



Sustainable Water  
Integrated Management (SWIM) -  
Support Mechanism



Project funded by  
the European Union

Water is too precious to waste

## **SESSION 9: EFFECTIVE RISK COMMUNICATION TO ENHANCE PUBLIC AWARENESS AND SUPPORT**

Training workshop on the identification and development of climate change no-regret actions in the water sector, 3-5 October 2012, Amman

*Presented by: Stéphane SIMONET, Water and Climate Change Expert*

# Objectives of Session 9

- **Goal:** Showing the importance of communication and information flows for effective risk management, explaining how to move from unidirectional communication towards active public participation and reaching autonomous community adaptation patterns
- **Learning Objectives:**
  - Understand the basic principle of risk communication and be familiar with some key communication supports
  - Acquire techniques to enhance participation in preparation and response to risk
  - Understand the potential and challenges of community based adaptation

# Structure

- Part 1: Communicating to decrease vulnerability and improve preparedness
- Part 2: Mobilising and involving populations in the planning, prevention and response to water-related risks
- Part 3: Moving towards community adaptation schemes

# Part 1: Communicating to decrease vulnerability and improve preparedness

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- Part 2: Mobilising and involving populations in the planning, prevention and response to risk
- Part 3: Moving towards community adaptation schemes

# Part 1: Communicating to decrease vulnerability and improve preparedness

- 1.1) Rationale and potential benefits
- 1.2) Targeting publics
- 1.3) Choosing the message
- 1.4) Selecting communication channels
- 1.5) Examples of risk communication
- 1.6) Limits and challenges

# 1.1) Rationale and potential benefits

- People generally have a good or fair understanding of climate change related risks at global level, but struggle to envision the potential local consequences and responses
- $RISK = HAZARD \times VULNERABILITY$ : environmental conditions are natural but disasters are social
- Low cost / high impact: simple communication campaigns can have a result in having a population changing habits to adopt more resilient behaviour and be more prepared to adapt to short and long term risks such as drought, floods or water stress
- Information campaigns can help getting support for risk management policies: the taxpayer wants to know where public money goes
- During a drought or flood crisis, an already informed population will react faster to official messages
- Prepared populations are half the way towards effective Early Warning Systems (see next)

# 4 pillars of a good Early Warning System



Source: UNECE, 2009

## 1.2) Targeting publics

- Identify opinion leaders and potential champions
- Assess vulnerability to target the most vulnerable population first
- Work with educational authorities, professors, students and advocates to work with existing education campaigns
- Children are a primary target since they are receptive to these messages and often are an entry point in households
- The smaller the audience, the more elaborate, precise and action prone the message can be
- Be aware of the needs and demands of the targeted public (as well as its link with water)
- Communication can be segmented but unity of communication format (e.g. symbols, logos) over time and space is a crucial success factor

# 1.3) Choosing the message

- Use local historical examples (of droughts, floods, etc...) to illustrate the magnitude of risks
- Study carefully the existing risk reduction campaigns to avoid conflicting messages
- Figures and scientific data are strong back ups that increase the legitimacy of the message, but:
  - Not too much jargon should be used
  - Scientific rigor is not always the best way to communicate: e.g. scientific speak in terms of probabilities whereas people act only if they are almost sure that an event will happen
- Short and to the point messages are to be privileged: communities and individuals have to get what is expected from them

# 1.4) Selecting communication channels

- Adapt the communication channel to the type of message (e.g. Mass media – television, national radio – for general campaigns, women NGO for targeted one)
- Start a dialogue via trusted local intermediaries (e.g. Non-Governmental Organizations (NGOs), community groups, religious organisations, extension workers or government bodies)
- Build on existing channels such as extension services, farmers and community groups, existing education structures

# 1.5) Examples of risk communication supports (1)

Simple not targeted messages are a good way to raise general awareness and prepare populations for more specific communication



(Photo by [Quirinoviera](#))

CLIMATE

## IF HIGHER TEMPERATURES LOWER OUR CROP YIELDS, IS THAT DEVELOPMENT?

As the global climate changes, the world's poorest people are the hardest hit. More frequent droughts and floods, increasingly intense storms, and slow-onset, long-lasting changes such as rising temperatures are expected to lead to the progressive loss of crucial crop species, declining soil fertility and shortages in water supply, threatening food security, livelihoods and job opportunities in rural communities.

That's not sustainable.

