

Social monitoring guidelines for flexible mechanism projects under the United Nations Framework Convention on Climate Change in South Africa

KHOROMBI MATIBE

September 1999
ENERGY & DEVELOPMENT RESEARCH CENTRE
University of Cape Town

Contents

1. INTRODUCTION	1
2. THE DIFFERENT 'FLEXIBLE MECHANISMS'	2
2.1 The Clean Development Mechanism	2
2.2 Joint Implementation	2
2.3 The 'Bubble'	2
2.4 Emissions Trading	2
3. RATIONALE FOR DEVELOPING SOCIAL MONITORING GUIDELINES FOR SOUTH AFRICA	3
3.1 The South African Reconstruction and Development Programme (RDP)	3
3.2 Understanding Sustainable development	3
3.3 The need for social development through CDM projects	3
3.4 Social monitoring to improve policy development	4
3.5 Social monitoring as an issue in the UNFCCC negotiations	4
4. SOCIAL MONITORING GUIDELINES FOR CLIMATE CHANGE- CDM PROJECTS	5
4.1 Characteristics of a good monitoring process	5
4.2 Criteria against which CDM projects should be monitored.	6
5. SOCIAL MONITORING METHODS	6
5.1 Changing social research methods	6
5.2 Participatory approaches	7
5.3 Monitoring planning process	8
5.4 Example of social sustainability indicators	9
6. CONCLUSION	9
REFERENCES	

1. Introduction

South Africa ratified the United Nations Framework Convention on Climate Change (UNFCCC) in August 1997 as a non-Annex 1 Party. It is expected that when SA ratifies the Kyoto Protocol she will have the opportunity to take advantage of the Clean Development Mechanism (CDM)

Article 12(2) of the Kyoto Protocol provides that the purpose of the CDM shall be to assist Parties not included in Annex 1 in achieving sustainable development and also to assist Parties included in Annex 1 in achieving compliance with their quantified emission limitation and reduction commitments under Article 3, in contributing to ultimate objective of the Convention (Kyoto Protocol, 1997:16).

This paper attempts to develop social monitoring guidelines for climate change projects with a particular focus on the CDM due to its advantage over other 'flexible mechanisms' in meeting the twin interests of both the developing (non-Annex1 Parties) and the developed (Annex 1¹ Parties) countries. The CDM allows developed countries to invest in low-cost abatement opportunities in developing countries and receive credit for the resulting emissions reduction while simultaneously engineering a sustainable development path for host countries. The rules and modalities of how to monitor CDM activities however are part of the negotiation process.

Activities Implemented Jointly² was initially proposed as a pilot phase for projects involving two or more parties in off-setting greenhouse gas emissions from the atmosphere, although Parties agreed not to claim credits from the process. While the AIJ pilot phase had been useful in developing methodologies and highlighting barriers to AIJ, it has not addressed the practical problems associated with ongoing monitoring and verification issues which are likely to dominate CDM projects (Simmonds, 1998). Little has so far been done to address the monitoring component of the noncarbon³ benefits of the projects.

The lack of institutional capacity by developing countries to select projects that generate high social return, let alone the ability to monitor them, will become a major constraint as CDM projects begin in earnest. It is therefore desirable that South Africa as a potential host for future CDM projects start developing social monitoring guidelines/criteria based on its domestic social policies whilst at the time laying a foundation for future climate change projects.

Social monitoring could entail *capturing climate change project activities that affect people's daily lives*. This could include checking how aspects of society change during and after implementation of a project. Monitoring could be rendered at project level and also institutional level. Another definition of monitoring could include the process of periodically checking the status of a programme or project, by observing whether activities are being conducted as planned (Shordt K, 1998)

This paper is part of the broader NORAD-funded project dealing with 'Monitoring, capacity building and decision-making support for government on flexible mechanisms under the UNFCCC.

The objectives of this paper are to:

- develop a broad methodological framework for social monitoring of potential climate change projects in South Africa; and
- propose guidelines for social monitoring of climate change flexible mechanism projects in South Africa.

