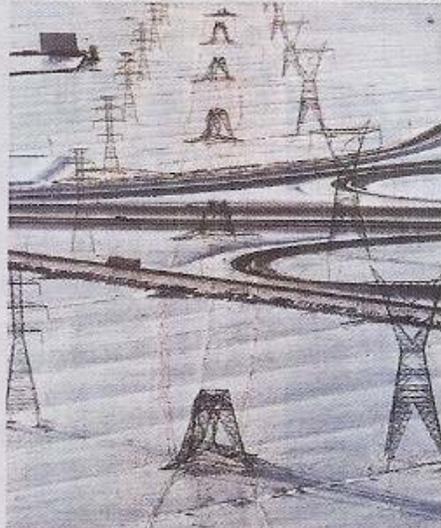
# FIRESTORM

Frantic fight to save homes



**The Gazette THE REVIEW**

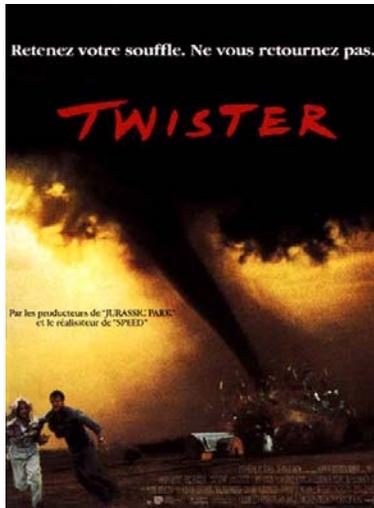
## The Ice Storm of '90





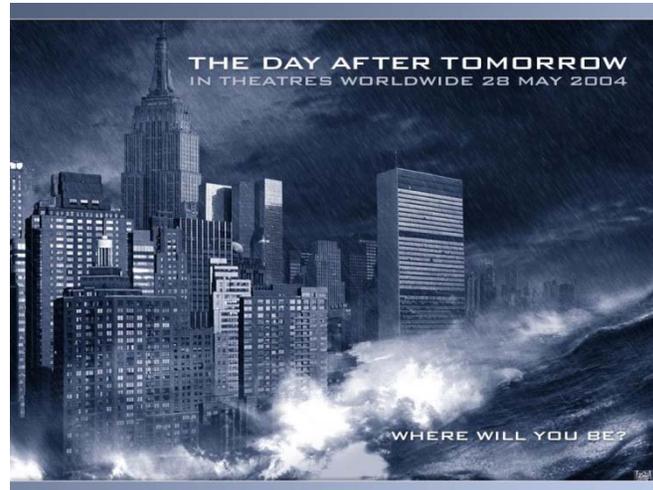
## What is risk? Media perspective

Risk is something that can be easily associated with fear or sensation - in other words: it sells well!



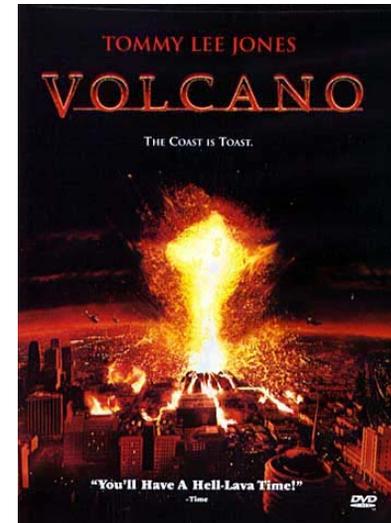
Twister

\$241,688,385



Day after tomorrow

\$186,739,919



Volcano

\$47,474,112

(box office in the US in the first six months)