That's why the United Nations Development Programme is helping countries develop the capacity to transform their national and sub-national development strategies and institutional frameworks to the pursuit of low carbon, climate-resilient paths out of poverty. Securing the environmental basis of human well-being is crucial to reducing poverty. It's just part of what UNDP delivers on the ground through over 135 Country Offices throughout the developing world.

**IF IT'S NOT SUSTAINABLE, IT'S NOT DEVELOPMENT.**

[www.undp.org/governance/strategies](http://www.undp.org/governance/strategies)

# 1.5) Examples of risk communication supports (2)



Creation of handbooks coupled with disaster awareness campaigns can improve the preparedness and reactivity of population (example from [getready.gc.ca](http://getready.gc.ca))

Games prove to be very effective medium to raise children's awareness on water related risks and actions to be taken (here "super kimy" depolluting water during a drought)



# 1.5) Examples of risk communication supports (3)



Trainings can be very effective to build capacity, especially if delivered by trusted local leaders (here, downscaling the Hyogo framework, source: UNISDR “resilient city” campaign handbook)

Public posters are a god way to reach a wide audience with disaster preparedness tips. Here the Santa Clara County (US) is using a popular cartoon figure to facilitate communication

# 1.5) Examples of risk communication supports (3)

- Other tools available :
  - Organization of large events and the endorsement of celebrities (generating media attention)
  - Commemoration of disasters coupled with awareness raising days (e.g. UNISDR « International Day for Disaster Reduction »)
  - Village Knowledge Centers targeting community-based organizations
  - “Exhibition farms” that successfully demonstrate the use and adoption of innovative techniques and no-regret adaptation options (i.e. improved soil management and introduction of new stress-resistant breeding varieties).
  - Cultural activities, such as drama, singing and the use of visual media (movies, short videos, documentaries, etc.).
  - Orientation programs and workshops addressing climate change impacts on specific activities (livestock management, farming practices, etc)
  - Field visits and commented tours as experiential

## 1.6) Limits and challenges

- Difficult and costly to reach all the communities – need to be complemented by the development of strong local institutions and resources
- Means for actions have to be provided: e.g. if government campaigns for farmers to subscribe to drought insurance policies, they should facilitate access to them
- To be effective, communication is to be scarce: too many messages can lead to saturation
- Works only for awareness raising and low profile behavioural changes, but usually not sufficient to trigger far-reaching actions
- Top-down approach that should be completed with active mobilisation and participation

# Part 2: Mobilising and involving populations in the planning, prevention and response to risk

2.1) Rationale and potential benefits

2.2) Basic principles

2.3) Case study: drought

2.4) Example

2.5) Limits and challenges

## 2.1) Rationale and potential Benefits

- Communities know the local reality, and ranking actors' priorities is possible only by involving them. These are crucial information for downscaling climate change risks
- Decisions made through participatory processes are expected to address more accurately local vulnerabilities
- Participatory process increase local ownership, leading to a more effective and sustainable benefits
- Participatory evaluation enhance learning by doing and enables policy improvement
- After water-related disasters, rebuilding is way more effective if communities are closely involved

## 2.2) Basic principles

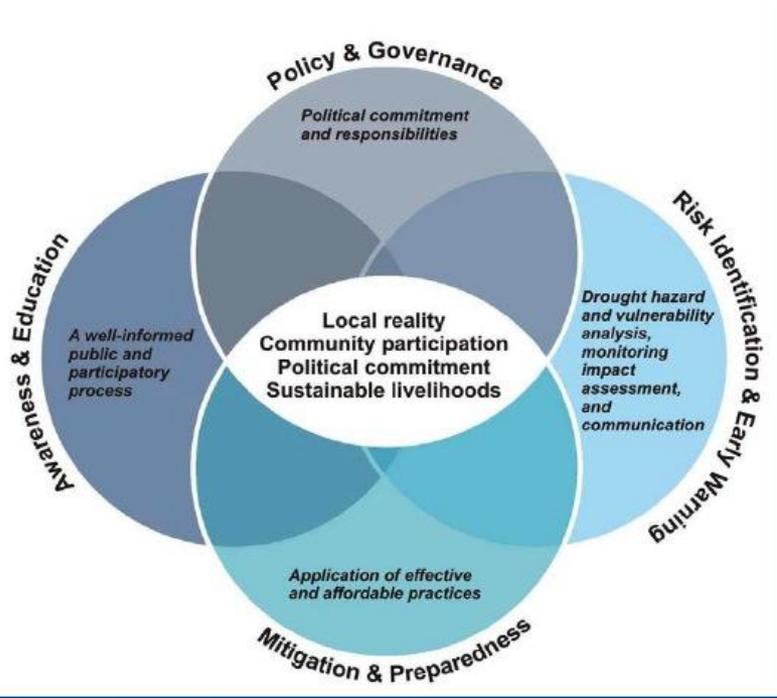


Figure 2.1: Key components for disaster risk management

- 2 way information flow: transparency required from public authorities (but formatting the message to be understood is a must)
- Participation should result into action: translate consultation and negotiation in (legally/morally) binding acts to ensure subsequent action

