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DEVELOPING NATIONAL CAPACITY TO IMPLEMENT INDUSTRIAL CLEAN DEVELOPMENT MECHANISM (CDM) PROJECTS IN A SELECTED NUMBER OF COUNTRIES IN AFRICA

UNIDO PROJECT YA/RAF/01/405

UNIDO CONTRACT NO. 2001/052

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KENYAN COMPONENT

FINAL REPORT

NOVEMBER 24, 2001

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CONTENTS

ABBREVIATIONS, SYMBOLS AND ACRONYMS

AHP	African Highlands Produce Company Limited
BAT	British American Tobacco
CNA	Climate Network Africa
CDM	Clean Development Mechanism
COMESA	Common Market for Eastern and Southern Africa
CTA	Chief Technical Advisor
DOD	Department of Defence
E.A. Oxygen	East African Oxygen Company
E.A.P.C. Ltd	East African Portland Cement
EA	East Africa
ER	Emission Reduction
FKE	Federation of Kenya Employers
GEF	Global Environmental Facility
GoK	Government of Kenya
IEK	Institute of Engineers of Kenya
IPC	Investment Promotion Council
KAA	Kenya Airports Authority
KAM	Kenya Association of Manufacturers
KEBS	Kenya Bureau of Standards
Ken Gen.	Kenya Electricity Generation Company
KBL	Kenya Breweries Ltd
KFSID	Kenyan Forum for Sustainable Industrial Development
KIRDI	Kenya Industrial Research and Development Institute
KNCPC	Kenya National Clean Production Centre
KNH	Kenyatta National Hospital
KOR	Kenya Oil Refineries
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Company
KWPCC	Kenya Water and Pipeline Corporation Conservation
LSK	Law Society of Kenya
MoE	Ministry of Energy
MOENR	Ministry of Environment and Natural Resources
MOTTI	Ministry of Tourism, Trade and Industry
MU	Moi University
NCC	Nairobi City Council
NCCI	National Chamber of Commerce and Industry
NCICC	National Committee on Industry and Climate Change
NEMCA	National Environment Management and Co-ordination Agency
NES	National Environmental Secretariat
NGO	Non Governmental Organization
PM	Project Manager
RECA	Relief and Environment Care Africa
RET	Renewable Energy Technologies
SME	Small and Medium Enterprises
SONY	South Nyanza Sugar Company
TL	Team Leader
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UoN	University of Nairobi
USAID	United States Agency for International Development

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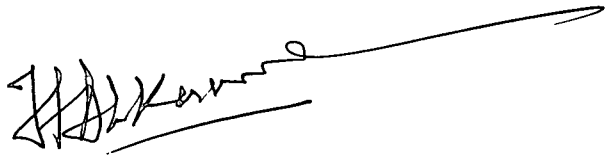
We wish to recognise the contributions from all the stakeholders from industry, Government, NGOs, industrial associations and RTOs who participated through workshops and individual consultations Finally, We thank the core group members and all other persons who participated and supported the various activities of this project.

This report has been prepared by Four Up Industrial Services Limited. All efforts have been taken to report as accurately as possible on the proceedings of the various meetings and workshops, however, if any error or misrepresentation has occurred, We at 4up ISL take responsibility and not the technical advisors or stakeholders. We however request all stakeholders to report to us any errors for correction on reports posted on the project WebBoard.



Harry L. KAANE

Team Leader
Director, 4up ISL

ii. INTRODUCTION

This is the final report covering activities and outputs from January to November 2001. The focus of this report is on the programme for barrier removal and capacity building. A review of barriers, strategies and CDM project portfolio is covered in the preliminary chapters. Comments received from the Project Manager and the Chief Technical Advisor on the first, second and third interim reports have been incorporated in the updated version of these reports. Proceedings of the various consultative workshops and participants lists have been included in the annexes.

The last workshop for stakeholder consultation was held on the 13th September 2001. The objective of this workshop was to review barriers and strategies identified in earlier meeting and formulate the Kenyan component to the Integrated Programme for Africa. The workshop was well attended by a cross section of stakeholders who deliberated in work groups and came up with good recommendations that formed the basis for the programme given in this report.

The workshop resolved to split the Kenyan component into six programme components:

I. Information dissemination and networking;
II. Capacity building;
III. Policy, laws and regulations;
IV. Pilot and demonstration projects;
V. CDM projects portfolio; and
VI. Sustainable industrial development fund.

Industrial CDM projects portfolio has been included in this report. Only three projects have been given in the portfolio. The main problem has been getting data from industry and Government departments necessary for undertaking financial, economical and environmental evaluations. Besides, due to financial constraints, we were not able to hire competent staff to support the portfolio development. It was resolved at the stakeholder meeting that the bulk of work be undertaken in Phase III if funds will be available. We have given an outline of the three projects in this report.

Our Kenyan component was merged into the Integrated Programme for Africa at a meeting held at Portudal Sally in Senegal. The African Integrated Programme was presented at a side event at the just ended UNFCCC COP7 in Marrakech, Morocco. Dr. Harry Kaane, the project Team Leader, represented all stakeholders at the meeting and conference.

