

WORKSHOP REPORT

ACCCA – IDRC Inception Workshop Dakar, Senegal

14-16 November 2007



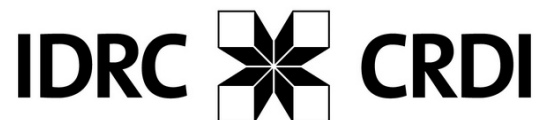
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Adaptation

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NARRATIVE REPORT

Day 1: Wednesday, November 14

Opening of the Workshop

Dr. Jean-Philippe Thomas and Dr. Isabelle Niang, ENDA-TM

Dr. Jean-Philippe Thomas opened the inception workshop by welcoming all the participants and facilitators. He presented ENDA-TM, its work, its mission, and its objectives as well as provided a brief overview of the *Advancing Capacity to Support Climate Change Adaptation* (ACCCA) project itself. He concluded by presenting each of the partners involved in the project (START, CSAG-UCT, SEI, UNITAR and IDRC) and thanked them for their presence.

Dr. Isabelle Niang quickly summarized the workshop agenda and then opened the floor to allow participants and facilitators to introduce themselves.

Climate Change and Variability, Social and Ecological Vulnerability: Lives and Livelihoods

Dr. Lawrence Flint, ENDA-TM

Dr. Lawrence Flint reviewed the rationale behind the ACCCA project, its mission, and its objectives. His presentation also touched upon the increasing impact climate change is having on the lives and livelihood of the most vulnerable population (through increased vulnerability and uncertainty, and a reduction in choices available) and the importance of finding ways to adapt to it.

Dr. Flint proceeded to explain the methodology to be used over the course of the workshop (communication strategy, climate change science, adaptation, and evaluation). He also presented the workshop objectives (create a project-wide community, identify needs and opportunities for further technical assistance, and share information).

See Annex III for a copy of the presentation.

Presentation of the 5 Pilot Actions

Each pilot action team (Burkina Faso, Cameroon, Ethiopia, Kenya, South-Africa) gave a 10-minute presentation of their respective projects. The teams briefly outlined their project objectives and described approaches that will be used and activities that will be conducted.

The subsequent discussion focused on the question of time. Some teams felt the planned 18-month project cycle was too short and asked about the possibility of extending the project timeline to 24 months. No final decision was taken on the issue, however it was emphasized that projects could have longer term goals, but that they should be realistic about what can achieve within the current 18-month project timeline.

Climate Risk and Climate Risk Communication

Mr. Moussa Na Abou, ENDA-TM

Mr. Na Abou reviewed how climate risk is defined by various disciplines, how it is described (taking into account uncertainties, its magnitude and its frequency), how it can be assessed (for instance through the use of sensitivity matrices) and how it can be communicated.

He outlined the concepts of vulnerability and risk and the interplay between these two strongly linked concepts. Conceptually, Mr. Na Abou posited that climate risk can be viewed as a function of hazard (physical manifestation of a climate related event), exposure (the extent to which the 'at risk' unit is exposed to that hazard) and vulnerability (which is related to the condition of the system).

Mr. Na Abou made numerous recommendations on how to effectively communicate climate risk. He emphasized the need to know one's target audience (at-risk communities, decision-makers, adaptation practitioners, etc.) and the main climate risk the pilot action is addressing. He also drew the pilot action teams' attention to how they might behave when talking about climate risk. Teams should avoid doom and gloom risk descriptions, and instead focus on urgent issues which meet at-risk populations' needs and be optimistic. Mr. Na Abou concluded his presentation with a practical exercise and invited each pilot action to present the main climate risk their action addressed. A short discussion ensued.

See Annex III for a copy of the presentation.

Communication Strategy I & II

Dr. Lawrence Flint & Emmanuel Seck, ENDA-TM

Mr. Seck discussed the issue of knowledge sharing. He emphasized the importance of creating networks to increase the possibility of disseminating information and knowledge. He also explained that better knowledge sharing can create synergies, improve capacity building and make it more sustainable.

Dr. Flint reviewed the need for an effective communication strategy. He emphasized the fact that these types of projects are about vulnerable people living in a changing environment, people being the most important element. Dialogue between the pilot action team and the community is a must. He identified communication strategies as an important element of a successful development project and gave examples of the pitfalls and hazards of ineffective communication. He also touched upon the Participatory Action Research approach.

See Annex III for a copy of the presentations.

Role-play Exercise and Discussion

Facilitated by Dr. Lawrence Flint, ENDA-TM

The group was split in two and each team was presented with a risk situation. Teams had to develop a communication strategy to present their risk situation to the other team, who would represent a vulnerable community.

A general discussion on communication issues followed the exercise. One participant asked if all project teams should adopt a similar communication strategy. Dr. Flint explained it was important to build a communication strategy that is adapted to the respective community. Each pilot action should therefore develop specific communication strategies/tools that are firmly embedded in the boundary partners' needs. The objective of the presentations was to give direction, not to impose a set structure.

It was noted that science has not been successful in offering sustainable solutions to the climate change challenge; it has not been able to translate knowledge and know-how into local language. Communicating climate science to the community is a big challenge and pilot action teams need to think clearly about the messages they want to convey to their respective stakeholders. Teams were asked to give examples of the communication methods they are planning to use. Some of those mentioned included:

- Using municipality events as a communication tool;
- Grassroots governing bodies;
- Existing networks (women/youth groups);
- Media (newspapers, television, radio, internet);
- Theatre, music;
- Social events; and
- Public meeting (forums, workshops, conferences).

It was noted that the proposed vehicles of communication were mainly to deliver information, but it was not clear which vehicles to use in getting the information from the communities. It was also suggested that the most effective way to foster ties, and communicate, with communities would be by going to them directly; use of the media could also support these face-to-face interactions.

Day 2: Thursday November 15

IPCC Working Group II Report

Dr. Isabelle Niang, ENDA-TM

Dr. Niang reviewed the findings of the IPCC's Working Group II (impacts, vulnerability and adaptation) for the Fourth Assessment Report, with a particular emphasis on the African chapter (Chapter 9). Africa is one of the continents that is the most vulnerable to the impacts of climate change due to the fact that it is highly dependant on the climate (e.g. rain-fed agricultural practices predominate, water security is problematic, and there are high population densities in many coastal zones) and is weak economically (widespread poverty), socially and institutionally. She reviewed the findings for each of the major sectors (agriculture, water supply, health and coastal zones) and closed by highlighting the absolute importance of adaptation in the fight against climate change.

Climate Dynamics in Africa

Prof. Amadou Gaye, University Cheikh Anta Diop

The presentation covered four main areas:

- The features of African climate;
- The connection between the African climate and the global climate;
- Trends in climate parameters and predictability of the African climate; and
- Future climate change.

This presentation concluded by reviewing the present needs, namely improving knowledge of the dynamic processes in all regional African climate (atmospheric, chemical, hydrological components) and of its dependence to ocean-atmosphere-land interactions, and the need to resolve difficulties of GCM to simulate the climate and its variability.

See Annex III for a copy of the presentation.

Sensitivity Matrix

Dr. Boubacar Fall, ENDA-TM

Dr. Fall reviewed how to produce a sensitivity matrix and outlined how such a matrix could be used to help define adaptation priorities in a given area. Particular care must be taken when choosing the scale and weighting for the matrix. In particular, consensus should be achieved when validating the weightings chosen.

See Annex III for a copy of the presentation.

Climate Data, Climate Change Explorer Tool, and AWhere

Dr. Mark Tadross, CSAG-UCT & Moussa Na Abou, ENDA-TM

Dr. Tadross highlighted how climate data can help adaptation practitioners and researchers in understanding climate changes in their project areas and to facilitate in decision-making for current and future adaptation measures. However, Dr. Tadross was also careful to point out that the data he was using, from global circulation models (GCMs), should be handled with care as they do not depict “reality”. He also invited pilot action teams to analyse the climate conditions of their action areas using a set of several models and then to see which one of these models best describe their region.

In order to help CCAA pilot action teams identify climate risk hot spots, map areas of vulnerability and identify potential adaptation options, Mr. Na Abou presented the GIS-based and spatial information tool (AWhere) developed by MudSprings Geographers. This tool allows one to combine and analyze multi-sectoral (agriculture, water resources, land use, etc.) information and helps to identify areas where specific adaptation options may be implemented. Mr. Na Abou presented some of the key features of the software and highlighted its main weaknesses and limitations. CCAA pilot action teams were invited to download the AWhere software from the MudSprings website, including the associated database for their country.

See Annex III for a copy of the presentations.

Conceptualizing Adaptation

Dr. Lawrence Flint, ENDA-TM

Dr. Lawrence Flint reviewed the concept of adaptation. He addressed why people adapt to their environment and on how they can adapt. Dr. Flint asked if migration, the most common form of adaptation, was the most effective? While adaptation affords an opportunity to build resilience in society, one must be wary of maladaptation.

See Annex III for a copy of the presentation.

Gender Dimensions of Adaptation to Climate Change

Ms. Molihi Shale, SEI-Cape-Town

As gender is one of IDRC’s priorities, Ms. Shale presented the importance of including gender goals in the project proposals. She explained that environmental impacts are not gender neutral and that women are as vulnerable, if not more so, than men. She noted that in many developing countries, women are responsible for fetching water and firewood; they also look after children and elderly family members when sick. All of those tasks are becoming more burdensome and time consuming due to widespread environmental changes.

See Annex III for a copy of the presentations.

Outcome Mapping and its Relevance to Planning Adaptation

Ms. Nathalie Beaulieu, IDRC

Nathalie Beaulieu reviewed 'Outcome Mapping', the approach used by IDRC to monitor and evaluate its projects. Outcome Mapping is based on changes in the behaviour of boundary partners. It gives one the opportunity to identify the partners one wishes to influence, what one expects from them, and how one wants to influence them.

See Annex III for a copy of the presentations.

Innocent Butare (IDRC) noted that the five pilot actions would need to improve their project proposals in the areas of budget (more detail), gender (more attention to) and activities (more detail), before IDRC could approve the actions.

Day 3: Friday, November 16

Project Development and Presentation of 5 Pilot Actions

The project development session allowed each team to establish a relationship with their pilot action monitoring team. During the session, participants discussed their own, individual needs to establish their roadmap.

After revising their project proposal all morning, each team presented their project for the second time. Many elements of the proposals demonstrated clear improved and the visions, missions, objectives, and methodologies of each project were more precise.

ENDA-TM proceeded to establish the initial monitoring teams for the pilot actions. The teams are as follows:

- Burkina Faso Pilot Action → Dr. Nogoye Thiam
- Cameroon Pilot Action → Dr. Boubacar Fall
- Ethiopia Pilot Action → Dr. Isabelle Niang
- Kenya Pilot Action → Mr. Moussa Na Abou
- South Africa Pilot Action → Dr. Lawrence Flint

ACCCA Planning

Nicolas Leclercq, UNITAR

Mr. Leclercq demonstrated how to use the ACCCA platform to pilot action teams. He explained that the platform would be the main communication, management, and monitoring tool for the ACCCA project and specified that the technical backstopper for the 5 projects would support the work of each of the teams and be in weekly contact with them.

Mr. Leclercq then presented the monthly performance journal; the monitoring and evaluation document for the ACCCA project. As the funding for the project comes from different sources, and each source has a different method of monitoring and evaluating, the document is a mix of four different approaches, performance indicators, logical framework, and outcome mapping. The document comprises 11 targets and should be completed on a monthly basis. Each team should decide upon which specific performance indicators it will use, as the journal is a generic document.

Discussion

Concerns were shared on the structure of the monthly journal. Teams expressed some reluctance to report every month. Some teams also did not feel proposed elements of the journal concerned their project and asked if they could be changed. It was decided that more discussion on the report would be done at the ENDA-UNITAR level before taking a final decision on the subject. Participants also expressed concerns over the falling value of the US dollar, the currency of fund disbursement.

Evaluation of the workshop

Facilitated by Dr. Jean-Philippe Thomas, ENDA-TM

Each participant was invited to provide his/her feedback on structure and content of the workshop. In general, comments were very positive. A key positive point was that participants appreciated the opportunity to meet representatives from other pilot action teams and the facilitators. Many remarked that this created a sense of community amongst the projects. Participants commented on the good organization of the event.

All participants have received a CD-ROM containing this report and all the accompanying documentation from the workshop.

See Annex IV for a full assessment of the evaluation results.