# 2.3) Case Study: Drought

## Box 4.6: Drought Risk Plans/Management

- Collect and analyse drought-related information in a timely and systematic manner.
- Identify drought-prone areas and vulnerable economic sectors, individuals, or environments.
- Establish criteria for declaring drought emergencies and triggering various mitigation and response activities.
- Provide an organisational structure and delivery system that ensures information flow between and within levels of government.
- Define the duties and responsibilities of all agencies with respect to drought.
- Maintain a current inventory of government programs used in assessing and responding to drought emergencies.
- Identify mitigation actions that can be taken to address vulnerabilities and reduce drought impacts.
- Provide a mechanism to ensure timely and accurate assessment of drought's impacts on agriculture, industry, municipalities, wildlife, tourism and recreation, health, and other areas.
- Keep the public informed of current conditions and response actions by providing accurate, timely information to media in print and electronic form (e.g. via TV, radio, and the World Wide Web).
- Establish and pursue a strategy to remove obstacles to the equitable allocation of water during shortages.

Source: Wilhite et al, 2000.

Participation is beneficial at almost all levels of a drought management plan

(2)

« Drought should not be viewed as a merely physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. » (Mediterranean Water Scarcity & Drought Report, 2007)

(2)

(3)

(source: Capnet, 2009)

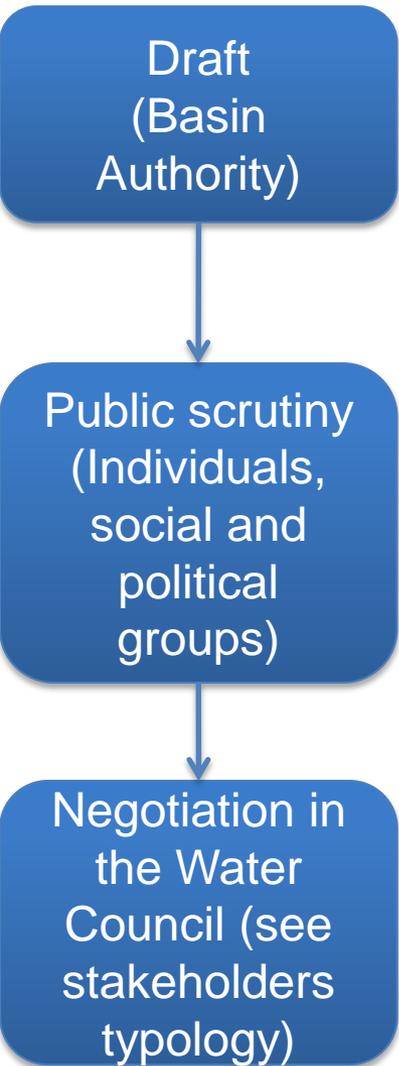
## 2.3) Case Study: Drought (2)

Drought management plan requirement	Participatory approach
Identify drought-prone areas and vulnerable economic sectors, individuals, or environments.	Local consultation to assess impact, especially of secondary consequences (forced sale of household assets or land, dislocation, or physical and emotional stress...) Community mapping of risk
Establish criteria for declaring drought emergencies and triggering various mitigation and response activities.	Collective negotiation and decisions between all stakeholders resulting in a binding act defining the levels of pre-alert, alert and crisis and the corresponding measures
Identify mitigation actions that can be taken to address vulnerabilities and reduce drought impacts.	Involve populations in preparation plans to reach better ownership of mitigation measures and raise awareness on long terms benefits of punctual restrictions