KENYAN COMPONENT TO THE INTEGRATED PROGRAMME ON CAPACITY BUILDING AND BARRIER REMOVAL TO ENABLE AFRICAN COUNTRIES IMPLEMENT INDUSTRIAL CDM PROJECTS

EXECUTIVE SUMMARY

Introduction

In 1999, UNIDO commissioned six national experts from Nigeria, Ghana, Senegal, Zambia, Zimbabwe and Kenya, who, together with international experts from ETC Energy of the Netherlands, examined key issues in the Kyoto Protocol to the UNFCCC as they impact upon industry. The work of these experts culminated in the development of the "Concept for Developing National Capacity to Implement Industrial Clean Development Mechanism (CDM) Projects in Selected African Countries".

The second phase of this programme started with preparatory work January 2001 and to ended in November with a side event at COP7. An Integrated Programme on "Capacity Building to implement industrial CDM Projects in selected African Countries" consisting of six national components and two regional (COMESA and ECOWAS) components form the output of this phase. A portfolio of potential industrial CDM projects has been included in the final report.

The third phase will implement the programme developed in phase II. At the end of the third phase, participating African countries will have achieved the following:

- Mobilised stakeholders and fostered public-private sector dialogue;
- Trained experts to develop, market, implement, monitor and certify CDM projects;
- Implemented pilot projects on a learn-by-doing basis to demonstrate the benefits of CDM projects and gain experience;
- Built capacity in industry to monitor and regulate greenhouse gas emission on a continuous basis; and
- Put in place mechanisms for information gathering and dissemination.

Teamwork and Stakeholder Consultations

Throughout these preparatory phases, stakeholder dialogue and consultations have been given priority. A core group of experts was initially put in place covering diverse disciplines: information, energy, legal, financial & investment, feasibility studies and technology transfer. This team has been responsible for the preparation of this Kenyan component.

The core group identified key stakeholders from Government, Industry, NGOs, Academia, Industry Associations and Donor Agencies with whom they have consulted in the preparation of this programme. Several workshops and meetings were held in different parts of the country to receive

views and ideas from stakeholders. In addition to workshops, members of the core group visited several industries, which have potential to host CDM projects.

Barriers to Technology Transfer and Capacity Building Needs

Initial work concentrated on identifying capacity building needs and barriers to technology transfer. The following were identified as major barriers to potential CDM project:

- Lack of information on potential benefits of CDM projects;
- Weak institutional and co-ordinating infrastructure;
- Lack of capacity to develop, implement and monitor CDM projects;
- High cost of doing business in Kenya;
- Lack of enabling legal and regulatory environment
- Weak enforcement of existing legal instruments on environment conservation.

Strategy for Barrier Removal

The following strategies will be adopted in the barrier removal process:

- Barrier-removal measures have been prioritised. Top priority has been given to building capacity to develop and implement CDM projects. Second in priority is the removal of legal and regulatory barriers, with emphasis on the enforcement of the existing laws and regulations relating to climate change;
- Adopt learn-by-doing approach to capacity building;
- Create a private sector managed umbrella body the "Forum for Sustainable Industrial Development," to oversee and co-ordinate climate change related activities in industry;
- Create a "National Committee on Industry and Climate Change" to gather and disseminate CDM related information;
- Capacity building to include formulation and enforcement of policy instruments; and
- A regional approach to marketing of CDM projects be encouraged.

Programme

The Kenyan component to the Integrated African Programme has been developed. It has the following six components:

I. Information exchange and networking;
II. Policy, Laws and Regulations review and enforcement;
III. Capacity building;
IV. Pilot and demonstration plants;
V. CDM projects portfolio; and
VI. Sustainable Industrial Development Fund.

CDM Projects Portfolio

1. TEAM WORK AND DIALOGUE WITH STAKEHOLDERS

1.1 Introduction

Various workshops and meetings have been held during the period running from March 2001 to September 2001. An overview of the proceedings of these workshops is given below. Full details on the discussions that took place during the consultative process may be obtained from the interim reports or annexed to this final report.

1.2 Core Group Meeting held on the 1st March 2001

On March 1, 2001, the core group members held a meeting with the Project Manager, Peter Pembleton and the project Chief Technical Advisor, Pim Kieskamp. The meeting was split into two sessions: A half-day workshop was held between 9:00 AM and 1:00 PM at the Milimani Hotel and consultations with individual core group members were made between 2:00 to 4:00 PM at the offices of 4up ISL. Key issues emerging from the core group meeting are summarized below.

1.2.1 Information on Industry and CDM

Modalities to enhance information exchange amongst the core group, stakeholders and other participants from outside Kenya were discussed at length. It was agreed that Dr. James Kulubi, the information expert, explores the possibilities of 4up ISL hosting a "copy" of the project WebBoard. It was further agreed that he would continue to update the project WebBoard before we are able to host our own Web locally.

1.2.2 Involvement of all stakeholders from the beginning

The composition of the selected core group members was discussed. It was emphasized that both public and private sector be represented in core group. A cordial relationship between those working in Government and private firms is to be encouraged. Further, for proper and timely response to issues relating to this project, it was agreed that assistant team leader and assistant national experts be identified.

1.2.3 Funding for Phase II

It was pointed out that the funds made available by UNIDO were to be used as seed money. Members of the core group are expected to contribute to the project at this preparatory stage, since this is an investment into the future. National experts will be paid at local rates for services they render to this project.

1.2.4 Legal and regulatory

Mrs. Grace Nzioka, the legal expert, pointed out the following as some of the legal barriers to technology transfer:

- Incorporation of CDM into the national legal system;
- Procedures for clearing prospective foreign investors;

- The need to strengthen the Investment Promotion Centre;
- Inadequate regulatory framework for technology transfer;
- Intellectual property rights;

It was agreed that she raises these issues during stakeholders meetings where the Kenya Intellectual Property Office, KIPO, the Attorney Generals' Chamber and University of Nairobi (Faculty of Law) will be invited.

