



THE ARKLETON TRUST

A cross civilisation dialogue of the effects of
climatic change on rural communities; how
can we dance together again.

Summary report

By

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The Arkleton Trust Seminar: Rural community strategies for
managing the economic and social impacts of climate change.

Douneside, Tarland, Aboyne, Scotland

4th – 8th November 2007



A cross civilisation dialogue of the effects of climatic change on rural communities; how can we dance together again.

The following text is an approximation of the discussion that occurred between the 4th and 8th of November 2007 at the Arkleton Trust Seminar held at Douneside House in Tarland, Scotland. The thread of the story “the preparedness of communities and their resilience in coping with the impact of climatic change and natural disasters” was formed and brought to us by our four Arkleton Trust Fellows: Hilda Zara, brought to us the El Guayabal community of the Venezuelan Andes; Tero Mustonen, shared the stories of the North Karelia, the White sea Karelia and the Sakha-Yakutia Nizhnikolymsky communities of Finland and Russia; Motilal Dash told us of the Rajasthan communities of India and Ugyen Penjor, who was unfortunately unable to be with us¹, brought us experiences from Bhutan. These studies provided a framework for the focus of the seminar and the open debate which followed. Discussions ultimately lead to how the Arkleton Trust should focus future efforts and funds. Below are some of the important issues raised in the discussion.

It is important to note the definition of “community” is one used for convenience. Within all communities there is heterogeneity; the beliefs, wants and thoughts of one individual will inevitably not be the same as that of his neighbour. Within the following dialog this internal heterogeneity is realised, yet for the purposes of this seminar and the requested outcomes, community refers to the voice of a group of individuals.

¹ Ugyen Penjor (Bhutan) could not attend due to visa problems.



THE QUESTIONS

Questions raised in the initial discussion

An understanding of the diversity contained in the term community was made apparent by the variety of the people attending the seminar; representatives attended from South America, North America, Africa, Asia, Europe and the Arctic. Communities are different and varied in their need and want for aid and/or communication, and also in the pace that such communication should proceed. Communities need the power to decide for themselves at what pace adaptation should take place. For example, an invasive approach in helping certain indigenous and remote rural communities deal with the problems associated with climatic change may increase the dependency of these community to the outside world and cause potential community destabilisation.

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Social and environmental sustainability are intrinsically linked. Climatic change is linked to countless other problems which face rural communities. Is this bottom up approach applicable to such a large issue? This is an important question if the levels of responses are to be adequate and fast enough to deal with the problem, especially in disaster situations.

The issue of how to learn from others was raised and subsequently challenged, elucidating some of the fundamental problems which are associated with research conducted in rural communities; those issues of empowerment and respect. Also what is the role and responsibility of the researcher? This gave insight into the assumptions of power and who has it. Researchers will enter a community and take information from it; in many past interactions little consideration was placed upon the community's authority and control over the information.

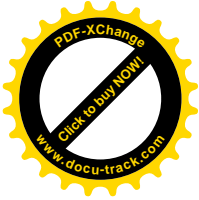
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A more appropriate code of conduct was proposed, that of asking the permission of the community if information could be shared with others. Also asking if the community believes that there has been any misrepresentation in the final piece of work which they consider important enough for a revision to be made. A continued dialog with the

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community after the initial research had been conducted, allows a more holistic mutual sharing of knowledge. When the question was posed to one of the fellows: “what is the

Box 1. Community Resilience and Preparedness in Coping Strategies with Impacts of Climate Change and Natural Disasters, El Guayabal Community of the Venezuelan Andes.

Hilda Zara Montilla

Under the presidential concept of decentralised ‘organised power’ community councils have gained some autonomy: roles include assessing impacts of public policies upon the community; creating co-operatives and enterprises; exercise social control over activities; and creating work groups to aid community decision-making. El Guayabal is a community made up of approximately 120 families and four community councils.

