ICTs, CLIMATE CHANGE AND DEVELOPMENT WORKSHOP
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This summary document reflects the ideas, inputs and feedback received from participants attending the "ICTs, Climate Change and Development" workshop held in January 2012. Further details of the workshop, including timetable and copies of presentations and posters can be found at: http://www.niccd.org/workshop2012.htm

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Working Groups/Plenary Discussion Notes Compilation

Overview Concepts for Understanding ICTs, Climate Change and Development
e-RESILIENCE

Good:

- Holistic, practical and easy
- Able to address vulnerabilities and convert them into opportunities
- It's a good model for using a bottom-up approach.
- Practitioners can benefit from it, understand what ICTs can do.
- Covers different issues (complex)
- Because it is intuitive, becomes holistic and it can be used for educational and advocacy purposes (e.g. go to a community and explain) and decision makers.

Use:

- Useful to design ICT4D proposals.
- Planning, evaluation and implementation of projects.
- Distributing information in a friendly way
- Opportunity, guidance to put into action.
- Good methodology for writing/designing ICT project proposals
- Multi-scale linkages: It can be used at three levels (micro, meso and macro), linking grassroots, research and advocacy.
- Risk management approach/complex systems theory- It can be used for research complex systems.
- Useful for advocacy and learning

Change:

- Does not consider real-world scenarios
- Need to consider local language and local knowledge in the application of

ICTs. Reflect local appropriation of communities, and their participation in projects
- Change its name to "Opportunity Model", so it's easier to understand.
- Model should include risks and assumptions.
- Where does the role of markets fit? Vulnerability dimensions?
- Governments are slow in decision-making processes- Would that be considered within diversity and flexibility?
- Vulnerabilities need to be made more explicit, more analytically divided (e.g. examples such as deforestation, rare metals markets, etc)
- Incorporate the 'application areas' section of the Overview Model into the vulnerability dimensions.
- Consider the risks that apply to different contexts of implementation.
- Gender dimension also needs to be made more explicit as part of vulnerabilities.

VALUE CHAIN MODEL

Good:

- Very useful framework. Mapping projects with the value chain model and e-resilience can make mapping of projects more integral.
- Provides scope for project implementation, research, monitoring and mapping.
- The operationalisation of the framework is doable/easy.
- The linkages between the various steps are well-defined, making the process clear to ensure impact.
- It indicates the steps, process and adoption in using ICTs in climate change and development.
- It is rooted in theory, but it can easily be operationalised at all levels of the project
- It is logical, sequential, easy to understand intuitively, and not too simplified (like other models).

Use:

- The model helps in project management (from planning to M&E) and policy advocacy based on field lessons. It can be used to see what is 'going wrong' with projects.
- Proposed to use it in ongoing work on weather and climate forecasting initiative.
- It can be used in the analysis of case studies in the future.
- Assessing and conceptualizing funding applications
- Checklist for preconditions of success
- Monitoring progress

Change:

- Value chain model needs to integrate e-Resilience framework under the "Uptake" component
- Instead of treating climate change impacts/opportunities as exogenous, it