## 2.3) Case Study: Drought (3)

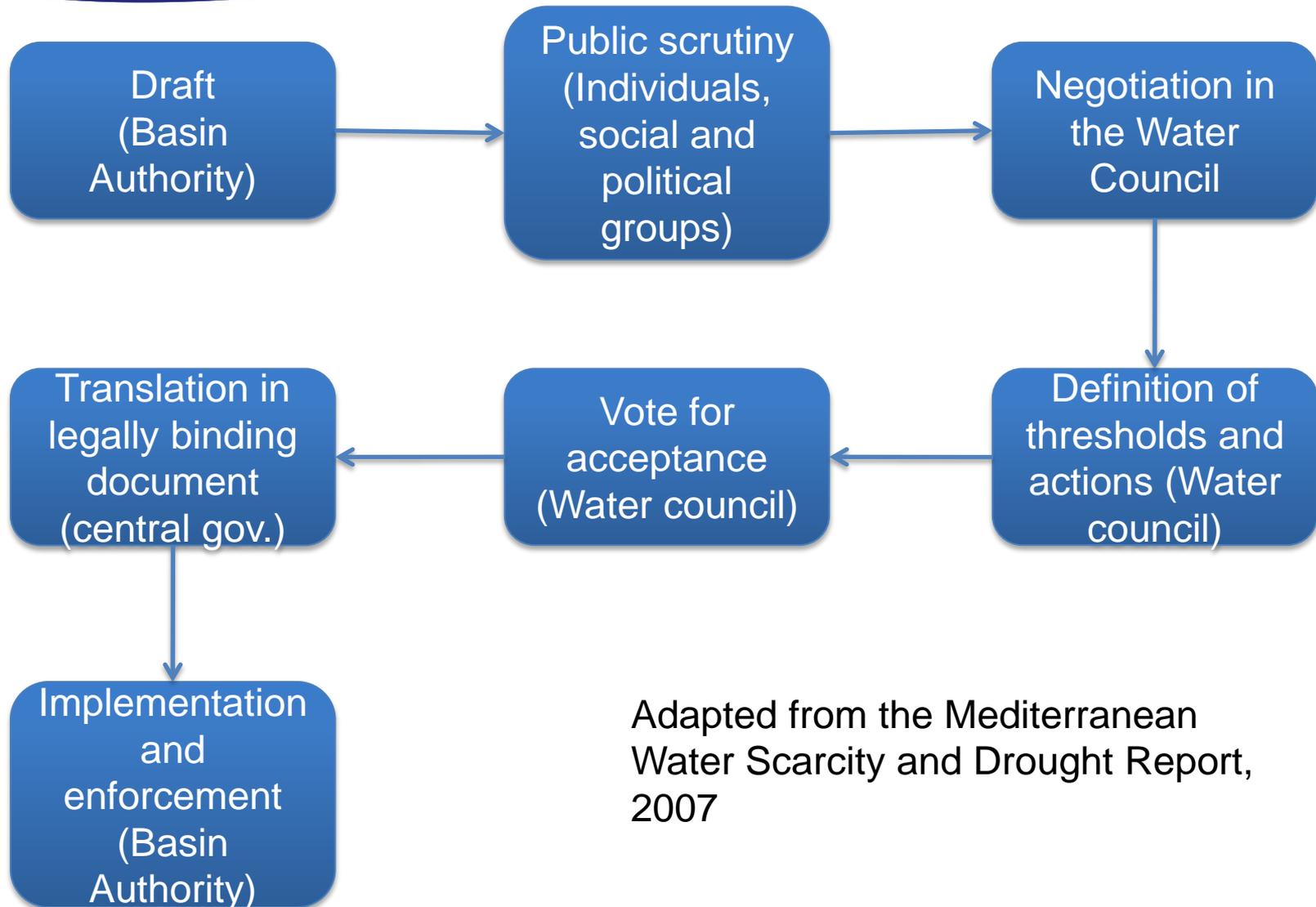
Drought management plan requirement	Participatory approach
Provide a mechanism to ensure timely and accurate assessment of drought's impacts on agriculture, industry, municipalities, wildlife, tourism and recreation, health, and other areas.	Build community based information systems to have a real time appreciation of impacts. List existing coping strategies and how to activate them
Keep the public informed of current conditions and response actions by providing accurate, timely information to media in print and electronic form	Implication of the population in the definition of communication formats and channels (cf part 1). Share individual stories on how people actually adapt / prepare to risk
Establish and pursue a strategy to remove obstacles to the equitable allocation of water during shortages.	Engage a dialogue with stakeholders to rank their priorities

