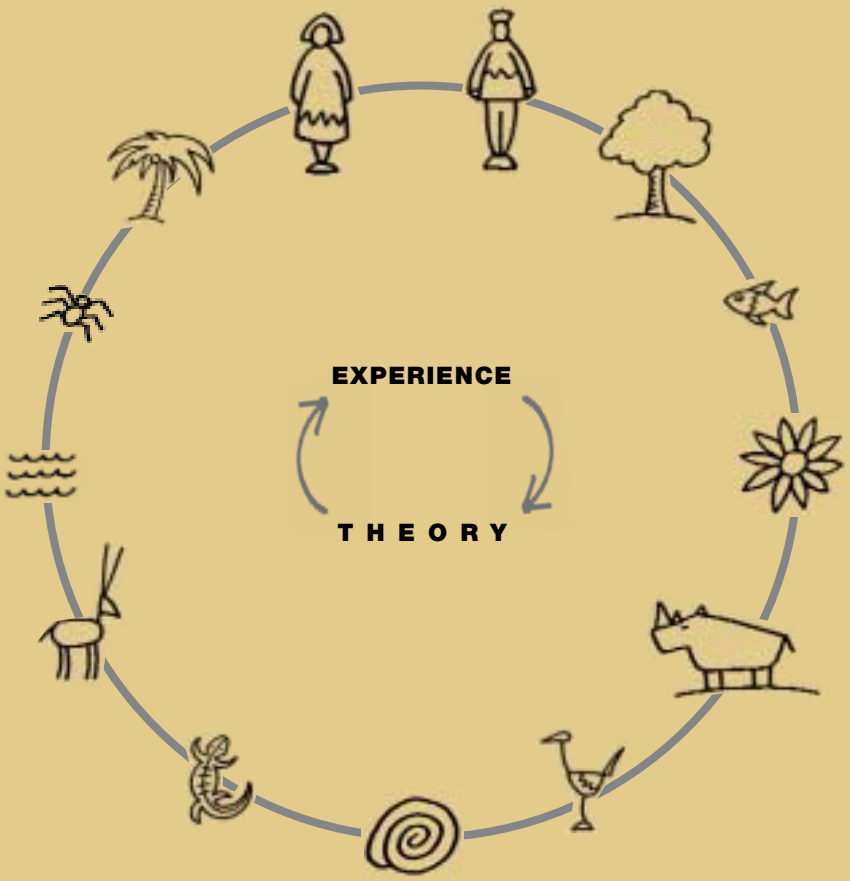
Communication and Natural Resource Management



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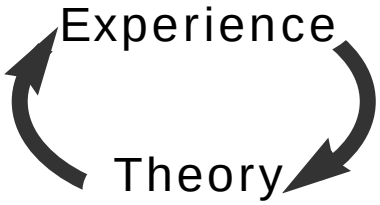
Communication and Natural Resource Management



Prepared by The Communication Initiative in collaboration with the Communication for Development Group

Extension, Education and Communication Service
Research, Extension and Training Division
Sustainable Development Department

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Acknowledgements

FAO wishes to acknowledge the contribution of the Strategic Communication for Sustainable Development Unit (DevCom-SDO) of the World Bank towards the production of this book. DevCom-SDO is a technical group within the Communication for Development Division whose goal is to introduce strategic communication as an integrated component of policies and projects, and to ensure an efficient use of human and financial resources. The Unit is also committed to the promotion of appropriate communication concepts and tools and to capacity building initiatives in the field of strategic communication for natural resource management.

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Foreword

When FAO raised the idea of preparing a resource book in collaboration with The Communication Initiative for people involved in **communication and natural resource management**, it was clear that finding an approach that reflected the diversity of thought, practice and local context would be a challenge. We hope that this document meets that challenge by presenting experiences across cultural and theoretical perspectives in such a way as to enable the reader to reflect on some of the shared principles and lessons learned in this field.

For many years, under the definition of Communication for Development, FAO has emphasized the critical role that participatory communication plays in involving communities in rural development. Such a commitment to genuine participation requires openness to the different ways of understanding and resolving problems that emerge from the cultural, economic and agroecological realities of the communities involved. During the past three decades the **Communication for Development Group** in the Sustainable Department of FAO has integrated in several field projects the use of different communication approaches and media, and more recently new information and communication technologies (ICTs), for community based rural development. These experiences have shown that participatory communication processes can transform the ability of rural stakeholders to fully manage local natural resources and to enable community control over their environment.