¹ Annex 1 is the name for developed country Parties to the United Nations Framework Convention on Climate Change

² Activities Implemented Jointly was created as a pilot phase of Joint Implementation at the first Conference Of Parties in Berlin in 1995

³ Non-carbon benefits are those benefits that would address the sustainable development needs of the developing countries whilst the carbon benefits are relevant for investor countries with binding commitment to reduce their emissions.

2. The different 'flexible mechanisms'

The climate change 'flexible mechanisms' as adopted in the Kyoto Protocol are an attempt by participating Parties (developed nations in particular) to utilise alternative ways to reduce emissions other than domestic reductions. They are called 'flexible' because developed countries with binding commitments can co-operate amongst themselves or jointly with developing countries to reduce emissions.

2.1 The Clean Development Mechanism

The Clean Development Mechanism (CDM), defined in Article 12 envisages the establishment of a multilateral or bilateral mechanism, the purpose of which is to assist developing countries (non-Annex I Parties) in achieving sustainable development and to assist industrialised countries (Annex I Parties) in achieving compliance with their commitments under the Protocol. The co-operation under the CDM is rather similar to the concept of Joint Implementation⁴.

First proposed as a Clean Development Fund which would use penalties from those who did not comply with Kyoto Protocol to fund projects in non-Annex 1 countries by the Brazilian delegation at COP 3, the CDM gained acceptance in the form it now appears in Article 12, having moved away from its original approach. Although the CDM's current text is mainly conceptual rather than operational, significant activities are underway to operationalise it

2.2 Joint Implementation

Joint Implementation (JI) among Annex I Parties, which is defined in Article 6 of the Protocol, allows an industrialised country to transfer to or acquire from other industrialised countries emission reduction units (ERUs) resulting from specific greenhouse gas emission reductions projects. The investor country can use ERUs to meet part of its emission reduction commitment.

2.3 The 'Bubble'

Article 4 of the Kyoto Protocol provides that any Parties included in Annex 1 that have reached an agreement to fulfil their commitments under Article 3 jointly, shall be deemed to have met those commitments provided that their total combined aggregate anthropogenic greenhouse gas emissions do not exceed their assigned amounts. That is, countries can agree to meet a total commitment jointly, but they must say so up front.

The European Union has since then taken advantage of this mechanism and started debates on how to make it work amongst its member states.

2.4 Emissions Trading

Article 17 of the Protocol provides that Parties included in Annex B may participate in emissions trading for the purposes of fulfilling their commitments under Article 3. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article. Through this kind of mechanism, it is expected that countries will be able to buy and sell surplus emission reduction units or credits.

⁴ JI is a project-based approach to reducing global GHG emissions in a cost-effective manner through co-operative emission avoidance, reduction and sequestration projects. JI originated from Article 4.2 in the Framework Convention on Climate Change (FCCC) which allows climate change mitigation activities to be implemented jointly by Parties to the same Convention

3. Rationale for developing social monitoring guidelines for South Africa

3.1 The South African Reconstruction and Development Programme (RDP)

The African National Congress (ANC) led government policies addressing social equity and developmental issues evolved from the RDP. It is therefore important to understand such policies from the context of the RDP. The RDP was initiated in the early 90s (and the report subsequently compiled in 1994) as integrated, coherent socio-economic policy framework to address key policy issues that would drive the ANC when it came to power after the 1994 first democratic elections. The RDP came up with many proposals, strategies and policy frameworks that can be grouped into the following key programmes:

- **Meeting basic needs** (jobs, land, housing, water, electricity, telecommunications, transport, a clean healthy environment, health care, nutrition and social welfare)
- **Developing human resources** (education and training of youth, women and the previously disadvantaged groups) to engage in decision making.
- **Building the economy** (building on current strengths and addressing serious weaknesses in the economy)
- **Democratising the State and Society** (creating a people centred approach with an entrenched Bill of Rights of National, Provincial and Local government)

Like most developing countries, South Africa could use CDM projects to contribute to its social development goals as set out in government policies such as the RDP, more recent white papers and other legislation. Doing that would require institutions to monitor the projects implementation, hence the need for social monitoring of CDM projects.

