

## **MEETING MINUTES**

### **CDM SUSAC INVESTORS WORKSHOP 21 MARCH 2002, LE MERIDIEN PARK HOTEL, FRANKFURT AM MAIN, GERMANY**

#### **AGENDA:**

9:30	Introduction to workshop – ESD
9:45	Outline of CDM Susac project –IER
10:00	Presentation of 6 projects by project proponents/project team
11:40	Investment opportunities & removing investment barriers –ESD
12:00	Risk and risk mitigating institutions – Greenstream Networks
12:20	Experience so far and future prospects - SENTER
12:40	Investor welcome in Africa – Ugandan Investment Authority
	Open discussion session
14:10	Session One: Projects and financing
15:50	Session Two: Risk & Risk Mitigation
17:10	Plenary
17:30	Close

#### **OPENING:**

The workshop was opened by the Chair, Prof. Friedrich, IER. The opening was followed by a presentation by John Malone (ESD). He identified that the objective of the workshop was to improve understanding of what makes a good CDM project by looking at real pilot projects developed within the EU funded CDM Susac project. Felicity Thomas, overall manager of the CDM Susac project (IER) apologised on behalf of Marc Debois, European Commission DG 11 Climate Change Division, since he had to cancel at the last minute. A brief background to CDM Susac was provided that noted the goals of CDM Susac was to kick start the CDM in Africa, Caribbean and Pacific countries by ensuring that these nations were in a position to compete with countries such as Brazil, China and India, which are likely to have larger projects which result in larger Greenhouse gas (GHG) reductions. CDM Susac aimed to provide both institutional and technical support. The project approach focused on learning-by-doing rather than on strategic policy development since it was considered to be a more focused approach.

#### **CDM Susac Pilot Project Presentations**

##### ***Presentation 1, NOVASEN, Senegal – Mr Fall - DN***

Peanuts shells were not utilised in the past but can be used to generate electricity via bagasse and charcoal. Approximately 15 000 t/a of peanut shells will produce 4350 t/a charcoal for households, 12 400 heat, 900 t pyrolysis oil, biogas (6200 MWh/a).

The project baseline calculation is based on consumed energy and the estimated carbon saving is 4018 TCO<sub>2</sub>/a. The estimated project costs will be €2.7 Million. The project will reduce the energy bill of the company, increase electricity provision to meet local energy and excess electricity can be sold to national energy utilities. The project will indirectly improve living conditions of local residents, and reduce the pressure on the local environment since it will reduce need to use wood from forests for fuel supply. Therefore the project will result in methane savings. It was highlighted that the amount of savings will increase or decrease based on the peanut shell supply.

Q: When calculating the baseline have you considered methane savings from using biomass waste products and avoided methane from peanut shell deterioration? Methane savings could have a significant impact on your overall carbon reductions.

A: No we have not considered the full savings from methane, and we will consider re-evaluating our baseline calculation to ensure we have not underestimated the GHG reductions.

### ***Presentation 2, Solar PV project, Uganda - Mr Kanyike***

The church solar project was initiated in 1997, using Standard PV Solar Household Systems (SHS). In July 2000, 1000 systems were installed, and today there are 1600 systems installed in Uganda, the Congo and Rwanda. The main demand for PVs in Uganda is for lighting in households. In Uganda off-grid systems, including solar electricity, could meet 89 % of rural electricity needs. Only 1 % of rural households are currently connected to the grid.

The Baseline study undertaken in the CDM Susac project task forces takes into account traditional lighting devices such as Tadoba (locally-made, wick lamps) lamps and small and standard kerosene lamps. Annually, the fuel consumption was recorded and a distinction be made between rural and urban areas. The project is expected to result in the installation of 72 000 PV SHS by 2010. The household kerosene use will be reduced by 28,629.4 tonnes over the project lifetime. CO<sub>2</sub> emissions are expected to be reduced by 18 000 t CO<sub>2</sub> per annum once all systems be in place. The PV systems will be subsidised by 50 % within 3 years by churches in America, which will enable the residents to purchase the systems at half price. Most people buy within the first year. Solar Energy Uganda are hoping to identify new investment to bring down the costs associated with expanding the project.