The Communication Initiative has worked to increase the profile of communication as a central element of successful development practise and to enable communication practitioners to use peer review and real time information exchange to improve their work. Through its 'location' as a crossroads for a range of information about, evaluations on, and reviews of, communication projects, The Communication Initiative has facilitated discussions across theoretical approaches, gathered information on grassroots initiatives from varied cultural and geographic settings and brought together practitioners from very different backgrounds.

The two groups share an understanding of the centrality of communication for rural development and social change, and a commitment to enhance rural people's capacities in managing communication processes. FAO is interested in exploring this in the realm of natural resource management and rural development in order to strengthen the work of communication practitioners. The Communication Initiative looks for ways

to profile and share the varied communication approaches and methods being used successfully in the field. Both institutions want to facilitate a process of mutual learning among different stakeholders interested in sharing experiences about communication for natural resource management.

The result of this effort is a unique and not easily categorized resource book – **Communication and Natural Resource Management: experience/theory**. It is not a work of theory and yet examines theoretical perspectives. It is not an account of best practises and yet provides examples of interesting and useful initiatives. It is not a training manual and yet presents exercises and learning objectives. It looks at how experience is, and can be guided by theory and how theory can be derived from understanding experience. It challenges us to reflect on our own and others' work by treating theoretical approaches as interchangeable tools within a variety of different communication and natural resource management initiatives. It encourages the readers to learn from each other.

We hope you enjoy reading this book and find it a useful tool when thinking about communication for natural resource management and rural development from perspectives that shed new light on old problems.

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The writing and preparation of this book has been a collaborative effort from the beginning. There are many people who helped us by allowing us to use their experiences in the field, there are others who helped point us towards essential reading and documentation, still others read portions of the document for us and offered advice and useful criticism. We thank all of you for helping make this a better book than it would have been without you while exonerating all of you from any role in its failings.

At FAO we would particularly like to thank Loy Van Crowder and Mario Acunzo who provided great support throughout the process and critical thinking when we needed it. We would also like to thank Denise Gray-Felder, Brian Byrd and their colleagues at the Rockefeller Foundation for their insight on social change in action, Adelaida Trujillo, Raphael Obregon, and Alfonso Gumucio Dagron for reading and commenting on the entire document. It is better for their input though they share no blame for its short commings. Others who provided us with information and/or read and commented on portions of the documents are Brian T. B. Jones, Kitty Warnock, Claire Thompson, Luz Marina Rizo, Juan Carlos Cruz, Lyes Ferroukhi, and Victor Ananias. Thanks also to the World Conservation Union (IUCN) who helped us locate some of the documents used in the book and a special thanks to several people at Kothmale radio who provided us with important updated information on their work, to the team at GreenCOM who provided significant and useful input, to Freedom Nyamubaya for writing and let us use her poetry, and to all those of you whom we have not mentioned but probably should have.

Introduction

USING THIS BOOK

This book has been written as a tool for people involved or interested in communication and natural resource management who seek a better understanding of how different theories and strategic change principles relate to actual practise. It is not, however, a book of theory nor is it an argument for one approach over another. Instead, it relates a variety of theories and change principles in simplified, almost schematic form, to a series of real initiatives in the field through interactive «experiences».

It asks that the reader become a participant in a process that requires reading and analysing each initiative using different theoretical lenses. Each «experience» is organised around a theme, a learning objective, a description of an actual natural resource management and communication initiative, and one or two theoretical lenses through which to analyse the initiative. As you work through each «experience», you will be asked questions about the theory and change principles and how they relate to the initiative. The idea is not to «discover» the right approach but rather to create an interactive space that enables you to reflect on what might work in your own context and also on how different contexts may require different approaches, principles and theoretical frameworks.

The reader will find no examples of «best practice» in this book nor will you find step-by-step examples of how to «do» natural resource management communication. While there are clearly examples of good practise and well planned initiatives in this and other places[1] this is a book about exploring the practical relation between theory and practise and about being open to different perspectives and approaches. Its format is designed for you to interact with directly. Spaces are there for you to write in, make margin notes on, and highlight elements that are relevant to you. It is also designed to be easy to photocopy so you can make multiple copies for yourself or others. We encourage you to use it in workshops as well as a tool for individual reflection. We hope you enjoy it and find it useful.