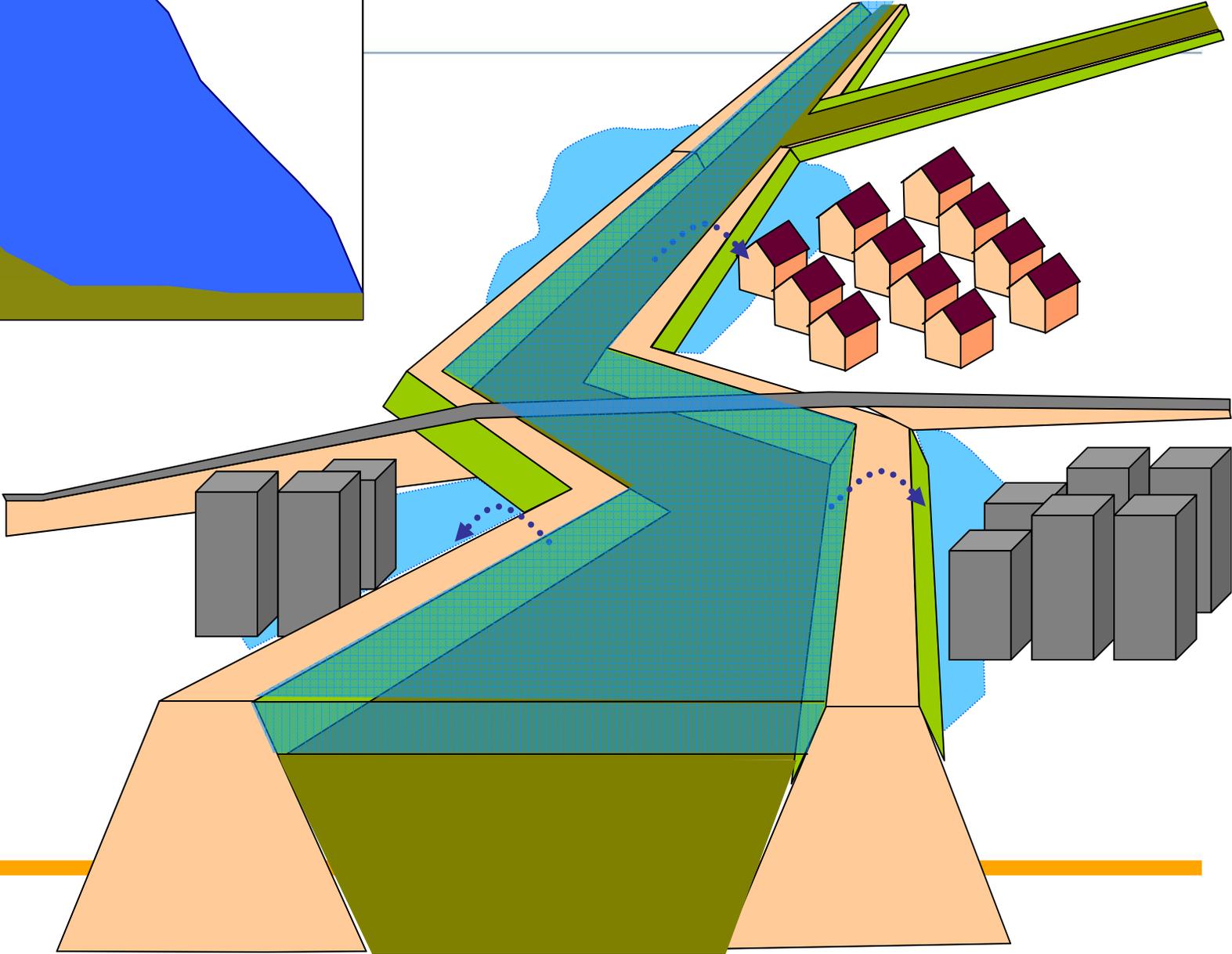
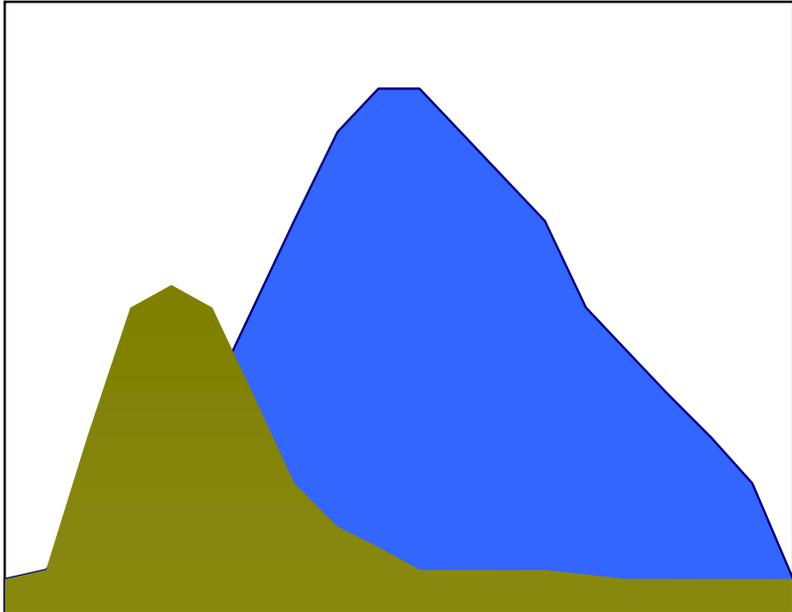