Over a period of six weeks 30 interviews and three focus groups were conducted.

A number of environmental changes were identified by the community; increased drought period and rising temperatures contrasted with heavier rainy seasons. Both factors contributed to an increased divide between those with and without irrigation, those vulnerable to landslides and those not. Environmental unpredictability was largely related to environmental damage caused by US oil practices and indeed practices closer to home, particularly pollution. However, an understanding of impacts from local behaviour, such as tree felling, forest fires, was apparent.

Community responses to climate change

Two different coping strategies were evident within the El Guayabal Community, those immediate actions and those longer-term adaptations.

Immediate solutions included: a change to less water-consuming crops; harvesting crops with shorter production cycles; a move to higher land with lower temperatures; planting of banana trees around coffee crops increasing shade and slowing water evaporation; leaving of weeds and dry leaves in low land areas thus preserving water; for some richer families a to change to livestock production

Long term adaptations included: a move to higher lands away from flooding rivers; not building houses near river beds; keeping riverbeds clean; channelling of the ravine and its tributaries; planting of bamboo trees along ravine and use of the Vetiver system to stabilise slopes; an early alert system; air irrigation systems for those having lost irrigations systems in floods.

Community needs and the future

Through interviews and focus groups the community identified a number of fears and needs. The fear of a reduced ability to cope with climate change in the future due to loss of livestock and further unexpected environmental change, which may trigger another natural disaster, was evident. The community expressed a desire for more information on daily practices which were potentially harmful to the environment, education for the young of the land’s true potential to provide. Finally, but extremely important, was a wish to rescue traditional local knowledge relating to the environment.

“Traditional tales with environmental references, songs, life experiences from families working the land, animals and plants; are all valuable sources of information.”

“We used to listen to grandparents, who are very wise on how to listen to the river, how to handle the animals and how to harvest the land without damaging it.”



local knowledge that we want to revive and protect?" the response was " the funding of a nomadic school. Respect for community knowledge, but with a need for information and knowledge exchange." Rural communities want to be involved in a sharing of knowledge but this knowledge needs to be passed on in a culturally appropriate way.

Furthermore, what does the community gain from the study and are any of its problems actually addressed by the research that is conducted. Should the money be re-channelled from the purely academic into a more tangible assistance strategy? Also does science have a role to play or do rural communities already have the coping mechanisms to deal with the problem. Do we need to recognise the importance of local indigenous knowledge, both formal and informal, to adaptive systems? Is there an over reaction to the overwhelming source of external power and decision-making which prevents the successful introduction of coping strategies.

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There was a realisation that climate change is at this moment rapidly altering people's lives, the magnitude of the problem and its effect upon rural communities. A small organisation like the Arkleton Trust is limited in its ability to deal with the enormity of the discussed problems. How could the Trust best focus its future efforts and what are in fact its true strengths?

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Key issues identified for discussion after the initial debate

- Coping vs. adaptation, disasters- speed and scale of change
- Structure and new tools for community learning: sense of place: what education is required? How do we learn from others?
- Governance
- Indigenous knowledge v 'Science': ethical issues in research
- Exit or voice
- Markets



THE THOUGHT

The main points of the first discussion

The main issue addressed in the initial discussions was that of coping vs. adaptation. Coping was said to be a short-term, passive action where as adaptation was an active, long-term strategy. Rural communities already have the knowledge to cope with climatic change. Their need is for greater communication in a way that is culturally appropriate. This will allow adaptive solutions to the climatic change problem which are known by one community to be integrated by another community if deemed appropriate to their situation. However it is essential that any communication be forwarded in a non-oppressive way. Indigenous communities have been subject to tyrannical governance by centralised societies in the past. This has resulted in loss and in some cases total destruction of pre-existing cultures and cultural identity. Also an increasing dependence on the outside world may further erode community self-identity. In this question of communication lies one of the fundamental problems of rural research and the implementation of successful coping strategies to climatic change: How to engage in dialogue with rural communities in a way which is not deleterious to their cultural and community identity?

