



**Virtual change**  
**Indicators for assessing**  
**the impact of ICTs in development**



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Research and Extension Division  
Natural Resources and Environment Department

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# CONTENTS

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FOREWORD	v
ACKNOWLEDGEMENTS	vii
ACRONYMS	ix
THE CHALLENGE	1
THE DATA	2
THE RATIONALE	3
SCHOOLS OF THOUGHT	4
Participatory Rural Communication Appraisal	4
Communication for Social Change	6
Link to indicator development	7
INDICATORS	8
Proposed indicators	9
HOLISTIC DIALOGUE	9
Three indicators: Holistic dialogue	12
COMMUNITY AND INDIVIDUAL VOICE	13
Three indicators: Community and individual force	15
PARTICIPATORY DECISION MAKING	15
Two indicators: Participatory decision-making	17
BUILDING COMMUNICATION PLATFORMS	18
Four indicators: Building communication platforms	21
CHANGE SYMBOLS	22
Three indicators: Change symbols	23
WORKING ALLIANCES	23
Three indicators: Working alliances	24



RELATIONSHIP BETWEEN THE INDICATORS	25
Dynamics between the indicators	26
SUMMARY	27
Holistic dialogue	27
Community and individual voice	27
Participatory decision-making	27
Building communication platforms	28
Change symbols	28
Working alliances	28
TESTING!	29
METHODOLOGIES FOR TESTING AND MEASURING	29
Indicators: Holistic dialogue	30
Indicators: Community and individual voice	31
Indicators: Participatory decision-making	32
Indicators: Building communication platforms	33
CONCLUSION	34



# FOREWORD

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Communication for Development, as a discipline, has reached an important crossroads with the emergence of new information and communications technologies (ICTs), the Internet and mobile telephony in particular. There has been sustained growth of ICT access and use across the globe with many developing countries choosing to invest heavily in ICT infrastructure as a key pillar of their poverty reduction strategies. These technologies have transformed how we work, organise and communicate with each other. Not only are technologies converging (a mobile phone device also allows access to the internet and radio) but so too are different disciplines or 'schools of thought' bumping up against one another such as Information Technology, Knowledge Management and the newly emerging discourse of ICT for Development.

New ways of working and approaches to technology have lead communication for development specialists to re-examine the social embeddedness of these technologies and how we assess their impact. The earliest discourse on ICTs for development focused on the issue of access and capacity building (and latterly content) However, in some areas the ICT revolution served only to widen existing economic and social gaps prompting communication for development specialists and others to argue that that if the opportunities offered by ICTs are to be realized, poor people must be active determinants of the process, not just passive onlookers or consumers. Access and use of ICTs are relevant therefore to the degree that they enable people to participate in and influence society.

This publication forms the third in a series considering the appropriation and use of ICTs by and for rural people. To begin to successfully evaluate their impact, this publication first describes what we mean by impact in the context of communication for development, proposes some indicators and concludes with examples for evaluating such indicators. We hope that you will apply these indicators to your work and welcome feedback and further debate.



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**Isabel Alvarez**  
Director,  
Research and Extension  
Division, FAO





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About the author: **Warren Feek** is The Executive Director of The Communication Initiative, a social enterprise that facilitates an online community of practice for people and organisations using media and communication strategies to address local, national and international development issues including poverty alleviation, democracy and governance, health, HIV/Aids, Natural Resource Management, Polio, Rural Development, Media Development and Human Rights -see [www.comminit.com](http://www.comminit.com)

For additional information please contact:

Clare O'Farrell, Communication for Development, FAO  
[comdev@fao.org](mailto:comdev@fao.org)







# ACRONYMS

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ANC	African National Congress
ANDI	Child Rights News Agency in Brazil
CfSC	Communication for Social Change
CI	Communication Initiative
CIDA	Canadian International Development Agency
FAO	Food and Agriculture Organization of the United Nations
HIV/Aids	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
ICT	Information and Communication Technology
IDRC	International Development Research Centre
NGO	Non Governmental Organization
PRCA	Participatory Rural Communication Appraisal
UN	United Nations





# VIRTUAL CHANGE

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## THE CHALLENGE

The advent of the new information and communication technologies (ICTs) particularly in the early 1990s created great excitement and hope as the international development community argued the case for the role such technologies would play in accelerated and improved development action. A host of stories – some drawn from reality and others perhaps wishful thinking that became their own “reality” – fed these expectations. By ICTs here we mean what most people would regard as computing, online and virtual technologies and processes – the combination of hardware, software and the means of production than enable the exchange, processing and management of information and knowledge.

Fishermen and women are now able to gain up-to-the-minute information on market prices for their catches. Farmers are doing the same for their crops. Live medical consultations take place between specialists in the North and general practitioners in developing countries. Women entrepreneurs have set up rural Internet kiosks powered by local energy sources such as wind and water mills. Online training and education is now provided through virtual courses for students anywhere in the world taught by teachers and professors anywhere in the world. Social action campaigns on issues such as the environment are conceived, managed and implemented through virtual mechanisms. We have also witnessed the convergence of traditional and new technologies such as rural radio, connected to the Internet. FAO has published case studies on a number of these initiatives (FAO, 2001 and 2003).

On the basis of these and other experiences and hopes, substantial resources have flowed from the international development community to support expansion of access to new technologies in financially poor countries and more extensive use of those technologies for improved development impact.

But how do you measure the impact of an ICT project? How can we demonstrate that the efforts of a farmer or any of their peers around the world developing equally creative initiatives, have not been for nought?



Accurate measurement requires ‘astute’ indicators. Which indicators (the small bits from the big picture) will produce the sharpest information regarding the overall contribution (positive, negative or neutral) of ICTs on development status? This paper sought to:

- investigate the state of the art with regard to criteria and indicators for assessing the impact of activities and projects using ICTs;
- prepare a topology of indicators and a framework for using these indicators.

The paper is based on a short desk study; there is no original research. It draws from the practice and thinking already in circulation, looks at the information and analysis and produces a set of indicators that can be justified by experience and argument.

## THE DATA

The task of defining core indicators to demonstrate the impact of ICT interventions on overall development status would be greatly eased by the availability of quality data – quantitative and qualitative. Such data is difficult to find even in the most advanced technology countries. In 2001, the Robert Wood Johnson Foundation reviewed what they termed “The eHealth landscape” in the United States of America. In a 150-page paper, two pages were allocated to research and evaluation. The paper’s summary starts positively but then introduces very substantial caveats that significantly undermine the initial assertions:

*“eHealth interventions have been shown to enhance social support and cognitive functioning ... enhance learning efficiency ... improve clinical decision making and practice ... reduce health services utilization ... and lower health costs ... among certain study groups. Most of these studies however were limited to small groups that may not be representative of the parent population, were not randomized control trials, had limited follow up periods, or only assessed proprietary interventions that may or may not be replicable. A recent literature review of eHealth applications in the area of behavior change found that most studies were descriptive and few were rigorous studies.... No studies have examined the cost-effectiveness of eHealth tools in large populations compared to similar interventions using similar media.” (Robert Wood Johnson Foundation, 2001).*

This study shows that, even in the multi-billion dollar world of eHealth in the most sophisticated technology country in the world, there is scant data and what data there is, is considered unreliable. It is therefore not surprising that there is



little reliable data evaluating the application of ICTs to thorny development issues such as rural poverty, gender equity and HIV/AIDS. This inadequacy was echoed in an FAO paper reviewing the local appropriation of ICTs:

*“The information available about the effects of such a wide-ranging transformation on the way people communicate and share information and knowledge is contradictory. On one hand, there is a plethora of literature on the potential benefits of ICTs as tools for enhancing people’s daily lives and reducing poverty by increasing access to information relevant to their economic livelihoods, including information sources such as healthcare, transport, education and markets. On the other hand, there is an alarming lack of empirical evidence, or analyses, of actual experiences of applying ICTs locally and their impact upon poor people’s economic and social livelihoods. The reality is that few projects pay attention to monitoring and evaluation of ICT outcomes, especially the local impacts of ICTs, with the result that guidelines for effective ICT deployment and appropriation at the local level are missing.”*  
(FAO, 2001).

Most of the documents reviewed for this paper could best be characterized as opinion pieces or personal perspectives and testimonies. A few were in the form of research results, but these also failed the tests outlined above in the Robert Wood Johnson Foundation quote. This is not surprising; Even in 2006 the application of ICTs to development priorities is a comparatively recent field and any substantive research is just commencing.

## **THE RATIONALE**

This paper starts its consideration of ICT for development indicators with an overall look at development communication thinking, rather than diving straight into a consideration of the new technologies themselves. Though they may be a little ‘sexier’ than roads, medicines, schools, community radio and a myriad of other social and economic development vehicles, ICTs have the same status: they are simply tools. There is nothing inherent in the new technologies that prompts positive development; just, as we learned with hate radio, as there is nothing inherent in local and community radio that ensures only good will result. Even the one-to-one and many-to-many interactive capacities of the new technologies, which many cite as providing an essential positive dynamic for development, can be misused for other purposes. It is insufficient to measure, for example, household or village access to the Internet as a predictor of positive future social and economic progress. What if the headman in the village or the senior male in the family monopolizes use and information flow?





## SCHOOLS OF THOUGHT

This paper draws from two schools of thought: the communication for development thinking undertaken by the Communication for Social Change (CfSC) network and the Participatory Rural Communication Appraisal (PRCA) approach developed by FAO. It uses these two perspectives to provide a binocular vision on development communication that will orient and direct the collection of information and the implications drawn from the thinking and research. There are three main reasons for choosing the Communication for Social Change and Participatory Rural Communication Appraisal change models.