ANNEX I: AGENDA

Overview

Day 1: Wednesday 14

- Getting to know the pilot actions, ACCCA programme and people: From posters to policy (yes, that is a lot of P's!)
- Putting together a communications toolkit and developing a strategy
- Workshop dinner

Day 2: Thursday 15

- Learning about climate science, applicability and utility
- Adaptation to climate change

Day 3: Friday 16

- Developing the projects: work-plans, refinement, road-mapping
- Focus on project needs: From work plans to monitoring performance
- Technical needs and assistance

Detailed Agenda

Wednesday 14th November 2007 Session I: Setting the Scene, Chair: Dr Jean-Philippe Thomas		
08:30 09:00	Registration Novotel, Dakar	Haby Sow
09:00 09:45	Opening of workshop Welcome and agenda setting Welcome, description of project, project partners, communities Summary of workshop agenda and projected outcomes Self-introduction of participants	Isabelle Niang Innocent Butare
09:45 10:15	Climate change and variability, social and ecological vulnerability: lives and livelihoods ‘What does it all mean and why should we all care?’ The ACCCA mission, objectives, methodology and projected outcomes	Lawrence Flint
10:15 11:00	First presentation of individual actions by team proponents	Principal Investigators
11:00 11:15	Tea and coffee break	
11:15 12:00	Risk communications - Defining risk, particularly climate risk - Risk communication as information and guidance to managing and integrating into global crisis management and sustainable socio-ecological development strategies	Moussa Na Abou
12:00 13:00	Developing a communications strategy Talking about climate, lives and livelihoods <ul style="list-style-type: none"> • Participative Action Research (PAR) • Social learning • The need for an effective communications strategy • Pitfalls and hazards of ineffective communications • How to plan an effective strategy 	Lawrence Flint
13:00 14:15	Lunch	
14:15 14:35	Knowledge sharing Principles of and details of new IDRC-IDS-ENDA <i>et al.</i> project	Emmanuel Seck
14:35 15:15	Participative exercise - Identifying communication vehicles, strategies and capacity building required to invest in communications strategy per action	ENDA team
15:15 17:00	Role-play exercise Description Participants split into two groups to prepare a presentation on climate risk as set out on a prescribed summary provided. <ul style="list-style-type: none"> • Two speakers are elected from each group to make a ten-minute presentation to the other group • Receiving group meets to review what they have been told (10 min) Feedback to rest of group in plenary	Lawrence Flint Boubacar Fall Moussa Na Abou Moliehi Shale Clark Seipt Nicolas Leclercq
End of day Workshop dinner		

Thursday 15th November 2007 Session II: Climate science, Chair: Dr. Innocent Butare		
08:45 09:00	Feedback on Day 1 and outline of Day 2	Isabelle Niang
09:00 09:30	Climate dynamics in Africa Climate change in perspective	Amadou Gaye
09:30 10:00	IPCC Working Group Report To include discussion	Isabelle Niang
10:00 10:30	Vulnerability exposure Sensibility matrix Risk screening	Isabelle Niang Boubacar Fall
10:30 10:45	Tea and coffee break	
10:45 11:45	Climate data: value, availability and utility Climate Change Explorer Tool	Mark Tadross
11:45 12:15	AWhere Description, practical uses for projects and demonstration	Moussa Na Abou
12:15 13:00	Practical experience using data, methodology and CCE tool Chance to ask questions and create trends for indiv. projects	Mark Tadross with facilitators
13:00 14:00	Lunch	
14:00 14:55	Practical experience using data, methodology and CCE tool Chance to ask questions and create trends for indiv. Projects	Mark Tadross with facilitators
Session III: Adaptation and building adaptive capacity		
14:55 15:20	Conceptualising adaptation - Understanding the objective and subjective dimensions of adaptation - Developing adaptive capacity	Lawrence Flint
15:20 15:40	Gender dimensions of adaptation to climate change	Moliehi Shale
15:40 16:10	'Adaptation Challenge' – A discussion session	Lawrence Flint
16:10 16:40	Outcome mapping and its relevance to planning adaptation Methodology and meaning	Nathalie Beaulieu
16:40 17:00	Questions, comments and discussion	Nogoye Thiam
End of day		

Friday 16th November 2007 Session IV: Project improvement, tools, resources, monitoring Chair: Dr Jean-Philippe Thomas		
08:45 09:00	Feedback on Day 2 Breakout groups and outline of Day 3	Jean-Philippe Thomas
09:00 11:00	Project Development Split into individual team groups to revise and streamline specific aspects of proposal <ul style="list-style-type: none"> • Establish working relationship with project supervisor • Define vision, mission, objectives, methodology activities and projected outcomes • Problems related to climate currently affecting the site • What are the trends? • What are the current coping strategies? • Define vulnerability and exposure • Construct communications strategy • Create a roadmap • Establish technical assistance requirements 	Lawrence Flint Isabelle Niang Nogoye Thiam Moussa Na Abou Boubacar Fall
11:00 11:15	Tea and coffee break	
11:15 12:00	Project Development continued	As above
13:00 14:00	Lunch	
14:00 15:00	Second presentation of individual projects	
15:00 15:20	Questions, comments and discussion	Jean-Philippe Thomas
15:20 15:40	ACCCA Platform	Nicolas Leclercq Moussa Na Abou
15:40 16:40	ACCCA Planning Monitoring and evaluation - Establishing performance indicators, progress targets, monthly journal Planning for technical assistance Project reporting and roles Financial matters	Nicolas Leclercq Innocent Butare
16:40 17:00	Workshop evaluation Close of workshop	Lawrence Flint Jean-Philippe Thomas
17:00	End of workshop	

ANNEX II: PARTICIPANTS

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ANNEX III: PRESENTATIONS

- *Climate Change and Variability, Social and Ecological Vulnerability: Lives and Livelihoods*
Dr. Lawrence Flint, ENDA-TM
- *Climate Risk and Climate Risk Communication*
Mr. Moussa Na Abou, ENDA-TM
- *Communication Strategy I*
Dr. Lawrence Flint, ENDA-TM
- *Communication Strategy II*
Mr. Emmanuel Seck, ENDA-TM
- *Climate Dynamics in Africa*
Prof. Amadou Gaye, Université Cheikh Anta Diop
- *Sensitivity Matrix*
Dr. Boubacar Fall, ENDA-TM
- *Climate Data, Climate Change Explorer Tool*
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- *AWhere*
Mr. Moussa Na Abou, ENDA-TM
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Dr. Lawrence Flint, ENDA-TM
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Ms. Moliehi Shale, SEI-Cape-Town
- *Outcome Mapping and its Relevance to Planning Adaptation*
Ms. Nathalie Beaulieu, IDRC

ACCCA
Assessing Capacity to Support Climate Change Adaptation

enda ENDA Energy, Environment and Development

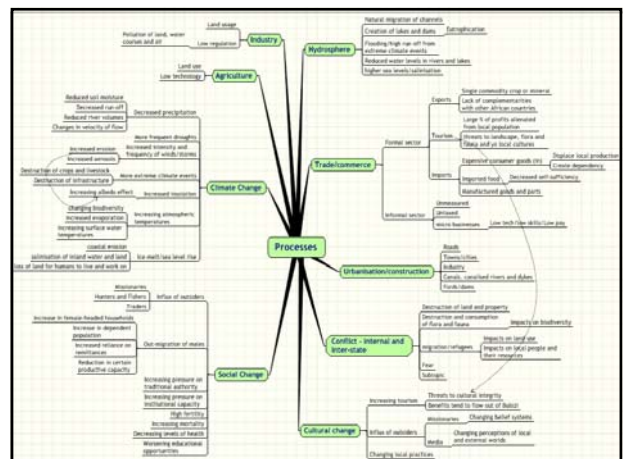
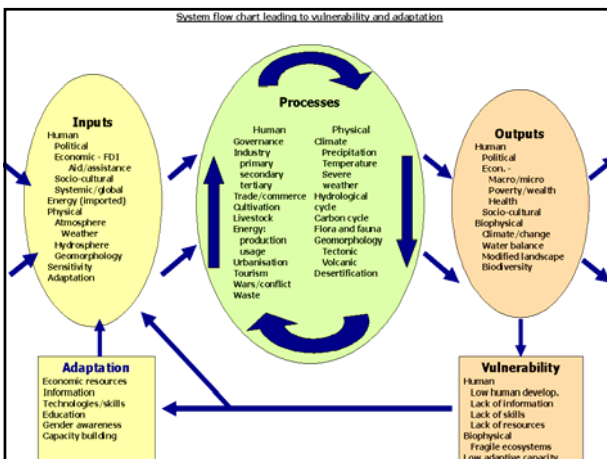
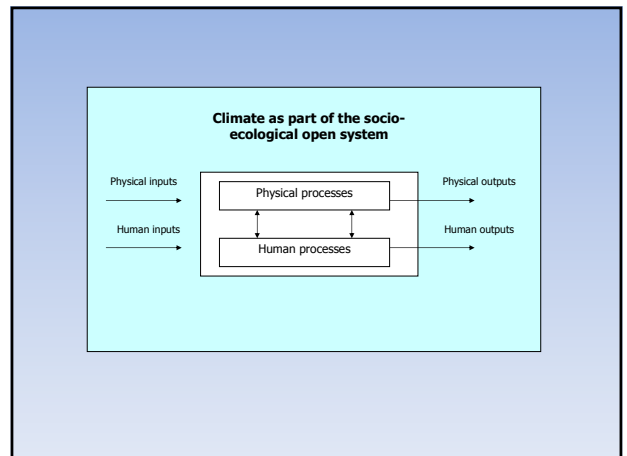
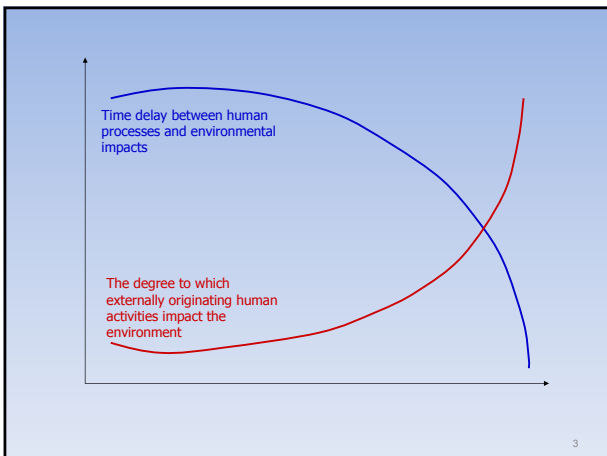
Technical Assistance Workshop for ACCCA Pilot Action Teams



Climate change and variability, social and ecological vulnerability

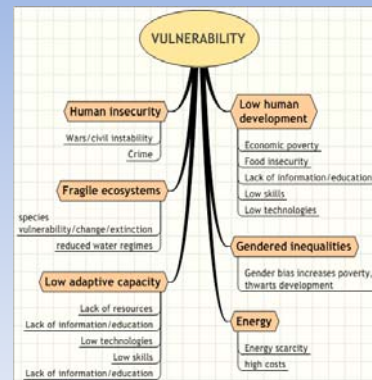
Climate change

- Define
- Contextualise
- Put into perspective



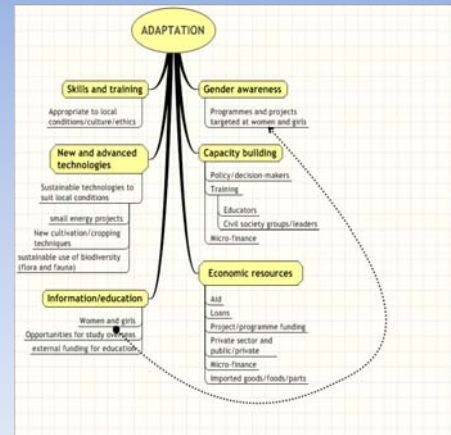


Possible impact on vulnerability in Africa of negative impacts of climate change and vulnerability





Net thematic impacts

- Impacts of increasing climate change
 - Increased social and ecological vulnerability/fragility
 - Impacts on adaptive capacity
 - Reduced choices
 - Increasing uncertainty and confusion








ACCCA - Setting the Scene for Adaptation - PAR

- Putting people first (entry point, ownership)
 - Listening, believing, and valuing real life stories of impacted lives and livelihoods
 - Understanding how people interpret climate
- Effective communications strategies
 - Creating communicative space
 - 2-way social learning
 - Sharing knowledge
- Investigating and applying climate science to local peoples' evidence
- Developing adaptation capacity and strategies based on 1-3 above
- Implementation, monitoring and evaluation

DEFINING RISK, PARTICULARLY CLIMATE RISK,

MOUSSA NA ABOU MAMOUDA
ENDA TM – DAKAR
INCEPTION WORKSHOP
DAKAR – 14-16 NOV. 2007

CONTENT

- ❑ WHAT IS VULNERABILITY ?
- ❑ WHAT IS RISK ?
- ❑ HOW TO DESCRIBE RISK ?
- ❑ HOW TO ASSESS RISK ?
- ❑ RECOMMANDATIONS

Definitions of vulnerability in the climate change related literature tend to fall into two categories, viewing vulnerability either

- ❑ In terms of the amount of (potential) damage caused to a system by a particular climate-related event or hazard (Jones and Boer, 2003),

Or

- ❑ As a state that exists within a system before it encounters a hazard event (Allen, 2003). In this formulation, vulnerability is something that exists within systems independently of external hazards.

IPCC: Combined vulnerability = $f(\text{hazard, exposure, sensitivity})$

Referred to as *physical or biophysical vulnerability*.

Hazard = Physical manifestations of climatic variability or change

- ❑ Droughts
- ❑ Floods
- ❑ Storms
- ❑ Episodes of heavy rainfall
- ❑ Long-term changes in the mean values of climatic variables
- ❑ Potential future shifts in climatic regimes etc.

Social vulnerability: Complex set of characteristics that include a person's:

- ❑ *Initial well-being* (nutritional status, physical and mental health, morale);
- ❑ *Livelihood and resilience* (asset pattern and capitals, income and exchange options, qualifications);
- ❑ *Self-protection* (the degree of protection afforded by capability and willingness to build a safe home, use a safe site);
- ❑ *Social protection* (forms of hazard preparedness provided by society more generally, e.g. building codes, mitigation measures, shelters, preparedness); and
- ❑ *Social and political networks and institutions* (social capital, but also role of institutional environment in hazard precautions, peoples' rights to express needs and of access to preparedness).