1.2.5 Energy

Mr. Aduda, the energy expert, will prepare data on renewable energy technologies including co-generation, solar energy and mini-hydros for inclusion as possible CDM projects. He will also look into energy efficiency projects at factory level.

1.3 Stakeholders' Meeting held on March 2, 2001

The meeting was organized in two sessions. A workshop of key stakeholders took place in the morning and individual discussions took place in the afternoon.

Peter Orao, on behalf of Professor Rueben Olembo, the Chairman of the National Environment Management and Co-ordination Agency, NEMCA, made opening remarks at the workshop. Peter Pembleton (the Project Manager) and Pim Kieskamp (the Chief Technical Advisor) made presentations. The PM gave an overview of the project, including background studies and the preparatory assistance. The CTA presented the project framework on the current and planned capacity building activities. The Team Leader presented a paper on national activities since phase I, planned activities for phase II and emphasized the roles of the core group and stakeholders. Key issues discussed and agreed upon are summarized below.

1.3.1 Information on Industry and CDM activities

Ways and means of improving information exchange were discussed. It was agreed that stakeholders make use of the existing project WebBoard. Those who wish to do so should contact 4up ISL for assistance. The core group will continue to update the Kenyan pages and look into the possibility of hosting the WebBoard locally.

1.3.2 On-line conferencing

The Project Manager has set up this feature. Those stakeholders who wish to participate should get in touch with 4up ISL for further assistance.

1.3.3 Publicity of the newly enacted Environment Act

It was pointed out that most stakeholders in industry were not familiar with the newly enacted Environment Act. Representatives from the National Environmental Secretariat were requested to look into this issue and disseminate the highlights of the new Act as widely as possible.

1.3.4 Learning by doing

The proposed Integrated Project will adopt the strategy of "Learning by Doing". Stakeholders were therefore encouraged to participate fully in this preparatory phase as they stand to benefit at the implementation phase.

1.3.5 Project ownership

It was emphasized that all stakeholders should be involved in the programme formulation, as this was a Kenyan issue. UNIDO was simply facilitating the formulation of the programme. The role of 4up ISL is to co-ordinate local activities. Both industry (private sector) and Government agencies should join hands to put up a Kenyan programme acceptable to all parties.

1.3.6 Possibility of CDM not being ratified

The possibility of CDM not being ratified was raised. It was pointed out, however, that the capacity to be developed would still be necessary for other investment opportunities other than CDM.

1.3.7 Publicity for CDM

Some representatives from industry expressed concern that they knew very little about CDM. It was therefore agreed that NES and 4up ISL distribute information on Industry and CDM.

1.3.8 Role of NEMCA and NES in Kenya

The Government representative explained to the participants that the National Environment Management and Co-ordination Agency (NEMCA) is under formation and will eventually take over the management and co-ordination of all environmental issues, currently being undertaken by the National Environment Secretariat (NES). These changes are part of the new Act.

1.3.9 Inclusion of non-industry GHG emission sources

It was pointed out that this UNIDO-facilitated project is restricted to Industry and CDM. As such, inclusion of other sources of GHG in this project e.g. automotive emission was not possible. In any case other groups were addressing these non-industry-related emissions.

1.3.10 Taxes on CP technologies

Participants were informed that the Government had removed import duty on solar energy components. The issue of duties will be discussed further in future meetings.

1.3.11 Emission standards and baselines

It was explained at the workshop that an Air Quality Bill has been drafted. Further, emission standards have been drawn out but due to poor information dissemination, most stakeholders are not aware of them.

1.3.12 Conclusion and resolutions

At the end of the workshop the following were agreed upon:

- Phase II objectives and outputs were endorsed and the project cleared to proceed;
- The list of stakeholders was expanded and approved;
- The project will be included amongst Government plans as a national programme;
- Sustainable Development be emphasized whilst developing prospective industrial CDM projects;

1.4 Stakeholders Consultations in May and June 2001

The following activities took place during this period:

i. A guide on data/information requested from industry was distributed to selected industries;
ii. Personal visits by core group members to industries in Nairobi and its environs were made to collect requested data;
iii. Three workshops were held in Eldoret, Bungoma and Kericho, where some members of the core group met industry representatives to discuss information sought from industry, articulate barriers and capacity building needs;
iv. A national workshop on barriers and capacity building needs was held in Nairobi on the 28th June 2001.

The objectives of these consultative meetings were to:

- Identify and prioritise barrier to technology transfer removal strategies and measures;
- Identify and prioritise capacity building needs; and
- Seek data and information on industrial CDM related activities.