Q: What is the cost of one system

A: The cost is 350 US\$ but the consumer only pays 20 % of the costs to receive the system. Payments are then made in instalments. After 3 months consumers start to pay interest.

### ***Presentation 3 Lakwela Project in Zambia, Mr. Captain, FY***

A Mini hydro project was presented, which will replace diesel used for a 840 KW Diesel powered plant in Mwinilunga Northwestern province. The baseline is calculated by assessing the replacement of diesel and reduction in diesel transportation which is currently used in the BAU situation. The project is expected to result in reduction of 165, 548 tonnes of CO<sub>2</sub> credits over the next 15 years. All projects in Zambia are screened, to ensure that they contribute to sustainable development criteria. There is a cut off mark of 55 %. This project achieves a ranking of 85%.

The project IRR is 12.2 % assuming a BAU tariff of US 0.10 kWh. However tariffs can be reduced to US\$ 0.089 and US\$0.085 for 50% and 100% advance payments, respectively. Project investment will be around 6 Million USD.

Q: What discount rate was used?

A : A discount rate of 12 % was used to calculate NPV

Q: Is a grid needed ?

A: distribution grid exists already. Investment costs will be reduced if the government will pay for the distribution lines.

***Presentation 4: Integrated Household Waste Management Project in Senegal / Alcyon ENDA TM – Djimingue Nanasta***

Agreement made that government will invest in project. Municipal Waste to be used to generate electricity (4500 MWh per year ) from approx. 90 000 t waste per year. 5 processing facilities planned in Dakar. Current estimate predict the project will result in carbon saving of over 3000 CO<sub>2</sub> e per year. Total project investments will be 77,748,998,791 EUROS

Contractual risk has been mitigated since the contract with Alycon has been signed for 25 years, the political situation is stable and no changes are foreseen within the upcoming 7 years

***Presentation 5: The Kampala Traffic Flow Improvement Project, Uganda - Paul Isabirye***

Project should be carried out in Kampala. Population is growing at 4.9 % per year in Kampala. Main modes of transport in the city are small vehicles such as mini buses. 200 000 vehicles in Uganda, of which over 70 % are located in Kampala causing congestion problems in the city. Transport activities account approximately for 75 % GHG emissions of the total emissions in the country. This project proposes to introduce mass transportation to reduce congestions while reducing GHG emissions. The per person fuel consumption will reduce by using mass transportation systems

It is estimated that the use of large buses will result in an annual savings of 27,750 t Carbon. This will apply when when 50% of the small busses be substituted by introducing bigger busses using different types. The project is currently in planning phase.

***Presentation 6: Tazama Pipeline Ltd. Project, Zambia, - Prof. Francis Yamba***

This project aims to replace 2 x 6 crude oil/diesel pumping stations with pumps powered by hydro electricity along the TAZAMA pipeline, that covers a distance of 1700 km from Dar-es-salaam in Tanzania and Zambia. BAU scenario involves fossil fuels used for operation within the next 15 years. Emission reductions are estimated to be a reduction of 208,175 t CO<sub>2</sub> over the next 15 years.

The project was approved as passing the cut-off mark of 55% contributing to sustainable development, therefore the project eligible for CDM. Project economics illustrated. IRR will increase when the price per t CO<sub>2</sub>e reduced increases. Advance payment of either 50% or 100% on sale of CERs has a reasonable effect on IRR, and positive contribution to NPV and Net Cumulative Balance. Total Investment costs will require USD 3.4 million, and different financial packages have been assessed for this project.

Q: How is the sustainable development cut off point decided?

A: This process was debated for a year by the CDM Susac committee, a committee which will probably become the Zambian CDM Sub Committee which then is envisaged to become the legal National CDM Authority in the near future. Members of the committee formed a panel to identify and rank economic, social and environmental aspects of projects

Q: At what stage are these projects.

