



CASE STUDY

Category: New ICT Routes to Climate Change Adaptation

Climate Change, Innovation & ICTs Project

Centre for Development Informatics (CDI), University of Manchester, UK
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ICT-Enabled Knowledge Sharing in North-South Partnerships: Lessons from the AfricaAdapt Network

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Initiative Overview

Knowledge-sharing tools and networks relating to climate change adaptation increasingly draw on Web 2.0 functionalities and user-generated content. These contribute to a shared evidence base upon which current and future adaptation planning and action (at a range of scales) can draw. They can help to build a community of practice around climate change adaptation, validate adaptation processes and information, offer users a sense of potential options and outcomes from adaptation actions, based on others' experiences, as well as space to document their own experiences (Hammill and Tanner 2011; Ecofys and IDS 2011).

AfricaAdapt is one such knowledge-sharing network on climate change adaptation in Africa, established in 2008 and hosted by four partner organizations: Environment and Development in the Third World (ENDA-TM), based in Dakar, Senegal; the Forum for Agricultural Research in Africa (FARA) in Accra, Ghana; IGAD Climate Prediction and Applications Centre (ICPAC) in Nairobi, Kenya; and the Institute of Development Studies (IDS) in Brighton, UK. The network describes its aim being "to facilitate the flow of climate change adaptation knowledge for sustainable livelihoods between researchers, policy makers, civil society organisations and communities who are vulnerable to climate variability and change across the continent" (AfricaAdapt, n.d.).

Since its launch it has grown to over 1,100 members (80% of whom are Africa-based) (as of 2011), consisting primarily of researchers and practitioners working on climate change and development in Africa. AfricaAdapt is funded through the UK Department for International Development (DfID) and Canada's International Development Research Centre (IDRC) under the Climate Change Adaptation in Africa (CCAA) programme and is intended to offer a space for its members to profile their work, access African adaptation research in a range of formats and languages and establish new connections (both online and face-to-face) with others working on the topic.

Application Description

The geographical distances between each of the partner organisations, and the continent-wide target area for membership, means that ICTs play an important role in facilitating and mediating relationships in AfricaAdapt. Among the four host partners key technologies that are used include Web 2.0 tools such as Skype, wikis, and Delicious, as well as more conventional tools such as e-mail. Use of these tools was also seen as a form of institutional capacity-strengthening in line with the above-mentioned aim of "promoting a culture of knowledge sharing", and to this end the team members charged with implementation of the network's activities (its Knowledge Sharing Officers, or KSOs) were provided with ongoing training and mentoring on the identification and use of knowledge-sharing tools (c.f. Jackson 2010; see Figure 1). In communicating with, and facilitating knowledge sharing between, AfricaAdapt's members however, a different range of networking and knowledge-sharing tools are employed, including Twitter, YouTube, and a bespoke online platform that allows for the creation of user and project profiles in a style similar to that of Facebook and other social networking sites.



Figure 1: KSO Training

The discussion of lessons in this case study will focus primarily on selection and deployment of ICTs to facilitate management and implementation between the four host partners, though we note that learning from the use of ICTs in internal management appears to influence subsequent strategies for engaging with the network's members. In particular we look at lessons on how the selection and use of particular ICTs as partnership management and information sharing tools create meaning and shape relationships. We also look at how the people, politics and protocols of this heterogeneous network of partners *shaped*, and simultaneously were *shaped by*, the use of these ICTs.

As activities aimed at addressing climate change and development are increasingly designed on networked and collaborative models a better understanding of the roles that ICTs play in mediating these relationships will help to clarify expectations of what can be achieved.

Formal Drivers and Objectives for ICT Usage

A key premise of the AfricaAdapt network is that knowledge on climate change adaptation is often poorly documented and rarely shared in forms that are accessible to those who need it the most, whilst recognising that other forms of marginalisation linked to power, literacy and language play a significant role in peoples' access to this knowledge (Harvey et al. 2009). Meanwhile, at the international scale, ever-increasing flows of adaptation financing and policy guidance are being mobilised, often without sufficiently drawing on how knowledge and practice are unfolding at local scales. The network was therefore established to help address the gap between locally and internationally generated knowledge on responding to climate impacts in Africa, and the challenges faced by communities and governments in acting on climate change.

The network's operating principles involve:

- being demand responsive in how it selects and translates adaptation information;
- building alliances and partnerships that maximise the benefits of knowledge sharing and promote visibility with diverse stakeholders;
- addressing capacity constraints to knowledge access, sharing and use; and
- demonstrating the added value of a culture of knowledge sharing.

Accordingly, the AfricaAdapt partnership was designed to span geographic, discipline, linguistic and institutional divides that delimit this challenge. In practice this involved assembling a team with diverse expertise (science, agriculture, community-based adaptation, disaster management) from a range of stakeholders (NGO, intergovernmental, academic), and a range of locales (East and West Africa, Europe) with capacity to operate in English and French.