RISK:

Defined as a function of hazard and social vulnerability

Compatible with:

- ❑ Risk defined as probability x consequence
- ❑ Risk defined in terms of outcome

❑ **Event risk** as the “risk of occurrence of any particular hazard or extreme event” and

❑ **Outcome risk** as “the risk of a particular outcome”.

OUTCOME RISK MAY THEREFORE BE VIEWED AS:

❑ A function of event risk, and

❑ Inherent or social vulnerability

AUTHOR(S)	RISK DEFINITION
Smith, 1996 (p5)	Probability x loss (probability of a specific hazard occurrence)
IPCC, 2001 (p21)	Function of probability and magnitude of different impacts
Morgan and Henrion, 1990 (p1)/ Random House, 1966	“Risk involves an ‘exposure to a chance injury or loss’”
Adams, 1995 (p8)	“a compound measure combining the probability and magnitude of an adverse affect”
Jones and Boer, 2003	Probability x consequence
Downing et al., 2001	Expected losses (of lives, persons injured, property damaged, and economic activity disrupted) due to a particular hazard for a given area and reference period
Downing et al., 2001	Probability of hazard occurrence
Crichton, 1999	“Risk” is the probability of a loss, and depends on three elements, hazard, vulnerability and exposure.”
Stenchion, 1997	“Risk might be defined simply as the probability of occurrence of an undesired event [but might] be better described as the probability of a hazard contributing to a potential disaster...importantly, it involves consideration of vulnerability to the hazard.”
UNDHA, 1992	“Expected losses (of lives, persons injured, property damaged, and economic activity disrupted) due to a particular hazard for a given area and reference period. Based on mathematical calculations, risk is the product of hazard and vulnerability.”

SYNTHESIS

❑ **NATURAL HAZARDS COMMUNITY:** Risk is generally described in terms of probability

❑ **IPCC AND THE CLIMATE CHANGE COMMUNITY:** In general, tend to describe risk (biophysical vulnerability) simply as a function of certain variables

❑ Something **EXPECTED**

Nonetheless, the determinants of both biophysical vulnerability and risk are essentially the same:

Hazard and social vulnerability.


BOTH

❑ Essentially are examining the same processes

❑ Differences in terminology

HOW TO DESCRIBE RISK ?

- ☐ Set current climatic conditions (hazards, risks)
- ☐ Expected/potential climatic phenomena
- ☐ Trends (intensity, magnitude, frequency)
- ☐ Concerned areas

- ☐ Resources/populations in concerned areas
- ☐ Conditions of these populations/resources
- ☐ Trends in populations'/resources conditions
- ☐ Hazard  Risk
- ☐ At-risk populations/resources
- ☐ Identify potential damage

ADDRESS **UNCERTAINTIES** RELATED TO:

- ☐ Expected/potential climatic phenomena
- ☐ Trends (intensity, magnitude, frequency)
- ☐ Concerned areas
- ☐ Resources/populations in concerned areas
- ☐ Conditions of these populations/resources
- ☐ Trends in populations'/resources conditions
- ☐ At-risk populations/resources
- ☐ Identify potential damage

HOW TO DESCRIBE RISK? (cont.)

DESCRIBE RISK IN TERMS OF:

- ☐ High
- ☐ Medium
- ☐ Low

HOW TO DESCRIBE RISK? (cont.)

TAKE INTO ACCOUNT THE **TIME FRAME**

- ☐ Short term
- ☐ Middle term
- ☐ Longer term

HOW TO ASSESS RISK?

RISK = f(HAZARD, EXPOSURE, VULNERABILITY)

RISK ASSESSMENT

☐ VULNERABILITY ASSESSMENT (social vulnerability)

☐ EXPOSURE TO HAZARD ANALYSIS

EXPOSURE TO HAZARD ANALYSIS:

THE **SENSITIVITY MATRIX**

PAST CONDITIONS

Climatic risks							Exposure indices	
	Drought	Dry spells	Intense rain	Flood	Warm spells	... other	Exposure score	Weighted exposure index
Frequency	20	40	10	5	10		85	8.88
Resources and Livelihoods								
Ecosystem services								
Soil water balance	5	4	1	5	1		64	3.59
Water supply	5	2	2	4	1		56	2.71
Water quality	2	1	3	4	2		48	1.76
Non-fum wood fuels	3	1	1	2	1		32	1.53
Grazing and fodder	4	2	1	4	1		48	2.35
... others								

PRESENT CONDITIONS

Climatic risks							Exposure indices	
	Drought	Dry spells	Intense rain	Flood	Warm spells	... other	Exposure score	Weighted exposure index
Frequency	20	40	10	5	10		85	8.88
Livelihoods								
Prevalence								
Smallholder farmers	60	5	3	1	3	1	52	3.00
Emerging farmers	25	3	2	1	2	1	36	2.00
Ranchers	10	4	2	1	2	1	40	2.24
Market traders	5	3	1	1	4	1	40	1.65
...others								
Impacts score	100	75	40	20	55	20		
Weighted impacts index	11.55	4.30	2.55	1.00	2.70	1.00		8.88

FUTURE CONDITIONS

Climatic risks							Exposure indices	
	Drought	Dry spells	Intense rain	Flood	Warm spells	... other	Exposure score	Weighted exposure index
Frequency	20	40	10	5	10		85	8.88
Livelihoods								
Prevalence								
Smallholder farmers	60	5	3	1	3	1	52	3.00
Emerging farmers	25	3	2	1	2	1	36	2.00
Ranchers	10	4	2	1	2	1	40	2.24
Market traders	5	3	1	1	4	1	40	1.65
...others								
Impacts score	100	75	40	20	55	20		
Weighted impacts index	11.55	4.30	2.55	1.00	2.70	1.00		8.88

RECOMMANDATIONS

☐ EVENT-RISK ~ HAZARD OCCURENCE

☐ And viewing biophysical vulnerability and risk as broadly equivalent

☐ **RISK = f(HAZARD, EXPOSURE, VULNERABILITY)**

RECOMMANDATIONS (Cont.)

CONTENT OF RISK DESCRIPTION WILL
DEPEND ON THE **TARGET AUDIENCE**

- ☐ At-risk communities
- ☐ NGOs
- ☐ Researchers
- ☐ Decision makers

RECOMMANDATIONS (Cont.)

AVOID:

Doom and gloom risk description

Too long time period

Be:

Optimistic/positive

Focus on urgent issues

**WHAT IS THE MAIN CLIMATE RISK
YOUR PROJECT IS DEALING WITH?**



WHAT IS RISK COMMUNICATION?


- ☐ **COMMUNICATE RISK INFORMATION IN EASY WORDS** TO TARGET AUDIENCES (AT-RISK COMMUNITIES, DECISION MAKERS, etc.)
- ☐ **BREAKS LANGUAGE BARRIERS**
- ☐ **A PARTICIPATIVE PROCESS**
- ☐ **NOT A STAND-ALONE PROCESS**

- ☐ **RISK COMMUNICATION IS ABOUT MORE THAN DELIVERING A MESSAGE**

- ☐ **IT IS ABOUT SETTING A PROCESS IN MOTION THAT WILL ENCOURAGE LEARNING AND THE EXCHANGE OF INFORMATION**


- ☐ **PERHAPS EVEN CHANGE THE PERCEPTIONS AND BEHAVIORS OF THE TARGET AUDIENCE**

HOW TO COMMUNICATE CLIMATE RISK?



Programme ACCCA Knowledge Sharing

Emmanuel Seck
Nov. 2007



enda - Programme « Énergie, Environnement, Développement » (enda.africadirect.org)

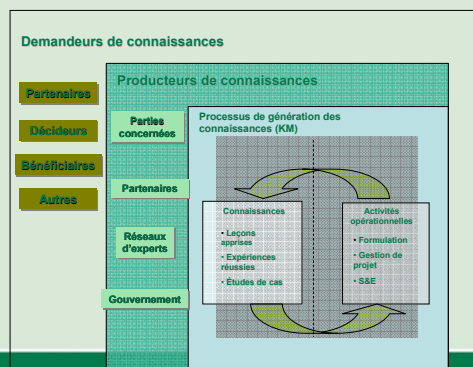
Knowledge Sharing?

Le partage de l'information et des connaissances :

- Développer et mettre en œuvre un système d'échange capable de créer, de traiter et de restituer l'information
- Assurer la mise en place d'outils tels que bases de données, plateformes d'échange etc.
- Intégrer au système de partage les leçons, les bonnes pratiques et expériences
- Promouvoir et mettre en œuvre une stratégie d'échange d'information,
- Appuyer les partenaires nationaux et régionaux dans la recherche d'informations générales et dans la préparation de leurs activités



Partage des connaissances



Objectifs du Knowledge Sharing (Network)

Accroissement du partage de l'information et des connaissances pour contribuer à l'amélioration des moyens de subsistances des populations vulnérables

- Renforcement des capacités des acteurs du projet
- Réflexion et échanges sur la problématique des changements climatiques & autres thématiques émergentes
- Renforcement de la visibilité du programme ACCCA



Constitution en réseau

– *Besoin de communication et d'institutionnalisation des relations entre membres, optimisation des ressources propres & externes, recherche d'une vision & de nouveaux modèles de développement*

- Un processus d'apprentissage
- L'importance des individus
- Nécessité d'être composé d'organisations
- L'importance d'une vision partagée



Activités

- Les activités d'échanges
 - les communications verbales
 - Les ateliers et séminaires
 - Les télécommunications électroniques
 - Les visites d'échanges
- Plaidoyer – lobbying
- Lever de fonds
- Sensibilisation
- Production et diffusion de documents
 - Les bulletins de liaison.
 - Les articles de fonds, les comptes rendus, etc.
 - Les publications.
 - Les sessions de formation
- Gestion
 - Coordination, auto-évaluation,
 - Animation, facilitation



Avantages & risques (inconvénients)

- Avantages
 - L'échange d'informations
 - Une collaboration efficace
 - La création de synergie
- Risques (inconvénients)
 - Problème d'hétérogénéité
 - Le faible niveau des échanges entre les membres de réseau
 - L'incompatibilité des ressources techniques ou financières existantes avec une bonne coordination et une exploitation efficace des réseaux
 - Le manque d'adéquation entre les différents réseaux et l'insuffisance des informations échangées
 - La précarité des infrastructures en place



Conditions requises pour un meilleur partage d'information et des connaissances

- *Des intérêts et objectifs communs*
- *Une stratégie réaliste, basée sur la recherche de solutions adéquates*
- *Une capacité de contribution de l'ensemble des membres du réseau*
- *La possibilité d'accroître les compétences des membres*
- *L'équilibre entre une gestion structurée et une gestion souple*
- *Une motivation et un engagement certains*
- *Un partenariat défini sur une base égalitaire*



Recommandations

- *Cartographie*
 - réseaux
 - acteurs
 - compétences
- *Synergie entre les réseaux existants*
- *Durabilité du partage des connaissances*




enda



ACCCA
Assessing & Adapting to Support Climate Change Adaptation

enda
ENDA Energy, Environment and Development

Technical Assistance Workshop for ACCCA Pilot Action Teams



Developing a Communications Strategy

Talking about climate, lives and livelihoods

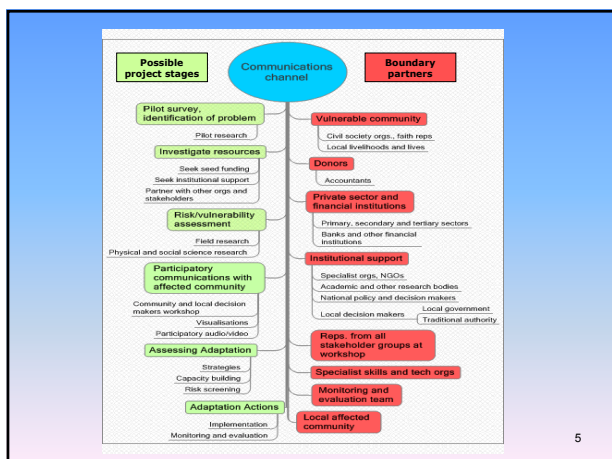
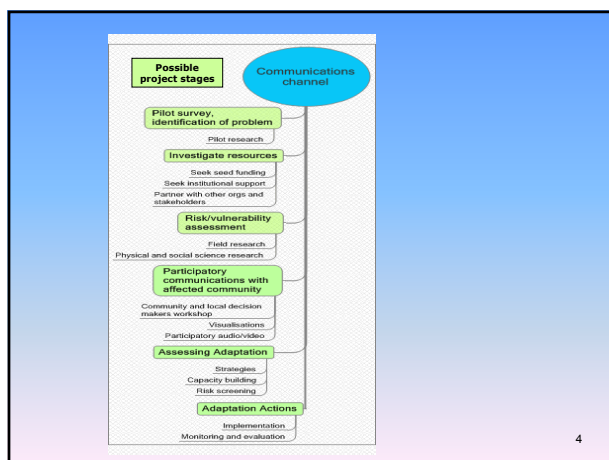
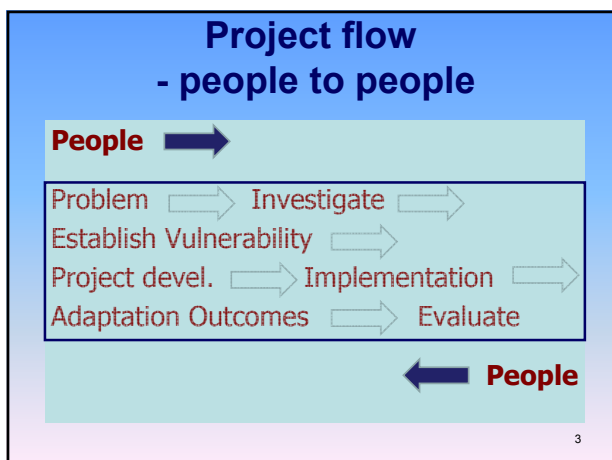


It's about people in vulnerable situations, real people, adapting to change, creating new choices, and living in harmony with their environments; but most of all, it's about people.

