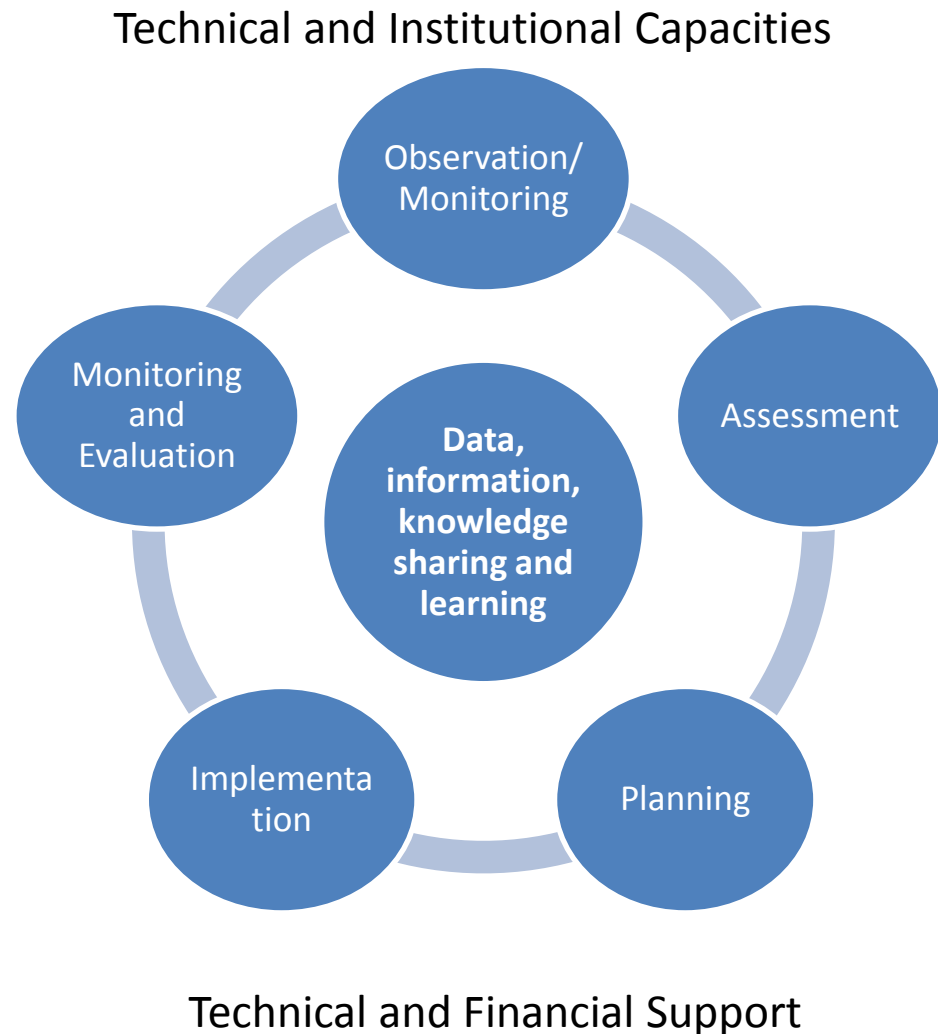


Data and Information Needs and Gaps for Adaptation Planning

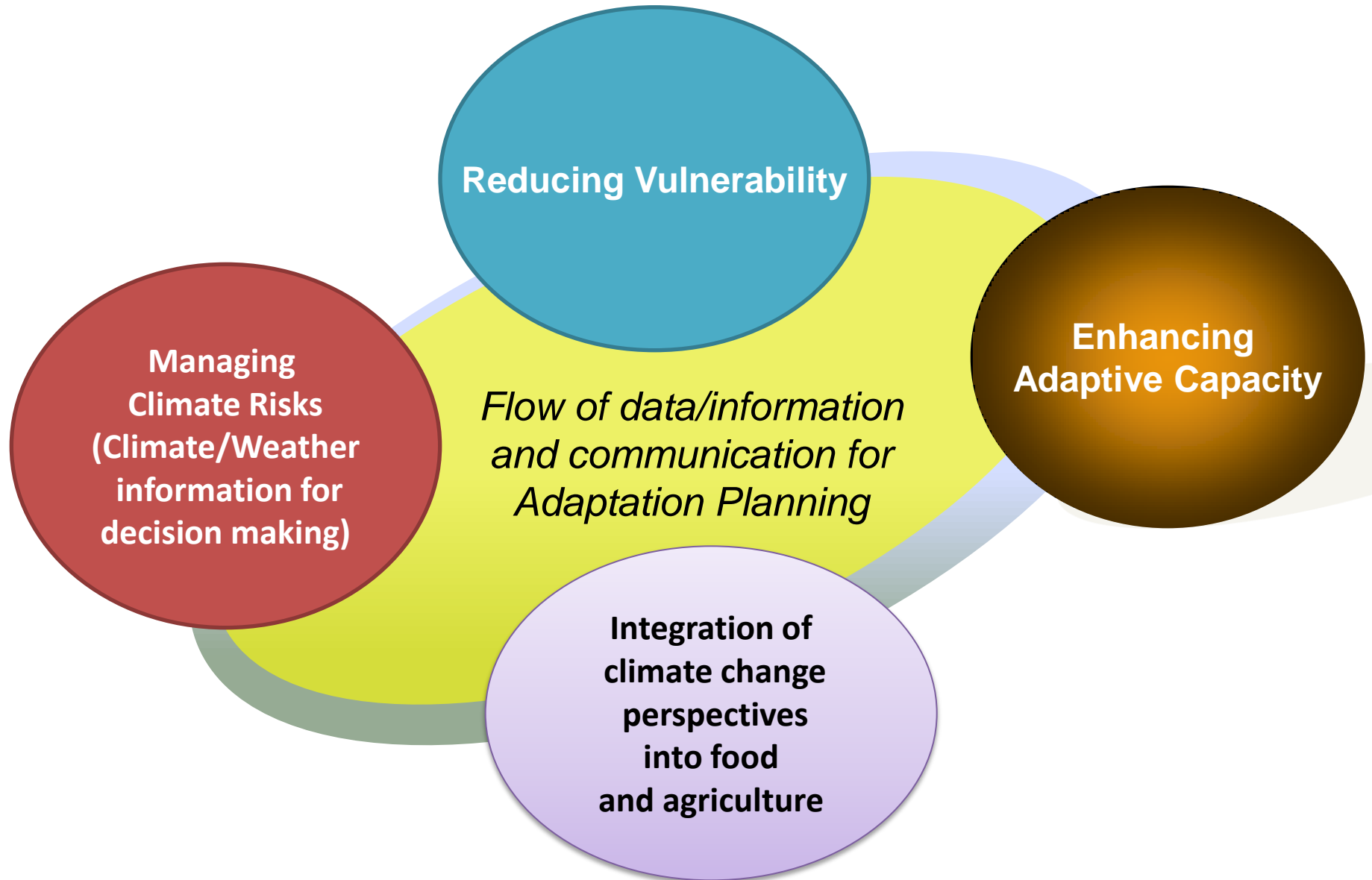
Selvaraju Ramasamy
Climate, Energy and Tenure Division (NRC),
FAO, Rome

Key Elements of Adaptation

1. **Observation/Monitoring** of climatic and non-climatic variables
2. **Assessment** of climate impacts and vulnerability
3. **Adaptation Planning**
4. **Implementation** of Adaptation Actions
5. **Monitoring and Evaluation** of Adaptation Actions



Data and information for adaptation planning



1) Observation/Monitoring

Data and Information Requirement

- **Observation, monitoring and prediction of climatic variables**
 - climate database (observed)
 - climate change projections (scenarios)
 - modelling and prediction of the climate system
 - Key issues are low resolution, downscaling & uncertainties
- **Crop and soil data requirement:**
 - Crop models, crop coefficients, soil data and management data
 - Spatial and temporal variability in crop, soil and management data contributes to uncertainty in assessments
 - Historical hazards, loss and damage
- **Socio-economic data and information for adaptation**
 - Livelihood systems and livelihood assets
 - Local perception of risks
 - Current exposure to hazards
 - Current risks and vulnerabilities
 - Indigenous knowledge of adaptation practices and strategies