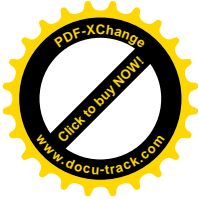
Key issues for discussion in the second debate

- What more work, if any, is needed and how should the Arkleton Trust focus its efforts?
- How should the lessons learnt so far be disseminated?
- What is the best way of developing and maintaining this network of communication?

The main points of the second group discussion

The importance of fear and healing should be addressed with regards to climatic change. Rural communities can be fearful of the changes that they are observing in

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climatic conditions, and are often asking what are we witnessing and what is happening?
A process of healing could occur if the stories of other communities of the world and what is happening to them could be shared, again in a culturally appropriate way. This should be an unedited dialogue between the knowledge holder and the visitor.

Box 2. Finland and Russia: The Evidence of Climate Change and Impacts from

Tero Mustonen, Snowchange.

The Arctic region has always seen vast changes between the seasons and Arctic communities have always been highly adaptable to these variations. However climate change is creating new changes at an unprecedented speed: warmer and more unstable weather has resulted in shorter ice periods and weaker ice, impacting upon the ice-fishing industry and transportation.

Snowchange has been working alongside a number of Arctic communities. These include the North Karelia, the White Sea Karelia and the Sakha-Yakutia Nizhnikolymsky communities of Finland and Russia, whom are some of the last nomadic people of the Arctic. The communities rely fully on the land for life, whether it be through fishing, reindeer herding or both, following the seasons and allowing the weather to determine nomadic routes. This ability to find new fruitful grounds is passed down from generation to generation.

Message from Communities

The life on the land must continue, for this reason re-empowerment of indigenous communities is needed through nomadic schooling; children must remain within communities to learn the traditional teachings of culture, values and tools of resistance, and not, as is presently dictated, be sent off to Russian boarding schools. In this way it is possible to raise the capacities to adapt to change in ways which are consistent with age-old nomadic practices. In addition, this can potentially break the cycle of colonisation which has suppressed the indigenous language, culture and values.

The lessons that have been learnt from the stories told at the seminar should be open for all. This thought led to the establishment of a *wiki website* which facilitates unedited communication, accessible by all who have internet access, giving a global voice to rural communities. Also all previous Trust work should be digitised and placed on the *wiki site* (accessed via the Arkleton Trust Webpage).

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A focused approach concentrating on the true strengths of the Trust should be implemented with avoidance of an overly broad, ineffective approach. There has to be



follow-up to the research that has been conducted already, with the fellows returning to their communities taking the messages back for approval and discussion.

Any proposals that are forwarded at the seminar will need funding if they are to be successful. There is a lot of interest from the corporate world in funding of projects for poor rural communities. A true strength of the Arkleton Trust is its ability to network; this resource should be exploited to a greater extent. There should also be more focus upon interactions with NGO's, universities and other bodies.

Box 3. Rural Community Strategies for Managing Economic and Social Impacts of Climate Change

Motilal Dash

Rajasthan is the largest of India's 28 States and seven Union Territories and contains 85% of the 2.34 million Km great desert 'Thar'. Whilst accounting for 61% of the State's area and a tenth of India's total geographical area, the desert contains only 5% of the total population and only 1% of its water resources. 'Thar' is characterised by high velocity winds, shifting and rolling sand dunes, high diurnal temperature variations, scarce rainfall, intense solar radiation and high rates of evaporation. Almost half of the state is affected by drought every three to four years.

This pilot study interviewed approximately 100 families in both Barmar and Churu, two rural districts of Rajasthan. Livelihoods are minor agriculture, domestic animal keeping and salt cultivation. However, migration to urban areas is widespread and elderly, females and young children constitute high proportions of remaining communities.