A WORLD OF FINITE RESOURCES

Between 1970 and 1999 the natural wealth of the earth's forests, freshwater ecosystems, oceans and coasts declined by 33 percent.[2] Today, 58 percent of the world's coral reefs

and 34 percent of all fish species are at risk.[3] Within the next 25 years 48 countries accounting for 35 percent of the world's projected population will face water shortages.[4] Over the next 50 years the world's population is estimated to grow by 50 percent to 9.3 billion. Virtually all of this growth will be in today's developing countries. The 49 poorest countries will see their populations grow from 668 million to 1.86 billion people.[5]

This grim statistical list could go on and on. The world has not managed its natural resources well and the problem will almost certainly get worse before it gets better. Furthermore, though the poorest and most marginalised have the smallest «footprints» when it comes to using the world's resources, they are also those who are and will be effected first and worst. Therefore, while long term solutions to the world's major environmental and food security problems depend significantly on action from the wealthy and most industrialised countries (those with the largest «footprints»), day to day survival for the poor and marginalised will depend increasingly on the careful local management of natural resources in a context of increasing scarcity and demand. Add to this the impact of AIDS which has already killed an estimated 7 million agricultural workers and is predicted to kill another 16 million by 2020[6] and it is clear that the coming years will present unprecedented challenges especially for the rural poor.

So, as journeys to find firewood get longer, maintaining the fertility of the soil gets harder, catches of fish get smaller, and the hands to do the work get fewer, the need to effectively manage natural resources has never been greater. Similarly, improving communication as a tool to facilitate the better management of limited resources has never been more critical. But, finding ways to sustainably and equitably steward and share these resources will require dialogue and compromise at global, national and local levels. Future benefits need to be weighed against immediate costs, and short-term interests against long term sustainability.

This exploration of experiences, theories and methods, will provide opportunities to reflect on the critical role that communication for development can play in supporting essential processes of dialogue. We hope that it offers some insight into how best to support the many actions that people are already taking, as they confront the challenges facing us all in a world of finite natural resources.

CRITICAL PERSPECTIVES

Let us begin by drawing out some key themes through the voices of a Zimbabwean war veteran, development worker and poet, and some leading thinkers in the areas of

Natural Resource Management (NRM) and communication for social change. In Dusk of Dawn, a book of prose and poetry, Freedom Nyambaya writes:

A Career for Life

I am a retired soldier
not a retired revolutionary
I still walk around armed
with tools and ideas of how to grow more maize
There are still those of us
who consciously organise and create
Africa's man-made problems and make
our suffering a career for interested scholars[7]

From Grazia Borrini-Feyerabend, M. Taghi Farvar, Jean Claude Nguinguiri and Vincent Awa Ndangang, in the *Co-management of Natural Resources: Organizing, Negotiating and Learning-by-Doing:*

«In the past, many traditional societies formed relatively closed systems in which natural resources were managed through complex interplays of reciprocities and solidarities. Communal property was generally widespread, and constituted a crucial element in the cohesion and sustainability of traditional resource management systems. Local knowledge and skills, built through extended historical experience, were another cornerstone. Most importantly, local communities tended to create *themselves* around a body of natural resources that they could manage together….

The historical emergence of colonial powers and nation states, and their violent assumption of authority over most common lands and natural resources led to the demise of traditional resource management systems virtually everywhere. The monetisation of economic exchange weakened local systems of reciprocity and solidarity, as did the incorporation of local economies into increasingly global systems of reference. In addition, the rise in power of modern, expert-based, «scientific» practices induced severe losses in local knowledge and skills. This generalised breakdown of local NRM systems finally resulted in the disempowerment and «deresponsibilisation» of local communities...[8]

And again from Freedom Nyamubaya:

Shanty town beauty

She stood at the door step

must have been five years or less
the begging eyes gazed from left to right
The kwashiokored tummy bulged out
of the torn dress
with marks that looked like the map of Africa
I realised it was not tattoo
but an accumulation of dust
run over by sweat
Pretty more than famous Cleopatra
everything equal
the girl would pass for Miss Africa
just another woman nature produced
but forgot to breast-feed[9]

These two voices, while coming from radically different backgrounds, present us with quite similar perspectives on the disempowerment of local communities, the importance of who «owns» development processes, and a sense of the mistrust and obstacles to communication that have been created by colonialism, modernisation and globalisation.