1.4.1 Observations from industrial visits

i. Most of the industries we visited or met in workshops could not provide specific data on energy consumption at process level, but had data on the total energy used in the entire plant. This lack of documentation on energy consumption intensities at various process-levels could prove to be a major obstacle in the initial search for industrial CDM projects
ii. Only one of the 15 industries we visited had equipment to measure gas emission. Majority of the industries in Kenya do not monitor gas emissions, a fact that could be a problem in the initial assessment of industrial CDM projects.
iii. Many of the industries, particularly those processing agricultural produce, are currently faced with economic hardships resulting from the liberalization of the Kenyan market and removal of price controls. As a result, they tended to discuss issues that were not directly related to CDM. A good share of the time in these meetings was spent discussing the current problems facing industry and the possibility of CDM addressing them.
iv. We found that a lot of time and effort is needed to explain to industry the role of GHG emission on climate change and their role in it. It was only after lengthy discussions in the workshops or meetings that industry "opened up" and sought more information on CDM. The individual meetings and small group meetings were particularly effective. Even

industries that were represented at the inception workshops and received information on CDM still had many questions on their potential benefits from CDM.

v. The key barrier to industrial CDM projects, as seen by industry, is the high cost of production in Kenya, resulting from poor transport and communication networks, high cost and unreliable electricity supply and high interest rates charged by banks. Also not to forget high taxation.

vi. Industry cited ability to measure and monitor green house gasses emission as a priority capacity building need.

We found the visits very useful, however, due to limited time, only few industries were visited.

1.5 Dialogue with Stakeholders on strategy

In the month of July 2001, consultations with stakeholders were continued. A meeting was held to develop and prioritize strategies for barrier removal. The two-day meeting was held in the offices of 4up industrial services and was attended by members from public, industry, NGOs, academia and industry associations.

Unfortunately, the meeting took place at the same time as the Cop 6-II in Bonn. We missed a number of our core group members from Government who were attending the meeting in Bonn.

1.6 Stakeholders Workshop on Programme Development

A stakeholders workshop was held at Milimani Hotel on 13 September 2001. The meeting started at 9.00a.m with a brief introduction of the participants present. It was then followed by a review of Barriers, Capacity Building Needs and Strategies for Barrier Removal by the National Project co-ordinator, Dr. H. L. Kaane. The presentation was followed by a brief plenary discussion.

The participants were divided into 3 groups, which reviewed barriers and strategies for their removal. Each group developed a programme for barrier removal in their respective themes. The conclusions of each group were presented during the plenary discussion.

2 BARRIERS TO TECHNOLOGY TRANSFER

2.1 INTRODUCTION

Barriers to transfer of technology and Direct Foreign Investment are categorised into the following four groups:

- Lack of awareness, information and poor participation by private sector in climate change activities;
- Lack of capacity to formulate and implement industrial CDM projects;
- High cost of doing business in Kenya; and
- Lack of enabling environment for potential investors in industrial CDM projects

The cost of realizing emission-reduction was found to be key in attracting CDM projects. Some of the barriers impact directly on the cost of implementing industrial CDM projects, while others increase this cost indirectly. Barriers that do not influence the cost of emission-reduction but tend to scare off investors were also identified and are given as contributing to disabling environment.

Identification and prioritisation of capacity building needs were influenced by the adopted goal of developing a long-term strategy and national programme that would maximise the potential benefits of CDM to the Kenyan industrial sector, including power generation and mining.

Barriers to technology transfer and capacity building needs were identified in consultation with stakeholders through industrial visits, questionnaires, group meetings and workshops.

2.2 LACK OF AWARENESS AND INVOLVEMENT OF KEY STAKEHOLDERS

The following barriers were identified under this group:

i. Lack of awareness on the potential benefits of CDM to industry;
ii. The failure of the Kenyan Government to promptly ratify the Kyoto Protocol;
iii. Lack of, or little, data on potential investment opportunities in the country;
iv. Lack of inventories on emissions, necessary to determine and set baselines;
v. Lack of a specific agency or clearing house to co-ordinate data collection, storage and dissemination;
vi. The convention and its protocols have not been fully integrated into national laws;
vii. Inability to effectively participate in UNFCCC meetings at national, regional and international levels; and
viii. Lack of policies and measures that recognise and reward users of clean production technologies e.g. through presidential awards

2.3 LACK OF CAPACITY TO FORMULATE AND IMPLEMENT INDUSTRIAL CDM PROJECTS

The following capacity barriers were identified:

i. Lack of capacity to gather and disseminate climate change related information, formulate and enforce laws and identify opportunities to industry and the public at large;
ii. Lack of capacity for effective participation and representation of the Kenyan industrial sector in UNFCCC meetings;
iii. Lack of capacity to develop and/or acquire and use computer tools for financial, economical and environmental analysis of CDM potential projects so as to identify, design and formulate bankable CDM projects;
iv. Lack of capacity to acquire equipment and instruments and ability to measure, monitor, document, evaluate and certify CDM projects;
v. Lack of capacity to develop and set baselines;
vi. Lack of capacity to identify, negotiate, acquire, absorb and widely use clean production technology;
vii. Lack of capacity to negotiate off-shore financing of potential CDM projects and Direct Foreign Investment;

2.4 BARRIERS WHICH MAY INCREASE THE COST OF DOING CDM BUSINESS IN KENYA

High cost of production, occasioned by poor infrastructure, is a major barrier to investment in industrial CDM projects. This group of barriers was identified as a major obstacle to current investors and responsible for poor performance of industry. It was observed that investment in industrial CDM projects may not be possible unless the current poor performance of industry is addressed, since new investments are not likely to take place in a declining industrial sector. Specifically, the following infrastructures were singled as potential barriers to CDM projects.

i. High interest rates and bank transaction costs;
ii. High cost and unreliable supply of electricity;
iii. Poor road and rail networks;
iv. Poor and expensive communication network;
v. Unreliable and inadequate intranet and internet services;
vi. Expensive specialised skilled manpower to operate and maintain state-of-the-art technologies;
vii. Unreliable supply of water in most municipalities;
viii. Disabling taxation regime on raw materials and imports, high VAT and cascaded taxation;
ix. Bureaucratic licensing procedures;
x. Bureaucratic clearance of imports;
xi. Weak or lack of innovation-support systems and structures; and
xii. Weak and ineffective industry support institutions.