Observed impacts from climate change

An awareness of recent climate change exists. The major consequence expressed is "less rain" or "drought". Observed impacts of this drought are increased heat, declining groundwater levels, scarcity of irrigation water, reduced agricultural productivity and reduced food security. For example, grazing lands are becoming increasingly dry and encroached upon daily and as such the large animals, cattle and buffalo, are unable to survive.

Adaptive Strategies

A number of Government initiatives are in place: irrigation; road constructions; dissemination of technology relating to soil management and water harvesting. However these attributes of the Drought Prone Area Program (DPAP) are labour intensive schemes which many of the community feel only benefit those with political nexus due to the high demand for aid.

A strong feeling of greater government involvement was evident. Villages felt that successful water storage and distribution programs are a must, as are distribution of drought resistant seed strains. A need for the provision of free education was also expressed.

Overall local villagers felt that at present no planned adaptation strategies were being undertaken by any formal bodies and villages were surviving off their own traditional adaptations to nature and climate change. These involve highly co-operative and integrated village dynamics which allow the exchange of goods and services among themselves.



THE SOLUTIONS

The final findings and outcomes of the seminar

The need to integrate activity

The need for a focused approach is paramount to the success of a small organisation like the Arkleton Trust if it hopes to have any effect upon such a wide and complex problem as climatic change. The Trust should make more use of its ability to communicate across a wide spectrum of organisations both governmental and non governmental upon which it can have some amount of leverage.

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Box 4. Evidence on Climate Change, Impacts and Responses from Bhutan

Ugyen Pendor

This study investigated the general situation in Bhutan as well as undertaking four case studies of very different rural communities: two in western Bhutan, one in the south and one in the center.

Analysis of meteorological data from 1996 to 2000 showed no obvious changes in temperature, precipitation, and humidity. However from 2000 to 2005 a slight increase in average annual temperature was witnessed and 2002 was shown to have received the highest level of rainfall, decreasing from then on. Furthermore, evidence suggests that the rate of Raphsthreng's glacier retreat has increased from 35cm per annum (1984-98) to 60cm per annum (1998-2003). Glaciers cover approximately 10% of Bhutan.

Case studies implied knowledge of climate change to be minimal, however a consensus that temperatures had risen over the years was recorded.

The key issue for Bhutan is water; over 17,553 households depend on springs and river for daily water use. And water-related problems in mountainous regions are cited as one of the causes of migration to urban areas and plains. Problems include highly variable water availability: flash floods from melting glaciers/monsoons to drying up of springs. Respondents considered deforestation to be the main cause for the fall in water resources.

Adaptation Responses

The main adaptation by communities appears to be migration to the plains or urban areas. Government incentives such as land grants attempt to reduce slash-and-burn agriculture.



The need for follow up work is essential if any of the issues relating to the rural communities studied are to be tackled. There should be feedback to the communities involved in the studies from the fellows concerned. There has been a proposed collaborating between the Barefoot College and three Siberian communities with the hope of bringing solar power generation to these Arctic communities.

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Outcomes

Spreading the knowledge

Stories of successful strategies implemented by rural communities in their adaptation to climatic change should be available to all. Furthermore, previous strategies used to face other stresses such as environmental and economic, can propose solutions to present changes. Hence knowledge of how to best adapt to climatic change already exists within rural communities which have faced such changes throughout their history. It is important to recognise this indigenous knowledge and the often complex relationships which already exist between many indigenous communities and their local ecosystems. These relationships can reflect strategies that maintain social cohesion, which can also be an extremely important aspect in a community's ability to deal with the continuing environmental changes. This sharing of knowledge would go some way in reducing fears and opening the path to healing in rural communities as they face climatic change. This dialogue has to be unedited (i.e. the wiki site), un-invasive and forwarded in a culturally appropriate way.