3.2 Understanding Sustainable development

The precise meaning and interpretation of sustainable development is a widely contested issue, and it is unlikely that there will ever be consensus on a common definition. Although sustainable development is not defined in the Kyoto Protocol there is, however, some broad agreement on the issues involved and what is clearly *not* sustainable.

The Brundtland Commission (1987) defined sustainable development as the development that meets the needs of the present without compromising the needs of future generations. This definition is rather general and does not clarify the kinds of activities that would assist in attaining sustainable development goals. Certainly, if activities deplete resources and erode host cultures, or undermine capacity building, they would not be in line with the letter and spirit of the Kyoto Protocol. However, it is difficult to draw the line in terms of sustainable and unsustainable practices. This is an indication that each member state has a responsibility to develop goals and objectives that would address their own unique situations.

Given that South Africa has its own goals and objectives to address the social and development needs of its own citizens, it is important that the CDM projects be driven in such a way that they support these goals. Meeting sustainable development goals would clearly require a mix of social, environmental and economic objectives that are well entrenched in the RDP, White Papers and other policy documents. Social sustainability in particular means that development enhance the welfare of the local population and improve the standard of living through service provision and commercial activity enhancement (Goldberg, 1998). This paper will address some of the key important social criteria that should be addressed by CDM projects.

3.3 The need for social development through CDM projects

The social development aspect of climate change projects should surely become a central issue, given the UNFCCC sustainable development goals. South Africa has its own social development issues and priorities well articulated in the RDP, formal plans and policies. The

introduction of climate change projects in South Africa could also mean that some social goals set out in the government social policy framework could be realised through CDM projects.

Austin and Faeth (1999) asserted that without careful assessment of the noncarbon attributes, there is always a danger that the CDM may become little more than a cost-reduction tool for the developed countries legitimised by incidental secondary benefits that may or may not be consistent with developing country priorities.

Climate change projects will become more meaningful and relevant when they address some of the challenges and opportunities facing participating parties and in particular the social challenges of the developing nations.

Given that there is a strong link between poverty and environmental degradation, flagging the social developmental aspects of climate change could become an issue in the negotiation process. Should that happen, monitoring could address social issues such as poverty alleviation, meeting of human basic needs and access to resources, job creation and income generation, health, capacity building and training, acquisition of skills, remote and rural areas electrification, cultural adaptability of climate change projects, gender equity as well as comfort and safety challenges facing impoverished communities. Some of these aspects would be described in a matrix for sustainable social indicators on section 5 of this paper.

Equally important but not mentioned in this paper are the co-benefits associated with likely CDM projects such as improved air and water quality, enhanced soil preservation, flood protection initiatives, biodiversity protection and solid waste minimisation programmes.

3.4 Social monitoring to improve policy development

Monitoring is an important component of the policy development process. Overlooking social monitoring could lead to a disadvantageous CDM process with strong possibilities of limiting its ability to realise sustainable development goals. In addition, decision-makers in the developing world could find it increasingly difficult to analyse and make a proper assessment of the progress and status of CDM projects. Sound policies can only be developed on the basis of feedback from development on the ground, thus it is incumbent to monitor project trends and produce up-to-date information suitable for management and ongoing policy decision making.

By developing social monitoring guidelines, South Africa could be laying a firm foundation to set up its own **national social monitoring framework**. Making the framework accessible to all levels of government would enable the government to address some of the existing management gaps that continue to hamper development and progress in the public sector. By so doing, South Africa would not only be doing something that could contribute to her domestic social upliftment and empowerment programmes, but also setting up a precedent that other countries could emulate. The World Commission on Sustainable Development (WCSD, 1995) cited that indicators for monitoring progress towards sustainable development are needed in order to assist decision-makers and policy makers at all levels and to increase focus on sustainable development.