could be the starting point of the model.
- Add to box 1 of precursors: national written policy (on ICTs and climate change), political environment and awareness of cc among the population
- Awareness of issue being addressed (climate change impacts)
- In box 3 add: access to ICT education. More emphasis on education, not only institutional support.
- Interaction between ICTs and climate change is not clear in the process (i.e. the linkages with opportunities for cc action is not clear).
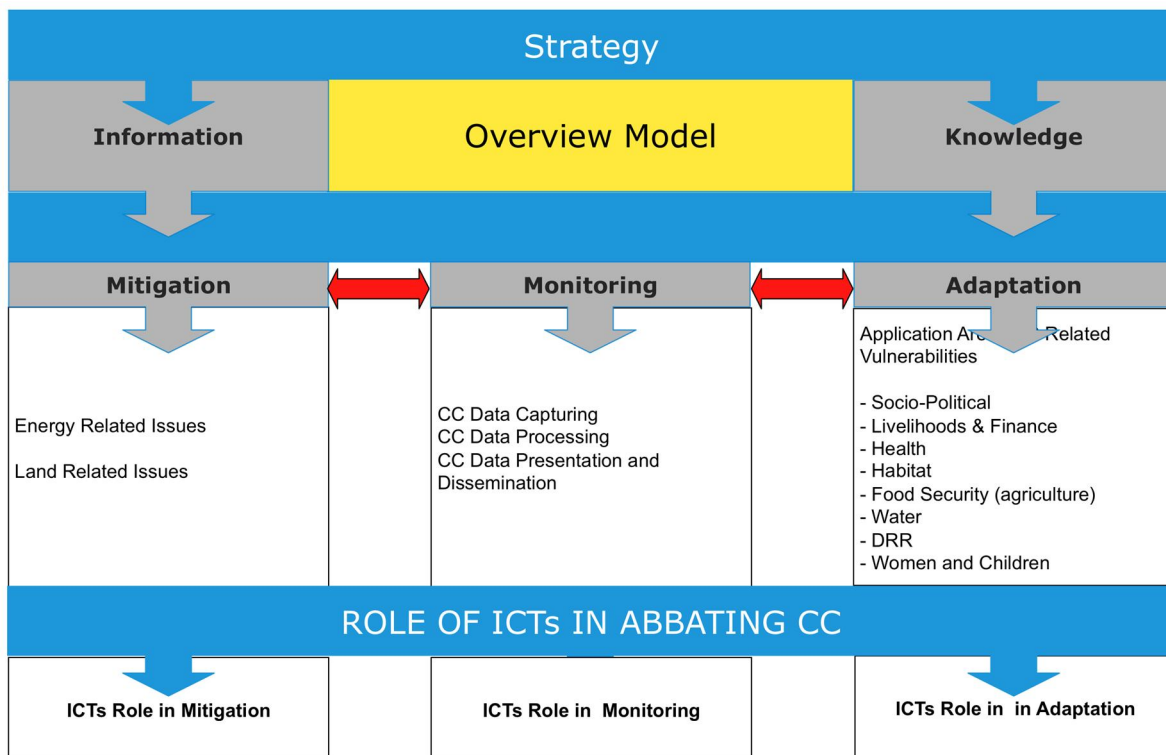
OVERVIEW MODEL

Good:

Easy to explain, to use and understand.

Use:

Use it to clearly indicate the area we contribute to.

Change: *(suggested alternative model)*

Strategy

Information | Overview Model | Knowledge

Mitigation | Monitoring | Adaptation

Energy Related Issues

Land Related Issues

CC Data Capturing
CC Data Processing
CC Data Presentation and Dissemination

Application Area Related Vulnerabilities

- Socio-Political
- Livelihoods & Finance
- Health
- Habitat
- Food Security (agriculture)
- Water
- DRR
- Women and Children

ROLE OF ICTs IN ABBATING CC

ICTs Role in Mitigation | ICTs Role in Monitoring | ICTs Role in in Adaptation

ICTs AND CLIMATE CHANGE MITIGATION

Key Issues

- Affordable access (Phones are expensive- Governments should paid. From UNFCC/CDM?)
- Internet must be free/cheap cost
- Lack of skill, manpower and know-how (low education levels)
- Government's apathy, lack of plans.
- Energy efficiency
- e-waste
- Government incentives
- Awareness raising
- Funding
- Lack of enabling environment
- Lack of knowledge on ICTs and mitigation
- User-friendly ways to spread information
- Collaboration between stakeholders.
- Low cost IP
- Implementation of strategy

Key Action Priorities

- Cooperation between NGOs and governments to co-fund projects
- Energy efficiency in new products, efficient use of ICTs.
- Increasing the access to energy for most people
- Effective and efficient energy plan (energy efficiency)
- Infrastructure and resources
- Public awareness
- e-waste policy (management)
- Introducing environmentally friendly, renewable energy practices
- Travel substitution, dematerialization, smart transportation.
- Mitigation strategy.

ICTs AND CLIMATE CHANGE ADAPTATION

Key Lessons

- Importance of development of content and awareness programs contextualizing them to local needs and challenges of communities: 'adapt' the adaptation approaches to local needs.
- Importance of linkage with income generation.
- The assessment of community needs and capacities helps to develop appropriate ICT strategies for adaptation.
- Appropriateness of technologies (i.e. context-specific, suitable technologies according to specific user groups).

- Producing local-specific information in appropriate formats
- Address local problems; produce local content and knowledge (locally relevant).
- Interventions should be linked to income generation activities as an incentive.
- ICTs can be used to mobilize communities during climate extremes.
- Interventions need to be sensitive to local information and communication needs, challenges and dynamics, and have local participation (ownership).
- Application of ICTs: increased productivity and reduced vulnerability.
- Advice on seeds varieties, water availability, good practices and weather via radio, SMSs, face-to-face, early warning systems and satellites.
- Need 'infomediaries' for the information to be understood, to increase productivity and reduce vulnerability.