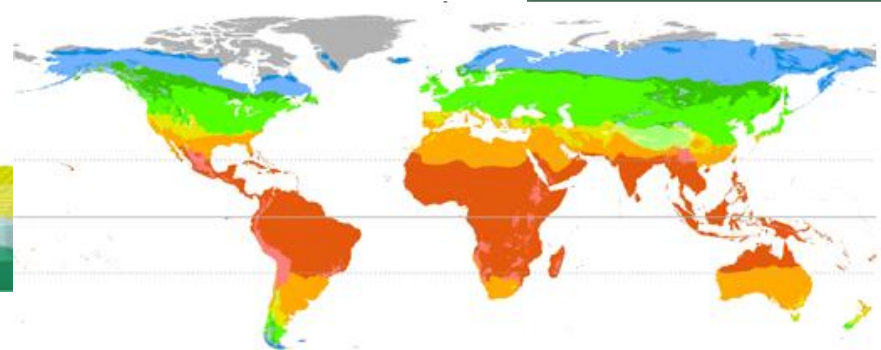
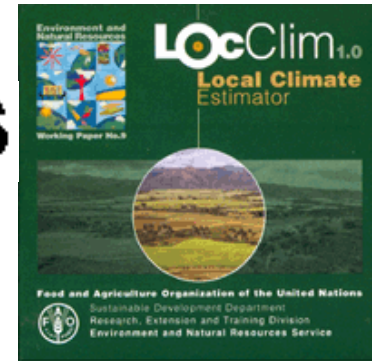
FAO Data and Information Systems

Data portals, Mapping Tools and Information systems



Agro-MAPS

FAOClim-NET



2) Assessment

Impacts, Vulnerability, Risks and Adaptation Options

- **Assessments of climate change impacts and vulnerability:**
 - Situation - natural resource/production system such as agriculture, or an economic activity
 - Time frame - near-term consistent with annual crop planning, or longer timeframe
 - Region and area - field scale, aggregated assessments, regional scale etc.,
 - Purpose of the assessments - to raise awareness of climate change, designing adaptation strategy, Policy relevant assessments.
- **Assessment of climate change impacts**
 - Natural systems - agricultural productivity, water supplies
 - Human systems - socio-economic indicators, trade implications
- **Prioritization and Identification of Adaptation Options**
 - Undertaken by parties - National Adaptation Programmes of Action (NAPA), National Adaptation Plans (NAPs), NWP on Impacts, Vulnerability and Adaptation
 - Evaluation - in terms of criteria such as feasibility, benefits, costs, effectiveness, efficiency etc.,

2) Assessment

Impacts, Vulnerability, Risks and Adaptation Options

Adaptive capacity

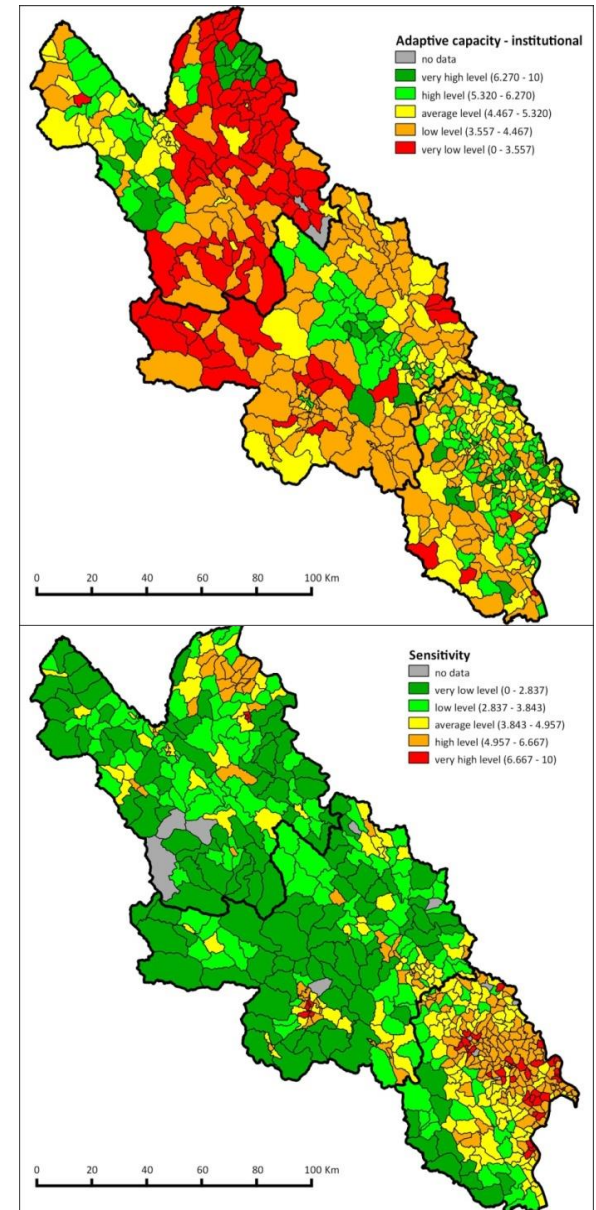
- Infrastructure, poverty, economic wealth, malnourishment, education index, health expenditure, malaria suitability, HIV prevalence, access to improved water, subscription to cellular network, travel time to nearest city, night lights data sets, contribution of agriculture to GDP, water discharge (availability)