3.5 Social monitoring as an issue in the UNFCCC negotiations

Judging from the interest abroad by many countries and investors in South Africa, it is clear that should the process produce positive results, this country may emerge as a key host to many CDM projects. Should that happen, then South Africa would need a social monitoring framework by which climate change project impacts could be measured – particularly relevant in a country that is in the process of rebuilding its social fabric.

It's also important to note that project recipients may not have all the necessary skills and knowledge to perform monitoring. In such cases, social empowerment objectives could be partly addressed through training in activities such as social monitoring, as well as other aspects of project development and implementation. Some skills cannot, however, be efficiently imparted through short-term training, so professionals would be needed to fill any gaps.

Social monitoring of climate change projects is one of the CDM-related aspects that South Africa could flag as part of **UNFCCC negotiation process**. Presumably, most developing country Parties could support this idea, as it is something that is going to affect CDM

investments when CDM projects are implemented. Giving social monitoring as one of the key priority issues in the negotiation process could also lead to more meaningful discussions that could address other burning issues, such as how to fund these kind of activities

4. Social monitoring guidelines for CDM projects

In order to determine whether climate change projects would bring social benefits to the hosts, it is vital that some form of national guidelines be put in place. Such guidelines could lay the basis on which further guidelines can be developed in the future or when climate change projects begin in earnest. The social monitoring criteria raised here are not about detailed procedures to be followed when conducting monitoring activities, but about what projects implementers should consider when making decisions about monitoring climate change projects. This comprises two subsections, namely: the characteristics of a good monitoring process, and the actual criteria against which projects will be monitored. If South Africa can develop and adopt guidelines on social monitoring for CDM projects, it could be a first step in the right direction.

4.1 Characteristics of a good monitoring process

It is always important to have basic objectives in place before initiating monitoring. It is therefore important that the overall framework develops key features of the monitoring process. Detailed planning at the outset, with all parties, could help ensure that projects realise their much needed objectives

Although some of the guidelines can be applied across sectors, most of those presented here apply to a situation where CDM project hosts are communities as opposed to industry CDM projects. At the same time, however, there will be those guidelines that could be best utilised in other project types. The emphasis on community based CDM projects is also due to EDRC 's expertise in this area and a concern that projects addresses the needs of the poor.

Good monitoring process should at least meet some of the following (Vine & Sathaye,1997)

- Make sure that the process is as inclusive as possible. The project net should be cast widely to embrace a wide range of relevant stakeholders in the process
- Plan for the use of monitoring information from the beginning. Plan the internal flow of information and determine its purpose from the outset.
- Target the monitoring, and do not try to cover all possible topics.
- Formulate or develop simple, measurable and easy to understand monitoring indicators.
- Gather, analyse, and use operationally relevant social information, such as data on gender and ethnicity
- Combine qualitative and quantitative monitoring.
- Keep the data analysis as simple as possible and ensure that the information does not become blurred through data processing. Straightforward data is more convincing.
- Plan for training or orientation of all those who collect and may use the data. This should include training to ensure validity and reliability in data collection.
- Develop means to mitigate negative impacts so as to ensure commitment to sustainable development.
- Define a framework for ongoing participation during implementation, monitoring, and evaluation.
- Assess the social impact of project investments over time.
- Ensure that the monitoring plan is consistent and cost-effective, technically-sound and readily verifiable by independent assessors

4.2 Criteria against which CDM projects should be monitored.

Potential CDM projects should be pre-screened to determine if they would meet or enhance the domestic national and local agenda for sustainable development. It is therefore important that such projects meet the following requirements as indicated below.⁵

- *Be compatible with and supportive of national and local development priorities* – the project must demonstrate compatibility with national or local development priorities, and identify indicators of relevance for monitoring
- Should fit in with the national climate change agenda
- *Contribute to social upliftment and minimise adverse social and cultural impacts* – where relevant, the project must contribute positively to social development of any local communities involved in the project, including opportunities for income generation. The project should also strive to minimise negative social and cultural impacts to recipients
- *Encourage local institutional linkages*– The project should provide adequate incentives for local partners, including the private sector and NGOs, to be involved. This involvement should include technology and information transfer and training
- *Should ensure transparency and participation by project recipients* – Project recipients should be involved in all stages of the project cycle.
- *Aim to transfer technology and build local capacity* – CDM projects should result in environmentally sound technology transfer in terms of hardware, skills and knowledge. Human resources should be developed and institutions strengthened to assess, manage and apply sustainable development strategies.
- *Should bring about measurable sustainable development benefits to the recipients.*