2.5 BARRIERS WHICH MAY DISCOURAGE POTENTIAL INVESTORS IN INDUSTRIAL CDM PROJECTS

The following issues were identified as barriers to the creation of an enabling business environment:

i. Wide spread insecurity;
ii. Long delays in judicial processes;

iii. Poor governance and rampant corruption;
iv. Poor relations with World Bank, International Monetary Fund and some development partners;
v. Economic instability; and
vi. Political instability and interference.

3 STRATEGIES FOR BARRIER REMOVAL

This chapter presents strategies and measures, identified during consultations with stakeholders that could, if implemented, go a long way to remove barriers, build capacity and enable industrial projects under CDM.

3.1 GENERAL STRATEGIES

3.1.1 Learn-by-doing approach

Where capacity building has been proposed, it will be done on a learn-by-doing strategy. Several pilot CDM projects shall be identified, formulated and packaged for marketing to Annex I parties. These projects shall then be used for training and building capacity where specified.

3.1.2 Target root-cause of barrier not symptom

Maximum benefits from investments into barrier removal and capacity building shall be sought. An approach that seeks to trigger a self-sustaining process to barrier removal and capacity building will be adopted. All stakeholders will be sensitised to appreciate the necessity of continuous capacity building as a measure to sustainable competitive advantage and productivity.

Appropriate public and/or private sector agencies responsible for barrier removal have been identified; these agencies shall, in collaboration, with stakeholders remove the barriers. Dialogue and consultations shall form the basis for barrier removal. Where necessary, support research and/or capacity building to facilitate barrier removal shall be provided.

3.1.3 Make capacity building and barrier removal demand-driven

Prospective industrial CDM projects will be identified and the most likely beneficiaries targeted for capacity building. In addition, industry will be sensitised to understand that benefits accruing from CDM projects will improve their market share through improved quality of products and reduced production costs besides reducing green house gasses.

3.1.4 Improve public-private sector dialogue

Industrial investors and policy agencies will be sensitised to harmonise their visions and seek synergy in their work. The Government's immediate concern of long-term increased productivity and sustainable development may not always be in harmony with industry's immediate objective of survival in the market and higher returns on investments.

3.1.5 Lobbying for policy changes

New policy instruments (laws and regulations) will be necessary as detailed in the following sections. Where this is called for, lobbying and sensitisation of the relevant Government organs shall be undertaken and as appropriate provision for technical assistance, consultancy and capacity building may be necessary in some of these organs to enable them appreciate the need for urgent action and make required changes.

3.1.6 Facilitation of barrier removal

Some of the policy, legal and regulatory barriers will not qualify for Africa, Industry & CDM interventions (phase III of current project). Such barriers will be removed through financial and technical support from the Government, Kenya Association of Manufacturers, Federation of Kenyan Employers and National Chamber of Commerce and Industry.

3.2 BARRIER-SPECIFIC STRATEGIES

3.2.1 Institutional harmonisation and rationalisation

Many public and private sector institutions facilitate, regulate, control or provide support services to industry. There is need to build capacity in these institutions to enable them understand their roles better and improve efficiency in service delivery.

A forum for stakeholders "Kenyan Forum for Sustainable Industrial Development, KFSID" will be established to co-ordinate Climate Change activities including CDM, Cleaner Production and Energy Efficiency programmes.

A "National Committee on Industry and Climate Change (NCICC)" will be constituted to include UNFCCC focal point; Ministries responsible for environment, natural resources, energy, industry, planning, budget preparation and legislation; Research and technological organisations, Kenya Association of Manufacturers, NGOs and representatives from key energy-intensive industries. This committee shall oversee all activities relating to Industry and Climate Change including CDM. Representatives of this committee will be facilitated to attend UNFCCC meetings.

The NCICC shall be constituted through the merger of the current Core Group on Industry & CDM with the UNFCCC focal point committee dealing with CDM and increase representation from industry; empower the strengthened group to co-ordinate barrier removal and capacity building.

3.2.1 Information dissemination and involvement of all stakeholders

Strategies identified in this category include:

i. Strengthen and increase national representation in Industry & Climate Change related meetings, conferences, workshops, etc. at national, regional and international levels. A sub-committee of the National Committee on Industry and Climate Change (NCICC) shall be formed to undertake this task. Members of this sub-committee shall be trained and facilitated to attend UNFCCC meetings;
ii. Timely incorporation of UNFCCC protocols and mechanisms into national laws;
iii. Timely delivery of National Communications to UNFCCC secretariat;
iv. Wide spread dissemination of information to all stakeholders using both print and electronic media;
v. Build information networks amongst stakeholders;
vi. Embrace dialogue and involve key stakeholders in decision making;

vii. Strengthen public-private sector dialogue; and
viii. Strengthen academia-industry links.

3.2.3 Capacity building strategies

Lack of capacity to implement industrial projects under CDM has been identified as a major barrier. The removal of these barriers was given top priority and will require substantial financial and technical support from donors.

Capacity building will involve individuals and institutions identified to perform tasks in implementing industrial CDM projects. It will take place in Kenya and/or in other countries and will involve training in industry and in formal Education & Training institutions. Training programmes will be developed in line with the specified tasks and required equipment, tools and instruments.