People>>Problem>>Vulnerability>>Project>>Adaptation>>Outcome>>People



2



Communicating about climate

- Lack of success in communications strategies to date
- Lack of skills and suitable personnel
- Hampered by ignorance, suspicions and scepticism
- Has often privileged scientific and academic discourse to understandable dialogue
- Has lacked the human touch

6

Methodology

- No one-size-fits-all methodology
- A Participatory Action Research approach (PAR)
 - Creating communicative space
 - Flexibility and adaptability
 - Sharing knowledge and skills
 - Encouraging sense of local ownership
- Understanding vulnerability as an essentially historical social production
- Seeing climate adaptation as synonymous with and integrated into sustainable development
- Knowing that **'It ain't easy'**

7

Communications toolkit – summary contents

Vehicles of communication

People to communicate **with** – target audience (boundary partners)

People to communicate - oratory, appearance, comportment

Time and space – in which to communicate

Time and space in order to contextualise

Imagery and visualisation

Medias

Content

Evaluation strategy

Who

When

Where

How

What

✓/X

8

Vehicles of communication?

- Talks/lectures
- Participatory workshops, multi-scale
 - Roleplay exercises
 - Imagery, picture/storyboard, mental
 - Films, participatory video
 - Games
- E-mail, blogs, Internet websites
- Phone/videoconferencing
- Hardcopy letters, fact/news sheets, manuals
- Media - interviews, radio, television, newspapers

9

Boundary Partners

- Who are the groups touched by or involved in the project? Include yourself!
 - Directly
 - Indirectly
- What is their role? What are their agendas?
- How might your project impact on them?
- How might their role impact on other dynamics that might impact back on the project's outcomes?

10

The Right Communicator

- A good orator, speaks confidently, clearly and with compassion
- A good listener, patient, ready to take on board other people's views and perceptions
- Flexible thinker, adaptable to different types of people and changing attitudes
- Experienced communicator, used to dealing with people at the target level, not easily intimidated
- Has knowledge of language and customs/culture of target audience
- A friendly, caring person – cares about the issues and about how others receive them, demonstrates the human touch
- An honest person who has the existing trust and confidence of others

11

Good African communicators?



12

Best African communicator?



13

Best climate change communicator?



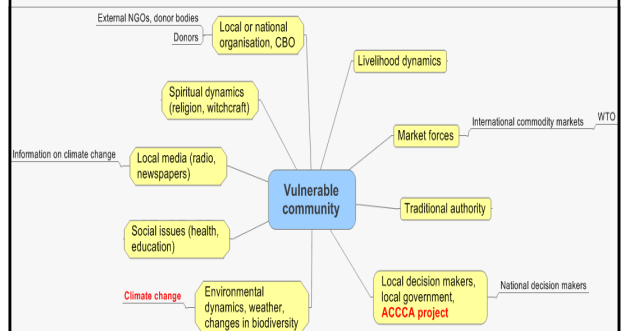
14

Time and Tangibility

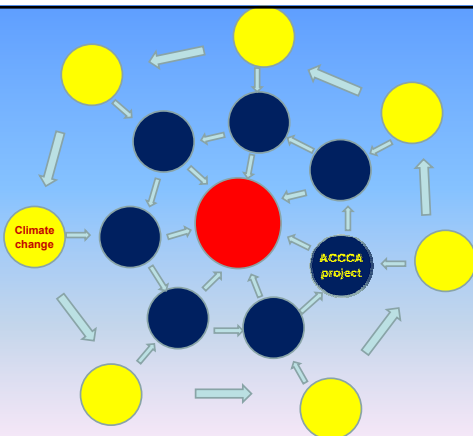
- 'Seeing is believing'
- Transcending the barrier between immediacy and longer-term planning
- How to make climate visible, bring forward
 - Memory
 - Imagination

15

Location of processes



16



17

How - Social Learning

- Two-way (double loop) learning
- Feedback – reaction and counter-reaction
- Receiving information as an enabler to process of imparting
 - Acknowledging receipt of information
 - Respecting information received
 - Valuing
- Participation as practice

18

How - Comportment Skills

- Speaking skills
 - Oratory
 - Eye contact
 - Behavioural aspects
- Attitude
 - Appearance
 - Demeanour
 - Receptivity
- The importance of positivity - SWAT

19

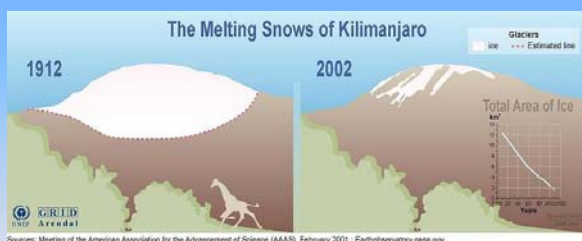
Imagery

Physical and metaphysical images

- Diagrams and photographs

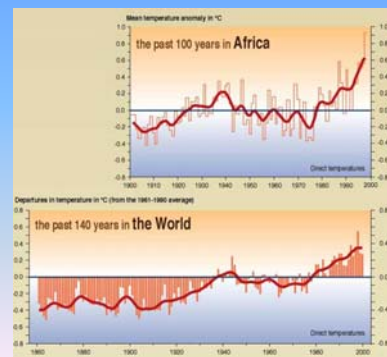
20

Easily understood? facilement compris?

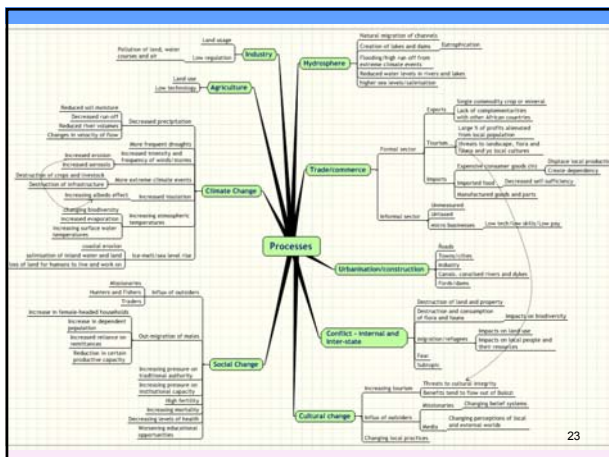


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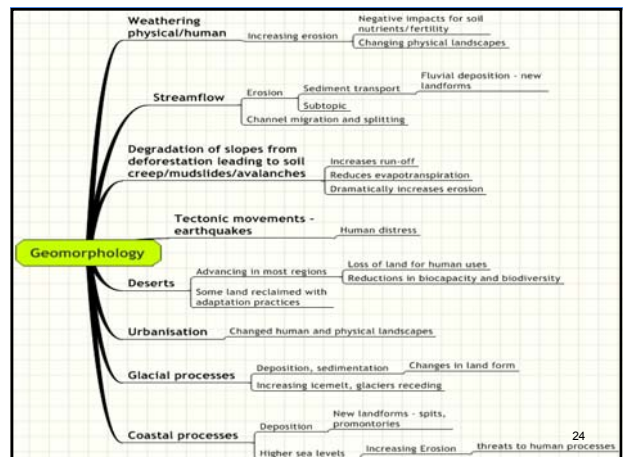
Compare and contrast?



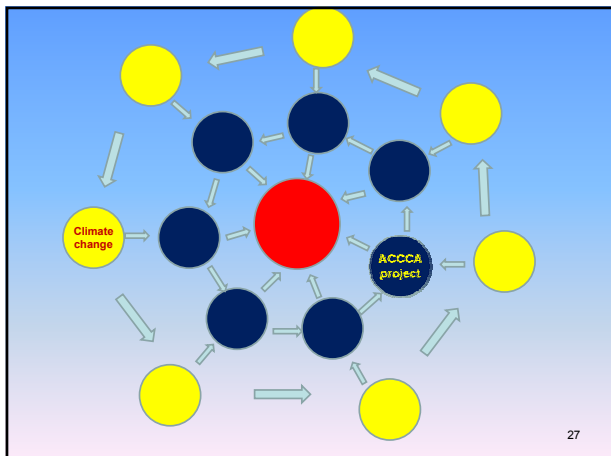
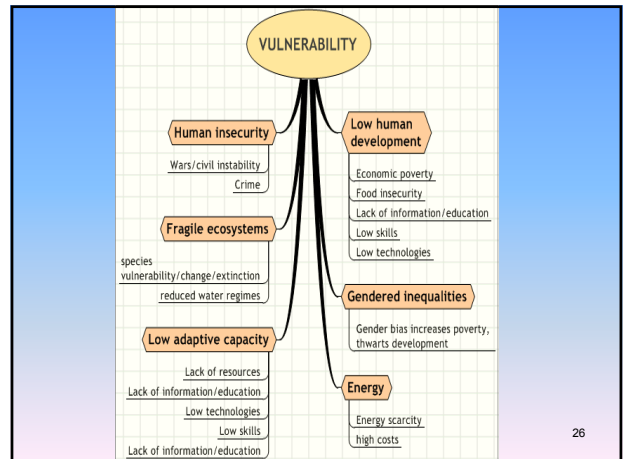
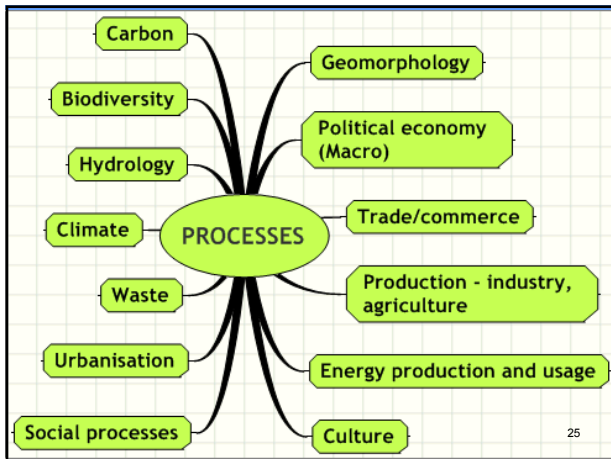
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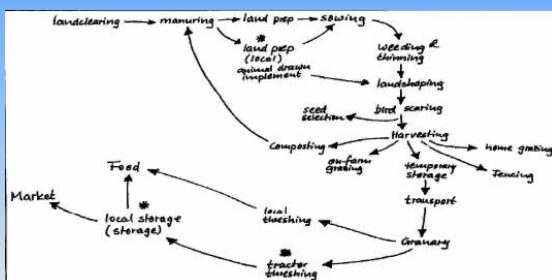
Imagery

Physical and metaphysical images

- Diagrams and photographs
- Use of imagination – mental imagery
 - Memory, recollection
- Visualisation and association
 - Storyboards
 - Participatory audio/video

28

Example of visualisation



Written translation of a symbolic system-presentation drawn by male villagers in Bassenko village, 20 kilometres from Ougadougou.
* Asterisks are farmers' perceived bottlenecks in the system

29

Use of imagery

- People learn more quickly and easily from imagery, physical and mental
- Keep graphics simple and easy to decipher
- Make all forms of imagery clear and quickly understandable
- Make sure the information is accurate and relevant

30

Employing the Media

- Controlled - invited
 - Attendance at workshops
 - Public education campaigns
 - Advertising
 - Interviews – radio, TV and newspapers
- Uncontrolled
 - Media coverage of events
 - Unscheduled interviews

31

Engaging the Media

- Opportunities and threats
 - Usefulness
 - How will a reporter re-interpret your message
 - What agendas do the media have?
- Which medias? Choosing carefully
 - The importance of newspapers and radio
 - Language
- Imagining the audience. Choosing the message according to the audience
 - Use of multiple mediums

32

What - Information

- The importance of doing sufficient research
 - Be qualitative as well as quantitative
- Accuracy of information imparted
- What to say
 - What are the important climate changes now and in the future?
 - How does this translate into risks?
 - Who will be affected and where (lives and livelihoods)?
 - Are there measures that can be taken to adapt to the situation?
- How much to say
- When to say it, to whom, and where

33

Evaluation

- Filter levels – self and receiver group, outside agents
- Does the receiver group feel that they have received information of use and value to them? It's worth asking them!
- Has the information they received been sufficient or insufficient in quantity and quality to get a basic understanding of dynamics and potential impacts?
- Does the receiver group feel able and willing to pass on the message/information to other stakeholder/user groups?
- Does the receiver group feel inspired to do something adaptive with the info received?