5. Social monitoring methods

5.1 Changing social research methods

A growing awareness of the failures of conventional development approaches in meeting the needs of resource-poor people has led modern researchers and project developers to explore methodologies that encourage stakeholder participation. These methods place more emphasis on involving the young, women, the old, children and not just men. This is important because while a project might be technically feasible, the final determinant of the success of the programme is whether it can be accommodated within the community's social structure.

The methods used to monitor projects vary, depending on the aspects to be monitored. For instance, if CDM projects are implemented in a local firm or industry, efforts should be made to make sure that employers and employees are involved and made aware of all processes involved from development right through to implementation and evaluation and reporting. Since social monitoring directly affects the personnel of that particular firm it is important that the personnel be given an active role in the monitoring process.

South Africa is still coming to grips with its socio-economic realities of the past. As a result of this, social development aspects of climate change projects must try to address issues such as capacity building, meaningful participation, improvement of self-esteem, and the cultural preferences, values and behaviours of project hosts.

Beall (1997) asserts that empowering people in terms of social, political and psychological power is a key aspect of development. Social power can be acquired through access to productive wealth, information, knowledge and participation in social organisations. **Community-led monitoring** could become an effective future social monitoring approach, enabling project hosts to control, closely observe and instil positions of trust and authority in their projects.

⁵ This list is based on earlier, unpublished work by Mark Davis and Njeri Wamukonya at EDRC.

5.2 Participatory approaches

Participatory planning is a project-planning process that involves all role-players, stakeholders, and beneficiaries, in formulating strategies and plans to develop, implement, evaluate and monitor projects. The idea stems from the acceptance that project hosts have an important understanding of local needs and possibilities and that their knowledge is important in driving projects from inception through to implementation and review. Involving the 'hosts' from the initial stages of the project is also regarded as the major determinant of project success, and that "ownership" is ensured and sustainability maintained.

Such methodologies also hold that there are many answers to every question, and that by having enough different voices stating and restating a problem, we go some way towards changing things. (Crawford Cousins et al 1994: 7)

It is now widely acknowledged that the participation of beneficiaries from the start of the planning process is a normal trend. In implementing CDM projects, structures should be designed to encourage the continuous participation of beneficiaries throughout the project.

Communities should determine their destiny, with governments supporting and facilitating their efforts. By involving host parties, many misconceptions and reluctance on their part can swiftly be addressed thereby getting the project moving. Governments will always play an important role in, for example, extending services to communities by setting suitable standards and developing policies to ensure fair distribution of resources. Participatory approaches should be adopted in social monitoring with the project participants being consulted and actively involved. Many international organisations, including the World Bank, are beginning to acknowledge the role of indigenous knowledge in sustainable development (Warren, 1991)