- Both the change models and their strategic thinking derive from a combination of experiences of communication-for-development practitioners and of research and evaluation data. This paper does not attempt to reargue those cases. They can be found in a number of publications *Making waves: stories of participatory communication for social change* (The Rockefeller Foundation, 2000); the core document produced by The Rockefeller Foundation: *Communication for Social Change: A position paper* (The Rockefeller Foundation, 1999) and *Participatory Rural Communication Appraisal: A new approach for research and the design of communication for development strategies and programmes* (FAO, 1998-2003b).
- Both approaches share an emphasis on community engagement and management, participation, empowerment, local capacities, ownership, and negotiation between vested interest groups.
- Communication for Social Change is a comparatively recent theoretical and strategic approach to communication for development, while the Participatory Rural Communication Appraisal approach is drawn from the long-standing participatory rural appraisal strategies with which FAO has considerable experience. This combination of new and established thinking provides a credible lens.

### Participatory Rural Communication Appraisal

In his article describing Participatory Rural Communication Appraisal (FAO, 1998), Van der Stichele highlights the following core elements for such thinking and strategic action:

*“PRCA is built on a definition of communication that views it as an interactive process characterised by the exchange of ideas, information, points of view and experiences between persons and groups. In PRCA, communication is a two-way process in*



*which all the people involved are seen as important sources of ideas worth listening to.”*

Such an approach to research has the following characteristics:

- It is holistic: it researches community needs, opportunities, problems and solutions, as well as communication issues, networks and systems.
- It is participatory: the researcher is a facilitator who enables people to undertake and share their own investigation and analysis, leading to sustainable local action and improved communication.
- It empowers and builds the capacity of communities.
- It leads to joint planning of both development action and communication programmes with the community.
- It deals with interacting groups identified on the basis of sharing a common problem and segmented according to criteria identified by the people themselves. People are active participants in the process of generating and analysing information.
- The community presents the results of the appraisal.
- The community owns and keeps the results.
- The Participatory Rural Communication Appraisal approach emphasizes the use of visual methods for generating, analysing and presenting data.
- It emphasizes change of attitude and behaviour among facilitators.
- Finally, the approach to research seeks a means to create mutual understanding between local people and development workers in order to marry local capabilities with outsiders' knowledge and skills for more effective problem-solving.

These characteristics were further refined in an FAO paper by Chapman *et al.* 2003, (see bibliog) that sought to recommend ways to enhance the use of information and communication strategies within a livelihoods approach. The recommendations from this study highlighted the necessity to:

- “Determine who should pay: A new consensus is needed on who should pay for communication and information services for poor rural communities.





- Ensure equitable access: New systems must deliver the right kind of information in the right format, for poor people to ensure that existing inequalities are not exacerbated.
- Promote local content: It may be more useful to promote more information sharing between local institutions than bring in new information from outside.
- Strengthen existing policies and systems: Further work is needed to strengthen communication policies, and new systems should seek to build on existing systems.
- Build Capacity: Capacity building is needed at all levels, to equip people with the new skills necessary to develop and manage new systems.
- Use realistic technologies: The most effective systems use realistic technologies that enhance and add value to existing systems.
- Build knowledge partnerships: New technologies provide enormous opportunities to build knowledge partnerships that cross national, ethnic and social boundaries." (FAO website ref) [http://www.fao.org/rdd/livelihood\\_en.asp](http://www.fao.org/rdd/livelihood_en.asp)

### **Communication for Social Change**

The Communication for Social Change approach holds that positive change (measured against overall development objectives such as reduced poverty, better health status and more equitable gender relationships) results from communication interventions that contribute the following to the overall mix of development action:

- **Dialogue:** increased inter-personal, inter-family, community and national dialogue on the priority development issues as perceived by the people themselves. When these issues become topics for discussion at mealtimes, work places, social 'spots' and formal meetings, and are given local and mass media coverage, this dialogue is an important element for social change.
- **Voice:** increased emphasis on enabling those most affected by the development issues under consideration to make their voices heard. Central to the effectiveness of the increased dialogue and debate is that the communication strategies in place support those most affected (e.g. by rural poverty, HIV/AIDS, discrimination) in achieving a prominent voice. The communication strategy should leverage the voices of those most affected.



- **Decision-making:** the communication strategy is established, reviewed and renewed by the people directly affected. Outside 'expert' assistance is invited rather than provided as a condition of programming. Development interventions are more relevant and effective when the people centrally engaged in an issue run the response.
- **Platforms:** the communication strategy seeks to develop a few communication 'platforms' (stable, ongoing processes that can be used for a number of different purposes) rather than running a series of discrete communication activities. The emphasis is on establishing communication platforms rather than running communication campaigns, thus ensuring there is a foundation to the communication process.
- **Symbols:** core symbols that resonate with the general population. The communication strategy seeks to make use of and multiply such symbols. These are best if they emerge naturally, take on meaning and embody the analysis and/or vision of the movement in question.
- **Alliances:** development of working alliances between individuals, organizations and social movements that can see value for their interests in becoming involved with others. Progress does not happen through specific individual programmes. Positive progress results from varied actions, by a range of organizations and interest groups, most often with no formal coordination but with a shared, albeit often unspoken, sense of purpose and analysis.

These elements for an effective communication strategy are best exemplified in the context of major social movements that have had a significant impact on the economic and social shape of the globe and its peoples. These include, for example, the civil rights movement in the United States of America, the independence movement in what are now India and Pakistan, the anti-apartheid movement in Southern Africa and the global environmental and women's movements. The six elements above were essential to the communication strategies of these and other movements – large and small. Examples are given for each of these elements as we explore specific indicators for measuring the impact of ICTs on development issues in the sections that follow.

### **Link to indicator development**

This paper uses both the FAO participatory communication approach and the communication for change approach to identify, sift, sort, view and organize the relevant information and ideas, and to propose some core indicators for assessing the impact of ICTs on development trends.



## INDICATORS

Developing indicators to measure the impact of one element of the development action on some large, complex and often sensitive development issues, is a very difficult task. This applies to all development interventions – from macro-economic policies to local service delivery. The basic requirement is to establish a connection between a given development intervention (e.g. increased internet access) and changes in the area of development in question (e.g. improved governance). To expand this example; Has the increasingly widespread access to knowledge and communication through increasingly available internet cafes and similar local facilities for internet access improved citizen participation in governmental processes and/or reduced local corruption?

The comparatively new ICT for development field has good company with this struggle to demonstrate causality and linkage. Even after 40 years of extraordinary spending and guided programme and policy implementation by the World Bank, it is difficult to link any possible overall improvements in poverty levels, where they exist, to World Bank policies

Secondly, there is a need to link a specific strategy to specific outcomes within the overall issue being addressed. For example, how can the integration of an ICT strategy [eg online forum] within a community radio process be shown to have contributed to improved environmental action in the communities serviced by those community radio stations – assuming environmental action is an overall part of their focus?

From local communities to international funders, interest in the new technologies is not a fascination with their inherent qualities, such as speed of information transfer and instant connection (at least it should not be!). The interest in ICTs is in what they can do for improved impact on rural poverty, gender equity, a healthier physical environment and other issues. For evaluation purposes, the interest is even more specific to particular geographic areas or populations.

A natural starting point for the indicator development process would be to derive these agreed measurement “markers” from empirical data. There are two major problems with such an approach. As FAO and other organizations have observed, there is very little empirical data from quality evaluation and research exercises from which to develop such indicators that would provide the best information on the impact of ICTs on development issues. Even if such data were available, it would probably be of very limited use. In order to provide a set of indicators that have generic validity – that can be applied in a range of different settings to differing development issues – such indicators need to connect to a set of generally agreed change principles. These principles need to draw from, and apply to experiences and circumstances much broader than ICTs. Without such a broad connection, the measurement of the impact of ICTs will not connect with overall development action.



The indicators proposed below emerge from the following four streams:

- Development Communication principles: Drawn from the Participatory Rural Communication Appraisal and Communication for Social Change approaches.
- The ICT evaluation literature: the conclusions from a range of practitioners and writers on ICT for development policies and programmes as to the added value that ICTs can bring to the overall development process. This is the ICT evaluation body of knowledge from which we have drawn.
- The need for short-term measurement that predicts long-term change: indicators that are measurable in the short term (e.g. two to five years) and predictive of long-term (e.g. five to 15 years) change. No one (communities, funders or programme managers) can wait five to 15 years to assess the impact of initiatives; earlier, valid information is required.
- The need for simple and practical measurements: few people working in difficult situations on some of the most complex and intractable issues on the face of the earth (poverty, environment, health, migration, crop yields, HIV/AIDS, etc.) have either the inclination or the time to wade through voluminous material in order to distil what applies to them.

A series of simple indicators, directly applicable to ICTs and relevant to what is required for overall development progress are required.

### **Proposed indicators**

The following specific indicators are proposed to measure the impact of ICTs on development issues and opportunities.