A: The projects are ready to be implemented and all project design and feasibility documentation is complete.

## **EXPERT PRESENTATIONS**

### ***Presentation 7: Experience with projects and further prospects – ESD Mike Bess***

ESD is adviser to EC ECCP on JI/CDM Project Preparation. Post Marrakech there is a growing interest from and in Africa for CDM. Main project opportunities in Africa are fuel switching projects, renewable energy projects and energy efficiency projects. The presentation focused on what makes a CDM project good. It was mentioned that turning bad projects into good projects using CDM will not work. Good projects will require to be a good investment, have a good market profile and be well managed, have a clear business plan, as well as a well-structured finance plan. It is key that the host nations define clear sustainability criteria for their countries in order to screen projects meeting these criteria. Local support is also important to get involved at an early stage. Environmental additionality is one of the most crucial issue. Projects covering methane emissions are very promising to result in credits that would represent up to 10 % ROI. Environmental integrity has to be demonstrated in the project design documents. Focal points in host and investor countries necessary. Compliance with eligibility requirements in both countries necessary, designated national CDM authority important, voluntary participation

Investment additionality aspect: What will attract investors? They want to use CERs to use for meeting obligations. Demonstrating financial benefits from CDM projects will be key for any investor. Apart from normal project cycle the CDM requires meeting additionality issues, (Baselines, MVP, more critical are undefined transaction cost to get CDM projects approved. This is additional to normal investments. Investment risk can be divided into typical risks associated with developing countries and additional risks linked to the CDM.

Key issue is to ensure that CDM projects are good projects anyway. The CDM can not turn a bad project into a good project.

Q: What are the main reasons for hesitation of host governments to the CDM?

A: In case of Uganda no resistance, from governmental level CDM was put forward. However in some other countries there is resistance due to suspicion about what the host country is giving away. There remains a certain amount of confusion regarding CERs and national sovereignty, what a CER is and what the commodity transaction is.

Q: What are high transaction costs (figures)?

A It is wrong to define exact figures, since they will vary according to projects. Numbers can be very high depending on how much time must be invested for example in obtaining approvals, or project contracts etc.

### ***Presentation 8: Risk and Risk Mitigation - Tommi Tynjälä***

Green Stream Network Ltd. Was established in July 2001. The company acts as a broker in carbon offset and green certificate markets (from renewables), canalise financing for renewables , prepares JI/CDM projects, main driver is the Dutch tax system

[www.gsn-trade.com/](http://www.gsn-trade.com/)

General remarks and concepts on risks. CDM does not turn a bad into a good project. Many good projects have difficulties to be implemented. CDM could help here. Good sponsors are needed, project sponsors experience, capability is important. Identification , allocation and Management of risk is fundamental to all projects, not just for CDM. Research by the PCF assessing the impact of carbon financing on IRR for different type of projects such as e-efficiency, methane biomasse, bagasse, hydro, wind (Source PCF). Indicate that methane projects are more attractive than those that only reduce carbon dioxide.

Risk is always related to the IRR, if a project is perceived as highly risky, this will require high expected return. Risk is also affected by the perception an investor has. Risks are related to country based risks, political situation, project developers can not control these risks. Legal risks, when legislation might change or it is difficult to put into force legal agreements. Commercial risks, include development risks which are related to the period when a project is getting developed (uncertainty of project approval and delays, then transaction costs will increase). Construction risks are the same for any project investment. Operating risks can be related to the management of a plant, force majeure etc. International risks exist in addition for CDM, which include CDM rules and regulations. Their will be obligations involved by Annex I parties so carbon versus monetary obligations

How will risks be allocated to the different players? There is a principle of control. Control systems definitely bring the costs down. Giving the risks to the party which is most capable of handling the risks is recommended. Legal and political risks, countries have to take care of. Some third party assistance might be possible but is very seldom used. Company takes care of any risk during construction phase. Infrastructure related risks such as access roads or transmission line are often in third party hands. *Force Majeur* is normally insured. CDM risks. Projects have to provide a certain amount of credits. Ratification and coming into force of Kyoto Protocol.