## What is risk? Science perspective...

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- Risk = Hazard x Exposure x Vulnerability
  - In the case of floods:
    - Hazard: probability of a particular discharge or water level at a particular place
    - Exposure: Land and assets in the inundation area of that flood
    - Vulnerability: ability/disability of the people or assets to withstand, cope with or recover from the negative effects of that flood
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# What is a flood?



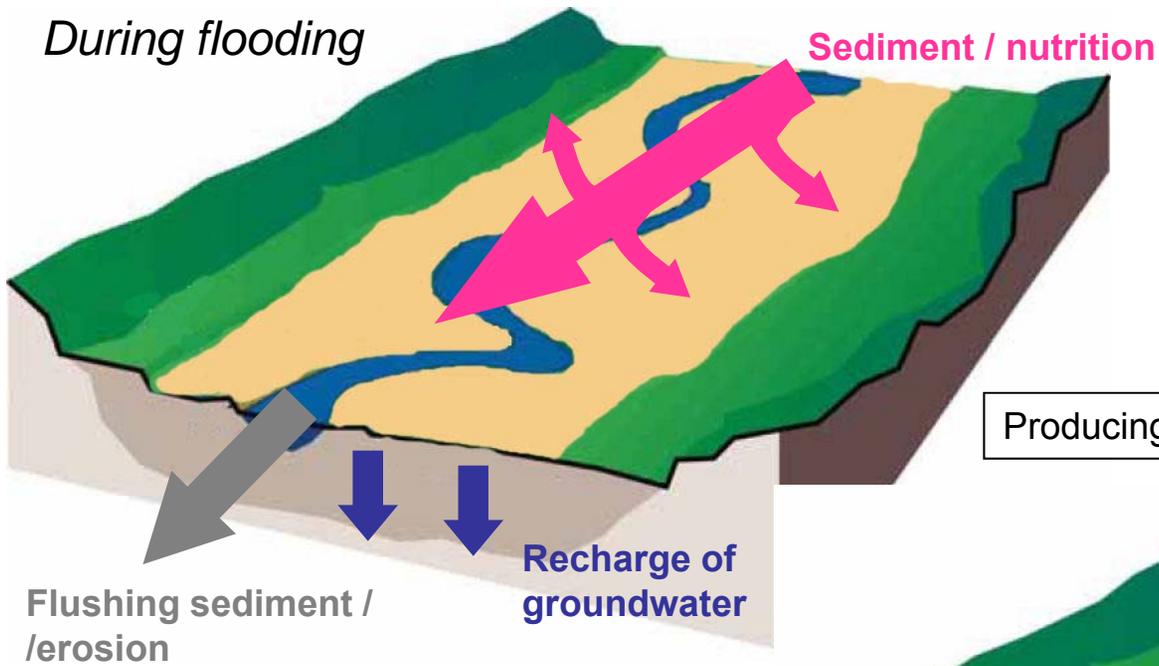


# Riverine flood (rural)



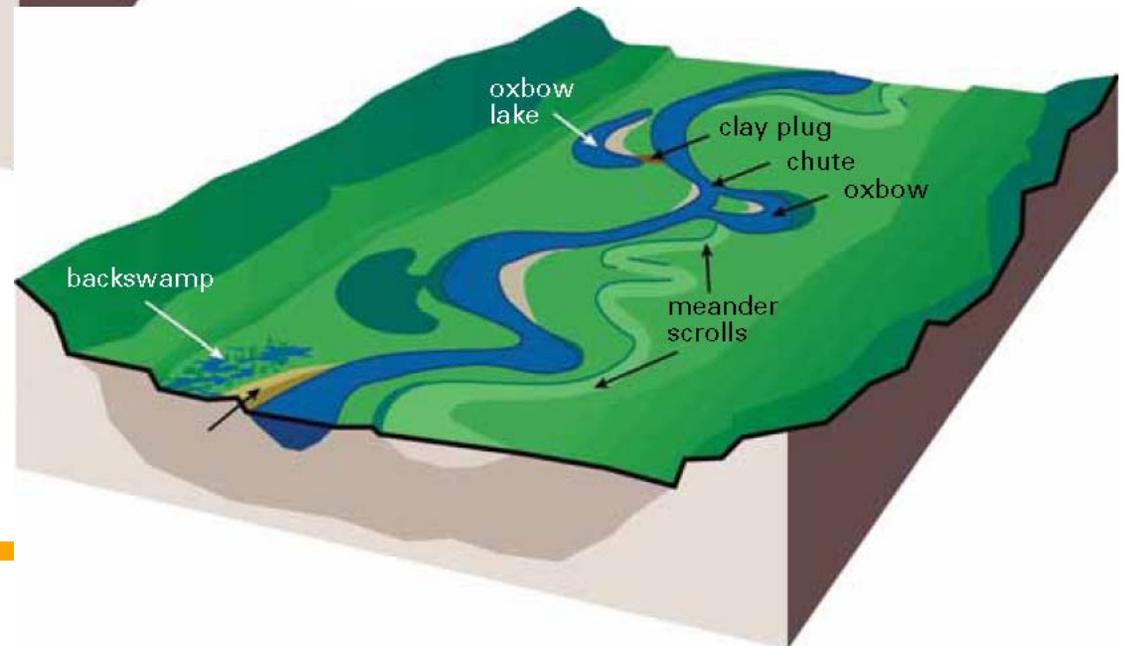


*During flooding*



*After flooding*

Producing diversified environment/habitat





# Riverine flood (urban)



Switzerland



Indonesia





# Pluvial flooding





# Flash flood/Debris Flow

Copyright: Swiss Federal Office for the Environment (FOEN)

Switzerland



U.S



Galloway Wash floods Spur Cross Road, 10.30 AM, Oct 10, 2003. (There is no bridge.) TMcG



Japan





# Coastal flood



AP Photo/Michael Dwyer



U.K



Italy





# Failure of hydraulic infrastructure





# Mudflow

Indonesia



Japan





# Landslide

China



U.S.





Sunday, 22 November 2009

## Cumbria flood victims have lives on hold

### BBC News, Workington

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#### **The road that leads to the Calva bridge is closed off.**

The blue and white police cordon stretches from one side of the road to the other.

As well as camera crews and photographers and the helicopters buzzing overhead, a crowd of people in wellies and waterproofs have gathered to get what could be a final look at the bridge.

Its collapse is inevitable but engineers say it could happen in hours or weeks - they just don't know.

At the roadblock, music teacher Ellen Pearson chats to colleagues who work with her at the Staiburn school and science college. Ellen says she has just been told not to go into school on Monday.

"Most of our kids are from Northside and Seaton and they can't get in. I don't know how long this will go on. The bridge closure makes it a really long journey."

Will the children have to change schools? "I just don't know", she says.

Tony Cashmore, 73, had to be rescued from his house last week. He has insurance, but it won't help.