### **HOLISTIC DIALOGUE**

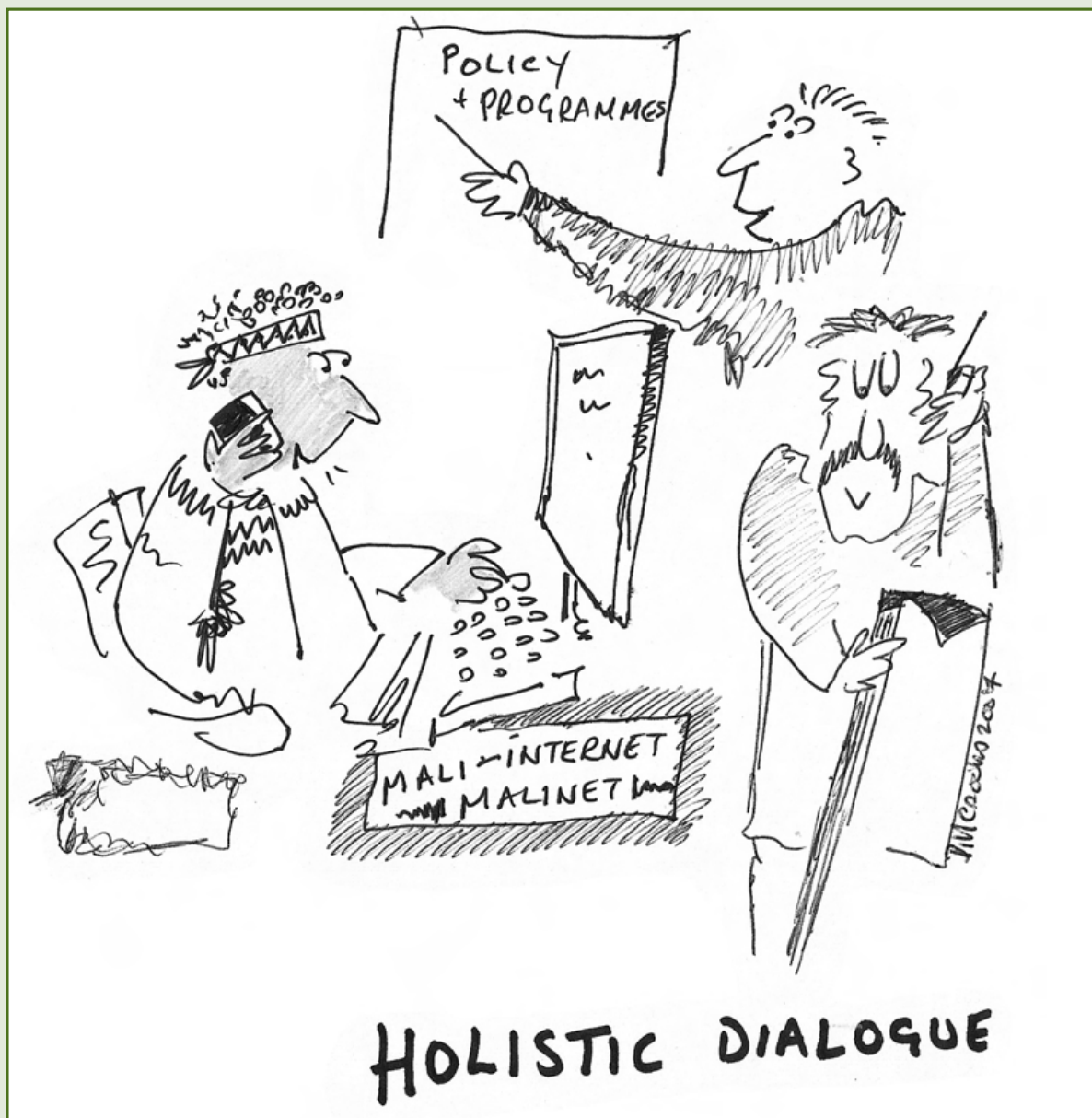
If there is no dialogue there is no development – it is that simple. No matter what the development issue, dialogue and debate are essential. From family mealtime discussions to competing academics in the op-ed columns of national newspapers, it is dialogue that drives and sustains development. There are no absolute truths. Opinions vary. Even interventions previously considered above debate, such as the immunizing of under-fives for example, are now rich sources of conflicting opinion. Such dialogue, debate and argument are healthy prerequisites for effective development practice.





Such dialogue needs to be holistic – as open as possible. Of course no dialogue is entirely unconstrained; there will always be matters of relationships, history, role, status and culture that inhibit the contributions people make and the topics that are explored. From a development perspective, holistic refers to a full and varied assessment of both the situation and the options for action, from a range of perspectives – those of children, women, elders, business people, activists and others.

The growth of full, widespread dialogue on a development issue is perhaps more important than the traditional communication sacred cow of “messages”. Obviously, there are overriding goals – the generic messages – of any development action: End Apartheid; Independent India; Clean Environment;





Stop Corruption; Gender Equality; Fair Land Rights; Don't Drink and Drive and Make Poverty History.

But below that level, what appears to distinguish effective development communication is not the ability of people to remember and recite messages they have received, but the degree to which the issue itself has become a priority focus for natural communication mechanisms. When local groups meet, is the issue on their agenda? When three or four people gather under the proverbial tree, is it likely to be part of their chat? Does it get prominent coverage in local newspapers and radio stations, or in chat shows if they are available and accessible? Is it raised with local politicians? Do the national media focus on this particular concern? Do employers and unions develop policies or issue statements? Does it exercise the minds and voices of taxi drivers? Does the issue resonate sufficiently (or has it been positioned in such a way that it resonates sufficiently) to accelerate natural discussion and debate?

Major social movements – ones that have significantly changed the way we all live and perceive our lives – have had this quality: the civil rights movement in North America; the independence movement in South Asia; the anti-apartheid movement; environmental action; anti-drink (alcohol) driving movements in many countries; land rights movements in New Zealand, Canada and other places; and the women's movement. We are seeing the beginning of this process on the comparatively recent issue of genetically modified crops and an apparent gaining of momentum on factors surrounding the rights of indigenous peoples. On reflection, a core and important part of the strategies of these major social movements was to gain deep, widespread debate and dialogue – encouraging and supporting people to examine the issue from their own perspectives.

So, where do ICTs fit into the overarching requirement for widespread dialogue on a development issue in order to secure positive progress? Many of the writers reviewed emphasized ICTs' potential to greatly expand dialogue. This was expressed in three different ways.

First, authors agreed that the ICTs offer the opportunity for "dialogue" (CIDA, 1997) with "space for feedback and permanent learning" (Gerster and Zimmermann, 2002) and "opportunities for two-way and horizontal communication". They also have the capacity to serve "as a community meeting place for mutual aid in dealing with daily problems and participating in the process of personal development and strengthening self-esteem, in order to influence social processes" (FAO, 2001). One of the great values of the new technologies for development is that there can be few intermediaries. It is possible for anyone's contribution to a dialogue to go unedited. The description of your programme can appear as you present it on your Web site. Your e-mail discussions do not require sign-off or approval. It is not necessary to have global or national committees distilling your and everyone else's ideas and



summarizing – most probably with a slant you never intended. The new technologies provide for un-censored dialogue.

Second, several reports agree that ICTs can function as an efficient means of knowledge sharing: “Knowledge sharing is the interactive process of making the right information available to people at the right time in a comprehensible manner to enable them to act judiciously, enriching the knowledge base in the entire mechanism” (Nath, 2001) thus “creating an evolutionary, continuous learning model of development” (The Rockefeller Foundation, 1999). This allows for an iterative approach to learning as opposed to the expert-driven notions of learning and technical support that presently dominate international development strategies and resource allocation. The new technologies provide a dynamic way for knowledge to be developed (and re-developed) from many different perspectives, and to be instantly shared for critique and dialogue. According to Delgadillo Poepsel (2000), this will also “enhance learning efficiency”. The Rockefeller Foundation 2001 report describes the following as extremely important potential functions of ICTs: “Valuing local content; Motivating local content; Making local content visible; Addressing language issues; Connecting with tradition; [and] Building adaptation skills.” Poepsel (2000)

Third, the writers reviewed emphasize that the new technologies support the holistic dialogue process by ensuring that anyone can access the information and contribute to the dialogue from anywhere. Although there are potential threats to this quality of the new technologies, to a great extent the practice of open access remains. This supports for example, “A level of social commitment, of establishing social relationships with the community, overcoming some of the material constraints and limitations on access to knowledge” (Delgadillo Poepsel, 2000) and the ability to access “conveyors of locally relevant messages and information” (The Rockefeller Foundation, 2001).

### **Three indicators: Holistic dialogue**

This paper proposes the following three indicators:

1. The ICTs are increasingly used for dialogue and debate.
2. Policy and programme knowledge is increasingly communicated through the ICTs.
3. There are increased levels of access to these ICT based processes.