# 2.4) Example: Tagus Basin (Spain) Drought Preparation Plan



Stakeholder	Variable of interest	Preference and compromise
Farmers	Water to irrigation	More water May be willing to accept lower abstraction permits in exchange for lower price (or vice versa, may be ready to pay higher prices to obtain more water)
	Price of water for irrigation	Lower price Subsidies for switching to less water-demanding crops
	Dam and reservoir capacity	More capacity (decrease vulnerability to drought)
Environmentalists	Residual water	Well above minimum flow requirement
	Dams and reservoirs	No additional investment to protect biodiversity Sustain ecological flow
Urban and Rural dwellers	Secure access to safe water	Closer safe water sources Guaranteed minimum water quantity Participatory water planning
Urban water supply companies	Dams and reservoirs	Increase storage capacity Infrastructure
Basin Authority	Dams and reservoirs	Integrated resource management Evaluate storage capacity First priority is urban water supply Other uses and services of water may be negotiated
	Ecological water	Guarantee ecological services and flow requirements

## 2.4) Example: Tagus Basin (Spain) Drought Preparation Plan



Adapted from the Mediterranean Water Scarcity and Drought Report, 2007

## 2.5) Limits and challenges

- Level of “scientificity” and accuracy of the documents and plans produced can be poor when not accompanied with technical assessment
- Traditional knowledge of climate risks and responses might no longer be valid or suitable under less familiar, uncertain and probably more extreme climate futures (→risk of maladaptation)
- In the same location, local perceptions and interpretations of climate variability can be broad and diverse among communities (eg. farmers vs. pastoralists) and within different social groups of a same place
- Needs to develop strong local institutions and good governance to support innovative, integrated and sustainable adaptation