Grazia Borrini-Feyerabend *et al*. tell us of a series of external impositions on local communities through colonial or state rule, the discounting of local knowledge in favour of «scientific» knowledge, and in some cases the stripping away of local control in a process they call «deresponsibilisation». These forms of disempowerment stripped many local communities of the capacity and even the right to manage the resources that had previously been the foundation of their existence and identity.

At the same time, and not surprisingly, these disempowering processes have generated mistrust and resistance. Freedom's revolutionary commitment to the development of tools and ideas to «grow more maize» and refusal to be objectified by scholars or images of hunger and poverty, speaks to community frustration and anger, but more importantly, to community strength and determination to reclaim what has been taken away.

What they both say is that managing natural resources in the difficult times ahead will require a clear recognition of the mistakes and abuses of the past. The «local» has to have an influential, indeed powerful, seat at the NRM table, and previous patterns of exclusion should be seen as having often been disastrous, both for local communities and for the world as a whole.

CHANGING APPROACHES TO NATURAL RESOURCE MANAGEMENT

Responses to the realities reflected above are not new to NRM or community-based development. There have been significant changes to the methods and theoretical underpinnings of all kinds of community development over the past 30 or so years. Much of this change is the result of reflection on experience, coupled with, and sometimes forced by, the insistence of local voices like Freedom's, to be heard and reckoned with.

During the 1970s, practitioners working with rural communities began to be disillusioned with the lack of progress, the failure of many development activities, and all too often, worsening conditions for the poor. It can be assumed that the communities themselves were even more disillusioned though their voices were seldom heard. Early work on NRM focussed on the lack of local knowledge and the need to improve this through education, training and outside expert advice. Local practices were surveyed to identify what had to change, but not surveyed for the local wealth of experience and knowledge.

To the extent that this amounted to a communication method, it was one in which local people were questioned to discover gaps in their knowledge that could be filled by expert outsiders. Knowledge was usually seen as technical, value neutral, and transferable across cultures and continents. If not quite a one-size-fits-all approach, it was based more on a belief in the universal application of methods defined by agricultural science than «less rigorous» approaches that emphasised the centrality of social and cultural practise.

As it became clear that this approach was not delivering the progressive improvements it promised, two key problems were identified. The first was lack of local support for many of the activities and projects designed by outsiders – Freedom's «interested scholars» or the «modern experts» of Borrini-Feyerabend et al. The second was failure due to poor understanding by outsiders of local social and environmental conditions, made worse by not acknowledging the value of local experience.

Identifying these problems led to new approaches to communicating with rural people that sought a better understanding of their local situation, and involved them in identifying the issues that affected them most directly. This led to the adoption of techniques such as «Rapid Rural Appraisal» (RRA), which enabled development workers and other outside «experts» to gather simple data quickly on issues iden-

tified at the local level. It also allowed some participation of semi-literate and illiterate people.

While this was an improvement over the complex and specialised information gathering of the past, it was still based on outsiders obtaining information, which was then taken away for analysis and use in the preparation of development interventions. Local opinions and ideas were gathered more effectively, but control and ownership remained outside of the communities being «developed».

Nevertheless, techniques like RRA opened the door to involving communities further – not just in data collection, but also in data analysis, problem identification and prioritisation, and eventually (though still not often enough) participation in defining, implementing and evaluating development interventions.

This more inclusive approach became popularly known as Participatory Rural Appraisal (PRA). The key insight of PRA was that both local communities and outside «experts» had information and knowledge to share. It was assumed that outsiders knew relatively little about local conditions, practices and resources, while community members often lacked technical knowledge that would help them adapt to changing social, political and natural environments. The important change was the identification of a two-way approach to communication that respected the experience and knowledge of both «inside» and «outside» participants, and gave the community a voice in setting development priorities.

PRA helped move the community back towards the centre of the development process and sought to better understand and overcome the difficult and often contradictory positions in which communities find themselves when facing issues of sustainable resource use. But, as important as this process of enabling communities to take ownership of their own development was and is, it does not fully respond to the interdependent context in which all development processes must work.

Consider the issues faced by communities in the relatively remote San Juan River Bi-National Basin in Central America (see Experience # 6). These communities are in Costa Rica and Nicaragua. The basin itself forms a natural ecological and social unit, and there are many cultural links between its inhabitants on both sides of the border. The area is also open to a variety of business activities, and depends on, or is affected significantly by, decisions and policies made in the relatively distant capitals of the two countries.