3.2.4 Formulation and implementation of enabling policies, legal and regulatory instruments

Sensitisation and lobbying of the relevant Government/public agency mandated to co-ordinate formulation of and/or enforcement of legal and regulatory policy instruments will be given priority. Sensitisation process will involve workshops, seminars and research to support modification to existing policy instruments and/or formulation and implementation of new instruments to remove the identified barriers. The Kenya Association of Manufacturers, Federation of Kenya Employers and the National Chamber of Industry and Commerce will play key roles in the removal of policy and regulatory barriers.

3.2.5. Financial barriers

Commercial and development banks will be sensitised and lobbied to appreciate the role of low interest rates and transaction charges as a catalyst to industrial development and to expose them to other means of meeting their operational costs.

3.2.6 Participation in UNFCCC meetings

Members of the NCICC shall be facilitated to attend UNFCCC meetings.

3.2.7 Technology transfer

Necessary amendments shall be made on existing industry and technology laws and policies to remove barriers to technology transfer.

3.3 STRATEGY FOR REMOVAL OF CAPACITY BARRIERS

This section presents strategies and measures identified during consultations with stakeholders that could, if implemented, go a long way to build capacity and enable projects under CDM.

These measures and interventions include:

1. Technical assistance for formulation and implementation of policy, legal and regulatory barrier removal measures;
2. Training and skills upgrading;
3. Provision of tools and instruments;
4. Information dissemination and networking;
5. Facilitation of research and surveys; and
6. Technical assistance for rationalisation and harmonisation of some institutions.

3.3.1 Strategies for Capacity Building to enable formulation and implementation of CDM projects

Selected persons from private sector shall be trained and equipped to perform this task.

3.3.2 Strategies for Capacity Building to reduce cost of doing CDM business

Provide technical assistance for policy review and implementation in the physical infrastructure and fiscal and monetary sectors.

3.3.3 Strategies for Capacity Building needs that create an enabling business

Technical assistance will be provided to selected institutions for policy review and enforcement capacity building.

4 PROGRAMME FOR BARRIER REMOVAL

The programme for barrier removal is divided into six components:

(a) Information Exchange and Networking;
(b) Capacity Building
(c) Policy, Laws and Regulations
(d) Pilot and Demonstration Plants
(e) CDM Projects Portfolio
(f) Sustainable Industrial Development Support Fund

The objectives, outputs and activities of each of these components are given in this section. A summary of the programme in matrix form is given in the annexes.

4.1 COMPONENT I: INFORMATION EXCHANGE AND NETWORKING

4.1.1 Objectives

The objective of this component is to develop and implement mechanisms for stakeholder awareness creation, information exchange, networking and participation in CDM activities.

4.1.2 Outputs

The following outputs will be necessary towards achieving the above objective:

(a) Kenyan Forum for Sustainable Industrial Development (KFSID) established;
(b) National Committee on Industry and Climate Change (NCICC) established;
(c) NCICC secretariat for information gathering and dissemination established;
(d) Inventory of greenhouse gases emissions established;
(e) Database on low greenhouse gasses emission technologies established;
(f) Website on Industry, Climate Change and CDM established;
(g) Newsletter on Industry, Climate Change and CDM established;
(h) Almanac for national, regional and international CDM related activities established.

4.1.3 Activities

The following activities will be undertaken to achieve the above outputs:

(i) 4up ISL and Core group members will organize and hold a workshop for key stakeholders to:
- Receive and endorse the proposed Integrated Programme for capacity building and barrier removal in selected African countries;
- Constitute the "Kenyan Forum for Sustainable Industrial Development (KFSID)
- Constitute the "National Committee on Industry and Climate Change (NCICC)" and its secretariat

(ii) The NCICC will undertake the following:
- Establish a website;
- Develop and publish regular news bulletin;
- Compile and disseminate calendar of CDM activities; and
- Establish and maintain database on low greenhouse gas emission technologies.

4.2 COMPONENT II: CAPACITY BUILDING

4.2.1 Objectives

The objectives of this component are to develop capacity for formulation, marketing, implementation, monitoring and certification of industrial CDM projects

4.2.2 Outputs

The following outputs have been set towards the achievement of the above objectives:

(a) Core group of 50 Economists trained in development and marketing of industrial CDM projects;
(b) Core group of 50 Engineers trained in identification and acquisition of CDM technologies;
(c) Core group of 50 Lawyers trained in contracting of CDM projects;
(d) Core group of 50 Engineers trained in monitoring and certification of greenhouse gas emissions;
(e) Core group of 50 Industrialists trained in negotiation of Direct Foreign Investment;
(f) Trained personnel facilitated to acquire tools and instruments for practicing of the acquired knowledge; and
(g) Selected institutions facilitated to acquire information processing and modern communication equipment access to Internet.

4.2.3 Activities

(a) The expertise listed above under outputs will be developed through formal training, exchange programs and through learn-by-doing approach in the implementation of pilot CDM projects; and
(ii) Selected experts and institutions will be facilitated to acquire tools and instruments for greenhouse gas monitoring and regulation.

4.3 COMPONENT III: POLICIES, LAWS AND REGULATIONS

4.3.1 Objectives

The objectives of this component are to develop, implement and enforce policy, legal and regulatory instruments to create an enabling and competitive environment for implementing industrial CDM projects.