34



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Time and space in order to contextualise

Imagery and visualisation

Medias

Content

Evaluation strategy

Build communicative space and capacity - what and who is needed? Develop a flexible strategy based on active participation. Devise and agree a system for evaluation



CLIMATE DYNAMICS AND TRENDS IN SUB-SAHARAN AFRICA

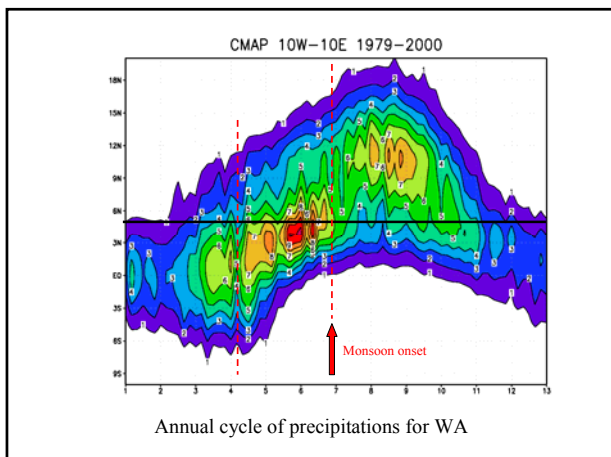
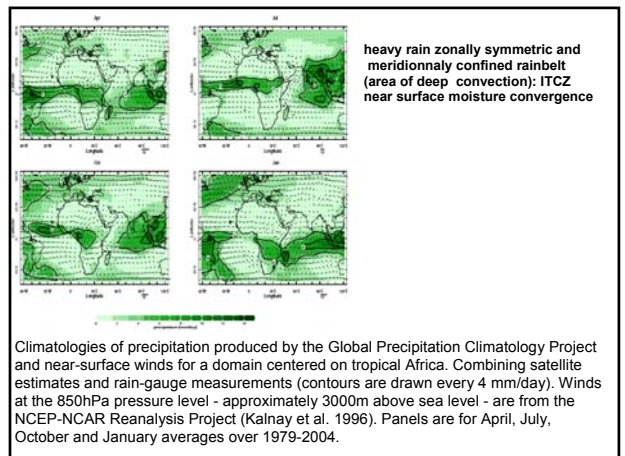
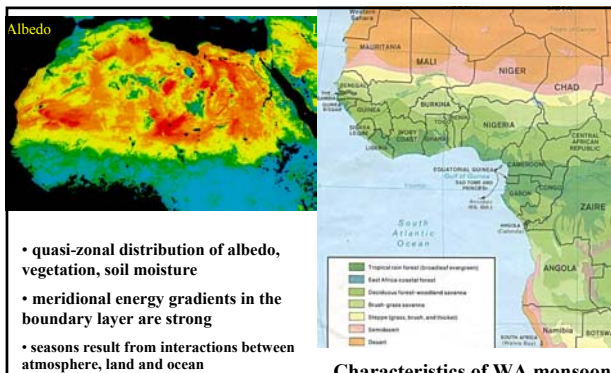
Amadou Thierno GAYE
Laboratoire de Physique et de l'Atmosphère et de l'Océan S. F.
Ecole Supérieure Polytechnique, UCAD
atgaye@ucad.sn

Features of African climate

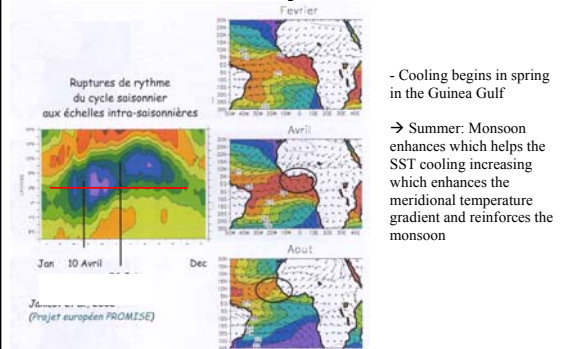
African climate connection to global climate

Trends in climate parameters and predictability of African climate

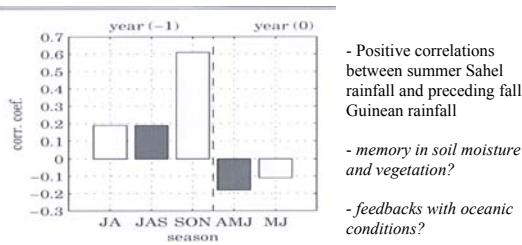
Climate change and future



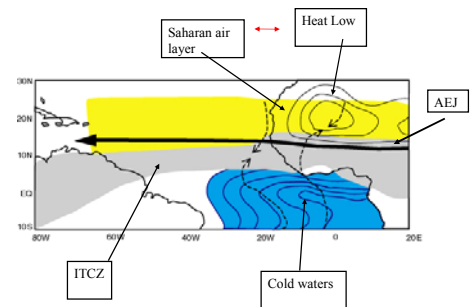
Ocean-atmosphere interactions in the annual cycle



Memory effects in the annual cycle?

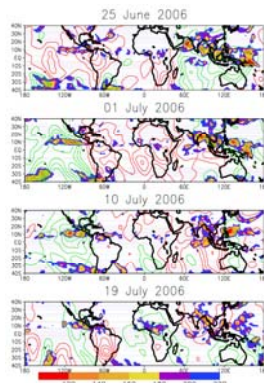


Heat Low and Saharan Dust Aerosols

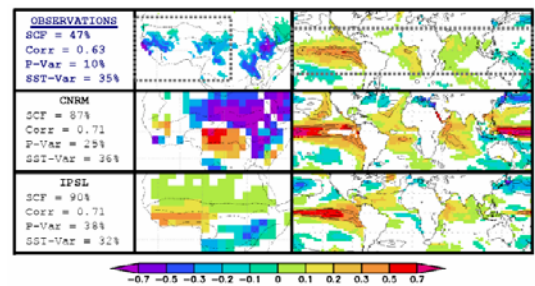


Regional versus Global mechanisms Monsoon onset in 2006

- Delayed onset (rains begin around 10 July 2006)
- Regional coupling with delayed upwelling in the Guinea gulf?
- Remote teleconnection / MJO event?
- How model represent the tropical teleconnections (forced by SST or internal variability)?

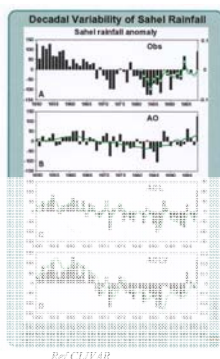


Interannual time scale



- **Figure:** First mode of co-variability between Sea Surface Temperatures and monsoon precipitation over West Africa. Here, the observed link over the 20th century (top) is compared to the CNRM and IPSL IPCC simulations (bottom).

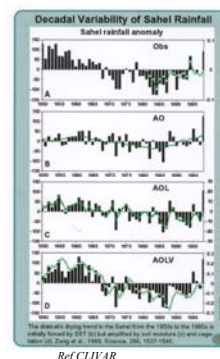
Impact of Ocean on Sahel rainfall



Precip. Sahel 1950-98

AGCM forced by observed SST

Impact Ocean - Vegetation



Precip. Sahel 1950-98

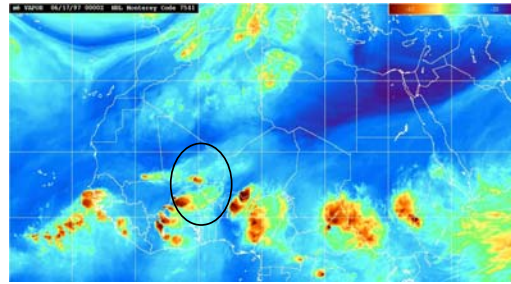
AGCM forced by observed SST

AGCM forced by observed SST
+ interactive soil moisture

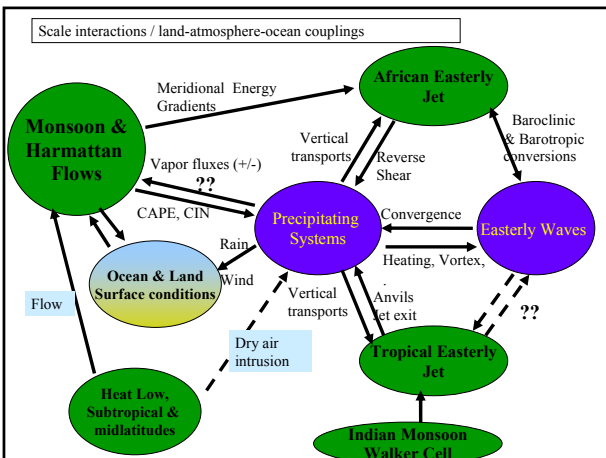
AGCM forced by observed SST
+ interactive soil moisture and
vegetation

- The dynamic of the WAM
- Convection and atmospheric processes
- Interannual and decadal variability
- Climate change

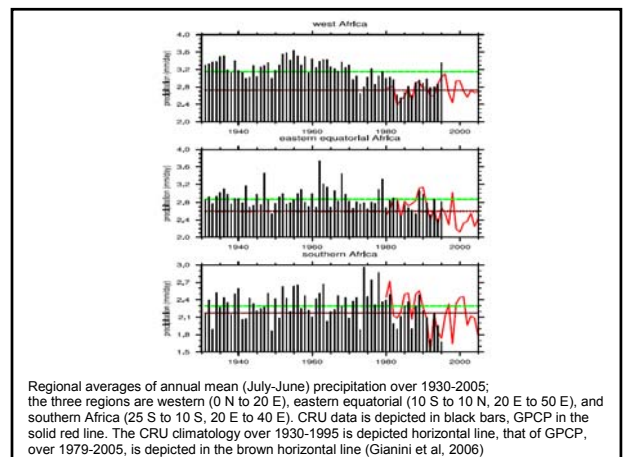
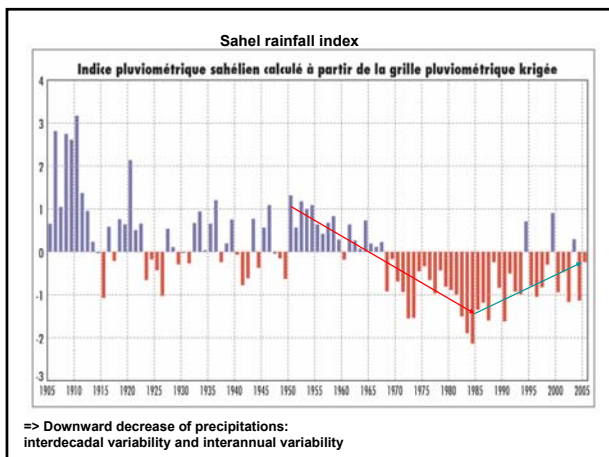
– Multiple scales associated with rain processes (Local, Mesoscale, synoptic (easterly waves))



Canal H2O METEOSAT
17 June 1997



- The annual cycle
- Convection and atmospheric processes
- Interannual and decadal variability
- Climate change



The largest regional precip deficit on last century

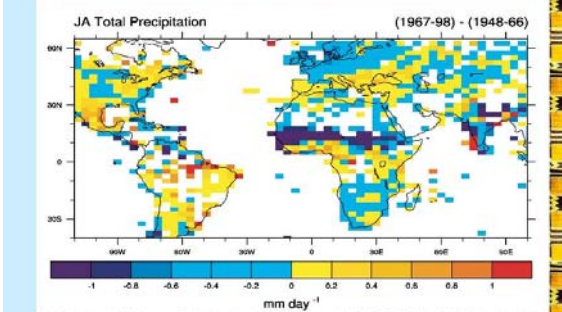
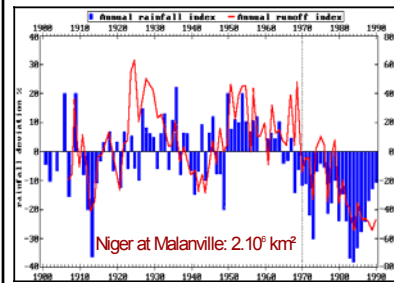


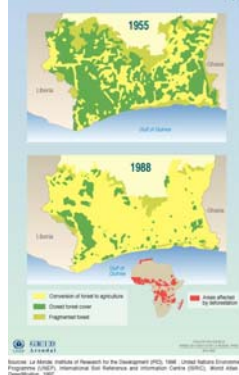
Fig. 3: The change in high summer (July-August) total precipitation (mm day⁻¹), 1967-1998 minus 1948-1966, estimated from land surface records ("g5560008.dat" constructed and supplied by Dr. Mike Hulme at the Climatic Research Unit, Univ. of East Anglia, Norwich, UK).

Fluctuation and deficits in rainfall have profound impact on African societies



- Hydrological systems amplify the impact of rainfall fluctuations
- Food production is linked to the rainy season (rainfed agriculture)
- Diseases or their vectors are controlled by climatic conditions

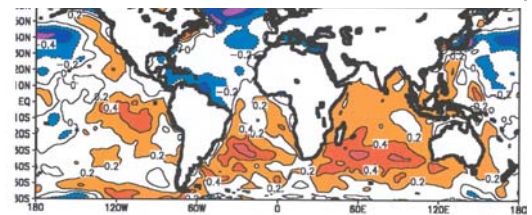
Deforestation in West Africa: Côte d'Ivoire Case Study



Natural ecosystems are affected

Example of deforestation in West Africa emphasizing the changes in Côte d'Ivoire between 1965 and 1988.