No matter how participatory an approach may be within a local community, there are many other factors that can impact the local management of resources. If business

regulations are lacking, then unscrupulous and unsustainable practices that generate little local benefit and much long-term damage can – and in the case of the San Juan Basin did – occur. If governments make policies that do not take local needs and concerns into account – or do not make policies at all – then local involvement and commitment to the management of resources will be weaker or impossible.

The proper management of an area like the San Juan Basin requires the coordinated participation of at least two national governments, local government, business and local communities. To do this requires more than a commitment to participation at the community level through processes like PRA; it requires meaningful participation at multiple levels and across divides of geography, culture, education levels, income and often fundamental interests.

For participatory approaches to succeed in this wider context of interdependent influences another facet is required - a way to bring the necessary groups into conversation with each other, and to enable the poorest and most marginalised to have a powerful/influential voice. In other words, a communication strategy that goes beyond the relationship between «outside» development experts and «inside» community members.

Communication strategies that go beyond the local community retain the insights provided by approaches like PRA, but insist that equal importance be given to communication strategies dealing with the external contexts in which communities must function. This has been recognised in approaches like Participatory Rural Communication Appraisal[10] and Co-management[11].

The Namibia experience with Community Based Natural Resource Management (see Experience 1) provides a good example of the importance of this kind of expanded communication strategy. Here processes of «internal» communication work together with parallel but linked processes of «outside» communication to build participation and trust between different communities, levels of government and policy makers.

Internally, Namibian communities had to find ways to separate and manage cattle and wildlife, to stop poaching (a major economic activity of many of their own members), to establish new forums for local and regional decision-making, and to learn skills and adopt practices to manage resources in new ways. But for these to be successful, different communities had to share access to resources, traditional leaders had to make co-ordinated decisions and share power, government planners had to listen to rural

communities, and national leaders had to incorporate local ideas and priorities into national policies.

This situation is not unique. In fact it can be argued that most development activities require changes at the individual and local level as well as between communities, policy makers and private interests. Such changes require communication strategies that look «in» and «out» at the same time, and that may involve quite different approaches in different spheres. Unfortunately, while the situation is not unique, it is still rare to find development initiatives that incorporate such communication strategies.

COMMUNICATION FOR DEVELOPMENT AND SOCIAL CHANGE

This recognition that «the local» is embedded in complex relationships with other actors and forces, has led to a related set of discussions on the role of communication in the context of globalisation and new technologies. The Rockefeller Foundation has initiated one of the more interesting of these discussions by involving people and organisations from around the world, in an exploration of how to increase the impact of communication as a tool in development processes given «globalisation» and new communication technologies.[12]

The discussion began from the premise that:

«…developments – in communications technologies, in political and media systems, and in emerging development problems – suggest a greatly enhanced, radically different role for communication in development programming.»[13]

Three broad traditional roles were identified as having formed the core elements of communication programming in development thinking and practise:

The first was to, «inform and persuade people to adopt… behaviours and practices… beneficial to them.»[14] There are many familiar examples of this in HIV/AIDS, immunisation, health and sanitation, reforestation, family planning, and soil and pest management, to name a few.

The second was to «enhance the image and profile of organisations involved in development.»[15] This has been an important aspect of generating legitimacy for – mostly northern – organisations and raising funds.

The third was to «enable community consultation over specific initiatives.»[16] This can be compared to Participatory Rural Appraisal discussed above, where the focus is more on community participation and involvement in a particular intervention, than the surrounding context of influencing issues and actors.

Each of the three traditional areas is important but not sufficient to respond to the changing technological, political and economic context in which development occurs. In order to be able to make change effectively «inside» a community, the surrounding environment must also change, or at least be recognised and influenced.

This need to understand the surrounding context applies to communication theory and method as much as it applies to the communities and people that communication initiatives seek to reach. In other words, communication thinking must also reflect on itself and the environment it works in, and change its own behaviours and practices accordingly. Within the discussion, some key contextual changes have been identified which are significant enough to require reflection on communication theory and method. These are the liberalisation and deregulation of the media, the emergence of new technologies, and a new global and political environment.

Media Liberalisation

Media liberalisation has broken the hold of many government-run and dominated information services, which have been the source of information for much of the world's population. The general trend since the end of the Cold War has been for governments to relax controls and enact freedom of speech laws.

The impetus has come from a variety of sources, both within countries and internationally, through political pressure from citizens groups and international donors, and economic pressure, as new trade regimes demand the opening up of national media to competition.