"By law insurers have to offer us cover but because we have been flooded before our excess is £20,000," he says.

It means Tony and his wife will have to pay for repair work themselves.

His daughter, Sue, says the damage from the last flood cost £17,000, so her father is unlikely to see any insurance money.

RSPCA officers are out in force in brightly coloured rescue gear.

They are moving from house to house in flood-hit areas checking in on pets that got left behind in the evacuation.

For the past two days a flock of geese have been visible on the town's main street, wandering aimlessly.

This morning the birds were cornered and caught by a team of brave workers to be reunited with their owner.

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## What is risk? Some public views...

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- « Government has to make sure that my neighbourhood is save from flooding »
  - « Those people who live in floodprone areas should pay by themselves for any flood losses »
  - « We have lived here for generations and it is our land, so how can we abandon this place? »
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## Risk perception

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- “**intuitive** risk judgements of individuals and social groups in the context of **limited and uncertain information**” (Slovic 1987)
  - way in which a stakeholder views a risk, based on a set of **values or concerns**. Risk perception depends on the stakeholder's **needs, issues and knowledge**. Risk perception can **differ from objective data**.
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## Think about it

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- How can we establish « acceptable levels » of flood risk?
  - Does the « benefit perspective » also belong into the debate?
  - Is there a chance that the public is interested in a balanced picture?
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## Conclusions

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- Risk perception is a major driver of the public debate on flood management: culturally/wealth specific.
  - Media are a major conduit for risk perceptions. Can they also channel the message of IFM?
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Thank you!