4.3.2 Outputs

The following policy instruments will be created with inputs from consultants and involvement of key stakeholders:

(a) UNFCCC protocols and mechanisms incorporated in national laws and ratified;
(b) Import duties and taxes on imported CDM technologies removed;
(c) Investment approvals and procedures simplified and licence fees reduced;
(d) Fiscal and monetary incentives for CDM investors developed and; implemented;
(e) Key agro-based industries privatized;
(f) Physical infrastructure development opened to private investors;
(g) Subsidies on fossil fuels based technologies removed;
(h) Public funds allocated to development of innovation systems, structures and institutions increased;
(i) Venture capital to support innovation created;
(j) Bank interest rates reduced;
(k) Macro-economic stability achieved;
(l) Political stability and good governance achieved; and
(m) Time taken to settle commercial disputes reduced.

4.3.3 Activities

Appoint a consultant or firm of consultants to undertake surveys and seek consensus of key stakeholders through workshops and seminars to:

- Review existing policy instruments and identify existing policy gaps;
- Identify why existing policy instruments are not achieving the anticipated results;
- Develop new policy instruments to fill in the policy gaps;
- Develop and implement mechanisms to ensure implementation of existing policy and new policy instruments in all the outputs given above.

4.4 COMPONENT IV: CDM PILOT AND DEMONSTRATION PROJECTS

4.4.1 Objectives

The objectives of this component are to implement pilot and demonstration industrial CDM projects to support capacity building, gain experience and demonstrate the efficacy of CDM projects.

4.4.2 Outputs

At least one (1) pilot industrial CDM project implemented.

4.4.3 Activities

The following activities will be undertaken:

(i) Finalize technical, legal and administrative issues with hosts of pilot CDM projects;
(ii) Acquire technology for pilot projects; and
(iii) Monitor and certify performance of pilot projects.

4.5 COMPONENT V: CDM PROJECTS PORTFOLIO

4.5.1 OBJECTIVE

The objective of this component is to develop, formulate and market industrial CDM projects.

4.5.2 Outputs

A portfolio of bankable industrial CDM projects.

4.5.3 Activities

The following activities will be undertaken:

(i) Identify consultants to carry out a national survey of investment opportunities,
(ii) Undertake a financial, economic and environment analysis of potential CDM projects; and
(iii) Establish a database of potential CDM projects at national and regional level.

4.6 COMPONENT VI: SUSTAINABLE INDUSTRIAL DEVELOPMENT SUPPORT FUND

4.6.1 Objectives

The objective of this component is to set up and manage a fund to support private sector acquire tools and instruments for monitoring and regulation of green house gases at soft lending terms.

4.6.2 Outputs

At least 300 industries and service providers will acquire greenhouse gas monitoring and regulation equipment.

4.6.3 Activities

(i) To solicit for funds from development partners;
(ii) Formulate legal and administrative instruments to govern the fund;
(iii) Set up the component implementation unit;
(iv) Issue funds to beneficiaries; and
(v) Monitor performance and funds repayment.

5. CDM PROJECTS PORTFOLIO

5.1 Replacement of Standard Transformers with Low-Loss Transformers and Standard Motors with High Efficiency Motors, Multiple Industries/sub-sectors, Kenya

5.1.1 Project Background

The electricity sector in Kenya is currently being restructured to strengthen the role of Independent Power Producers (IPPs) and distributors. Currently, the Kenya Generating Company (KENGEN) is responsible for generating the bulk of power used in the country. A few IPPs supply approximately 13% of total generation to the grid, and more are expected to join in soon. So far, all of the IPPs use oil-fired plants. The KENGEN plants are predominantly Hydro (74%) with some supply from Geothermal (11%) and oil-fired (2%) plants.

Kenya has experienced erratic weather patterns over the last ten years. Little or no rainfall has been received in the catchment areas feeding into the hydro-plant dams. As a result, hydro plants have become less attractive, and preference is given to oil-fired plants. The drought experienced in 1999/2000 led to wide spread electricity rationing, affecting all domestic, commercial and industrial consumers. This led to the installation of oil-fired Emergency Power Plants and diesel generators in practically every enterprise and in many homes. With the improved rains, these diesel plants are now being used as stand-by generators.

The power shortage, however, brought with it some positive effects as well. Awareness of energy saving measures and benefits has risen sharply among most consumers over the last two years. Most consumers are now aware of the fact that saving energy reduces would be investment in generation plants and also saves the consumer money. This project is therefore formulated as part of the on-going campaign to reduce losses and save energy.

5.1.2 Project Description

Implementing the proposed project is intended to:

(a) Reduce power and energy losses in distribution transformers;
(b) Reduce losses in industrial motors;
(c) Reduce electricity generated from diesel-fired power plants; and
(d) Reduce greenhouse gases emitted from oil- and diesel-fired power plants.

The project will be undertaken in two phases. Phase one will involve constructing a plant in Kenya (or the COMESA region) to manufacture low loss transformers and motors. The second phase will involve replacing standard motors with high efficiency motors and replacing standard transformers with low-loss transformers. A total of over 3,000 MVA in distribution transformers will be required initially for Kenya alone and thereafter some 150 MVA in distribution transformers every year.

The energy saved through the use of efficient motors and transformers will result in lower energy generated by oil-fired plants, leading to reduced GHG emission from these plants.

