URAdapt

Managing Water at the Urban-Rural Interface: The key to climate change resilient cities

Adaptation Capacity of Addis Ababa: Assessment & Policy options

Alebel Bayrau (PhD)

Addis, 29 May 2012

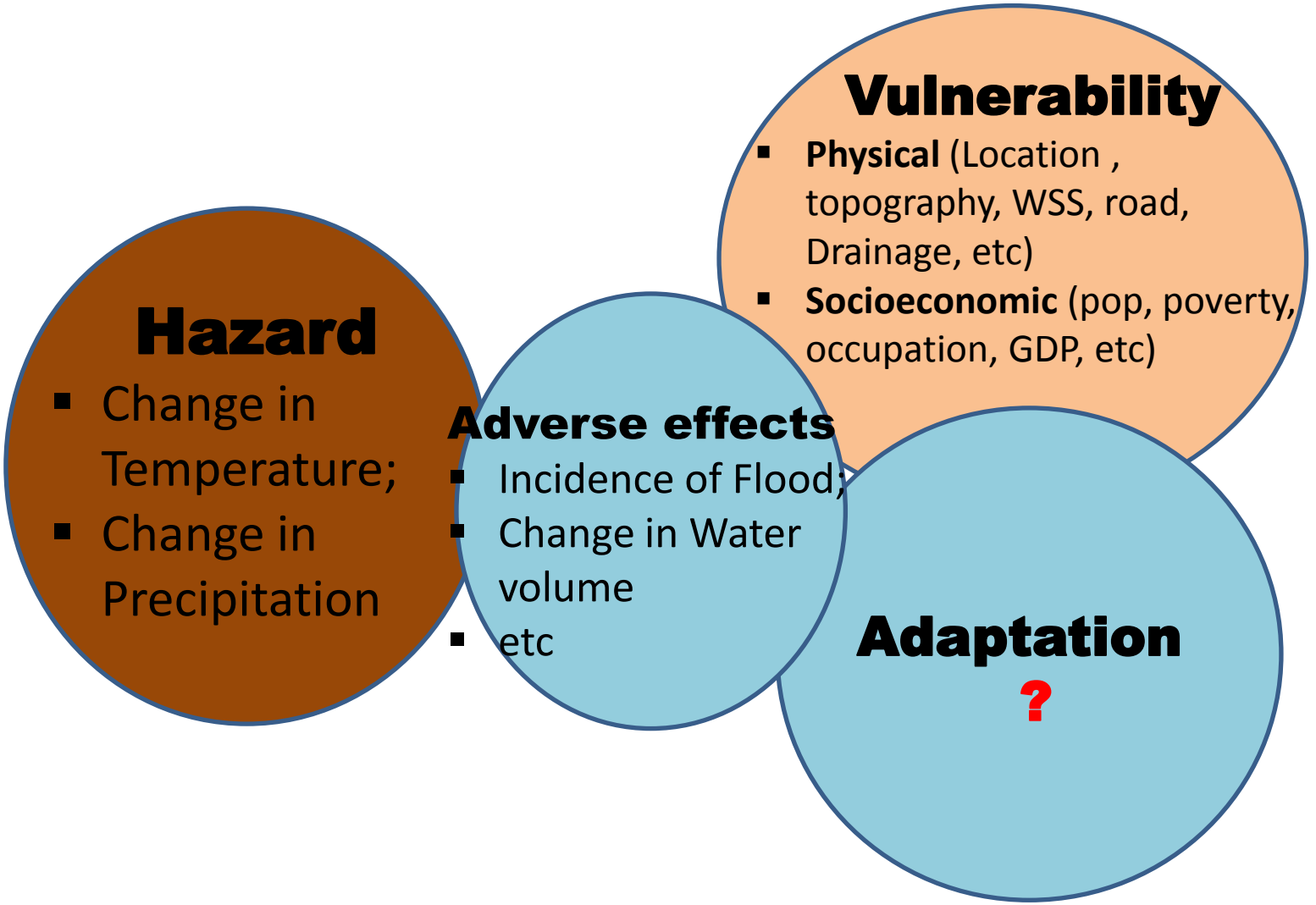
International Water Management Institute