Such indicators are simple, easily understood and generally applicable. A small telecentre in Mali can assess whether and to what extent: the new technologies are being used for dialogue and debate; whether the knowledge derived from the community is being captured and communicated through the new technologies;

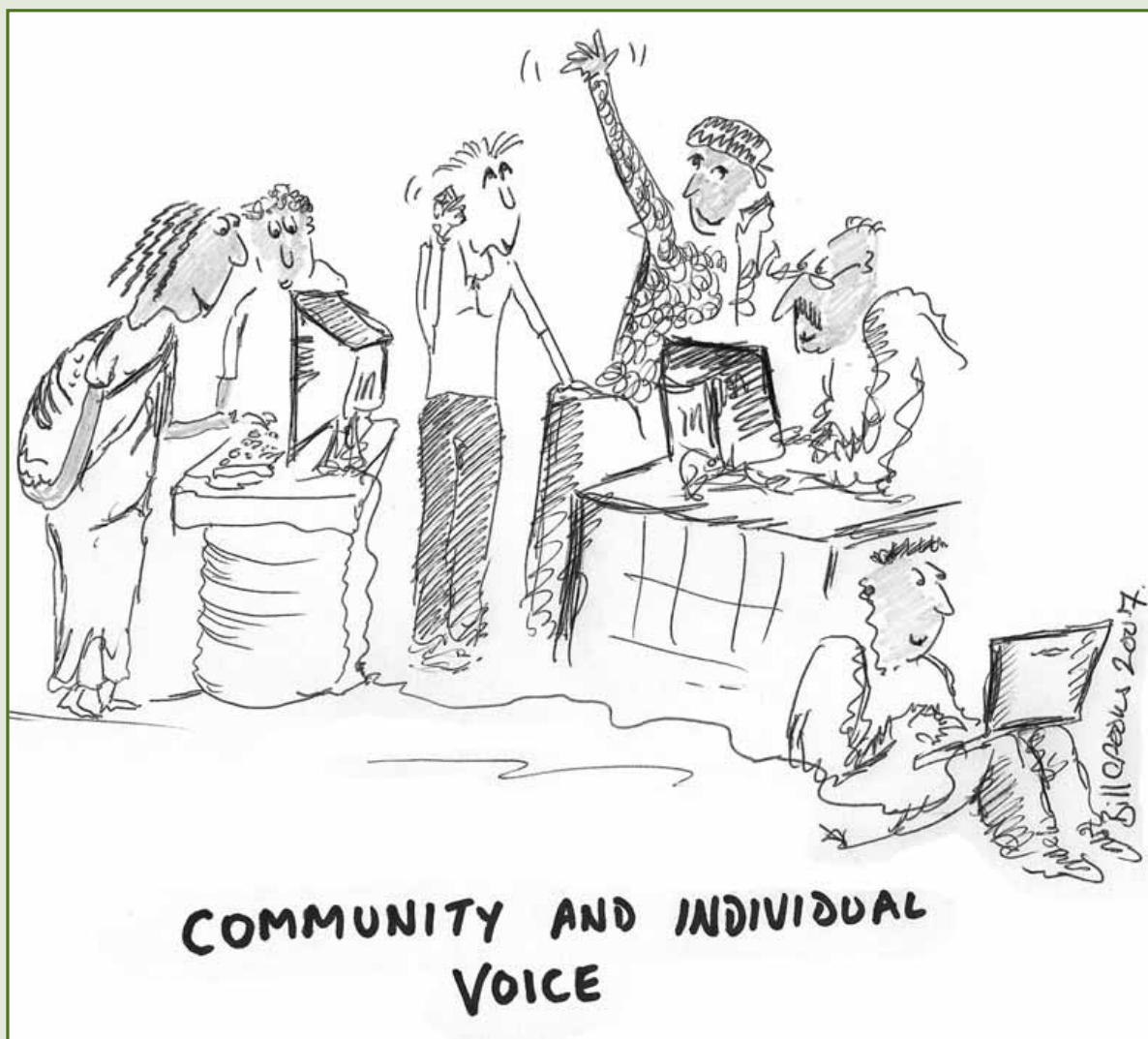




and if an increasingly wider group from within the community are accessing the ICT processes. A major global funding agency such as a large American foundation, bilateral aid department or United Nations agency can apply the same indicators. As a result of their funding, technical and strategic support, can they demonstrate increasing dialogue and debate, increased upload of local knowledge and growing access to ICT processes? These indicators also relate directly to the core requirement for effective communication action on large and small development issues.

### **COMMUNITY AND INDIVIDUAL VOICE**

When major development successes are assessed, there is a clear correlation between the prominence of the voices of those most affected by the issues in question and the effectiveness of the action. The clearest contemporary case illustrating this concerns HIV/AIDS. It is no coincidence that the communities







and countries that have been most successful in addressing HIV/AIDS issues have seen very prominent voices from those most affected by HIV/AIDS – the gay communities in San Francisco and many other cities, intravenous drug-using communities in Europe and individuals and groups affected by HIV/AIDS in Uganda and Thailand. The Treatment Action Group with its successful campaign and legal action against the pharmaceutical companies on the issues of generic drugs and pricing was initiated and dominated by the people most affected.

The process of supporting and legitimizing the voices of those most affected by a development issue follows a long tradition of successful communication that adheres to this principle. Perhaps the most striking way to highlight this essential change principle is to imagine the reverse of what happened on some major global changes. Can we imagine, for example, the most prominent voices in support of the civil rights struggle in the United States of America being liberal white clergy or the heads of established, predominantly white voluntary organizations? Those voices were important, but it was vital that the lead voices expressed the perspectives, views, opinions, ideas and critiques of the people and communities most affected. When their voices are marginalized, development suffers. The same principles can be applied to the non-violent components of liberation struggles, peasant movements for agrarian reform, the human- and land-rights struggles of indigenous peoples, and parents whose children have died as a result of alcohol-impaired drivers.

This is not to say that the voices of experts and funders are not important, but the development process is undermined and weakened when those voices dominate. Because of the nature of ICTs, there is a strong tendency to place them in the hands of technology experts whose judgements and expertise are the main voices expressed; issues of bandwidth, 3G (third generation), software platforms, wireless versus wired and other technical issues thus come to dominate the ICT focus.

Commentators on ICT indicator development generally reject such an 'expert' approach and put considerable emphasis on the voices of those most affected being a prominent element of any ICT evaluation (Nath, 2000; IDRC, 1998; Rockefeller Foundation, 1999). Specific groups of people, those most often marginalized both in communities and in the development process, are highlighted as being vital to engage for effective use of ICTs (Delgadillo Poepsel, 2000; FAO, 2001). Gerster and Zimmermann (2002) point out that this is not a passive process: "The poor must define their information needs themselves in order to get relevant answers". According to CIDA (1997, the accent on the voice of those most affected ensures: "Learning ... Insight ... Creativity ... Interpretation, Analysis, Experience ... and Expertise"v. Essentially it is agreed that ICTs are most effective when they "support bottom-up articulation of development needs" (Gerster and Zimmermann, 2002).



### **Three indicators: Community and individual choice**

Within the overall development requirement to support the voices of those most affected by a development issue for the most effective action, the following three indicators are proposed:

4. The opinions and ideas expressed through ICT channels are increasingly those of the people most affected by development issues in any given context.
5. The people most affected by development issues in any given context increasingly dominate the physical use of the ICTs.
6. Technical experts on ICT for development increasingly respond to and implement the technical requirements voiced by those most affected.

These indicators counter what have been the predominant voices in the implementation of new technology for development: first, the voice of the large, well-endowed, often northern development organizations whose primary concerns appear to be pushing the perspective and value of their own work. The Web sites of such agencies for example are dominated by the work of the agency in what has become known as 'brochure-ware' or 'web-posters'; the voice behind such sites is predominantly organizational, northern and technical. The second predominant voice is that of the technically savvy in relation to development issues, as has already been highlighted above, with its emphasis on connectivity, software solutions and technical relationships. Important as these voices may be, they do not drive change. From a historical experience in development, even in the North, the three indicators above will provide evidence to drive positive change.

The indicators are also simple, easily understood and generally applicable. Whether we are dealing with a multimedia centre in Tirana or the ICT processes of a UN agency, it is possible to assess trends related to: whose opinions and critique are expressed through the ICT channels; who is using the technology; and the role of the ICT experts, in particular their working relationship with the people most affected by the development issues of focus.

### **PARTICIPATORY DECISION-MAKING**

The required emphasis on dialogue and voice is even more effective in addressing development issues when the people most affected by a development issue are central to decision-making related to how to respond to the issue. Lack of involvement of the people most affected is a consistent failing in




development programming where the major decision-makers are often geographically, economically and socially remote from these people.

There are three decision-making traps that must be avoided if the value of ICTs to the overall development process is to be maximized. The first is where decisions about the technologies themselves, in isolation from the development context, guide decision-making; this places the ICT experts at the centre of the decision-making. The second is where the ICTs are viewed from an efficiency model point of view; the first 'line of sight' for development organizations related to ICTs is to view them as helpful in doing their business quicker and better and this places the development organization staff at the centre of the decision-making. The third trap is set by the argument that development issues are complex and difficult and therefore require guidance from the best formally educated and most well-read people in order to reach the most astute and well-informed decisions.

The history of effective communication for development practice warns us against placing decision-making in the hands and minds of people not centrally affected by the issues in question. Should the civil rights struggle have been







facilitated by people unaffected by blatant racial discrimination? Would the anti-apartheid struggle have been more effective if managed by a group of international NGOs? Would the growing momentum to end female genital mutilation be more effective if centrally guided by UN agencies for which this issue is part of their mandate? Would as much progress have been made on tobacco issues without the central involvement of people afflicted by cancer and the other side-effects of tobacco in the decision-making processes? The same questions could be asked for everything from Maori land rights in New Zealand to drinking and driving in Ohio.

Grass-roots programmes provide a second body of evidence for the importance of the people affected being central to the decision-making. Noted development communication practitioner and thinker Alfonso Gumucio was asked to highlight 50 examples of communication for social change action; these became the book *Making waves* (Rockefeller Foundation, 2001). For almost every action scenario that Gumucio describes, the communication initiative arose from the people most affected and remained managed and guided by them. These include Tambuli (the Philippines), Bush Radio (South Africa) and Video Sewa (India).