Sensitivity

- Percent land under irrigation, net primary productivity, volume of rainfall per person on agriculture land, crowding on agriculture land, length of growing period, available soil moisture, soil degradation, slope, net primary productivity, major agriculture systems, own food production, protein consumption, dietary diversity, water withdrawals, people living in water stress etc.,

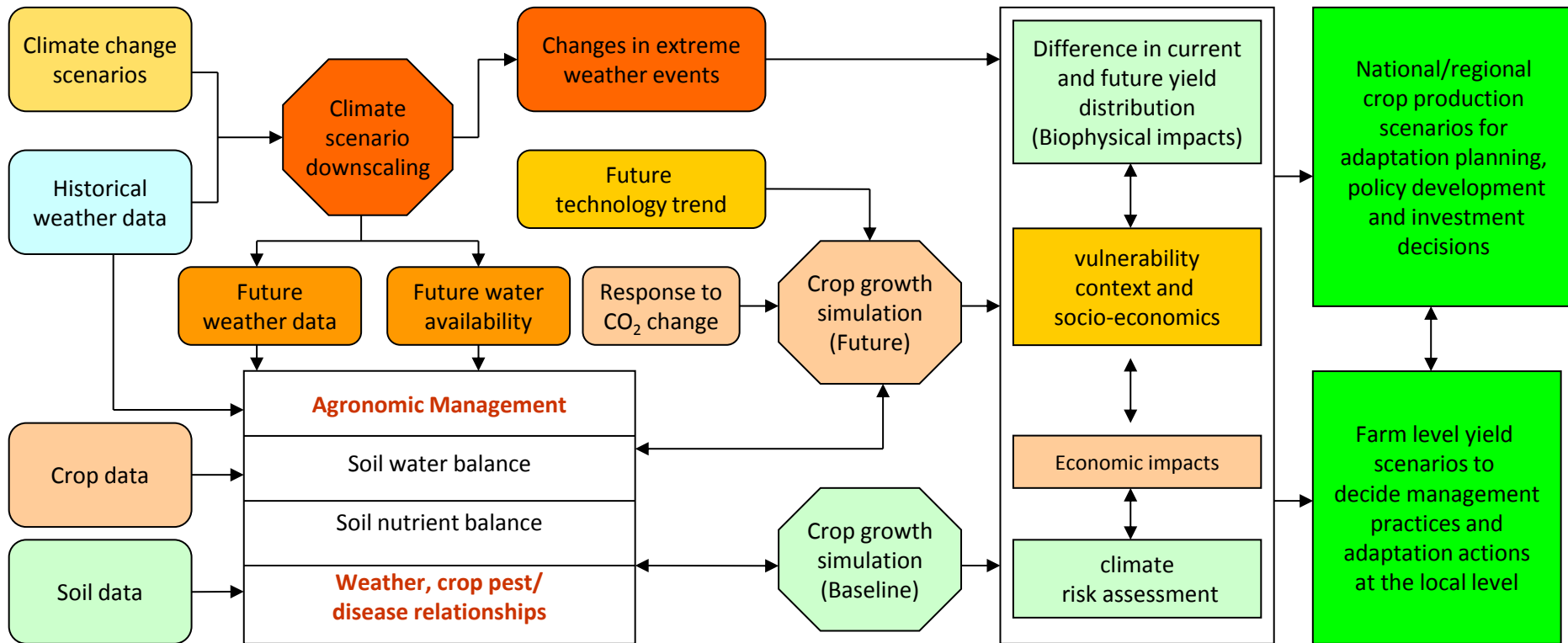
Exposure

- Sea level rise, coefficient of variation of inter-annual rainfall, coefficient of variation of monthly rainfall, risk of cyclones, risk of floods, projected proportional change in rainfall, projected change in temperature, people living in water stress, disaster events (numbers), disaster events (affected population)