These trends present a double-edged sword. On the one hand, countries which had heavily censored and controlled media, have seen the emergence of often vibrant and populist newspaper, radio and television outlets, while old government-controlled institutions have faded due to falling audiences and funding.

On the other hand, the door has been opened to unregulated media that can further disempower the marginalised. Government self-congratulation and disinformation has often been replaced with a diet of Western pop music, and irrelevant or inaccurate news.

This trend has created a new communication environment in which single media outlets have been replaced with many, in highly-fragmented markets with multiple audiences. Getting the message out now requires paying attention to more outlets and audience segments, and the additional problem of encouraging the new media to play a role in development processes.

We can see some of this in the GreenCOM experience in El Salvador (see Experience # 8), where training reporters to better understand environmental issues, was considered central to building greater awareness and commitment to environmental sustainability. It is also reflected in the Kenyan Pastoralist experience (see Experience # 2), where reporters were sensitised to the culture and lives of pastoralists, and encouraged to write stories about them, to help build understanding for their issues, and reduce their marginalisation within Kenyan society.

New Technologies

The revolution in information and communication technologies is profound. The Internet, e-mail, mobile phones, satellite and wireless, have all opened up communications in ways not thought possible even a few years ago. Countries with collapsing telecommunications infrastructures can utilise cell phones, microwave and satellite technologies, to upgrade and more affordably replace old systems, and provide phone and Internet service to isolated rural areas.

These systems are helping to connect previously isolated people to information and other communities. The Kothmale project in Sri Lanka (see Experience # 5), demonstrates how community radio can be linked to the Internet, to provide access to information on health and agriculture. Other initiatives in Kothmale show how connections are being made with surrounding villages and ethnic groups, creating the potential for greater understanding and dialogue between people isolated by terrain and culture.

However, as the FAO has pointed out, «a combination of inadequate national communications policies; insufficient infrastructure, connectivity access and high costs; a scarcity of skilled ICT labour; and a lack of local content creation and applications (language and software) hinder ICT appropriation by poor nations and by poor regions within nations and especially by isolated rural communities»[17].

This «digital divide» could grow and serve to further widen the gap between rich and poor, the connected and the marginalised. Furthermore, increasing access to new technologies is only part of a response to ICT marginalisation. As Alfonso Gumucio

Dagron reminds us, «when we talk about technology we are only referring to instruments, not to social, economic or cultural development. A knife is just a knife; it can be used to hurt someone or to carve a beautiful wood sculpture. Content and utilisation is what makes the difference.»[18]

There is great potential in many of the new technologies, but like media deregulation, they are not in themselves good. The Internet for example, makes both amazing and terrible things possible. Its very openness means that it is used for both our brightest and darkest dreams. It can be a place for tackling discrimination and injustice head on, and it can be a place for the worst kinds of racism and exploitation. It is also an instrument that is denied to many because of income, gender, education, language and geographic barriers. Consider this set of UNDP statistics from 1999:

- The typical Internet user worldwide is male, under 35 years old, with a university education and high income, urban based and English speaking.
- A computer costs the average Bangladeshi more than eight years' income, compared with one month's wage for the average American.
- English is used in almost 80 percent of websites. Yet fewer than one in ten people worldwide speak the language.»[19]

Others feel much more positive about the impact of the Internet and information communication technologies (ICTs). For example, John Lawrence points out how:

«…in 1995, the Social Summit and the Beijing Fourth World Conference on Women both engaged local communities in dialogue on crucial policy issues for the first time via Internet (See Gurstein M. Community Informatics. Idea Publishing, Hershey Pennsylvania 2000). The wealth of documentation on ICTs in the service of social development and anti-poverty strategies following the Social Summit demonstrates serious, local commitment by communities throughout the world. An important index of the empowering potential of the Internet is the degree of resistance encountered in autocratic societies. Also we should note the extraordinary contribution of the Internet to reversing the «diaspora» effect in remoter, poorer or troubled regions (e.g. the 3 Pomegranate Network in Armenia http://www.3noor.org/nnplaunch.html).[20]

A recent study by the FAO's Communication for Development Group on local appropriation of ICT's found that:

On the one hand:

- there are a limited number of community driven ICT initiatives,

- there is scarce visibility and coverage of grassroots driven ICT projects,
- most of the documentation on community ICT projects is relatively new because the projects are new and few evaluations have been undertaken,
- the emphasis of ICT projects is more often on providing access to information than on finding innovative ways to apply ICT's to specific local needs,
- and the priorities of many ICT projects are influenced more by interests of external organisations than local community based organisations.