1. Background

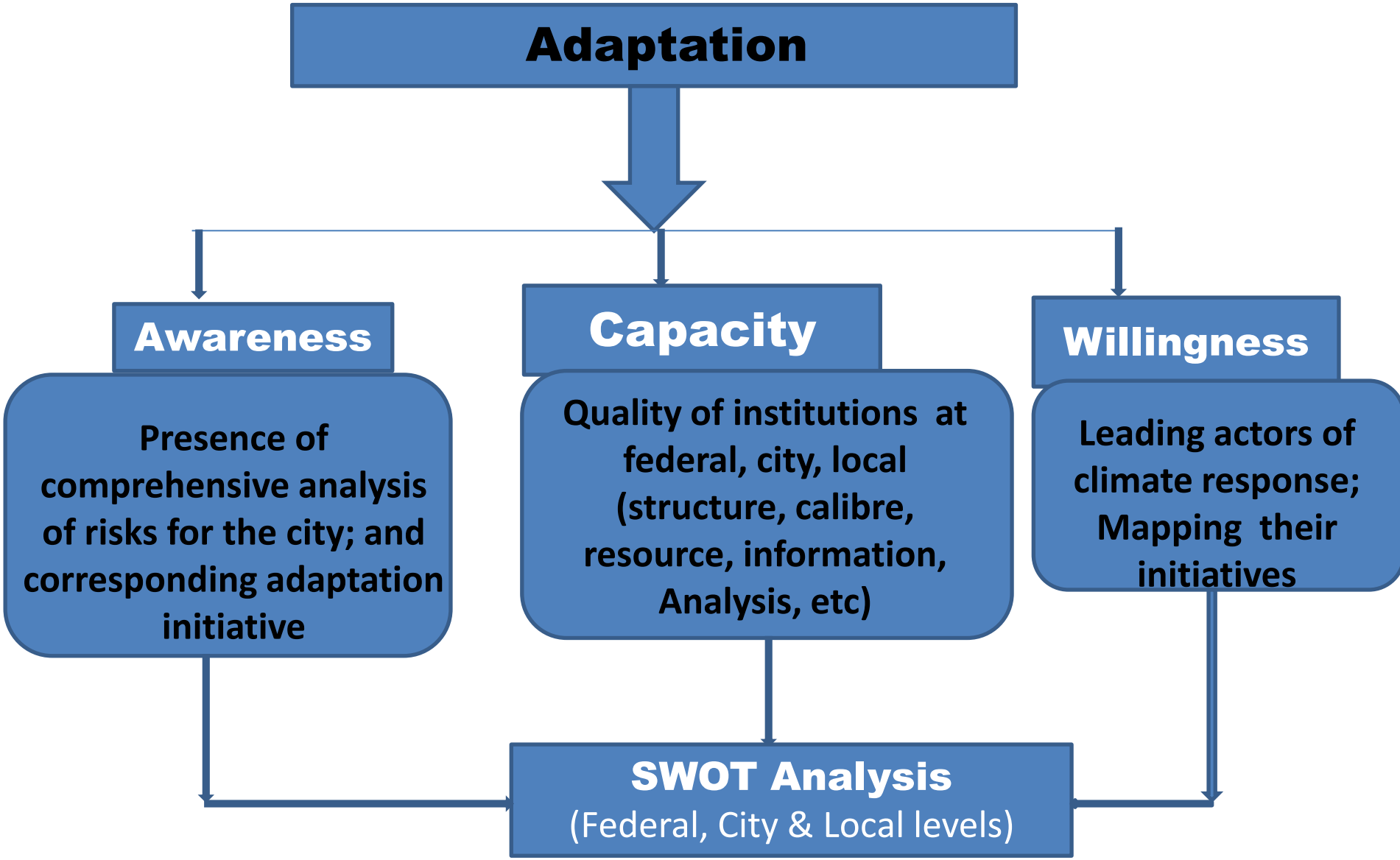
1. Study objective

- Assess the extent of vulnerability of the city to water mediated climate change (WMCC);
- Assess the adaptation capacity of the city to WMCC
- Propose policy and institutional options to build the adaptive capacity of the city.

2. Methodology
2.1. Conceptual framework



2. Methodology …



3. Review of policy & Institution

- **3.1. Policy and Strategy**
  - Environmental Policy
  - Water Policy
  - Disaster prevention and preparedness and early warning policy
  - health policy
  - urban development
  - Population policy
  - Agriculture policy
  - NAPA (EPACC)
  - CRGE
  - GTP

- **Shows the awareness & Willingness**: Analysis of policy gap, integration of climate change either directly &/or indirectly.

- **FGD with vulnerable community**: awareness and willingness of local community and identify adaptation strategy already employed by the local community

- **3.2. Institutions**
  - Constitutions
  - Governance in AA city
  - Organogram of AA city Administration
  - AAEPA
  - AAWSA
  - AA city sanitation, beautification & Park (Agency & Office)
  - AA housing agency; Housing Development project office;
  - AA road Authority
  - AA fire and Emergency prevention and control agency
  - Infrastructure & construction Authority
  - Special institutional arrangement between AA & Oromiya ???