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Raising awareness

Awareness of the catastrophes faced now by rural communities as a consequence of climatic change needs to be disseminated to the rest of the world. Climatic change is not a distant event that will affect us but is something that is already having devastating consequences upon some of the world's most venerable rural communities. These many local problems created by climate change will benefit from the solutions provided through an awareness at the global level.

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Resources for community learning

Long-term funding for community learning could be established by the Arkleton Trust. There is a need for an increase in core funding if the Trust hopes to expand. It has been noted that one of the main strengths of the Trust is its ability to network. If the resources of the people attending the seminar are used to contact businesses a larger amount of interest could be generated in corporate investment in resources for community learning.

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Giving voice to communities and inspiring others

A voice can be given to rural communities through the use of the wiki site, allowing for an unedited dialogue facilitating global communication. This will allow adaptive solutions to climatic change to be disseminated and implemented, providing possible solutions, not problems.

Siberian woman to attend Barefoot College, India

One of the most exciting results from this Arkleton seminar, was the resulting collaboration between the eminent Bunker Roy of Barefoot College and Tero Mustonen of Snowchange. Three communities located in the Kolyma River Delta of the Republic of Sakha-Yakutia, Siberia will each send three women to India to train as electrical engineers. After six months these women will return, bringing with them the equipment and the expertise to solar electrify the community's tents. This technology will also allow the nomadic camps to establish schools within the camps, thus providing a means to educate their children without the need to send them further afield to areas which do not teach local indigenous knowledge. A recent update (March 2008) indicates that the Siberians have now chosen the women to attend the solar panel project in India, and all is moving on successfully.

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Conclusions

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The seminar brought together the Fellows funded by the Arkleton Trust through the Conyers Fund, the David Moore Fund, and the John Higgs Fund, as well as academics and practitioners from a wide range of countries and backgrounds. The event was felt by those present to have been extremely useful in reaching common ground on the current situation – especially the need for a focus on adaptation both to the challenges of climate change, and potential opportunities for rural communities in different context. As in so many other aspects of the Trust’s work, there was an emphasis on the need for recognition of the work already being done in and by rural communities themselves, and on the need for empowerment and exchange of learning and experience, supported by modern information technologies. A number of key areas of follow-up were discussed and these will be considered by the Trustees.

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List of Participants.

Prof. John Bryden , Programme Director, Arkleton Trust; Director UHI PolicyWeb Inverness; Emeritus Professor Aberdeen University, Scotland

Margaret Clark, retired Director of Commission for Rural Communities, London. UK

Hilda Zara, Caracas, Venezuela (Bernard Conyers fellow)

Tero Mustonen, Snowchange, Joensuu, Finland (Bernard Conyers fellow)

Dr. Motilal Dash, Birla Institute of Technology and Science, Pilani, Rajasthan, India(Bernard Conyers fellow)



Rhona Barr, Imperial College, University of London, UK (David Moore Award)

Chris Madine, Newcastle University, Newcastle Upon Tyne, UK (David Moore Award)

Margot Hill, ex Imperial College, London, from Switzerland (Sir John Higgs Award)

Nicola Swan, Director Rural Sustainable Development (Training and Research) Ltd

Bunker Roy, Director Barefoot College, Tilonia, Rajasthan, India

Lynda Khiali, Tizi-Ouzou, Algeria

Dr. S.R. Subramanian, Programme Coordinator, Shanti Ashram, Coimbatore, India

Frank Rennie, UHI, Ilse of Lewis, Scotland

Dr. David Fleming, Director, The Lean Economy Connection, London, UK

Xie Liyong, Dep. of Rural Development, Shenyang Agricultural University, Liaoning Prov. China

Prof. Ellen Wall, University of Guelph, Canada

Prof. Tony Fuller, University of Guelph, Canada

Karen Refsgaard, NILF, Oslo, Norway

Dr. Gry Synnevaag, Director, Norwegian Church Aid, Afghanistan; NORAGIC, Norway

Caroline Higgs, Chairman, Arkleton Trust

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