The added value of ICTs for enhancing the engagement of the people most affected in decision-making about action on the issues that most concern them is reflected in the ICT literature at two levels: decision-making about the priority use and development of the ICTs themselves; and using the ICTs to engage more people centrally affected by development issues in overall decision-making processes. The literature reviewed reflects these two strands.

### **Two indicators: Participatory decision making**

This paper proposes the following indicators:

7. A minimum of 40 percent of the people involved in the management (board and/or management committee and/or staff) are directly affected by the development issues that the ICTs are designed to address.
8. There are x (the number inserted here depends on the scale and nature of the programme being evaluated) examples in the last 12 months of the use of ICTs for engaging people directly affected by development issues in overall programme management and/or policy development.

The indicators meet the standards that we have set: they are simple, measurable and generally applicable. Whether we are dealing with a community telecentre in Madras, an initiative in Papua New Guinea to capture local knowledge or a regional virtual newswire in Central America, the two tests can be applied. The technology for such involvement exists. Meetings can be held virtually or in a



combination of face-to-face and virtual. Simple technologies including instant messaging and instant quick polls and surveys, allied with direct submission facilities, provide easy ways to both gain input and discuss options.

Through such mechanisms, the technology serves the essential requirements for effective development – in this case, the people most affected by development issues being involved in making the decisions that affect their circumstances and prospects.

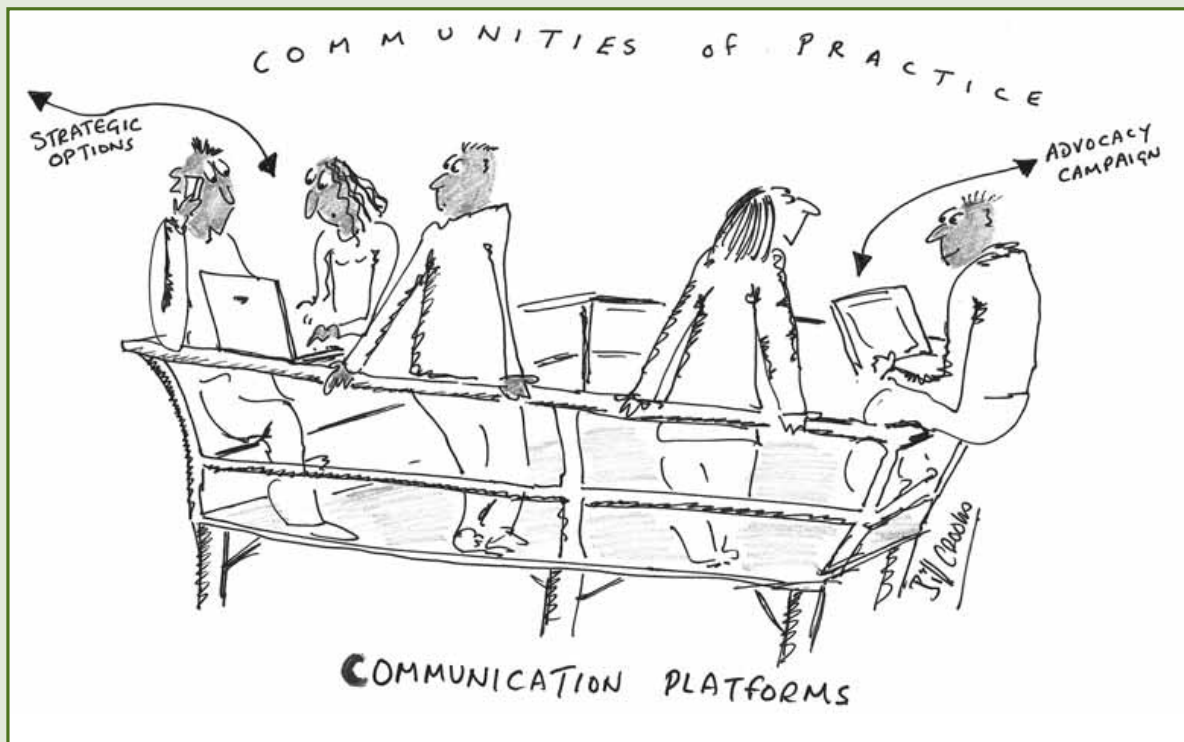
## **BUILDING COMMUNICATION PLATFORMS**

The approach to development projects by donors and international agencies is predominantly narrow; projects are designed to address particular issues. As a result, the projects are restricted in scope and focus, only relevant to the particular issue they are addressing in the locale in which it is addressed and time-limited for the length of the funding. There are numerous examples and it would be unfair to focus on specific, actual projects, but consider the following illustrative examples: a 12-part radio drama on a local environment issue; a journalist training workshop on mother-to-child transmission of HIV/AIDS; a television documentary on rural poverty in a particular country; brochures, posters and videos on tobacco-related issues in a region; and inserts in national newspapers promoting child rights in a country. These are fairly typical examples of fairly typical communication initiatives. They are discrete initiatives focused on particular problems and will be funded and staffed accordingly. In general, when the funding runs out, the project ends. Such projects concentrate exclusively on the particular issues they are designed to address.

However this approach is not consistent with the lessons learned from successful social movements that have (and perhaps economic ones as well). Although the communication work of social movements – ranging through the women's movement, civil rights, anti-apartheid, tobacco, alcohol-impaired driving, sexual exploitation, land rights, environment, minority rights and a host of other global, national and local movements – involve specific activities similar to those described above, such communication initiatives are not the essence of a communication strategy for an effective social movement. The key element for an effective social movement is that people, communities, groups and a cross-section of organizations in a range of geographic and social settings adopt the issue at the heart of the social movement as their priority, and creatively develop and implement programmes relevant to their mandates and context.

By way of example, let's take the growing anti-tobacco movement of the past 20 years in which the predominant strategy changed from discrete smoking-cessation projects to building an anti-tobacco movement. There is no hierarchical organizational head to this movement – many people and organizations lead in many different circumstances. There is no one discrete set

of funded and staffed activities – organizations with mandates relevant to tobacco (or feeling the implications from tobacco use) have created, developed and undertaken their own programmes. These range from trade unions concerned about workers' health, businesses working to reduce cleaning costs, health systems trying to contain healthcare costs, customs and trade organizations working against smuggling, farmers' groups concerned about



farming incomes, cancer patients protesting their legal rights to accurate information, advertising agencies concerned about their moral responsibilities and a myriad of other actors, interests and mandates. It is this process of the issue being adopted and acted upon by an ever-growing group of organizations in an ever-growing tapestry of actions that builds an effective movement.

The essence of communication strategies for successful social movements is the building of communication platforms rather than the conducting of communication activities. What is the difference? Discrete activities have already been described; they involve specific work on particular aspects of the problem. They imply (and most often in reality manifest themselves as) central control of both the message and the medium. The programming process is perceived as linear – by taking X action we will see Z effect. There is a clear sense of a package – here is the package of activities that will be implemented to directly address this problem. The platform approach takes an entirely different communication tack. Rather than attempting to directly and discretely address an issue, a communication platform seeks to play one (or sometimes both) of two roles. Namely to:





- Provide a general communication base that allows for consideration of and action on a full range of development issues. For example (to continue the tobacco example) when the Soul City initiative in South Africa and the ANDI (Child Rights News Agency in Brazil) moved to address tobacco issues, they did not need to develop new programmes. Their strategies allowed for the incorporation of tobacco issues into the existing platforms. In Soul City's case, this is a combination of TV and radio drama, school materials and both NGO and private sector partnership initiatives. These all stand on their own as platforms that can 'hold' any initiative and draw the relationships between issues – in this case, tobacco and child rights. The ANDI strategy was to build a series of platforms that could be applied as and when necessary to the priority child rights of the time. So, they 'built' a journalists' network, awards programme, media analysis function, reporting programme and strong alliances with child-related organizations in Brazil. Evaluations of both Soul City and ANDI demonstrate the effectiveness of this approach. (CIDA, 1997)
- Provide, communicate and facilitate the essential information that people and organizations require to be more effective in their work. Traditional, vertical communication practice stresses refining the message and being more effective in the delivery of that message. Within social movements, responsibility for action has been adopted by a myriad of local groups, organizations and people who understand and can communicate through the cultural norms, languages and nuances so that their messages have resonance and credibility in the local setting. They do not need refined messages that are centrally developed. What they require is: up-to-date data on trends (e.g. tobacco use in sub-Saharan Africa among 14- to 19-year-olds); insights into what seems to be working in other locales (e.g. restrictions on smoking in restaurants in Gauteng); forthcoming events that they can choose (or not choose) to explore local angles on (e.g. advance notice of a new report on the effects of secondhand smoke on children); ways to identify and contact people and organizations who could be helpful to their local work (e.g. exchange programmes between anti-tobacco activists). The communication platform provides this kind of information. People can add to or take from the platform what they require or can contribute.

Social movements have found ways to establish communication mechanisms that serve both these 'platform' purposes. The new ICTs provide an excellent means to operationalize the platforms required for effective development communication. This is recognized by a variety of researchers, commentators and policy analysts. From my analysis their conclusions concerning the essential communication mechanisms for effective social movements fall into 4 categories:



**Share Knowledge** from all sections and perspectives of the movement – local to global - across the range of people and organisations involved in the movement, with a particular emphasis on cutting through hierarchies and respecting and prioritizing locally generated knowledge

**Develop the communication processes within the institutions** that are involved in the social movement: It is crucial across the range of organisations involved that everyone has a communication capacity and role

**Establish the “spaces” to communicate:** space in this context means the physical spaces such as public gathering, radio show, drama events or texting, where the relevant information can be highlighted and debate and dialogue can take place. It also means the psychological and social space – creating an atmosphere and environment in which it is OK to raise and discuss the sensitive issues that are often at the heart of the struggles of social movements.