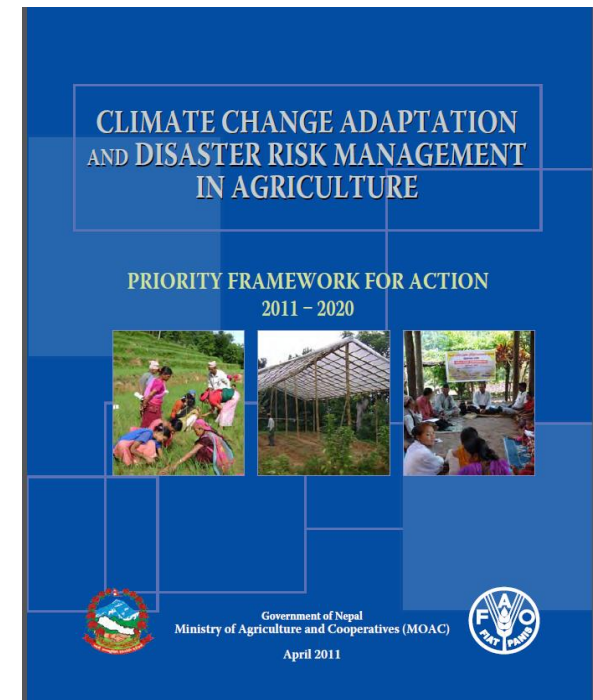
2) Assessment

Data and information flow in a generic climate change impact assessment framework



Planning/Preparation

- **Aligning the national priorities to the local priorities**
 - The NAPAs enable LDCs to identify and prioritize urgent and immediate needs
 - Priority Frameworks for Action (PFAs)
- **Preparation of Localized Plans**
 - Local adaptation plans of Action (LAPAs) and Decentralized Risk Reduction Plans
- **Understanding institutional settings and support services**
 - Institutional assessments - comparative advantages and gaps
 - Capacity development needs