5.3 Monitoring planning process

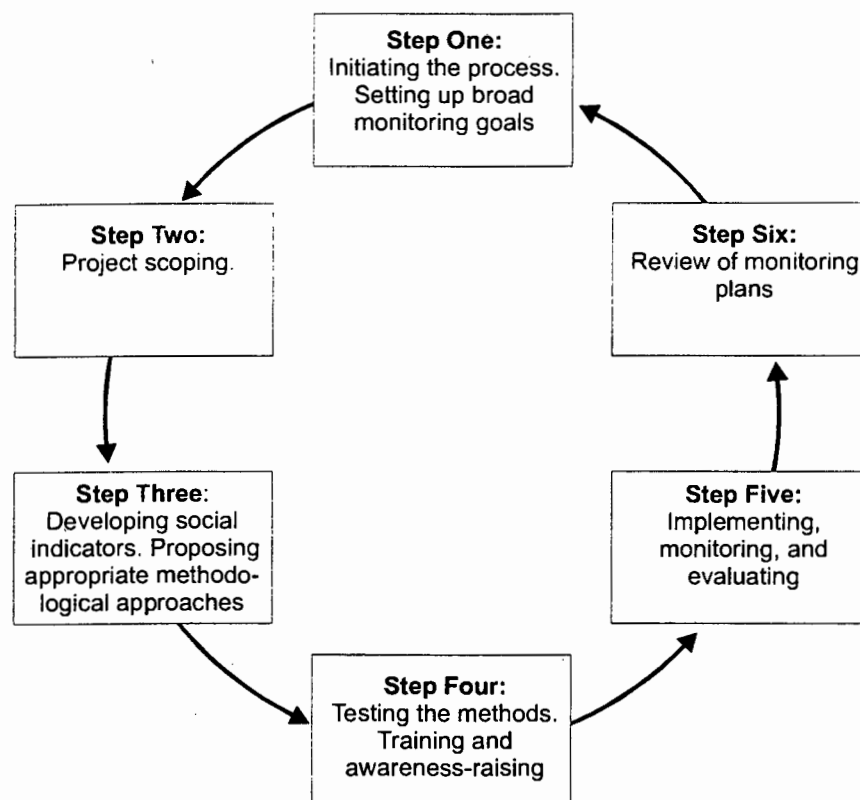


Fig 5.3 Monitoring planning process

The monitoring process shown above involves **initiating the process and setting up broad monitoring goals** in the early stages of the project. The host government sets broader guidelines and creates an enabling environment for CDM projects to thrive. But the investing party and host partner work together to get it started with local consultations.

The second phase of the planning process could entail **project scoping, consulting different stakeholders and drawing up a community profile**. This phase is of utmost importance to the future direction of the project as it involves bargaining, explaining and revising initial thoughts to incorporate other views. This stage can be a deciding factor on whether the monitoring should continue or should be halted.

During the next phase project stakeholders **develop specific social indicators, identify target groups and propose appropriate methodological approaches** to measure the indicators' impacts to project beneficiaries.

Once target groups are identified adopted **methods are tested** to determine whether they are valid under particular circumstances. **Training and awareness raising** accompany methodological testing. This is a crucial component of the planning process as the reliability and objectivity of the intended data is often verified through pre-implementation testing.

Assuming that everything is in place, the project then goes through the **implementation phase**. It is during the implementation phase that a need to **review** current methods and approaches may arise. In that case a project review team should identify gaps and weaknesses in the project and enhance the strengths. Once current methods are reviewed and gaps identified the project cycle begins again and follows other stages. The cycle goes on and on.

5.4 Example of social sustainability indicators

The aspects to be monitored and the level of detail depend on resources available and the intended use of the information gathered. Often resources are limited and a compromise on frequency and duration is required. The matrix below shows aspects with their corresponding social indicators. The example gives an idea of activities developed to determine how much impact climate change projects can have on meeting social needs and aspirations of project recipients. To monitor and manage these social impacts along with their applications is a cutting edge field and new ideas are constantly being evolved and experimented with in search of true sustainability.

Fig. 5.4 Example of social sustainability indicators in Energy Efficient⁶ low cost housing

<i>Monitoring aspect</i>	<i>Social indicators</i>
Jobs	Types of employment created Number of persons employed Duration employed Earnings
Health and safety	Incidences of respiratory infections e.g. asthma, bronchitis Incidences of eye infections related to indoor air pollution Damage from fires & paraffin poisoning
Capacity building in skills	Type of skills learnt Duration of training Applicability of skills Employability of trained workers
Income generation	Enterprises arising due to project implementation
Savings	Reduced energy expenditure
Comfort levels	Perception of comfort
Cultural impacts	Sensitivity of the project and all its processes to the local culture
Equity	Sex, gender, age and generational issues. Is the project sensitive to the needs of all age groups, different genders etc?
Education	Impact on local education and educational opportunities created
Perceptions of social status	Feelings about the differences between standard and Eco-home

6. Conclusion

Successful conception and implementation of technological projects always involves proper recognition that the project is implemented in a social environment. Given that climate change projects would be international in status and domestic in execution, it is important that all the dimensions of such projects be taken on board, including an emphasis on socio-economic benefits to the host country communities.

