John Seager/Hsrc
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To Cilna de Kock
cc
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Subject Additions to the Outputs database

Dear Cilna
Please add the following to our outputs database.

Seager JR. Social impacts of Climate Change in Southern Africa. Written input to "Development of a Climate Change Research & Development Strategy for South Africa. Workshop: Towards Finalisation and Implementation." Cape Town, 14-15 September 2006.

Seager, JR. Quality of life, poverty and the environment. Oral presentation to the National Environmental Advisory Forum meeting on "Mainstreaming the environment into Development Issues and Opportunities relating to AsgiSA." Pretoria, 3 Oct 2006.
Regards
John.

Climate Change R&D Strategy SOCIAL ISSUES.doc Poverty and Environment NEAF 031006 Seager HSRC.ppt

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Input for DST R&D Strategy on Climate Change

John Seager, HSRC

Written input submitted to the *Development of a Climate Change Research & Development Strategy for South Africa. Workshop: Towards Finalisation and Implementation*, Cape Town, 14-15 September 2006.

Social impacts of Climate Change in Southern Africa

Until recently, the focus of most climate change research has been in the natural and physical sciences with an emphasis on modelling climate change scenarios and attempts to mitigate greenhouse gas emissions. Some research addresses the economic impacts, but very little research on the social components of climate change is being done. Human populations *are* adapting to climate change and there is an urgent need for more research to understand the social processes that determine people's response.

Some examples of **social components** within climate change are listed below.

- Sustainable energy – What are the social implications and barriers to uptake of cleaner fuels?
- Food insecurity and vulnerability – A better understanding of the contribution of survivalist agriculture and indigenous knowledge is needed.
- Pollution and health problems due to climate change – How large is the pollution-related burden of disease and associated health care cost, particularly in urban settings.
- Increases (range and severity) of vector and water borne diseases can be prevented by relatively simple behavioural interventions and appropriate technology (e.g. insecticide impregnated bed nets for malaria, and reduced exposure to contaminated water for schistosomiasis) but uptake and sustainability of these interventions is often sub optimal. Behavioural research is needed to improve intervention success rates.
- Heat stress and mortality due to higher temperatures – Urban settings will be worst affected (island heat effect) and heat-related morbidity and mortality need to be investigated.
- Human migration and environmental refugees – Climate change will become a major driving force for the movement of people due to desertification, drought, floods, deforestation, etc. Migrants will gravitate to the cities and

intermediate towns where, since they are likely to be poor, they will tend to settle in the already poorly serviced areas on the peri-urban fringe and exacerbate the health and social problems associated with overcrowding and inadequate infrastructure.

- Human adaptation, change and coping strategies – What are the generic responses of people who adapt to or cope with the consequences of climate change and how can best practices be identified?
- Natural disaster management – How should drought and flood damage be prevented, mitigated or effectively managed to minimize impacts on vulnerable populations?
- Institutional/policy response to climate change – What is the status of the institutional and policy response that deals with climate change?
- Science-policy interaction gap – There is often inadequate interaction between science and policy development. Further work is needed to explore the nature of this gap and provide the necessary evidence for better policy decisions.
- Economic impact of climatic change – Adverse economic impacts will implicitly lead to severe social impacts. What are these impacts and how can they be addressed?
- Diminishing water supplies and societal adaptation - What will the social impacts of diminishing water supplies be and how can water utilization be modified or optimised? Urban lifestyles can result in much higher water consumption (e.g. waterborne sewerage in place of pit latrines) – will our population accept alternative technologies?
- International global warming agreements and conventions – primarily around water, energy and pollution. How will these global policy developments impact on people in South Africa and other countries of the region?
- Environmental education/awareness – there is an urgent need to demystify the issue of climate change, so that South African society can make informed decisions about future strategies.

For virtually all these issues, the poor are most likely to suffer the brunt of adverse impacts. The better-off usually have more livelihood choices, have assets which allow them to offset economic shocks, are usually independent of their own agricultural production for food, are more mobile, and can avoid living in high risk areas.

Overall aims

The first aim of the social *science and climate change initiative* will be to encourage social scientists in the region to take a fresh look at development issues, with which they are already familiar but probably have never considered as being related to climate change.

The second aim is to investigate the role of climate change in limiting developing countries' potential for achieving the Social and Health Millennium Development Goals.

The third aim is to assess the impact of differing perceptions of risk and to increase public engagement and dialogue about climate change, social development and health issues.

The fourth aim is to conduct research that will provide evidence for more effective policy development and interventions that will allow vulnerable populations to mitigate risks associated with climate change.

Who should champion the social science component of climate change research?

The Human Sciences Research Council is particularly well placed to address these issues because it is a national, multidisciplinary organisation. The HSRC has high calibre research staff (the vast majority at Masters level or above) covering relevant fields such as development economics (including agriculture and food security), human development and health (including environmental health issues), urbanisation, migration, and policy analysis, among others. The organisation is also well placed to build on its existing research networks covering much of Africa.

Conclusions

Climate change research, which has been dominated by the natural and physical sciences until now, has provided compelling evidence for global warming. However, long before we are able to turn the tide by better management of greenhouse gases or alternative energy strategies, we are going to have to cope with or adapt to the consequences of global warming. In order to do this, we need to bring social science into the picture and use it to develop innovative, cost-effective and equitable solutions.