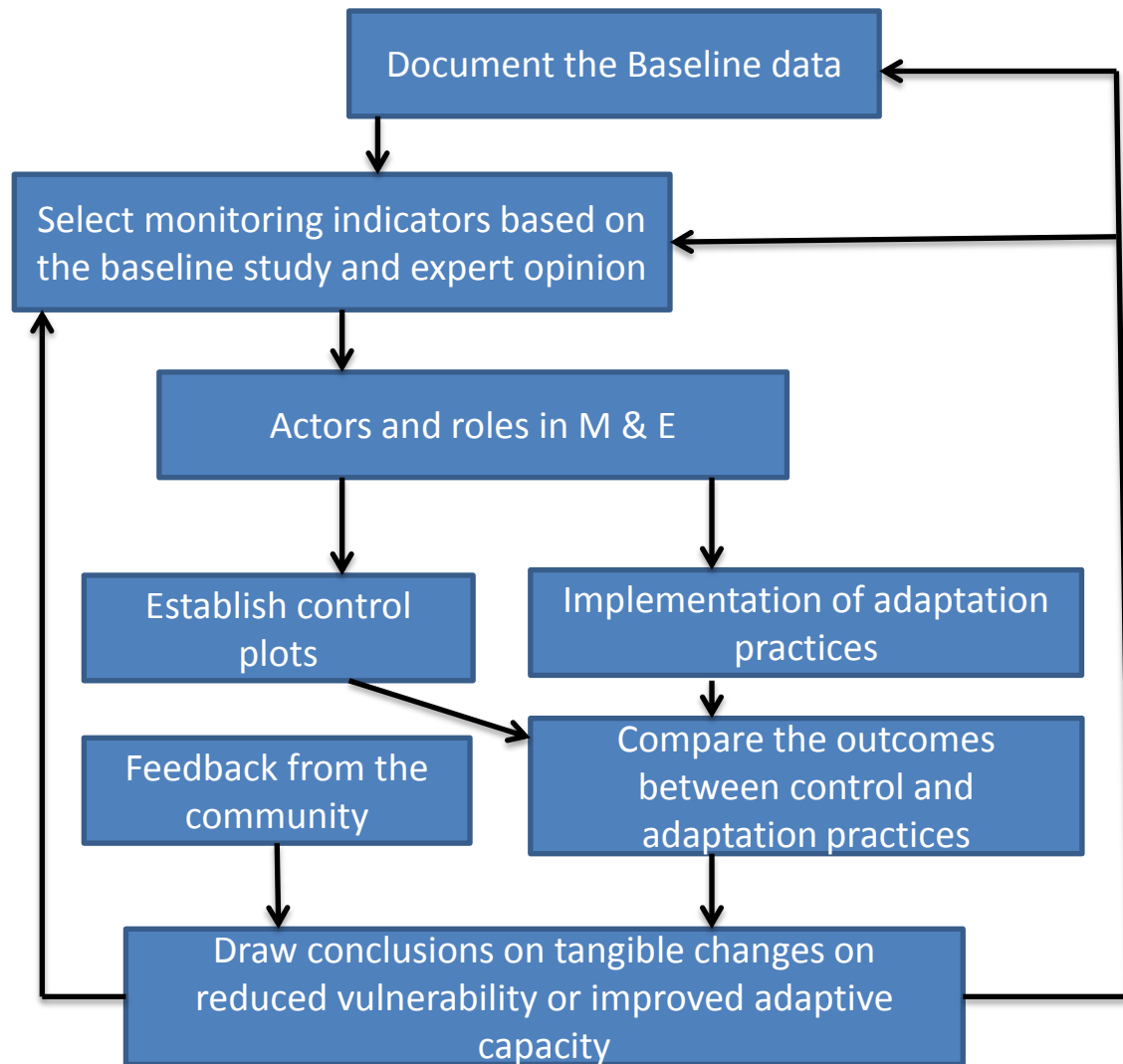
Implementation

Community Based Adaptation (CBA)

- Assess current vulnerability, risks and local livelihoods
 - Assess future climate risks
 - Strengthen institutional capacities for adaptation
 - Identify, validate and test suitable adaptation options
 - Design location specific adaptation strategies and plans
 - Up-scaling and linking to development
- Community Mobilization
 - Awareness raising strategy
 - Improve information and knowledge dissemination
 - Informal community set-ups
 - Participation
 - Community action plans
 - Local task groups
 - Defining roles and responsibilities
 - Defining time line of actions
 - Testing adaptation practices
 - Selection of adaptation practices
 - Participatory extension
 - Field based demonstrations

Monitoring and Evaluation

- Data collection should reflect local priorities
- Monitoring criteria and data vary greatly according to the situation
- Avoid rigid data collection frameworks
- M&E indicators
- Both quantitative and qualitative indicators need to be considered
- Specific case studies can highlight the benefits



Knowledge Management

- **Good practices examples – data bases**
 - Local Coping Strategies
 - Ecosystem-based Adaptation
 - Adaptation database – Agriculture (e.g TECA)
 - Nairobi Work Programme – knowledge products
 - Technology briefs (Adaptation)
 - Gender-sensitive adaptation database
 - Indigenous practices database
- **Learning portals**
 - E-learning tools
 - Adaptation Learning Platforms
- **Case studies**
 - Country specific case studies
 - Regional case studies



Thank You