- Shows the institutional capacity: institutional structure, plan & actual implementation, resource, etc capacity

4. SWOT Analysis

4.1. Strength

- Strong awareness & willingness at federal & city levels
  - Risks identified & cc initiatives at federal & city levels
    - Policy, CRGE, GTP, EPACC, NAMAs;
  - Poverty eradication (Pro-poor development plan) at federal & city levels;
    - WS, health, education, income generating, etc
- Well-designed organizational structure with clear mandates at all levels
    - Organogram: federal, city, district levels;
    - city – district structure (Admin., EPA, WS, health;
- Strong willingness of local community
  - High motivation to participate in local development;
  - Indigenous coping mechanism for cc related adverse effects (flood)
  - Strong social network (idir)

4.2. Weakness

- **Policy gap**
  - Water policy ignore efficiency;
  - no policy instrument for water efficient technology use;
  - No wastewater management policy (e.g. no policy for selling treated ww)
  - No urban agri. Policy & strategy;
  - Building construction standard doesn't consider fire control;
  - No pollution directives & policy is command & control
- **Institutional gap**
  - No clear institutional arrangement b/n AA & Oromiya;
  - Low private participation (recycling of SW)
  - No early warning system at district level
  - No insurance scheme for risk minimization

4. SWOT

4.2. Weakness

- **Low institutional capacity**
  - No clear understanding in integrating development plan with cc adaptation plan (adaptation plan-dev.plan);
  - Low coordination among the different sector office (WS; road: plan, implementation & Monitoring);
  - Low motivation among district officials Vs high Comm.
  - Shortage of manpower sector offices (quantity & quality) (EPA
  - Low implementation capacity (ww treatment (7%); green area zoning (15%); Park (30%)
  - Very low enforcement capacity of existing policy (pollution policy)
  - Low revenue collection capacity (at city level)
  - Narrow revenue base (business tax, employee tax)
  - Less awareness of local community about water mediated cc impact

4. SWOT …

4.3. Opportunity

- **Constitutional right**
  - Right to use water resource;
  - Right to design special institutional arrangement b/n AA & Oromiya;
- **More resource from CC**
  - Likely to increase water due to precipitation
- **CC adaptation financial opportunity from international community**
  - USD$100 B after 2012 if Prepared convincing adaptation plan
- **Anticipated Better economic performance**
  - Increase GDP/capita (GoE, IMF)
- **High motivation from CC agents**
  - Federal & city level leaders to cc & improve good governance (GTP)
  - Local community (FGD result)

4.4. Threat

- Low level of implementation capacity of adaptation programs/plans;
- Low level of revenue collection;
- Low level of development (WS, health, SW, education, etc, coverage);
- Uncertainty in cc impact (results from modelling are probability figure);
- Uncertainty of climate financial opportunity;

5. Policy & Institutional options for adaptation

5.1. Demand side policy

1. **Residential water use**
- Improve efficiency of water use through modifying consumer behaviour
  - Water pricing (short run)
  - Incentive for use of water-saving technology
  - Provision of information (using media & education) on
    - water efficiency
    - Water conservation: Service that water provides rather than on water (recycling)
  - Research on consumer perception on service delivery & WTP

2. **Industrial water use**
- Water pricing with efficiency objective
- Incentive based pollution abatement
  - effluent charge,
  - sewer discharge fee
- Subsidy of industry using abatement technology
  - Access to credit
  - Price for technology
- Performance regulation (regulating production quantity/emission charge)
- Input tax/output tax/charge

5.2. Supply-side policy

1. Fill policy gap
- Formulate policy for use water-saving technology transfer;
- Provision of policy & institutional right to sell treated ww, collect & use revenue, etc
- Design policy for building construction standards to integrate fire control
- Install social insurance schemes in flood prone areas in consultation with local people (AKAKI-Addis & AKAKi Oromiya)
- Prepare urban agri policy & strategy

2. Institutional capacity
- Build implementation capacity
  - Improve quality of manpower (Provision of training)
  - Better Incentive mechanism for employee
  - Improve HR management with aim of improving service delivery;
  - Implement the already plan (man power, material, land fill, water supply development)

5. Policy options …

Supply-side option …

- Improve coordination among the different sectors offices in their plan, implementation & M & E (AAWSA, Housing agency, road, infrastructure office)
- Establish high level steering committee b/n AA & Oromiya that ensure access to sustainable water resource for AA & the downstream people to live in environmentally health area
- Strengthening AA infrastructure & construction authority to regulate policy
- Strengthening organizational structure of AA fire, emergency prevention & control to S.city & district level;
- Integrate cc adaptation plan in to development plan (flood control in road & drainage development plan;
- Implement the master plan for AA:
  - Resettle households in slum areas
  - Park development plan
  - Zoning of green areas in AA in the master plan
- Provision of early warning information in a well systematic way
- Improve revenue-base (improve revenue from Park through provision of improved service; awareness creation

Thank you