Giving upfront payments, transfers risk to the purchaser. Green Stream Networks takes some of the risks, but never will take any risk associated with the construction phase. Mitigating risks related with the CDM component by finding contractual solutions (including ERPA), Guarantees (to cover partial risks such as Export Credit Guarantees, partial credit guarantees). For country risk use guarantees, firm contracts. CDM cash flows will be in foreign exchange (FEX), mitigating exchange risks.

For development risks develop clear national and international rules for the CDM

Conclusion: Partners are as important as the project content.

Impact of CDM on risks: Improvement of credibility of the project (+), provide some hedging against FEX risks (+), improves the IRR (+), increase the development risks (-).

### ***Presentaion 9: Investoment opportunities and removing invetment barriers, SENTER International , Astrid Bronswijk***

SENER is an Implementing centre operating as an agency for implementing Dutch government policy. Funding for different programmes comes from different sources, the yearly budget is 1 billion Euro . The Dutch Government is working hard to fulfil emission reduction commitment of 6 %. The speaker emphasised that SENTER does not invest directly into projects but does purchase carbon credits on delivery. I.e. no advance payment is made.

How much can be earned for each ton reduced CO<sub>2</sub>e ? Based on the market predictions SENTER are prepared to pay between 2-6 EUROS per ton reduced. Landfill projects can receive 20% or more ROI. Carbon credits revenue represent another share of ROI. The Dutch government has an incentive to identify value for money credits under the SENTER run programmes (JI – ERUPT, CDM – CERUPT). There are specific times for tenders. The tendering process begins with the submission of an expression of interest. If invited, project proposes can submit a full tender.. It is essential to present a feasible project and realistic calculations as well as the approval of host countries. Criteria for selection of projects is the price per carbon since projects are competeing with each other.

For JI tenders credits will be purchased between 2008-2012. CDM crediting can happen immediately and commences when projects starts. Expression of interest / first phase of tender is a pre-requisite for entering the second phase:

Exclusion criteria (bankruptcy), financial and economic standing of company, technical capacity, Example of a wind farm in Poland. 60 MW, 30 turbines, co-operation NL-P. 583.000 t CO<sub>2</sub>e reduced

Tender for CERUPT is still in planning phase, one or 2 more tenders expected on CDM, two more expected for JI, by end of 2002 first projects be selected. Information will be announced on the SENTER website: [www.carboncredits.nl](http://www.carboncredits.nl)

***Presentation 10. Investors welcome in Africa - Ugandan Investment Authority & Vice President World Association of Investment Promotion Agencies –Prof. M. Kigozi***

An investment agency aims to help the private sector and in general tries facilitate investment. Much is being done in Africa to mitigate; political risk, such as stability, is reducing, economic strength is increasing, African economies are liberalising and moving toward privatisation of markets. Improving infrastructure such as for electricity, telecom...availability of labour, trainability, education, productivity. Liberalise banking and financing environment. All these things provide incentives for investing in Uganda and more broadly in Africa.

In Uganda, investment is focused on sectors such as agriculture and agro processing, mining, tourism, packaging, services. Of the UIA licensed projects, JV – 25%, Local 36%, foreign 39%. The private sector is the driving force for promoting CDM and therefore business associations, which represent the private sector in Africa should be more involved in the CDM process.

Q: There is a serious imbalance in the trade balance and this affects investment.

A: This is a problem, but should not affect all sectors, since some sectors are much better at exporting than others.

Q What about the situation in Zimbabwe. What is happening there will affect all countries in Africa?

A : All countries have bad neighbours, but even the countries that receive a lot of investment in Asia or S. America have bad neighbours but this does not have to affect investment. There is a false perception of Africa and this needs to be corrected.