Key Action Priorities

- Invest in collaborative preparedness of communities/countries through knowledge/best practices, and action oriented activities in the ground.
- Action research in the field, with community participation.
- Conduct first a participatory assessment of development priorities, focus on identifying key climate change related issues.
- Bi-directional communication between local level and national/international levels.
- Respect for local knowledge.
- Evolving a set of guiding design principles that are fairly generic, but that can be customized to specific contexts in implementing ICTs and climate change initiatives.
- Understanding pastoral needs and choosing appropriate technologies.
- Lack of hardware and knowledge on how to use it (also needs to be linked)
- Community participation
- Traditional Knowledge- strategy to integrate it.
- Issues of scalability and sustainability.
- Establishing linkages with markets, showcasing benefits and addressing knowledge needs.

Key Questions

- Developing integrated action research programs for few selected communities in select areas, in order to derive tools and mechanisms to propose to be adapted at a larger scale.
- Participatory research to identify relevant ICT application needs in community adaptation.
- Identify methods for producing reliable, replicable and cost-effective results.
- Role of institutions in ICTs and community based adaptation to climate change.
- Issues related to scalability and sustainability. What are the barriers to scale-up?
- How to document and disseminate indigenous adaptation knowledge? (ICTs are efficient tools).
- What have been the impacts of ongoing ICTs and climate change adaptation

interventions in different contexts?

- What are some of the barriers for scaling up these interventions?
- Identify points to incentivize ICTs and climate change adaptation projects
- How do you enhance sustainability?
- Follow-up studies for after project ends –is progress sustained later, and if not, why not?
- What kind of governance mechanism is necessary to sustain resilience and gains?
- In general, what is the role of governments to sustain the use of ICTs in adaptation?
- Studies to determine long term impacts
- Role of institutions and governance in the sustenance of ICT approaches

STRATEGIC NATIONAL ACTIONS

Key Lessons

- Importance of stakeholder participation and involvement (e.g. different Ministries, private sector, civil society, academics, etc), and common language.
- Using existing infrastructure and practical approaches.
- Importance of institutional coordination ensuring the policy process is inclusive and participatory (multi-stakeholder approach)
- There is a lack of integrated policy guidelines in the majority of developing countries
- There are challenges and gaps in the ICTs, climate change and strategic implementation for long-term impact.
- Current lack of coordination on ICTs and climate change issues.
- Importance of ICT tools and energy related issues. There are lots of potentially useful tools and technologies in both ICTs and energy, some maybe currently too expensive for ICT4D (e.g. biosensors for deforestation and urban planning, fuel cells with biogas from agro/food waste). However, these aren't as widely disseminated as they should be (i.e. separate silos), so we should keep an "open mind".
- It is necessary to consider both efficiency optimization in (a) converting existing infrastructure and (b) designing new structures (e.g. urban transport systems).
- There is a lack of energy and environmental metrics (i.e. indicators) for ICT operators (e.g. informing for example when to replace hardware).
- Need for a holistic integration of participatory communication and ICTs into national climate change policies.
- Need for a systematic, integrated and coordinated institutional communication for meaningful impacts on cc mitigation and adaptation

Key Action Priorities

- Industry standards for ICTs
- National Task Force with representatives from all sectors to develop and

implement ICCD strategies
- Create awareness on climate change and the role of ICTs at all levels
- Reduce the gaps between the different groups interested in climate change (i.e. scientists, government decision-makers, civil society)
- Review/improve national documents on ICTs and climate change policies
- Integrate ICTs in a 'national Blue Print Climate Change Policy', planning and implementation (including M&E)
- To develop an integrated policy and action guidelines for national level implementation, in order to avoid the 'piece meal' approach and apply ICT and climate change strategies to all stakeholders, with accountability.
- Coordinating body at high-government level, with various Ministries (ICT, environment, etc) responsible for implementation.
- Integration of education and gender equality issues into the agenda.
- Sharing good practices and research results so they are 'global' (through establishing a worldwide body, civil society has a role in sharing information and creating positive policies (especially at the national level), more investment in research –both technical and policy oriented-, 'moving from words to action', and by (possibly) putting pressure on private companies for cheap technologies for development)
- In response to the above, development of a systematic evaluation methodology of environmental costs and benefits (within the ICT sector or in general).
- Integrated policy in order to avoid a 'piece-meal' approach. Importance of institutional coordination and multi-stakeholder approach.
- Frameworks and guidelines to develop policies.
- Mainstream ICTs and climate change into policy approaches
- Need to use a common language that people in rural areas also understand.
- Industry standards