⁶ This matrix is based on work done in SA on a group of energy efficient low cost houses called 'Eco-homes'. 'Energy cost optimised homes' is a concept that was developed by PEER Africa to try to implement the principles of an energy-saving house through passive solar designs and insulation. PEER Africa have already built a few hundred houses at Kutlwanong in Kimberly (Northern Cape) and are intending to expand their concept to other parts of the country.

Given that lack of capacity in developing countries is one of the potential barriers to CDM project operation, it is important that more development projects be monitored to determine their social impacts as a way of strengthening domestic institutions. South Africa could draw on this document to develop ideas for development projects. Such a framework could be helpful to drive domestic development projects efficiently thereby preparing South Africa for future CDM projects.

In the international context, organisations such as the Earth Council, the ifo Institut fu Wirtschaftsforschung (Institute for Industrial Research) and the International Institute for Sustainable Development (IISD) amongst others have initiated work to design effective indicators of sustainable development (IISD, 1998). This was initiated as a follow up to the 1992 Rio Conference on Environment and Development but their work has not been co-ordinated with the UNFCCC' objectives of promoting sustainable development.

Surely, greater co-ordination between such efforts and the UNFCCC negotiation and processes will be productive in ensuring that international environmental agreements can support sustainable development more effectively.

References

- Austin, D and Faeth, P 1999. How much Sustainable Development can we expect from the Clean Development Mechanism. World Resource Institute. Washington, DC
- Beall, J. 1997. A city for all: valuing difference and working with diversity. London
- The Brundtland Commission (1987): United Nations Conference on Environment and Development. Rio de Janeiro, Brazil., Earth Negotiations Bulletin (ENB)
- Crawford Cousins, C (ed) 1994. Holding the space: explorations of power and control in training and in development. Unpublished paper
- Goldemberg, J (ed) 1998: Issues and options. The Clean Development Mechanism. UNDP publications. New York
- IDS Bulletin, Jan 1979, Vol12-Crane Angrosino, 1974
- International Institute for Sustainable Development Net (IISD, net) 2000. Beyond Delusion: Science and Policy Dialogue on Designing Effective Indicators of Sustainable Development. <http://iisd.ca/measure/scipol/>
- Narayan, D. 1995. The contribution of people's participation: Evidence from 121 rural water supply projects. Environmentally Sustainable Development Occasional Paper Series No 1. World Bank, Washington. – not used in paper
- Mansell, D 1999. Social and economic aspects of international projects. University of Melbourne, Australia. International Greenhouse Partnerships Training & Development Course. unpublished paper. – not used in paper
- Shordt K, 1998. Making monitoring simple and useful., International Water and Sanitation Centre, The Hague. <http://www.irc.nl>
- Simmonds, G 1998: Barriers to energy efficient low-cost housing in South Africa. Energy and Development Research Centre, UCT, Cape Town, South Africa
- The Kyoto Protocol to the Convention on Climate Change, 1997: Article 12 (2) p16. Climate Change Secretariat/UNEP, Geneva
- Vine, E and Sathaye, J 1997: The monitoring, evaluation, reporting and verification of climate change mitigation projects: Discussion of issues and methodologies and review of existing Protocols and guidelines. US Environmental Protection Agency
- Wamukonya, N and Matibe, K, 1999: EDRC Monitoring plan for Kutlwanong housing project. Energy and Development Research Centre. University of Cape Town. Unpublished report.
- Warren, MD 1991: World Bank discussion paper on using indigenous knowledge in agricultural development. World Bank, Washington.

**Social monitoring guidelines for
flexible mechanism projects under
the United Nations Framework
Convention on Climate Change in
South Africa**

KHOROMBI MATIBE

ENERGY & DEVELOPMENT RESEARCH CENTRE
University of Cape Town