**AFTERNOON DISCUSSIONS**

**Session 1 - Financing CDM Projects**

**Q: How can transaction costs be specified and therefore reduced?**

The discussions then resulted in agreement that specifications of transaction costs such as those quoted by the PCF do not incorporate all transaction costs, such as finding the right ministry for approvals etc. Thus these figures are actually quite meaningless unless talking about specific individual projects.

In general it was agreed that high transaction costs make the CDM less attractive for projects that generate relatively minimal carbon emissions reductions. It was recommended that consideration be given to develop streamlined procedures to reduce transaction costs. It was acknowledged that once the UNFCCC have clarified rules for accreditation some transaction costs would automatically be reduced.

As an indicator of what the minimum size for a project could be, the limit used by SENTER of a minimum no. of 100,000 t CO<sub>2</sub> reductions over the lifetime of the project was considered a good cut off mark for deciding if it made sense for a project developer to register a small project as a CDM project. It was agreed that early movers usually have to pay higher transaction costs. It was noted that CDM Susac had contributed greatly to reducing

transaction costs in Senegal, Zambia and Uganda since the key stakeholders (government, private sector and focal points) were aware of the importance of keeping transaction costs to a minimum.

**Q. What will be the main actors who could reduce these transaction costs?**

It was agreed that there are some transaction costs that will remain fixed such as development of the project design document, validation, monitoring and accreditation processes. Approx 50,000 US \$ is considered the current minimum for these non-reducible procedures. The transaction costs which can be reduced are related to costs associated with time and effort, contacts necessary to get approval etc. This is something that governments and focal points have a responsibility to reduce. Costa Rica is an example, the focal point has a list of projects and ensure that investors can have easy and direct access to the project developers. In other countries, it can take days to find the right person.

It was acknowledged that current transaction cost quotes by organisations such as the PCF and SENTER are high because as the first organisations to purchase credits they are trying to ensure they do everything right in other words they are trying to be “cleaner than clean” and apply the highest standards for feasibility studies, baselines and environmental impact studies. It is therefore essential that the executive board makes the rules clear and works to stream line processes.

**Q Can small projects (i.e. those with emission reductions under 100,000 t CO<sub>2</sub>) be supported under the CDM?**

The major problem with transaction costs is that they are defined by both the purchaser and the host government's institutional arrangements for approving CDM projects. Host governments institutional structures can result in expensive time delays whilst purchasers can demand extensive study of the proposed projects to ensure that they are likely to receive the CERs. It was agreed that bundling might be a process that could reduce transaction costs to a point where small projects would be more attractive, but at the moment it remains unclear as to whether the transaction costs will really be reduced when projects are bundled. Currently the PCF and other organisations are unsure what the UNFCCC requirements on small projects will be and therefore will require due diligence on all the small individual projects within the bundle, thus raising transaction costs. It was acknowledged that insurance firms have a role to play in trying to develop risk mitigation packages associated with bundled projects. Additionally, streamlined baselines will also reduce transaction costs. Then too the size of the projects could be reduced. It was agreed that the small renewable CDM projects in ACP are likely to be supported under the CDM since the national focal point could streamline processes in line with the fast CDM track approved in Marrakech by the UNFCCC.

**Q - Is it worth waiting for CERs or is it better to bank CERs late**

Marrakech implemented a voluntary CDM where participants can get started and then sell the CERs in future. It is therefore possible to register a project two years after it has started. Can register project and bank permits and can speculate on price increases. However project developers should be cautious about additionality. Indirectly the issue of financial additionality does apply and therefore you might lose credits if creditors consider that your project would have gone ahead without the CERs. It is therefore important to be able to justify why the project when forward but that the decision to do so was on the basis that CERs would be awarded to the project.

An example of a biomass project was given that was not accredited because it was already operating. Investment additionality is a speculative issue and can not be defined. It was therefore recommended that project developers seek Annex I endorsement and government endorsement that the project only went ahead on the presumption that the project would be awarded CERs.