Stakeholders

AfricaAdapt's broader stakeholder group consists of a wide range of actors working on climate change adaptation on the continent, including researchers, community-based organisations, the media, policy makers and others, with the intention of promoting connections between these groups and increasing the access of those traditionally excluded from adaptation dialogues. For the purposes of this case, however, the key stakeholders consisted of the "management group" of 8-10 representatives from the partner organisations listed above (2-3 representatives from each partner, primarily consisting of the KSO and a management representative, most commonly the KSO's line manager).

Impact: Cost and Benefits

As the lead partner in the first phase of the network's activities, IDS played a significant role in selecting and ultimately enforcing the use of particular ICTs for coordination and sharing between the four network partner organisations. IDS brought an enthusiasm for new and sometimes unfamiliar tools to the partnership and due to its influence saw many of these ideas adopted. However, these were not always smoothly and unanimously appropriated by partners, who each brought different sets of expectations, experience, and constraints that ultimately influenced the informal negotiation of what technologies would be used, and how. These experiences reveal the close link between technologies and power relations in shaping partnership in line with the ways of working of the lead organisation.

Two examples that can be compared to reveal these influences are the use of Skype and of wikis within the management partnership.

In terms of selecting appropriate tools, the use of Skype as the primary means of communication was widely accepted by partners and was seen as an easy, low-cost alternative to telephone calls or extended email discussions. However, due to bandwidth constraints, and for ease of record-keeping, group discussions were primarily text-based. These text-based Skype meetings were chaired by IDS as the lead partner through a process that usually involved partners pre-drafting particular statements to others, negotiating agreement on contentious issues such as the distribution of responsibilities between partners via parallel one-to-one discussions using the same technology, and the use of varying degrees of directiveness and tone to control the pace of discussions and achieve particular outcomes. While many of these strategies are common within all meeting facilitation, the use of text-based Skype enabled their deployment (such as talking "behind the scenes" to secure support for certain decisions), potentially subverting the transparency of decision-making processes. At the same time, text-based Skype meetings facilitated some disengagement with elements of the discussion by participants simply not contributing, or by physically stepping away from their computers while the meetings were in process.

In contrast to the example of Skype, attempts to use wikis within the partnership demonstrate the ways in which partners actively and passively resisted the adoption or principles of use of particular ICTs. An attempt to implement the use of a wiki among managing partners to improve tracking and sharing of documents was resisted by partners who did not see the value of imposing another layer of navigation to access documents or who found it onerous to access another new, unfamiliar tool. Meanwhile, a wiki developed for KSOs to enable sharing of resources for implementing activities and minutes from meetings was used regularly for these purposes, but itself became a source of debate. While KSOs from the four partners and their capacity support team sought to keep this as a private space where they could discuss work together away from the scrutiny of their line managers, others within the partnership felt that creating closed spaces within the partnership was anti-collegial. Eventually it was agreed that KSOs would retain this online space, but would report back to the broader group on their discussions to ensure a spirit of openness. This debate highlighted the risk of selecting tools that meet the needs of some people within the network while being seen as inappropriate or insufficient by others, and how the use of particular tools can affect the cohesion of a network.

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These two examples illustrate how the selection and deployment of ICTs impacted the relationship between the network's partners, while the norms of openness, participation, institutional hierarchy and connectivity across partners impacted the successful deployment of ICTs. They highlight how ICTs can provide benefits, but also potentially bear great costs on the strength of a partnership depending on how strategically and appropriately they are brought into action. As we will discuss below, this suggests the need for heterogeneous ICT-enabled partnerships (such as those often found in work on climate change and development) to reflect collectively on how these dynamic interactions impact desired outcomes of their work and ultimately influence the adaptive capacity of organisations and the clients of such networks.

AfricaAdapt, like many North-South partnerships, sits both within a context where access to, and mastery of new technology, is limited and variable, and among a range of other ICT-enabled climate change knowledge-sharing initiatives which tend to promote themselves on the basis of their use of sophisticated technologies. The challenge this presents was noted by one KSO:

People have this tendency of thinking that the latest or most modern tools are most effective and then they don't want to use older tools like the fax or the telephone, but those [tools] work. [...] We need to rethink our definitions of ICTs, it's not about the latest tools, it's about the tools people use and that work. [trans.] (cited in Harvey 2011)

A further consideration in this regard is where the added value of particular technologies is likely to be experienced. For example, heavy investment of partners' time, finances and energy into technologies which are primarily aimed at enhancing transparency and accountability to donors, but have little impact at the level of service delivery to the network's primary stakeholders (e.g. researchers, community-based organisations and policy makers in Africa) may be attractive at some levels, but ultimately detracts from the network's activities and its ability to support adaptation actions and enhance adaptive capacity.