Sea surface temperature trend

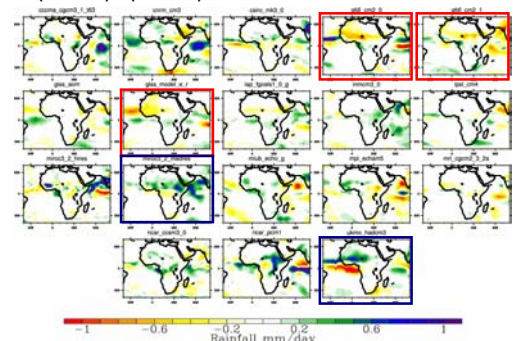


– The interhemispheric SST gradient linked to the Sahel drought

- The annual cycle of the WAM
- Convection and atmospheric processes
- Interannual and decadal variability
- Climate change

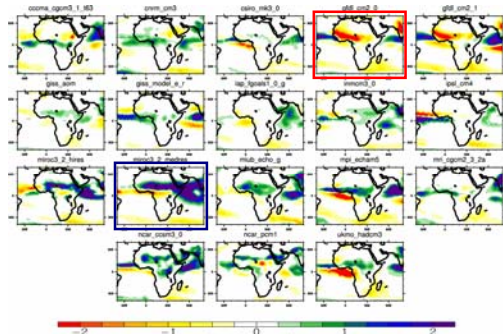
Simulated rainfall trend (20th century)

XX1 (1970-99) - (1950-69) JAS.



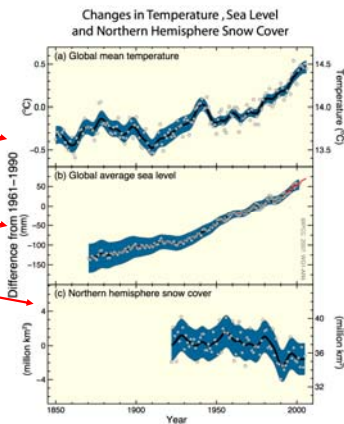
Rainfall change at the end of the 21st century

SRESA1B(2070-99) – XX1(1960-99) JAS.



Warming is Unequivocal

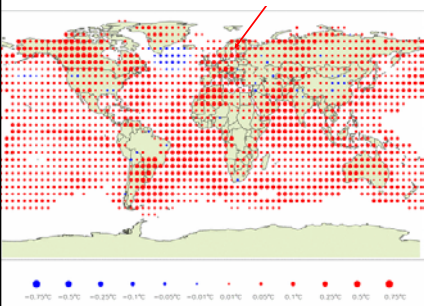
Rising atmospheric temperature



IPCC, 2007

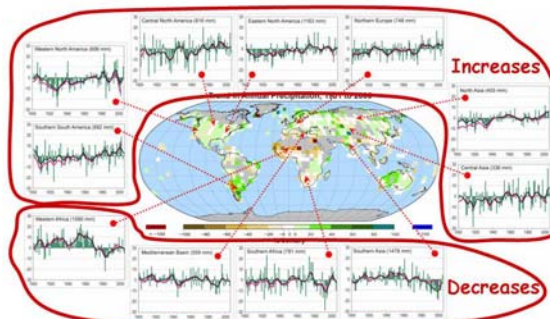
Global distribution of temperature change for June/July/Aug since 1880

<http://www.ncdc.noaa.gov/gcag/gcag.html>



• There are some exceptions to the general trends (land use?) and local ups and downs in individual years

Land Precipitation is changing significantly over broad areas



Smoothed annual anomalies for precipitation (%) over land from 1900 to 2005; other regions are dominated by variability.

A World of Drought

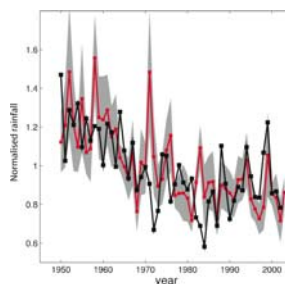


Many dry areas are getting drier as soils dry out.

Observed sea surface temperature (SST) and links to the pattern of rain in Africa?

SSTs and Sahelian rainfall have varied in the past.

Some studies suggest links now to the widespread ocean SST trends and global warming.

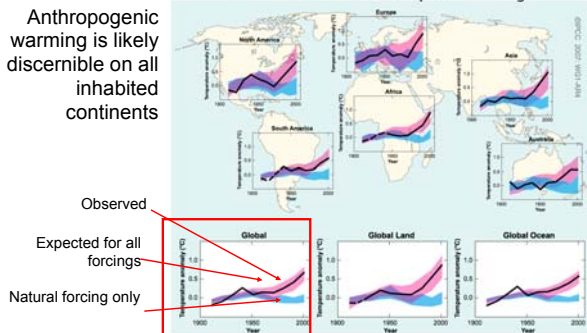


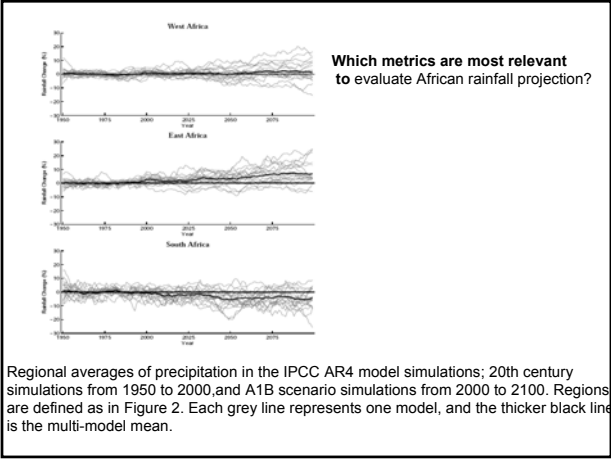
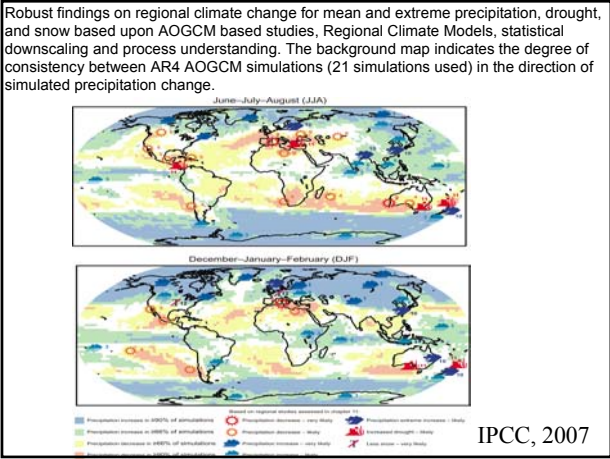
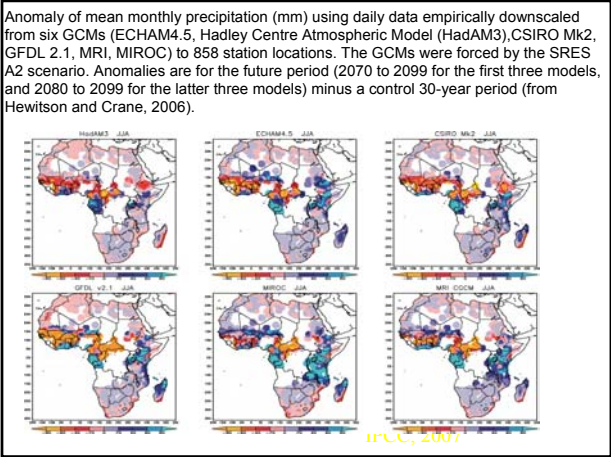
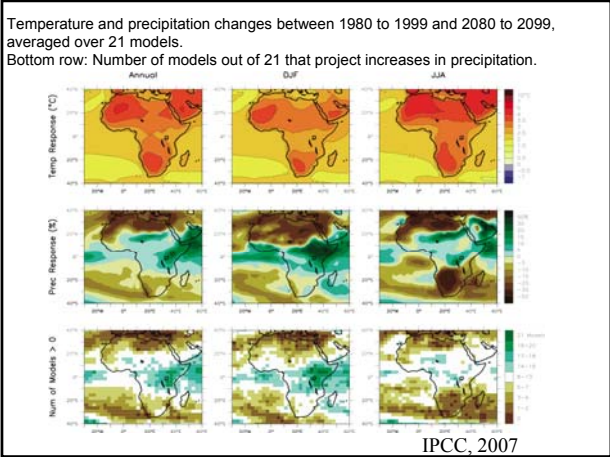
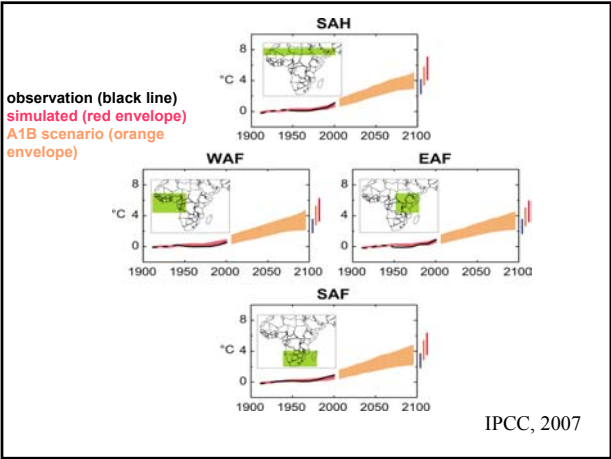
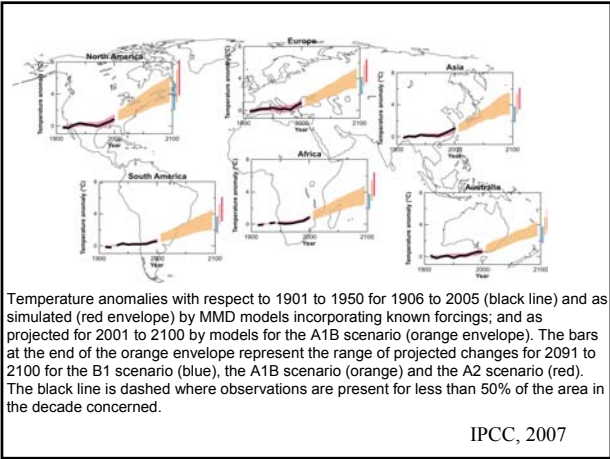
Sahelian rainfall decline is reproduced in many models

Understanding and Attributing Climate Change

Anthropogenic warming is likely discernible on all inhabited continents

Global and Continental Temperature Change





What we need now

- Improve our knowledge of the dynamic processes in all regional African climate (atmospheric, chemical, hydrological components), and of its dependence to ocean-atmosphere-land interactions
- Resolve difficulties of GCM to simulate the climate and its variability

MATRICE DE SENSIBILITE

Dr Boubacar FALL
ENDA-TM (SENEGAL)

Programme « Énergie, Environnement, Développement »

Exemple de matrice de sensibilité

	Risques climatiques				Indice d'exposition
	Sécheresse saisonnière	Sécheresse aiguë	Pluies intenses	Inondations	
Moyens d'existences					
Récoltes vivrières					
Récoltes de rente					
Bétail					
Indice d'impact					
Modes d'existence					
Petits exploitants					
Nouveaux exploitants					
Commerçants					
Indice d'impact					




enda

Exemple de matrice de sensibilité

	Risques Climatiques				Indice d'exposition
	Sécheresse saisonnière	Sécheresse aiguë	Pluies intenses	Inondations	
Moyens d'existences					
Récoltes vivrières	2	5	2	4	65
Récoltes de rente	2	4	3	3	60
Bétail	2	3	2	2	45
Indice d'impact	40	80	47	60	
Modes d'existence					
Petits exploitants	2	5	3	4	70
Nouveaux exploitants	2	4	3	4	65
Commerçants	1	2	3	3	45
Indice d'impact	33	73	60	73	




enda



Looking from the right angle

Outcomes from this session:

- Be aware of the complexities and simplicities in climate information
- Understand what can and cannot be done
- Comprehend limitations and strengths of different data
- See a way forward to working with incomplete knowledge



Principles: Approaching climate information with understanding

Climate change information is not derived from a single source:

- Multiple sources (Process change, historical trends, GCM simulations, downscaling (RCM and empirical), quantitative and qualitative)
- Multiple attributes (base variables, derivatives such as dry spell duration, combinatory processes, extremes, etc)
- Multiple scales (short-term to long-term, local to regional to large scale)
- Multiple contexts (source characteristics, error cascade, uncertainty and probability, with or without baseline climatology, conflicting results, etc)

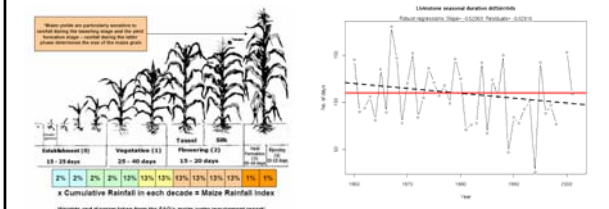
Information selection problems are compounded by:

- Variable ease of access
- Infrastructural constraints
- Missing metadata
- Data complexity
- Unknown or large uncertainty
- Communication and terminology barriers

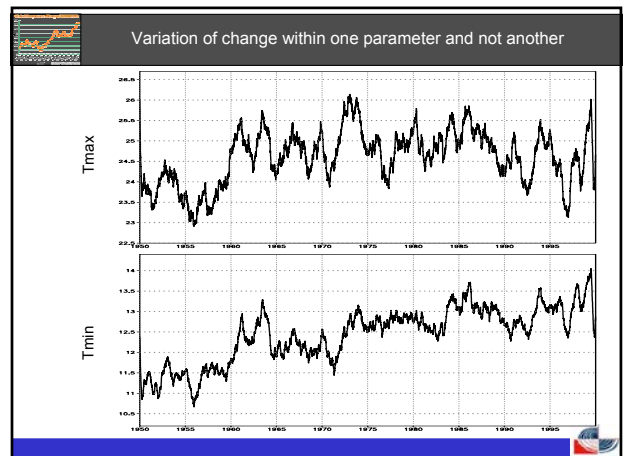

Case study – Calculating 1 risk for a rain-fed maize crop

Risk = f (hazard, exposure, vulnerability)

- Hazard = length of rainfall season
- Exposure = 1 rainfall station i.e. single location
- Vulnerability (biophysical) = need 110 days to grow maize




Weights and diagram taken from the FAO's maize water requirement report

Data attributes

- Arguably, in adaptation activities the historical data is most valuable for setting the context – what is the baseline envelope of the “normal” climate
- There is no longer a “normal” – the climate is a moving target
- Hence: How to define what is the relevant baseline?