# Part 3: Moving towards community adaptation schemes

3.1) Rationale and potential benefits

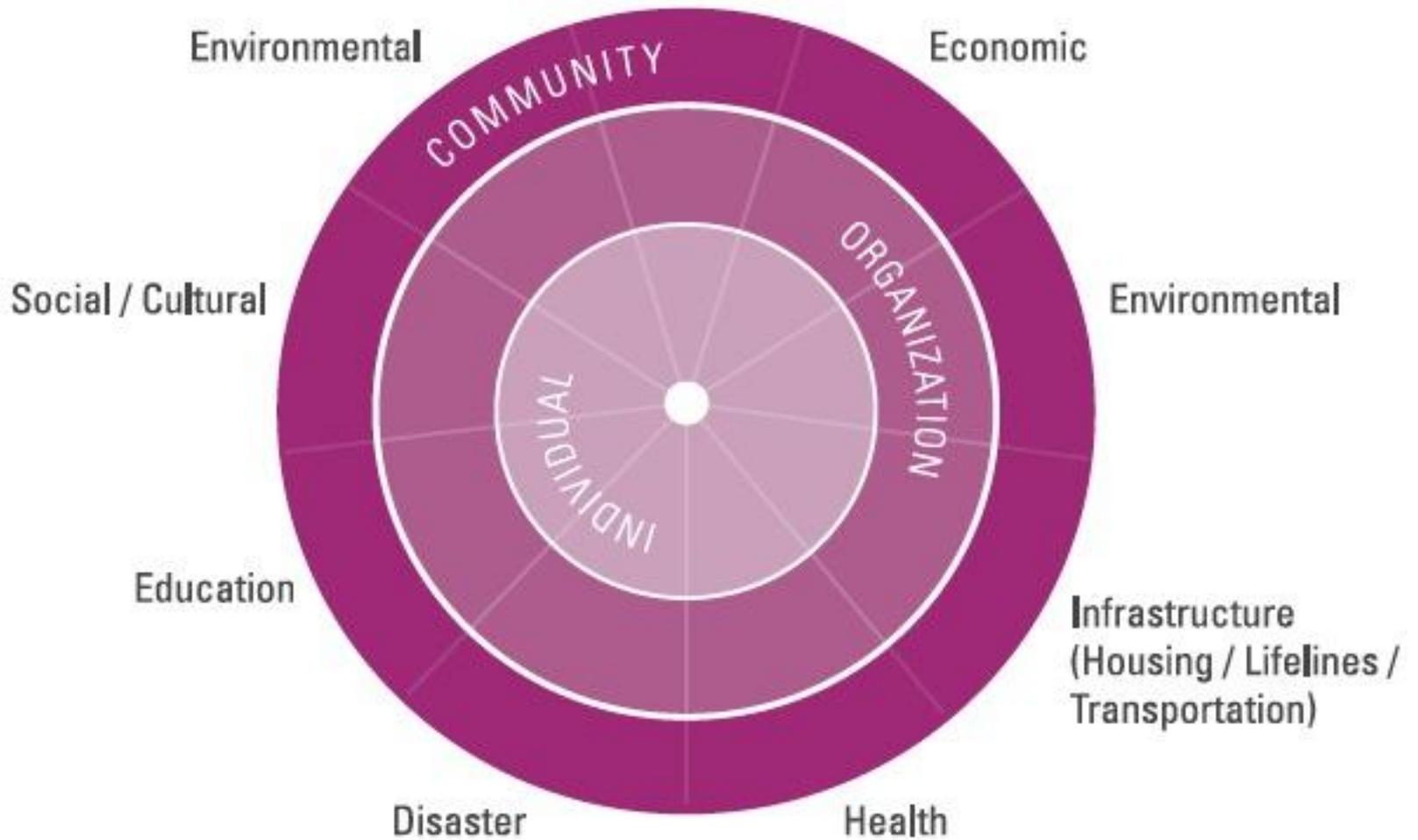
3.2) Examples

3.3) Limits and restrictions

## 3.1) Rationale and potential benefits

- Rough definition: Enhance community knowledge and capacity to face local consequences of climate change by using adequate techniques (already locally mastered or easily acquirable) and endogeneous resources (e.g raw materials) in relation to needs
- Building on the existing is often the quickest, cheapest and most effective way to face local impacts of climate change (no-regret strategies)
- Timing is essential in a climate crisis phase. Community empowerment can allow quicker responses than national ones, limiting the impact from the very beginning
- Capacity building ensures long term (sustainable) and integrated adaptation capabilities (adaptive capacity) to unpredictable local effects of climate change and therefore boosts resilience

The Resilience Wheel



Source: UNISDR “resilient city” campaign handbook

## 3.2) Examples: Farmers of Soukra

- Farmers of Soukra (Tunis' suburb) facing reduction of available arable surfaces– IDRC Project
- Engaging a wide dialogue with a lot of different stakeholders. Based on the reality of the farmers situation (small exploitations that cannot be profitable in a monoculture structure).
- Diversifying sources of water (including grevwater) and increasing water efficiency
- Boosting yields with innovative Solutions (picture)
- Creating a farmer association to handover the leadership of the project



**Suspended cultivation vastly increases yields and boosts soil health.**

Akiça  
Bahri

- <http://www.youtube.com/watch?v=Dn62ReFA5K0>

## 3.2) Examples (2): IUCN Search Project

- IUCN “SEARCH” (**Social, Ecological & Agricultural Resilience in the Face of Climate Change**) Project
- 3 year project in 5 countries (Egypt, Morocco, Jordan, Palestine and Lebanon) to develop climate change social and economical resilience using available community resources
- Principles: Develop diversity (ecosystem and actors), Promote sustainable infrastructure and technologies, Enhance self organization, Encourage learning by doing

## 3.2) Examples (3) SEARCH Applications: Morocco (Oued el Kebir Watershed)

- Very rugged topography, vulnerable to environmental hazards (droughts, floods)
- Engaging concertation on how to share the scarce resources to preserve traditional activities (eg goat production), with the help of collaborative mapping sessions
- Increasing the resilience to climate change by building capacity, especially of the most vulnerable population (eg women with awareness raising sessions)



## 3.3) Limits and Challenges

- Technical support is required, at least in the first steps
- Often not sufficient to face extreme phenomenon
- Managing common pool resources and sharing assets and risks within a community are often difficult processes
- Should not detract attention from the necessity for central and local governments to invest in heavier infrastructures: “Community action cannot put in place the building codes and standards that help ensure buildings can withstand extreme weather or, where needed, earthquakes » (SATTERTHWAITE, 2012)

# Key messages

- Information and communication campaigns can be very effective in reducing vulnerability but it should be targeted and tailor-made
- Participation makes more accurate planning and better implementation through greater ownership
- Community engagement increases adaptive capacity resilience on the longer run but does not replace scientific assessments and infrastructure investments when those are necessary
- Given the uncertain and dynamic nature of climate change, communication efforts and community engagement should be a continuous process undertaken throughout the entire life of an adaptation project to ensure ownership, and not only for gathering information during the initial steps of the project cycle.

# Q&A, Discussion

- Any needs for clarification?
- What approaches and tools are you using to communicate on risks and engage with local communities? Which ones are more effective?
- Can you give an example of a successful (or not) participatory experience for risk mitigation/adaptation?
- Have you come across successful community-based adaptation strategies? What were the key success factors / traps to avoid?

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Thank you for your  
attention