Key Questions

- General lack of awareness and capacity in the industry.
- Industry standards for environment-friendly materials in developing countries.
- Identify pathways for mainstreaming climate change and ICTs
- What are the processes, outcomes and lessons learned of ICTs integration into national and regional climate change planning?
- To develop guidelines and policy frameworks which could be adopted nationally, regionally and internationally in order to develop policies.
- How do you finance such coordination, or how do you get it to happen?
- How to create a collaboration platform?
- What mitigation and adaptation solutions are already present in local communities in the South?
- Responding to the lack of energy and environmental metrics for ICT operators, develop indicators and a technical agenda in this regard (best carried out by independent university-based researchers).

GLOBAL AND REGIONAL POLICY PROCESSES
-Plenary Brainstorming Session-

Processes & key players identified:
- COP
- Rio + 20 –June 2012
- IGF (Internet Governance Forum)
- IGF Prep-Comm
- Arab IGF
- National / Regional IGF meetings
- 1992 World Summit
- OECD
- MDG Review Meeting
- UNEP (ICTs)
- Cooperative Sector (upcoming Montblanc meeting)
- WSIS Forum- May, Geneva
- UNISDR – UN process on disaster reduction
- MDG review meeting 2015

Regional:
- LAC e-Waste (Relac)
- e-waste LAC
- Regional COP and Rio +20

Distribution lists:
- UNISDR
- NICCD Project (ICTs, CC & Development)

Other issues mentioned:

- ICT tools, energy: conceive in terms of optimization of existing processes – eg. Electricity grids, and developing new ideas – eg. designing efficient transport
- What mitigation technologies exist in developing countries?
- rapid consumption of ICT tools, e-waste accumulation and incineration process
- ICTs at COP 17: one day dedicated to ICTs and Climate Change as part of side events, led by the UNFCCC Secretariat. University of Manchester presented on e-Adaptation.
- Formation of a Coalition on ICTs and Climate Change: to move agenda forward – the International Telecommunications Union (ITU), the Global e-Sustainability Initiative (GeSI), the UNFCCC Secretariat, the UN Global Compact, TechAmerica, as well as high-level representatives from the governments of Ghana, South Africa and Egypt– multi-stakeholder coalition.
- IGF: for many people, first time life thrown at issue of ICTs and Climate Change
- IGF forum – regional representation
- Rio +20: not representing ICTs. Governments working to come up with text

for Rio to include ICT4D.
- UNEP starting to look at ICTs more seriously – related to WSIS e7
- Many have regional processes to get involved in

NETWORK ACTION PLANS
-Group Suggestions for Next Steps/Follow-up-

- Regional Best Practices.
- Blog/extending list, more information.
- Include technical people in group/OS. Engage Open Source communities in networks of support and the development of smart technologies.
- Need short, accessible, differentiated ways of translating research into knowledge.
- Issues of data access
- Engage different stakeholders, not only work from niches.
- Online Tutorials (virtualisation of tutorials).
- Practical Workshops.
- Develop a database of experts and contacts in the ICT and cc field , in order to push the agenda forward.
- Share events in the list (when and where are they taking place).
- Pilot frameworks in the field.
- Workshops on the subject in different countries, to discuss experiences.
- Mapping projects in the field.
- Use the Google group to share project ideas and build partnerships, foster collaboration and share meetings announcements.
- Contribute to regional best practices.
- Use social media (Facebook, Twitter, etc) to disseminate/raise awareness.
- Institutional backing: it would be important to have institutional support in the way forward.
- Strengthening linkages between universities and CSOs working in the field, including work with local organizations to help facilitate processes, and the collaboration between universities.
- Mainstream ICTs into organizations.
- Critical approach (discussing our own technology and energy consumption, be more critical about it, and foster programs with cell phone companies and the ICT industry on key actions and plans).
- Promote collective campaigns (e.g. one-pager on the issue to be translated into different languages, or agree on short text to be put in the bottom of e-mails, to create awareness).
- Engage media on advertisement or awareness raising on the subject, including what citizens can do about it.
- Fact sheet with key information and suggested action.
- Translation of products into local languages.