**Recognise the strongest characteristics of each communication medium:** Effective social movements recognised and worked to the strengths of different communication mechanisms in different contexts. A public march is very different to a radio phone in show. The new ICTs for example mean that knowledge and skill presently at distance can be accessed and utilised. Likewise broader networks can be established as there is no need for physical proximity.

#### **Four indicators: Building communication platforms**

Flowing from the reflections and analysis above the following core indicators are proposed: They are simple, measurable and applicable in a range of contexts:

9. The ICTs are increasingly used to draw relationships between different development issues.
10. The ICTs are increasingly used as a communication platform to identify and negotiate the specific strategic and technical support that development organizations require
11. The ICTs are increasingly used as the source for the core information needed to better inform individual development activities.
12. The ICTs are increasingly used as the gathering point for like-focused organizations and groups.

As already stated, the development of communication platforms is essential to the success of effective social movements. The indicators above will highlight the extent to which ICTs are being mobilized in support of this. They go well beyond the normal criteria of access, to assess trends in the nature of that access. No matter what the ICT initiative – large, small; operational, funding; direct

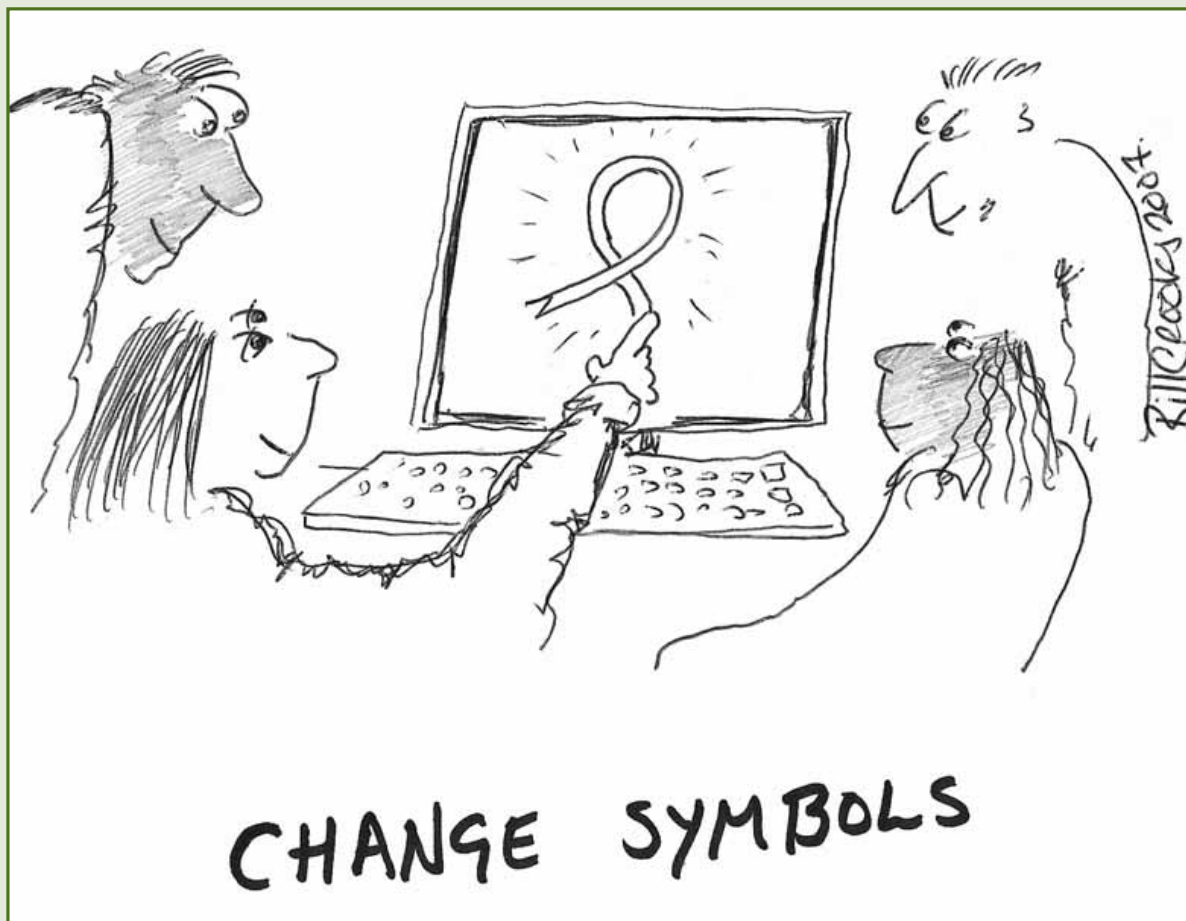




impact programming, service and support – impact can be measured according to the four indicators above. Positive trends in these indicators predict long-term positive impact on the issues in question; we can be reasonably certain of this because of the importance of platform development and platform strategies as essential elements of the most effective social change movements.

## CHANGE SYMBOLS

It is difficult to think of any major social change that has not been associated in some way with a particular change image or symbol. The red HIV/AIDS ribbon is one of the latest additions to the gallery of social change icons. It joins the clenched fist for black power, the passbook for anti-apartheid, the panda for the environment, the female symbol for the women's movement, the 'dream' for civil rights and a range of other symbols and images that serve the very powerful purposes of highlighting the 'cause', embodying the case and provoking the necessary dialogue and debate. In every local setting, there will be similar images that people in those contexts immediately identify with an issue, concern or struggle – maybe a particular animal, a specific word, a particular myth, a specific event, and so on. Mostly these images or symbols emerge from the action and the struggle – it is almost impossible to design a symbol or create an image, introduce it to a community or struggle and have it 'adopted' with





strong deep meaning and resonance. Such symbols and images come to convey a common meaning and/or a point of debate. That meaning transcends the physical properties of the symbol (e.g. a ribbon) or the actual facts of the image (e.g. what actually happened during a particular event). These symbols and images are tremendously important to all change processes.

Interestingly, there is no reflection (that I can find) on the role of ICTs in either making use of and/or multiplying such symbols or images. But obviously, their potential role in this area is very significant.

### **Three indicators: Change symbols**

13. The ICTs are increasingly used to highlight emerging symbols and images related to action on the development issue(s) in question.
14. The ICTs are increasingly used to multiply strong symbols and/or images that are emerging from the struggle.
15. The ICTs are increasingly used to both convey meaning and deepen debate and dialogue through the symbols and images presented.

ICTs provide some distinct advantages for highlighting, multiplying and conveying meaning related to the symbols and images that are core components of any social change strategy. The Internet and e-mail provide information and idea collection points that facilitate the assessment of trends, including the 'spotting' of emerging symbols and images. Through the instant communication processes of the new technologies, there are opportunities for rapid multiplication of the emerging symbols and images, conveying meaning and facilitating debate and dialogue using the symbols as 'triggers'.

### **WORKING ALLIANCES**

Effective social change on any development issue emerges from an alliance of interests rather than from one specific programme. Changes at local, national or global level are not undertaken by a single initiative or by one centrally managed change strategy. Essential to social change is a loose alliance of differing vested interests that identify with each other but do not control each other's activities. Again, some of the major social change processes of the past provide the evidence for this important element for change, though the principle applies to all change processes – large or small. Gandhi was not the Director of the total Indian independence movement. Martin Luther King did not hold the formal position of President of the Civil Rights Struggle (Inc). Nelson Mandela was head of the African National Congress (ANC), but the anti-apartheid struggle was much broader than the ANC. There is no central, controlling organization for the environment movement and indeed many of the leading organizations such as Greenpeace and the World Wildlife Fund have significant strategic differences.



For all of these movements – and at a global level we could add major social movements such as the women’s movement and the peace movement – there is not only no one central, controlling organization, but there are literally tens of thousands of organizations each pursuing their own objectives and strategies within the overarching goals of ‘equal rights for women’ and ‘clean environment’, for example. As indicated, this is not just a global phenomenon; at a local level, the same principle applies. Effective and sustainable change requires an alliance of interests rather than a single, centralized programme of action.



The writers reviewed expressed a strong belief that ICTs add substantively to the process of partnership building, as well as contributing to attaining higher levels of influence, to enhancing social support, to networking and to building consensus (CIDA, date; The Rockefeller Foundation, 1999, 2001).

### **Three indicators: Working alliances**

The following three indicators to measure ICTs’ contribution to working alliances are proposed:

16. The ICTs are increasingly used to build working strategic and/or operational partnerships with other organizations that have similar vested interests.



17. The ICTs are increasingly used to participate in networks of like-focused organizations.

18. The ICTs are increasingly used to both provide support to others involved in compatible action and to receive support from such organizations.

ICTs can greatly enhance these important aspects for social change movements. The technical capacities of Web site and e-mail technologies as well as mobile phones provide significant added value for alliance building, especially

- their interactivity,
- the ability to instantly manipulate information,
- the possibility of working with people and organizations at a distance,
- the ability to aggregate information whilst also retaining the individuality of each component, and
- the rapid speed of communication.