Suggestions for handling historical data

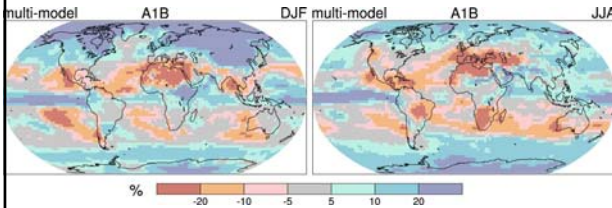
- Understand the metadata
- Quality control: Assess the data visually!
- Begin with aggregate measures: Averages
- Build to higher orders of variability (if relevant)
- Examine histograms ... look at shape vs thresholds
- Do the above for derivative attributes as well
- Be imaginative

Ask questions:

- What information can be taken as robust?
- Qualitative versus quantitative conclusions
- Do the conclusions make physical sense (don't rationalize away garbage)?
- Acknowledge it when something makes no sense

Given T & ppt, what, in your context, is the main restriction on data?

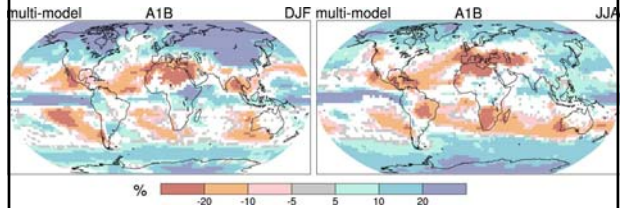
GCMs



Multi-model average precipitation % change, medium scenario (A1B), representing seasonal precipitation regimes, total differences 2090-99 minus 1980-99

After IPCC AR4: SPM 7

GCMs



White areas are where less than two thirds of the models agree in the sign of the change

After IPCC AR4: SPM 7

GCMs for climate simulation

- GCMs are NOT reality – they are a reduced complexity simulation of one possible time evolution in which the major features have a response to primary forcing similar to the real world
- No one GCM is “best” or “more correct”. The GCMs of 1990 have much in agreement with the GCMs of today
- GCMs are best at handling large scale processes
- GCM prognostic variables are more robust than diagnostic variables
- GCM single grid cell data is least robust– it is NOT valid at a point!
- Hence: *Precip (diagnostic variable) at a single grid cell is one of the least robust attributes of a GCM simulation!*

Downscaling - RCMs

Uses a high resolution limited area dynamical model forced at the boundaries by a GCM

- Can be moderate to high resolution (typically 25km – 60km grid)
- Based on fundamental physics (mostly)
- Usually only one or two driving GCMs, but may have ensembles
- Like GCMs, the single grid cell value is of low robustness
- Will not always have the variables of importance
- Does have local feedbacks (are they correct?)
- Is a spatially smoothed product compared to station scale
- Will often require management of large data files
- Introduces its own bias and error, etc

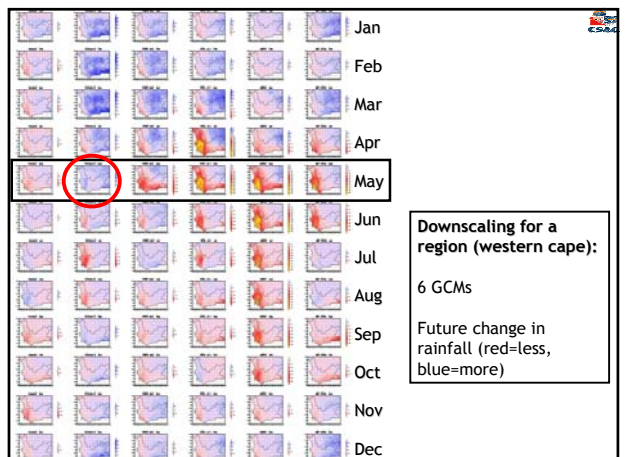
Downscaling – Empirical/Statistical

Uses the fact that local scale climate is largely a response to large scale forcing. As GCMs are arguably skillful at the large scale processes, allows derivation of local scales from predictor variables of the GCM

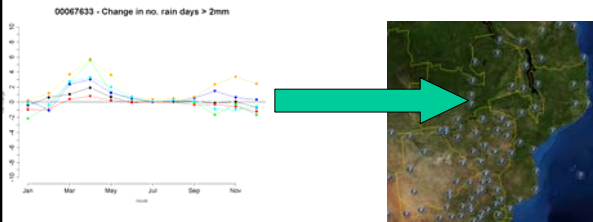
Should incorporate:

- Large scale forcing
- Residual variance (stochastic)
- Predictor variables of relevance and which carry the climate change signal

Is very good at capturing the first order response, but does not capture most feedbacks



Representing change at 1 location



Uncertainty and probability

Data are not TRUTH! There will only be one time evolution into the future, but many possible evolutions

Uncertainty may arise from many sources: structural, physics, knowledge gaps, feedbacks, non-linear behaviour, tipping points, etc.

Uncertainty DOES NOT mean nothing can be stated robustly
Distinguish between first order response and nuance

Based on available evidence, assess whether projected direction of change is robust, then assess magnitude of change

Summary of suggested approach

A: Characterize baseline observational climate as best as possible

- Station data
- Gridded data
- Measured parameters + derivatives

B: Characterize process change to inform understanding

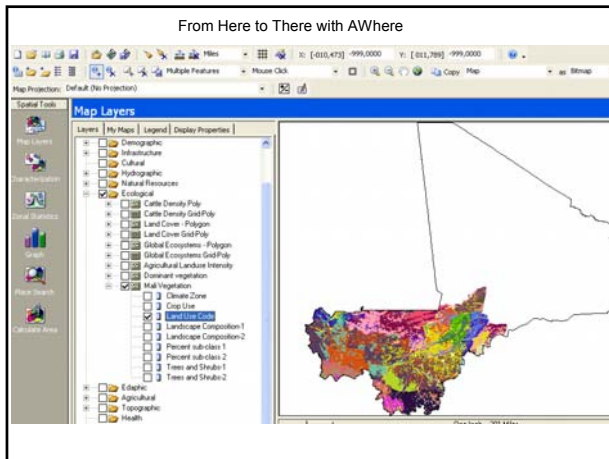
- Consider circulation change as a means to gain confidence in location-specific climate

C: Use as many models as possible

- Ideally, focus on model simulations run under common forcing

D: Downscale where possible

- RCM downscaling still problematic, empirical more robust



GIS-BASED TOOL USED FOR:

- ☐ VULNERABILITY MAPPING
- ☐ CLIMATE RISK MAPPING
- ☐ LOOKING FOR ADAPTATION OPTIONS
- ☐ MAPPING AND GRAPHING SURVEY INFORMATION

AWhere Spatial Information System

- ☐ Created by AWhere, Inc., formerly known as MudSprings Geographers
- ☐ Based in Denver, Colorado, USA.

AWHERE CONSISTS OF THREE COMPONENTS

- ☐ AWHERE MAIN PROGRAM
- ☐ ADDITIONAL INSTALLABLE PROGRAMS
- ☐ DATABASES

Presentation

- ☐ In the form of Geographic Information System
- ☐ Databases contain data on:
 - o Climate
 - o Hydrographic
 - o Agriculture
 - o Soils
 - o Infrastructures
 - o Topography
 - o Administrative boundaries, etc.

LIMITATIONS

- ☐ Commercial tool and is still under development
- ☐ Low data resolution when you zoom-in
 - ☐ Weak graph function
 - ☐ Instability
- ☐ Needs good computer memory

APPLICATIONS

- CHARACTERIZATIONS
- SURVEY INFORMATION MAPPING

Classification	Aridity Index	Global land area
Hyper arid	$AI < 0.05$	7.5%
Arid	$0.05 < AI < 0.20$	12.1%
Semi-arid	$0.20 < AI < 0.50$	17.7%
Dry sub humid	$0.50 < AI < 0.65$	9.9%

Crop	Crop water need (mm/total growing period)	Sensitivity to drought
Alfalfa	800-1600	low-medium
Banana	1200-2200	high
Barley/Oats/Wheat	450-650	low-medium
Bean	300-500	medium-high
Cabbage	350-500	medium-high
Citrus	900-1200	low-medium
Cotton	700-1300	low
Maize	500-800	medium-high
Melon	400-600	medium-high
Onion	350-550	medium-high
Peanut	500-700	low-medium
Pea	350-500	medium-high
Pepper	600-900	medium-high
Potato	500-700	high
Rice (paddy)	450-700	high
Sorghum/Millet	450-650	low
Soybean	450-700	low-medium
Sugarbeet	550-750	low-medium
Sugarcane	1500-2500	high
Sunflower	600-1000	low-medium
Tomato	400-800	medium-high

What do we mean by adaptation?

- i. Adjustments to provide the same "standard of service" under different climatic conditions
e.g. reliability of water supply, degree of protection against flood risk, food supply
- ii. Reorganisation to reduce exposure to loss or exploit new opportunities
e.g. change agricultural land use, change business



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Alternative definition

- Adaptation to climate change is an opportunity to build resilience in society, in institutions and in ecological systems



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Context of adaptation

- Adaptation is a social response to human and environmental vulnerability
- Effective adaptation to climate change must engage with all of the historical production of vulnerability that increasing climate dynamics are impacting upon.



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Argument

- The IPCC recognises different forms of adaptation but also states that there is little evidence that efficient or effective adaptation to climate change autonomously. Thus, intervention is necessary to enhance adaptive capacity or the ability to adapt to new or changing conditions... to lessen vulnerability or shift towards maladaptation.



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Adaptation occurs at different scales

- i. Individual / enterprise scale
e.g. the farmer
- ii. Community scale
e.g. Geographic / generic
- iii. National scale
e.g. change locations / types of production
- iv. Global scale
e.g. changes to global food market

Distributional / equity issues become more important as scale increases



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What are the limits to adaptation?

- i. Physical limits
**Change is so great that the impacted system is destroyed*
**Change is so great that it is physically impossible to reduce loss*
- ii. Financial limits
**It is too expensive to respond to the impact*
- iii. Feasibility limits
**Social and political constraints on options*
- iv. Capacity limits
**Limited institutional capacity to make adaptation decisions*

These are determined by economic, social, political and institutional factors:
They can **expand** or **contract**

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Variation of limits

Limits to adaptation vary

- By sector
- With physical conditions
- With economic / political / social conditions
- With scale

Limits to adaptation vary over time

- As economy / society / structures evolve
- As climate changes
- As constraints on adaptation change

Adaptation strategies, even where successful create winners and losers



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What happens if change is beyond the limits of adaptation?

- "Take the hit":
 - *Accept altered circumstances*
- Make a radical change:
 - *Alter priorities*
 - *Relocation*

Population movement and migration is the most common and effective form of adaptation in the world today. It plays an important role in livelihood resilience



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Typology of adaptation

- Adaptation to physical processes
- Adaptation to social and economic practices, processes, skills, knowledge, resources
- Adaptation to cultural and psychological ideas and capacity – adaptation of the mind



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Adaptation of the mind

- Morale
- Belief in self/community abilities
- Belief in others' abilities/agenda
- Spritual/cultural issues
- Motivation – belief in causes
- Inspiration
- Volition
- Possible to build metaphysical capacity?



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Conclusion

- Adaptation is a highly imprecise and vague term
- It can be defined in physical and metaphysical ways that are interdependent
- It is contested in conceptual value across class, gender, income level, ecological conditions and climatic scenario
- The outcomes of adaptation may create differential results for interest groups who are directly or indirectly linked to the adaptation process



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Adaptation Challenge 1

- Define climate problem
- Describe trend of problem
- Delimit geographical extent
- Say what socio-economic ecological constituencies are affected
- What are the risks?
- Suggest possible adaptation strategies
- What risks are attached to these adaptation strategies?



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Adaptation Challenge 2

1. Vision
2. Mission – refer to vision
3. Objectives – refer to mission
4. Methodology
5. Activities
6. Projected outcomes – refer to objectives
7. Evaluation – refer to 1-6 above

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ACCCA

SEI STOCKHOLM ENVIRONMENT INSTITUTE

Gender and Climate Change Adaptation

enda

UNITAR

START

Adaptation


Why Gender?