**Q Is it possible to validate CDM projects if there is no defined CER purchaser?**

Yes but it is controversial.

**Q How far can ODA be used to support the kick starting of a project.?**

This is a very controversial issue and remains unclear. It will be necessary to await what decisions come out of the COP before any definite answers can be given. However in general where smart subsidies are used to support infrastructure development, such as extending the grid etc to enable a CDM project to function, there is not expected to be much controversy. In other words when ODA is used to change a project from a marginal project into a real project, i.e. ODA supports incremental costs to realise a project it is expected to be approved. The important thing will be to justify the use ODA in a clear and transparent way. In general, however, it was acknowledged that no CDM project would ever be 100% financed by ODA and that the best CDM projects would not use ODA, since the CDM mechanism is supposed to rely on private sector support, and ODA should be channelled to meet social needs.

Insurance – export credit programmes have financed many fossil fuel and large-hydroplants all over the worlds. It is about time that these programmes are used for financially friendly projects. The first place to start would be to get them to support CDM. This is nothing to do with ODA but with national support for national businesses.

**Q – What is the standards price for a CER.**

There was disagreement about whether prices for CERs will be differentiated. Some participants felt that a bond market provides a good allegory where we can expect that prices for CERs will vary between projects and countries. Prices will depend on demand and purchasers will have their own preferences for project types and locations. The CER price and purchasing activity is expected to be driven by more than the need for companies to comply with regulations, but also driven by new ethical consciousness amongst large firms, and new environmental technology sectors seeking to export technologies and gain access to additional finance under the CDM. However it was agreed by this group that differentiation will only occur when considering forward transactions, if a spot market is considered then there will be no differentiation.

Those participants who disagreed that there would be a differentiated market for CERs noted that buyers will be interested in the compliance tools. There will be some people interested in credits for carbon purposes. Others will be interested in specific sectors. A distinction should be made between young and old markets. The importance of the project will be less significant than the quantity of the CERs that a project generates. As a result there is unlikely to be much differentiation in the CER market price. It is regulation that will drive the CER market.

**Q - Will there be differences in the quality of projects in terms of requirements to ensure that projects meet sustainable development goals.**

The quality of how a project meets sustainable development goals will be defined by the Annex I countries and what purchasers will accept. In general it can be accepted that Germany will be cautious about buying credits from projects which do not meet sustainable development goals. However, it was accepted that there might exist purchasers who would only be interested in the price of the credit rather than any other sustainable development objectives.

**Session 2 - Risk**



**Q What are the risks associated with CDM projects ?**

A key risk is whether the Kyoto process will go ahead or not. A number of African states and European states want to go forward. Provided 50 countries sign up to the same rules and procedures, the system would only fail parties if participating play by rules or not. If Kyoto not signed, EU has invested so much in the process that something will be developed that looks pretty similar to the Kyoto system.

Risk can be considered on different levels. A) whether the Kyoto protocol will be ratified. B) Which instruments will be developed e.g. certificates from JI or CDM will they play a role in meeting targets or not? C) risks associated with project development as mentioned in the presentation by Greenstream Networks.

It was agreed that at this stage in the UNFCCC process it might not be possible to define all the risks accurately. It is clear however that the early movers define the rules and thus clarify the risks. There is additionally another risk in the sense that a project developer may not find any investor. This is a different risk to the risks associated with preparing and implementing a project. Include a regular project risks and CDM specific risks. Hot air is also a risk. If Russia puts everything in the market, then there is no room for CERs and CDM is no longer viable. Therefore there is a hope that Russia does not put everything into the market.

Problems in Zimbabwe may also affect investors not familiar with Africa about the perception of the region. Especially if African governments support the Zimbabwean government since investors are very nervous about ownership issues. Investors more familiar with Africa may be less sensitive about the politics in Zimbabwe affecting other countries. It was recommended that national focal points prepare lists of potential CDM projects in their countries to present to investors.