While on the other hand ICT's can:

- offer opportunities for two-way and horizontal communication,
- support bottom-up articulation of development needs,
- support, create and strengthen interactive and collaborative networks,
- support policy and advocacy,
- help build consensus,
- and enhance partnership with the media.[21]

Whether sceptical or optimistic about the potential of these new technologies to spark serious social change that benefits the poor and empowers the marginalised, there is recognition that they can offer cheaper and more accessible communications, and provide increased opportunities for horizontal (as opposed to hierarchical) forms of dialogue and information sharing.

It is still too early to pass judgement on the potential of these technologies, but if the central questions about «content» and «utilisation» are to be confronted, who better to do so than those concerned with communication for social change?

Politics and Economy

The final set of trends identified through the Rockefeller discussion, concern changes to the political and economic environment. One aspect of this has been the end of the Cold War, and with it the emergence of more open political systems. Even states that retain one-party systems or function as monarchies or theocracies are more open to political debate and to greater freedom of expression.

This has been reinforced by the emergence of a global economy in which, «for the first time in human history the entire planet is capitalist, since even the few remaining command economies are surviving or developing through their linkages to global, capitalist markets.»[22] This enclosure of the world within a single economic system is requiring all governments to make adjustments, and one aspect of this process is to make information more available. The global marketplace has helped create some of the

impetus for government to deregulate media and relax freedom of speech laws. This has been reinforced by the Internet, which has proven very difficult for even the most authoritarian governments to regulate.[23]

However, the globalisation of the capitalist system has also led to an increasing concentration of ownership in the communication field. For example, AOL/Time Warner controls 32 percent of the US Internet service provider market[24]. This concentration of ownership is compounded by the convergence of media and telecommunication industries in which a few very large multinational companies now control both transmission systems and the programmes they carry. There are clear trends towards concentration and centralisation on the one hand, and fragmentation, coupled with the potential for networked or horizontal communication on the other. While it is not clear how these seemingly contradictory tendencies will work themselves out, they require that anyone involved in communication watch them closely as they are about who controls the flow of world information.

INSIGHTS AND DIRECTION

Discussions and debates about what these changes to the communication environment mean range around a few key insights. For our purposes – examining what experience and theory have to show us about the use of communication in natural resource management (NRM) – the most telling points are:

1. There is a complex history of unequal power relationships and economic marginalisation in which community level development processes are embedded and from which lessons can be drawn and better approaches to communication built.
2. Preferred methods and approaches to communication in NRM, have moved from «expert» outside advice provided for «recipient» communities, to the sharing of knowledge in a process of mutual exchange, where the community determines its own development priorities.
3. Local communities do not exist in isolation from wider contexts of social, political, economic and environmental forces, and these need to be taken into account.
4. Most NRM initiatives require communication strategies for both internal and external processes.
5. New communication technologies have increased the possibilities for marginalised communities to access information, and to have their voices heard from local to global levels.

6. The obstacles to this access remain and should not be underestimated, as they are caused by language, gender, poverty, geography, discrimination, and a variety of other forms of marginalisation and disempowerment.
7. There are many experiments in the use of communication and NRM, but these are as recent as the new technology or method employed, and can only show us partial glimpses of what is possible and what is sustainable.
8. For every positive indication of how ICTs may create opportunities for those involved in communication for social development, there are negative aspects that must be kept in mind such as the digital divide, the concentration of ownership over the means of communication, and who controls the content and utilisation of communication tools and approaches.

In spite of these potential pitfalls, many people, communities and organisations around the world, have begun to experiment with a variety of approaches to communication and NRM that make use of inclusive methods and technologies (some new and some traditional).

It is easy to feel we are at a point where there are more questions than answers, and more uncertainty than clear direction. However, there are opportunities and possibilities being created by people wherever they are engaged and lessons being learned in the process of engagement. If the paths we should follow are not clearly marked the general direction has been mapped and to paraphrase the words of Spanish poet Antonio Machado «Traveller! there are no paths, paths are made by walking» (Cantares XXIX). We hope that you will find the following «experiences» useful as tools to explore other contexts and theoretical perspectives while gaining insight into your own communication practise.