- IDRC priority (along with PAR and knowledge sharing)
- ACCCA priority to:

“Increase the resilience and well being of groups in developing countries of Africa that are particularly vulnerable to climate change and other environmental stresses”

Defining Gender

- The socially constructed identities
- The beliefs that have shaped how men and women have been valued, classified and assigned roles and expectations over time
- The unequal relationship between men and women



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Key Issues

- Vulnerability and adaptation are largely social issues
- Decision-making and access to information are key to adaptation decisions
- Environmental impacts are not gender neutral

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How do these imbalances exist?

- In many developing countries, women are responsible for **fetching water and firewood** – tasks that become ever more burden some and time-consuming due to widespread environmental changes.
- Climate change will also affect **people's health**, and it is women who look after their children and elderly family members when they are sick. If such demands on women increase, they will, for example, be less able to pursue income-generating activities.
- Poor women's lack of access to, and control over, natural resources, technologies and credit mean that they have fewer **resources to cope** with seasonal and episodic weather and natural disasters.

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Challenges to gender-sensitive adaptation

- Women are not a homogeneous group
- There are no gender-sensitive analytical tools for climate change adaptation
- The capacity of other stakeholders to handle gender issues



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Moving forward



- Clear gender goals
- Develop/adopt indicators of gender impacts
- Identify data sources and techniques to obtain relevant gender disaggregated data at various stages of the project
- Take steps to ensure women's participation

IDRC CRDI DFID


Adaptation

Adaptation aux changements climatiques en Afrique par la recherche et le renforcement des capacités

Le « outcome mapping » dans la planification de l'adaptation

Présentation à l'atelier ACCCA,
Dakar, 15 novembre 2007

Nathalie Beaulieu, Administratrice de programmes, ACCA
Centre de recherche en développement International (CRDI)




Canada

IDRC CRDI

Le Outcome Mapping (OM)

- ▶ Traduction française: Cartographie des incidences ou Évaluation pour le changement (EPS)
- ▶ Une approche de suivi et évaluation
- ▶ A une forte composante de planification (étape de définition des intentions)



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Particularités du OM (p/r au cadre logique)

- ▶ Est axé sur les changements de comportements
- ▶ Les incidences (*outcomes*) sont les changements de comportement désirés pour les partenaires que l'on cherche à influencer (partenaires limitrophes ou *boundary partners* en anglais)
- ▶ On n'essaie pas de faire un lien linéaire entre une activité et ses incidences,
- ▶ On suit séparément les stratégies (ce que fait le projet) et les incidences (ce que font nos partenaires limitrophes)
- ▶ On considère que le projet fait une contribution aux incidences et on n'essaie pas de définir la part d'attribution au projet



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Étapes de la définition des intentions (*intentional design*)

- ▶ 1-Vision
- ▶ 2-Mission
- ▶ 3-Identifier les partenaires limitrophes
- ▶ 4-Défis de changement
- ▶ 5-Stratégies
- ▶ 6- Marqueurs de progrès
- ▶ 7-stratégies pour le rendement organisationnel



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Comment peut-on l'utiliser dans la planification de l'adaptation?

- ▶ Pour identifier la chaîne des incidences nécessaire pour toucher le bénéficiaire final
- ▶ Pour réfléchir sur quels changements de comportement sont nécessaires pour l'adaptation à des aléas (*hazard*) donnés
- ▶ Pour identifier les stratégies nécessaires par chacun des acteurs pour arriver aux incidences recherchées (définir les rôles et les responsabilités)



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Pour tenir compte de l'incertitude de l'avenir, il faut combiner cette approche avec d'autres

Par exemple:

- ▶ Identifier les aléas
- ▶ Identifier les vulnérabilités aux aléas, et les groupes les plus vulnérables
- ▶ Considérer différents scénarios du futur
- ▶ Explorer différentes stratégies pour chaque scénario ou chaque aléa



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Rappel: les questions clé apportées par OM:

- Qui cherche-t-on à influencer?
- Qu'est-ce qu'on attend de ces personnes ou organisations?
- Comment s'y prendra-t-on pour les influencer?

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En plus de la planification, le Suivi et évaluation peut être utilisé pour l'apprentissage

- Nous croyons que le S&E peut être utilisé comme outil pour renforcer la capacité d'adaptation

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L'apprentissage dans un contexte d'adaptation

Conditions actuelles

Conditions désirées

Action

Suivi

Évaluation

Apprentissage

Réflexion

Planification: Définir les conditions désirées et les moyens pour y arriver

Suivi: définir les conditions actuelles et les moyens mis en œuvre

Évaluation: comparer les conditions actuelles aux désirées

Apprentissage: Ajustement des moyens mis en œuvre pour se rapprocher plus efficacement des conditions désirées

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Adaptation

DFID Department for International Development

Adaptation aux changements climatiques en Afrique par la recherche et le renforcement des capacités

Merci de votre attention!!

Canada

ANNEX IV: RESULTS FROM THE WORKSHOP EVALUATION



Inception Workshop

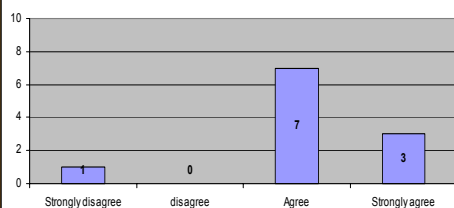
14-16 November, Dakar, Senegal

Evaluation Synthesis

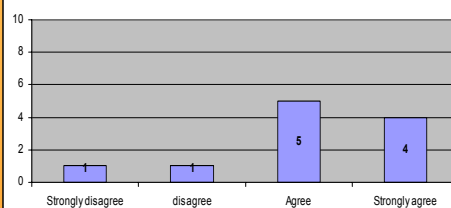


General Workshop

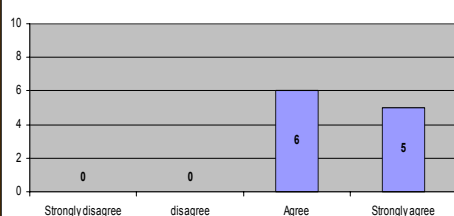
Q.1: The workshop was well structured and organized



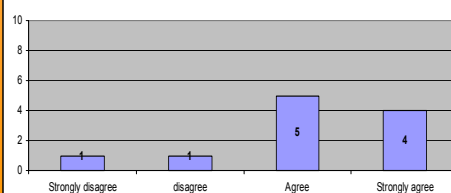
Q.3: The materials and documents were resourceful and clear



Q.2: The logistic was well organized



Q.4 The materials and documents will be useful in finalising and implementing your project





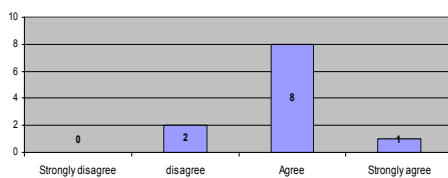
General Workshop

- In general, participants were satisfied or very satisfied with the structure, organization, and logistics of the workshop. Some participants thought the roadmap of the workshop could have been better explained at the beginning (Q1 & Q2).
- Most participants were satisfied or very satisfied with the material and documents that were distributed before and during the workshop. One participant said that the materials were too superficial and had little substance (Q3 & Q4).

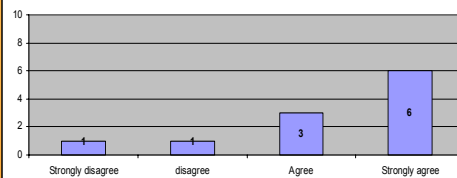


Workshop Sessions: Communication

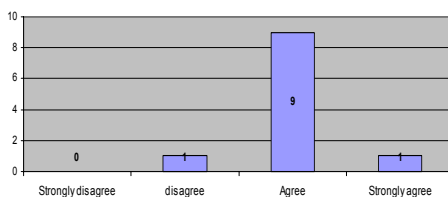
Q.1: The theory on risk communication was clear and appropriate



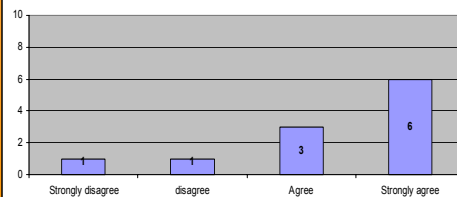
Q.3: The discussion and the role-play exercise were useful and helpful in better understanding the theory on communication



Q.2: The theory on communication strategy was clear and appropriate

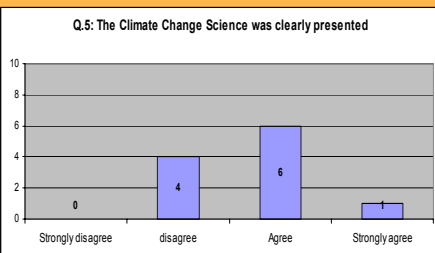


Q.4: The session on Communication was well structured





Workshop Sessions: Communication

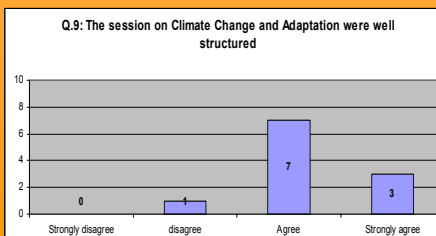
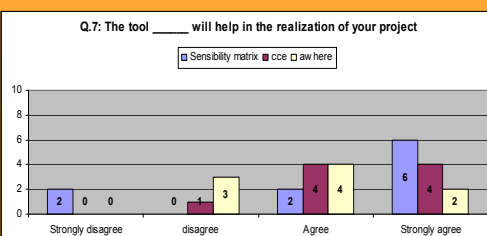
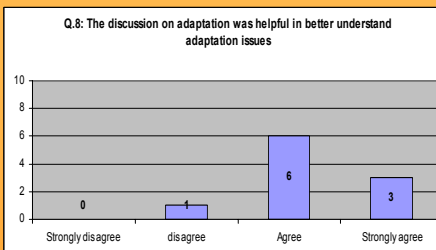
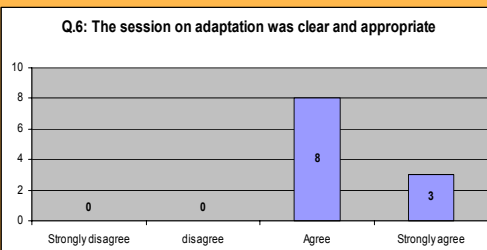


• In general, participants were satisfied with the risk communication and communication strategy theory, although some participants, argued that the purpose of the session was not clear. It was also suggested that there should have been more discussion about the different communication tools. One participant also thought there was a lacked of substance in the theory presented (Q1 & Q.2).

• 7 participants were satisfied or really satisfied with the role-play exercise, while 4 participants were not satisfied with it. Some participants failed to understand the explanations of the exercise and others did not understand the purpose of it. Some participants also suggested that more time was needed for discussion after the exercise (Q.3 & Q.4).



Workshop Sessions: Climate Change Science & Adaptation





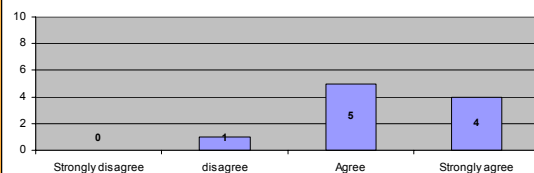
Workshop Sessions: Climate Change Science & Adaptation

- 4 participants were not satisfied with the session on climate change science. 1 participant pointed out that the presentations were too complicated and another participant argued that more time was needed for the presentations and for practical application (Q.5).
- All participants were satisfied or very satisfied with the session on adaptation (Q.6 & Q.8).
- Overall, participants were satisfied with the tools that were presented. Some participants suggested that each team will use different tools in the realization of their action, but not all. This explain why all tools have unsatisfactory rates (Q.7).

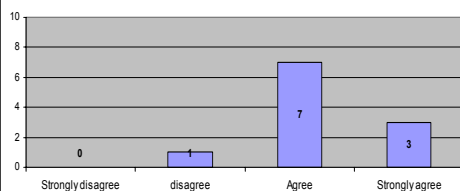


Workshop Sessions: Project Planning

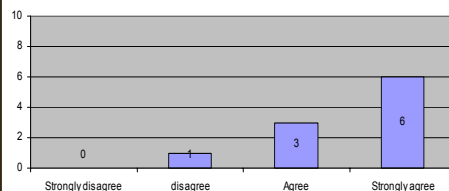
Q.10: The project development session was very helpful in advancing you project workplan



Q.11: The training on project planning was clear and appropriate



Q.12: The session on project planning was well structured





Advancing Capacity to Support Climate Change Adaptation



Workshop Sessions: Project Planning

- Most participants were satisfied or very satisfied with the training on project planning. Some participants suggested that this session should have been presented at the beginning of the workshop. One participant would have like to have had more details on how to carry out evaluations (Q.11 & Q.12).



Advancing Capacity to Support Climate Change Adaptation



Overall Workshop Evaluation

- In general, participants found the workshop fruitful and useful. They underlined the importance of capacity building and described the workshop as an eye opener to different climate change concepts. They also pointed out that meeting the other pilot action teams and the facilitators was a great opportunity .
- It was suggested that goals should be made clear from the beginning. One participant also argued that the experience and knowledge inherent to the participants was not drawn on. Finally, one participant said there was a lot of information given for a three-day workshop