## **RELATIONSHIP BETWEEN THE INDICATORS**

Take a car, any car, or a motorcycle, or a minibus in Kenya or a tuk-tuk in Thailand. Imagine any vehicle. It is not a vehicle unless its component parts relate to each other. The engine is useless without wheels and a chassis. The wheels are useless without a gearbox and steering wheel. There is no use trying to go anywhere in the vehicle, no matter how comfortable the seating, unless there are wheels, engine, chassis and gearbox! The same is true for the social change process and, consequently, the measurement indicators.

This means that the indicators above cannot be taken in isolation. Simply facilitating holistic dialogue through the ICTs will have little effect if this is not linked to corresponding increases in the volume of the voices of those most affected, participatory decision-making, building communication platforms, multiplying change symbols and developing working alliances. It is the totality of the six processes that matters and therefore the totality of the measurement indicators that need to be assessed, as the diagram that follows demonstrates.

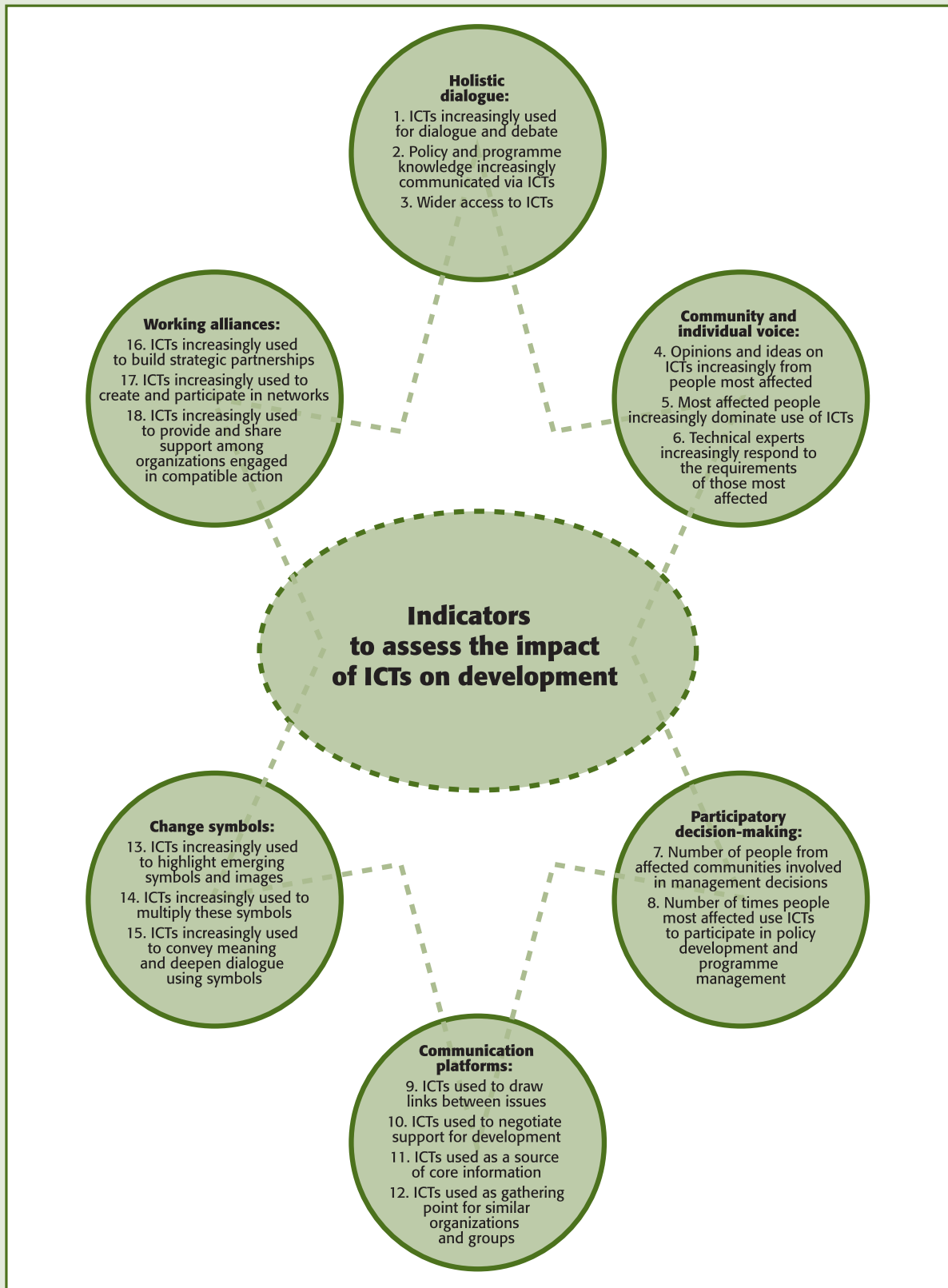
The whirlpool in the middle of this diagram – where the indicator streams meet – is the change process in operation. It is this dynamic that needs to be assessed, and it is for this reason that it is essential not to isolate specific indicators from any of the six highlighted above in any of the planning, operation or evaluation phases.

The relationship between the indicators is even more complex. Let's return to the vehicle metaphor. There is little point in putting a Ferrari Formula One engine on the chassis, gearbox and body design of a Bangkok tuk-tuk (though I





## Dynamics between the indicators





suspect this would be encouraged by the tuk-tuk drivers and from personal experience some may have experimented along these lines). Improvements need to be gradual and in harmony. A slight increase in engine power will require a modification of the gearbox ratios and a change in wheel alignment and passenger seating positions, for example.

The same is true for the social change process related to harnessing the power of ICTs for effective action on development issues – and hence the measurement and evaluation of those processes. Little will be gained from a massive increase in one element of the process – for example, just focusing on getting as many people directly affected as possible involved in the management of the programme or initiative. Attention to that element of the process needs to be matched by corresponding improvements in action in the other five areas. It is therefore vital in the evaluation process to assess that relationship.

## **SUMMARY**

The 18 indicators can be collated as follows, grouped into their categories:

### **Holistic dialogue**

1. The ICTs are increasingly used for dialogue and debate.
2. Policy and programme knowledge is increasingly communicated through the ICTs.
3. There are increased levels of access to the ICT processes.

### **Community and individual voice**

4. The opinions and ideas expressed through ICT channels are increasingly those of the people most affected by development issues in any given context.
5. The people most affected by development issues in any given context increasingly dominate the physical use of the ICTs.
6. Technical experts on ICT for development increasingly respond to and implement the technical requirements voiced by those most affected.

### **Participatory decision-making**

7. A minimum of 40 percent of the people involved in the management (board and/or management committee and/or staff)



are directly affected by the development issues that the ICTs being mobilized are designed to address.

8. There are x (the number inserted here depends on the scale and nature of the programme being evaluated) examples in the last 12 months of the use of the ICTs for engaging people directly affected by development issues in overall programme management and/or policy development.

### **Building communication platforms**

9. The ICTs are increasingly used to draw relationships between different development issues.
10. The ICTs are increasingly used as a communication platform to identify and negotiate the specific strategic and technical support that development organizations require
11. The ICTs are increasingly used as the source for the core information needed to better inform individual development activities.
12. The ICTs are increasingly used as the gathering point for like-focused organizations and groups.

### **Change symbols**

13. The ICTs are increasingly used to highlight emerging symbols and images related to action on the development issue(s) in question.
14. The ICTs are increasingly used to multiply strong symbols and/or images that are emerging from the struggle.
15. The ICTs are increasingly used to both convey meaning and deepen debate and dialogue through the symbols and images presented.

### **Working alliances**

16. The ICTs are increasingly used to build working strategic and/or operational partnerships with other organizations that have similar vested interests.
17. The ICTs are increasingly used to participate in networks of like-focused organizations.



18. The ICTs are increasingly used to both provide support to others involved in compatible action and to receive support from such organizations.

- There is a balanced and harmonious relationship between all the elements above.

## **TESTING!**

At the beginning of this paper, four criteria were highlighted for the indicators developed. In order to be useful they had to:

- emanate from a set of overall social change development strategies of proven impact;
- be consistent with and informed by the opinions and perspectives emerging from the ICT evaluation literature;
- provide short-term measurements that predict long-term change;
- be simple and practical, and applicable in a range of different contexts.

The indicators collated above attempt to meet those criteria. They do emanate from an overall development strategy – Communication for Social Change, with all of the evidence from large and small social movements. The indicators are informed (and reinforced) by the ‘evidence’ and perspectives of the ICT evaluation literature. Short-term measurables are presented. The intention is to ensure simple and practical indicators that are applicable across the full range of development contexts.

## **METHODOLOGIES FOR TESTING AND MEASURING**

The above indicators can be measured using the full range of evaluation and research methodologies. Content analysis, structured and unstructured interviews, surveys and questionnaires, participant and non-participant observation and the whole host of social science approaches are applicable and appropriate. Methodologies for indicator measurement are not the major concern of this paper; the core issue is the indicators. Examples follow of some approaches that can be used to collect information pertinent to the indicators. In keeping with the nature and intent of this paper, these are provided in summary form as simple suggestions that can be locally adapted and used. There is of course an entire, detailed field of work and discipline related to evaluation methodologies. It would be inappropriate to go into such depth in this context.

The evaluation methodologies proposed below also need to be consistent with the participatory and social communication approaches described above.