**Q How can risk be reduced?**

Large insurance firms are interested in re-insurance schemes below a 30% level or so. Therefore an investor hesitating could be encouraged by exploring insurance options. Country risks can be insured by the World Bank. UIA have set up the African Trade Insurance to mitigate against some of these risks as well. Baseline risk is no longer valid since in the Marrakech accords CDM projects can choose whether to have a baseline for 7 years and renew it up to twice (21 year crediting life in total) or to establish a baseline for ten years with no option of renewing it. It should also not be forgotten that because risks are currently higher at the start of a new process prices are low, but prices may well rise in the future when there are more players in the market.

It is important that awareness raising in Africa about the CDM continues. There needs to be a one stop shop for all investors in each country. The most important thing for the investors is clarity on the side of the African countries. It is also important for African government to understand what the costs associated with supporting the CDM are and to decide if the benefits outweigh the costs. An example of this process is in the GTZ/Netherlands funded country strategy studies which worked with governments to make this assessment.

Project developers in the African countries should think about risk and consider the risks likely to impact on their project. Try to find answers to these issues of risks, so that when the project is presented to investors, the project developer will have answers to the investors

**Q Do investors prefer JI to CDM?**

JI is just next door to Europe and proximity makes a difference. Rules are also a bit simpler in JI than in CDM. There is a fundamental principle which is that we are dealing with Annex I countries that have taken on a cap whilst the non-annex I countries have not. There is no definite signal that the simpler JI process will be adopted since it is not supported by the UK Netherlands etc. However the CDM will always be more complicated, since there are no targets for the players in the countries in the developing world. Therefore to ensure that

gaming does not occur the validation procedure has to be more stringent than for JI where countries have targets to meet and thus have an interest to ensure the carbon reductions are real.

Some participants argued that CDM is more attractive than JI because credits are awarded for up to 21 years under CDM whilst they are awarded for only 5 years under JI. It was noted that investors already working in the international arena would find CDM attractive.

**Q Can rules for CDM be simplified?**

It has been difficult to negotiate the CDM and perhaps we should just ensure it is in place before we discuss changing the rules that govern the CDM. It was noted that there was a definite possibility that some people were discussing how to complicate the rules. In general rules will increase transaction costs and reduce the market share of CDM in carbon markets. In general, from the experience of carbon brokers, it appears to be easier to get endorsement for a CDM project than for a JI project.

**Q What have we learnt from the Workshop?**

Different people (project developers, investors, validators, risk managers, carbon brokers, insurance firms) have seen the types of CDM projects on offer from African project developers and learnt about the CDM Susac project, which was a pioneering project that began two years ago. Experiences from the project have revealed what needs to be done to realise CDM projects. The dialogue achieved today has raised issues that are between project developers and carbon credit purchasers and therefore defines the further work that needs to be done to support CDM projects in Africa.

More work is needed to be done amongst the private sector in Africa. It is essential that there is a one stop shop for CDM in African countries. The governments in the three countries are aware of this and it is hoped that this can be achieved. The third point is that we have a portfolio of 6 projects and the barriers to realising these projects has emerged from the discussions and include:

- 1 Transaction costs was a major issue. The transaction costs are very high. There is thus a need to evaluate how to reduce these transaction costs since we are small size projects. One of the ideas is the question of simplified procedures. There is also a need to build capacity in these developing countries the costs will then be reduced as capacity is built. We would like to encourage capacity building, need to identify SGS officer in Zambia so that local officers would do things locally. This would reduce validation transaction costs. Question of bundling is important. The next issue is project finance.
- 2 Project finance is an issue for us. Local investors do not have 3 million US\$ which is small sum of money for international investors. International investors presume local investors can cover these small project costs however the funds do not exist locally. There is a need to identify a means to resolve this issue.
- 3 Risks are also an important issue. Need to change perceptions of risk in Africa. Need to ensure governments in Annex I present Africa more positively. Need to recognise what things have improved in Africa. There are improvements that have improved risk situation.