A final impact which appears to be emerging from the network's experiences with using ICTs in its first phase is the transfer of experiences and lessons learned from their use in internal management processes, to their selection and deployment among network members. As the network moves toward its second phase, partners are reviewing the suite of tools used for engagement with network members, and many which are now being added are either tools which have functioned well within the managing partnership (such as Skype) or whose absence in the managing partnership was noted (such as a mailing list or discussion group). Not surprisingly, wikis were never suggested as a new tool to deploy with the network membership.

In this regard, ICTs have played an important role in facilitating learning processes between managing partners, allowing rapid feedback and propagation of new ideas. One such example involved reflections from KSOs that the externally-facing ICTs used to engage the network's members were not achieving the depth of discussion and breadth of participation required to share learning and knowledge of often complex adaptation solutions. The idea of initiating 'meet and greets' – opportunities for face-to-face gatherings of the network's members in a variety of geographic locations – evolved from a mix of using ICTs for rapid reflection and testing through visits of KSOs to each other's organisations. Such 'meet and greets' are now a key feature of the network, a signal of the move to balance online and offline interaction with and between the network's members, which has allowed more meaningful participation from those not able or willing to engage with the technologies offered by AfricaAdapt.

Evaluation: Failure or Success

Ultimately, the use of ICTs in both coordinating work within the AfricaAdapt partnership, and reaching out to its worldwide membership has proven effective enough to see the network grow into one of the largest of its kind and to secure funding for a second phase of activities, now being led by ENDA-TM in Senegal.

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Beyond the smooth functioning of the network's management group, the ultimate measure of the success of ICTs is whether or not AfricaAdapt has strengthened people's capacity to adapt to the impacts of climate change in Africa. Through external evaluations and studies to collect "stories of change" the network has identified a strong body of evidence to demonstrate impacts in this regard. The cases range from using AfricaAdapt's web-based resources to produce rural radio broadcasting content on impacts in Kenya and Cameroon, to rebroadcasting short videos on malaria and climate change in villages in Cote d'Ivoire, and even applying learning on rainwater harvesting from another African initiative (found on the AfricaAdapt website) in 20 villages in Malawi. These examples point to cases of knowledge uptake which has resulted in new actions to confront the climate challenges facing Africa.

Enablers/Critical Success Factors



Figure 2: AfricaAdapt Learning Review

One of the key factors in assuring this success amid the challenges described above has been the network partners' willingness to experiment and learn: to regularly review existing approaches, document and learn from successes and failures, and adopt new approaches where existing ones are not satisfactory (see Figure 2). One of the key factors in assuring this success amid the challenges described above has been the network **partners' willingness to experiment and learn**: to regularly review existing approaches, document and learn from

successes and failures, and adopt new approaches where existing ones are not satisfactory (see Figure 2). One of the key factors in assuring this success amid the challenges described above has been the network **partners' willingness to experiment and learn**: to regularly review existing approaches, document and learn from successes and failures, and adopt new approaches where existing ones are not satisfactory (see Figure 2). This suggests, we would argue, that the success of ICT-enabled initiatives depends less on the "out of the box" effectiveness of their tools than on the initiative's strengths in **experiential (or "double-loop") learning, innovation, and reflective practice**. For example, this approach to practice prompted a full-scale review of the network's web platform and ICT deployment strategy for its members, and which has resulted in a redevelopment of the platform (now underway) and the reprioritisation of its use of ICTs. It is also the key driver of the network's ability to transfer learning from successful uses of technologies in the core partnership outward to the broader membership, such as the recent piloting of Dgroups in the core partnership to assess whether it should be used with other members.

Critically, as noted above, this approach to learning has also helped to clarify where the limits to using ICTs within the core partnership and with the network membership lie, making evident where the need for face-to-face engagement and outreach using more traditional media are required and resulting in strategic changes.

Constraints/Challenges

A challenge that is closely related to the above has been **funding for ICT sustainability**: ensuring that there are financial resources available to continue evolving the network's engagement with ICTs in line with the lessons it learns. Budgeting for use of ICTs in funded projects tends to privilege set-up and maintenance costs, leaving scarce resources for ongoing re-development as user needs evolve, or lessons emerge that demand new ways of working. Consequently there is enormous pressure on partners to get everything right the first time, which can be unrealistic for new and rapidly evolving fields such as knowledge sharing on climate change adaptation. This can lead to networks being "locked in" to inadequate or inappropriate tools, as experienced by AfricaAdapt in relation to its online platform which could not be redeveloped until new resources became available. However, AfricaAdapt has tended to use many free or low-cost technologies, such as Skype, YouTube, Delicious or wikis, which have allowed a degree of flexibility irrespective of budgetary constraints.