Gathering the information in the ways suggested below should be an important part of the overall change process related to the value of ICTs in development. The people most affected should play a central role; they should manage the information gathered and the analyses developed. External technical assistance on evaluation issues must be supportive, not dominant. Too often, evaluation is made so technical that it becomes disconnected from the groups experiencing the major development issues. The evaluation results should spark further debate and dialogue. These connections between the evaluation process and effective action – in this case through the use of ICTs – are vital. Evaluation is part of the change process.

So, what are some methodologies? Below, the first four categories of indicators are used to highlight the possible ways in which evaluation methodologies can be used to collect the relevant information.

### **Indicators: Holistic dialogue**


1. The ICTs are increasingly used for dialogue and debate.
2. Policy and programme knowledge is increasingly communicated through the ICTs.
3. There are increased levels of access to the ICT processes.

### **Examples of possible evaluation methodologies**

**Content analysis:** This could involve assessing the nature of the content on a random sample of e-mails sent by people from the ICT centre or through the ICT process. What levels and trends do they show of dialogue and debate, and of receiving and communicating knowledge relevant to peoples' daily lives and priorities? Do they show increasing levels of access to ICT processes?

**Structured and unstructured interviews:** If the programme is in an ICT centre that people attend and use, a quick set of "exit" interviews could be employed with those attending on the first Monday of each month, for example, with questions such as: Who did you contact today? What did you discuss? What did you share? What new ideas or knowledge did you gain? What ideas and knowledge did you contribute? Who came with you today? What will you share when you get home? What will you use when you get home? What made you think today?

**Surveys and questionnaires:** Identify the local population to whom the ICT initiative is relevant and highlight those families, people, friendship groups and communities that are affected by a particular issue – for example, the difficulties girls face getting into, and being given equal priority in school. Design a very brief yes-and-no answer questionnaire that seeks to highlight the extent to which these groups are using ICTs to: gain information to support their case for girls in school and girls being treated equally in school; and to discuss this issue.



Administer the questionnaire over time to the same group – for example at monthly intervals. Compile the results and note trends.

**Participant observation and non-participant observation:** Ask a small group of people, with the permission of their families, to keep a diary (or to dictate to someone who can keep a diary) recording each day if possible, over an agreed time period, the times during a debate or dialogue in a family or local community setting when the new technologies are mentioned as the source of information for an issue under discussion. For example, in a discussion on crop rotations: “Naseem mentioned today that his cousin had been on the computer and it said that...” Repeat regularly and note trends.

### **Indicators: Community and individual voice**

4. The opinions and ideas expressed through ICT channels are increasingly those of the people most affected by development issues in any given context.
5. The people most affected by development issues in any given context increasingly dominate the physical use of the ICTs.
6. Technical experts on ICT for development increasingly respond to and implement the technical requirements voiced by those most affected.

### **Examples of possible evaluation methodologies**

**Content analysis:** Many ICT centres have log-in processes (either into the building and/or onto the computers themselves). Look at those files and compare the people logging in – and the number of times they log in – with their gender, occupation, education and interests. Over time, assess the extent to which the communication capacity of the technologies is increasingly or decreasingly used by those facing the most severe development issues.

**Structured and unstructured interviews:** Highlight a small group of people significantly experiencing a development issue – e.g. people who are affected by HIV/AIDS – and who are active in addressing that issue. Conduct an open discussion with them on four or five main lines of enquiry related to the extent to which the ICTs have (or have not) given them an increased voice in policy and strategy discussions. These lines of enquiry might include: Do you feel more connected to policy and strategy discussions about how to allocate HIV resources? Have the new technologies supported you in increasing the extent to which your views and opinions contribute to those discussions? Has access to the new technologies meant that you feel better or no better informed about HIV developments relevant to your setting? Repeat the interviews on a regular basis for comparative and trend data.



**Surveys and questionnaires:** Conduct a survey of policy-makers and resource-allocators – from local to national – in an area relevant to your setting. For example, this might be land-reform and land-allocation questions. Give them a survey that has questions based on four themes:

- the extent to which they feel the need to take account of the views and opinions of people affected by land-reform and ownership questions;
- the extent to which such groups are using the new ICTs to express their grievances and organize their campaigns;
- the extent to which the policy-makers themselves consult new technology sources to inform their policies and decisions;
- the policy-maker and resource-allocator assessment of the ways in which the new technologies have affected both decisions taken and policies adopted – with specific examples.

**Participant observation and non-participant observation:** Ask some appointed people – as participants in the following process or as observers (perhaps a combination) – to observe meetings between technical experts on ICT and development, and local, interested community members. The experts may, for example, be proposing a wireless option, a new software package, new hardware options, more advanced networking systems or Web-site development. The observers are to note the style of interaction between these technical experts and local people. Categories would need to be developed. For example: Who talks? Who questions? Who listens? Who decides? What are the main themes discussed? Who leads the discussion? What factors guide the decisions?

### **Indicators: Participatory decision-making**

7. A minimum of 40 percent of the people involved in the management (board and/or management committee and/or staff) are directly affected by the development issues that the ICTs being mobilized are designed to address.
8. There are x (the number inserted here depends on the scale and nature of the programme being evaluated) examples in the last 12 months of the use of the ICTs for engaging people directly affected by development issues in overall programme management and/or policy development.

### **Examples of possible evaluation methodologies**

**Content analysis:** Collect names and background information of the people on the boards or management committees of ICT-based development agencies – e.g. telecentres – in your region or country. Assess the balance between people directly affected by priority development issues in the region, and those from backgrounds or in situations where those issues have less impact.



**Structured and unstructured interviews:** Interview the directors of the main telecentre or equivalent ICT operations in your country. Ask them to identify specific instances of people directly affected by the priority development issues being centrally involved in the detailed planning of a development issue strategy that involves an ICT component. It is important to be specific. Follow up with the people who have been identified, compare stories and examples cited and draw conclusions.

**Participant observation and non-participant observation:** Identify people centrally affected by priority development issues in your area who are involved in action on a development issue that includes an ICT component – perhaps an initiative to identify and share local knowledge and/or to copyright and protect that knowledge. Observe their engagement in that process, drawing conclusions concerning their level of engagement in the decision-making process.

### **Indicators: Building communication platforms**

9. The ICTs are increasingly used to draw relationships between different development issues.
10. The ICTs are increasingly used as a communication platform to identify and negotiate the specific strategic and technical support that development organizations require
11. The ICTs are increasingly used as the source for the core information needed to better inform individual development activities.
12. The ICTs are increasingly used as the gathering point for like-focused organizations and groups.

### **Examples of possible evaluation methodologies**

**Content analysis:** Select a random sample of new technology users in your setting – perhaps from a particular group such as the farmers’ union, or their children – and ask them to review the history of their use of the Internet over the past month, for example. Note the sites they are accessing, paying particular attention to the range and variety of sources of information and combine this with a ...

**Structured or unstructured interview:** Ask participants to explain why they accessed particular sites, and what they gained from those sites for which aspects of their lives and livelihoods. Repeat on a regular basis for comparison purposes.

**Surveys and questionnaires:** By way of example, identify 20 to 50 locally developed organizations in your setting and develop a questionnaire to be administered to three to five people in leadership positions in each of those organizations. Focus the questionnaire on the following themes:





- the extent to which they gain information from Internet sources to inform their decisions, with trends if possible;
- the main sources they use;
- the connections they make with issues and information from other “disciplines”;
- the networks they engage with and participate in;
- the information they have found most valuable and the demonstrable benefits – with actual examples – of having access to the information and networks cited.

**Participant observation and non-participant observation:** If the work is undertaken in an ICT centre, which could be a small Internet café or equivalent, observe the interactions between people with different interests and goals. To what extent do those using the café because of their political work (e.g. e-mailing colleagues in other parts of the country) begin, because of the physical interactions at the café, to engage and compare notes across interests, for example with people engaged in a local women’s group who are using the café to prepare their local newsletter? What linkages and connections are made?

## CONCLUSION

Following such specific examples of possible methodologies for implementing the indicators proposed, it is important to recall the overall evaluation principle that is being applied. Based on an assessment of the most important factors for successful social movements, a series of core communication indicators for ICTs were highlighted. Before closing, two major observations remain to be made concerning the value of the information and ideas presented above for more effective evaluation of ICT development initiatives.

There is a chicken-and-egg quality to the perspective presented above. Which should come first when developing indicators to measure the impact of ICTs on development issues: the evidence from research or the assertions from experience and thinking? I see them as linked. At present, we only have the assertions; there is no compelling data. But the assertions are important. They provide one framework through which the research can be funnelled. Such research may very well reverse the thinking above, but this is the value of a process of action and reflection or learning by doing.

‘You become what you measure’ is a valid dictum for almost any development initiative. When people and organizations know the criteria by which they will be assessed, they tend to work to strengthen those factors. If the evaluation indicator is numbers of condoms distributed, the operational emphasis will go on condom distribution. Similarly, for the environment – if the assessment criteria are numbers of species saved from extinction, or acres of natural habitat saved from human development, then the programming emphasis will go on those factors. The same is true for the evaluation indicators developed and





proposed above. If the dominant thinking assesses ICT developments according to these evaluation indicators, this will drive programming towards those elements.

This paper has considered the end goal of ICT based interventions, such the possibility for increased participation of people in decision making and policies which affects their lives brought about by ICT use rather than the technology used. Therefore it is important that these indicators remain focused on the end goal. The next step is to apply these indicators and reflect on their usefulness but this would be the subject for another paper.

Warren Feek  
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