Another challenge to both implementing and assessing the success of ICTs within heterogeneous partnerships such as this one is **norming success criteria**: establishing a common set of expectations against which to measure success. In the case of AfricaAdapt, for example, certain partners felt the availability of relevant information and data should be a priority, while for others platforms for effective dialogue between partners was a greater priority. Similarly, some felt that the network should develop the capacity to deliver all elements of the network's activities within the partnership (e.g. using desktop publishing, video editing, and even web development tools), while others supported the view that outsourcing aspects of the work was a more effective use of resources and would produce a better end product.

Recommendations/Lessons Learned

1) Select ICTs thoughtfully. ICTs are not an invisible mediator: they shape the outcome of climate change-related activities. AfricaAdapt's use of ICTs as a management tool by heterogeneous partner organisations highlights the need for collaborators to think hard about their choice of technology and the impact this has on their desired outcomes. The link between institutional practices, working cultures and expectations must be considered at the start of the partnership and frequently throughout to review whether use of technologies is creating positive and/or negative shifts in the ability to achieve impact.

We have learned that this reflection process can have significant bearing on the how ICT budgets are structured, what kinds of capacity support should be offered to partners, and importantly, on how to balance the adoption of new technologies with reliance on established forms of practice. It may also influence the transfer of practices from within the management process into the broader network membership and ultimately shape the network's objectives.

2) Look at stakeholders' own ability to learn and adapt. Organisations involved with climate change adaptation must themselves be able to adapt. AfricaAdapt experience suggests, we argue, that a key factor in the successful selection and deployment of ICTs within partnerships working on climate change (and other complex and highly uncertain challenges) is the adaptive capacity of the partnerships themselves. Learning from change, organising and building knowledge across systems and scales, and nurturing diversity are seen as essential components of this capacity (Folke et al. 2005).

At the same time, ICTs can potentially contribute to this adaptive capacity by helping these partnerships document learning, maintain and contribute shared stores of knowledge across distances, and by creating spaces for the contribution of a wider range of viewpoints and contributions than might otherwise have been possible.

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As such, there seems to be potential for a mutually-reinforcing link between the effective deployment of ICTs for knowledge sharing, an ongoing commitment to learning in practice, and the strengthening of a partnership's adaptive capacity in the face of fast-evolving fields such as climate change adaptation (see Figure 3). One question this raises, which warrants further investigation, is whether, and under what conditions this link brings about a positive influence on the adaptive practices of the broader network membership.

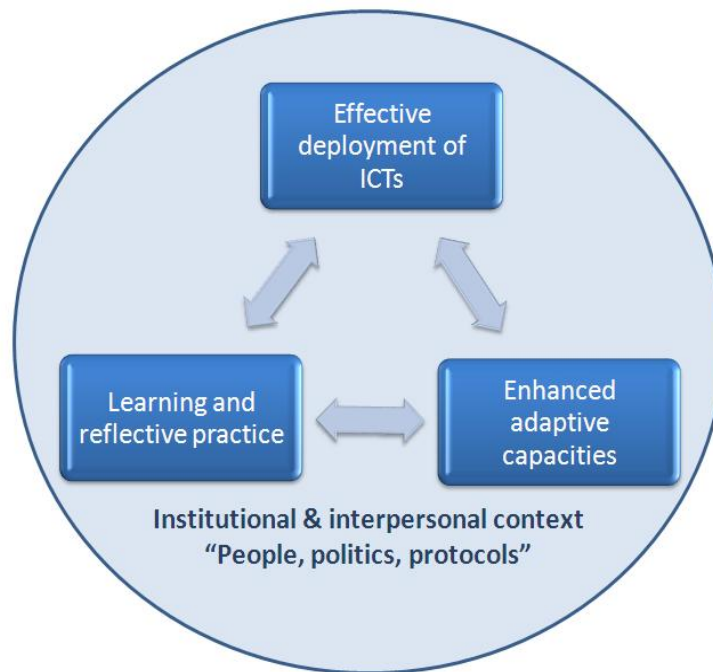


Figure 3: Relation between Technology, Learning and Adaptive Capacity

As stated above, however, these processes always unfold within a given context which is shaped by institutional and interpersonal norms, hierarchies, power relations, financial and time constraints, competing priorities, etc. and which will ultimately influence what can reasonably be expected and achieved.

Data Sources & Further Information

The authors, Blane Harvey and Tom Mitchell were both members and Programme Managers of the AfricaAdapt Network while based at the Institute of Development Studies. The observations in this case study draw upon their experiences in establishing and implementing the first phase of the network from 2008-2011.

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AfricaAdapt: <http://www.africa-adapt.net>

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