Although this analysis has been made for Kenya alone, this project makes a lot more sense when undertaken in all of the East African Community countries. Legal and regulatory infrastructure is now in place for such plants to be established within the community. The only plant supplying distribution transformers to the three countries is located in Tanzania. There is no motor manufacturing plant in the sub-region. The project would become even more feasible if implemented in the COMESA region.

The projected has focused on distribution transformers but could in future be extended to power transformers.

5.1.3 Contribution to Sustainable Industrial Development

This project would bring major environmental and socio-economic benefits to Kenya. The Government of Kenya has among its key objectives poverty eradication, jobs creation, wealth creation, environmental conservation and efficient use of resources including energy. Benefits accruing from this project would go along way toward achieving these national goals. In particular,

- Reduced use of oil-fired generating plants would result in reduced GHG emissions. This is a major contribution to mitigating climate change;
- Reduced demand for imported oil would ease the demand for foreign exchange to pay for imported fuel. The freed resources could be invested elsewhere;
- Reduced energy losses in industry would result in direct cost savings and hence increased profits and opportunities for employment;
- Lower losses to the power distributors would lead to lower electricity prices and benefit all consumers;
- Lower prices at the domestic level would result in a shift from paraffin and gas to electricity leading further reduction in GHG emissions;
- Involvement of local staff in the design and implementation of the project would contribute to capacity building for the country;
- If implemented, the project would serve as an example to investors and policy makers and help raise awareness on the need for reduced GHG emissions and mitigation of climate change;
- The project would transfer technology to Kenya from a participating Annex 1 country;
- Although no EIA has been carried out, it is clear that the proposed project has no negative impact on the environment. On the contrary, the implementation of energy saving measures could delay or prevent construction of power plants that posses inherent negative effects on the environment. If necessary, an EIA will be carried by the project validator once one is identified.

5.1.4 Greenhouse-gas Emissions Abatement

5.1.4.1 Project Baseline

This project assumes that the Government of Kenya will implement its generation plan as outlined in the Least Cost Generation Plan (LCGP). Oil-fired plants feature prominently in this plan for meeting intermediate and peak loads. The continued use of standard transformers and class 3 motors is taken as the baseline for the business-as-usual scenario. The LCGP was developed by international consultants who also did a comprehensive load forecast for Kenya. We have not considered other scenarios, as the chosen one is the most probable and least risky version.

5.1.4.2 Emission Reduction Projections

The plan given in this document assumes that the project can be developed and the plant commissioned in the next three years. The crediting period can therefore start in 2006 and last for twenty-one years, until the year 2026.

The mitigation measures under this project are expected to yield annual CO_2 emission reductions estimated at 180 tonnes in the first year, increasing by 5% per year for the credit period of 21 years. The total cumulative avoided emissions would be 6.4 ktonnes CO_2. The project would also reduce SO_2, N_2O and CH_4 emissions. These have not yet been quantified.

5.1.5 Project Summary

The following Table presents a summary of key project data.

Project location	All distribution transformers in Kenya and motors in industry will be replaced. The proposed plant for the manufacture of transformers and motors may be located in any of the East African Community or COMESA countries.
Proposed mitigation measures	**CO_2 abatement: Fuel switching and energy conservation**: The project entails the following: (a) Replacement of all distribution transformers with low-loss transformers; (b) Replacement of all motors in industry with high efficiency motors; (c) Construction and operation of a plant for the manufacture of low-loss transformers and high efficiency motors.
Project baseline	**Business as usual scenario**: the continued use of standard transformers and motors with the associated losses. These losses will contribute to increased use of oil-fired generating plants. The Government of Kenya has developed the "Least Cost Generation Plan" to year 2017. This project takes this plan as a baseline for future power generation mix. Oil- and diesel-fired plants feature prominently in this plan.
Crediting period	**Twenty-one years**: The project seeks Certified Emission Reductions (CERs) for three 7-year "renewal" periods depending on baseline development. Crediting will commence in 2006.
Estimated CO_2 reduction	Anticipated Annual Emission reductions (ERs) Order of magnitude estimate: The annual reduction in CO_2 emissions is estimated at 180 tonnes, increasing at 5% annually for duration of the credit period. Cumulative avoided emissions: 6.4 ktonnes CO_2 over 21 years.
Sources of ERs	Ceq. ERs will be achieved through reduced losses in transformers and motors, leading to reduced demand on electricity generation plants. Oil- and diesel plants will be given priority in reduced generation, hence reducing emission from these plants.
Sustainable development impact	This project will contribute to the national goals of poverty reduction, job and wealth creation, efficient use of resources and a better environment in the following ways: (a) Increased energy efficiency in transformers and motors hence reduced energy losses; (b) Lower charges of electricity as the cost of losses will not be transferred to consumers; (c) Reduced demand on imported oils and savings in foreign exchange; (d) Funds saved from reduced demand for fuel will be used to develop other sectors.
Project financing	The following will finance the project: (a) Private local and international investors (Company); (b) International private lenders e.g. IFC (equity participation) (c) ODA support
Anticipated sources of revenue	The Project will generate its revenues through the following: (a) Savings resulting from saved energy; (b) Sale of transformers and motors; and (c) Sale of CERUs (CO_2 ERs).
Host country approval	The Stakeholders including the Ministries of Energy, Industry and Environment (represented by the National UNFCCC focal point) have endorsed the project.

5.2 Boilers and Kilns, Multiple Industries/sub-sectors, Kenya

5.2.1 Project Description

The project involves replacing low-efficiency boilers and kilns with high-efficiency boilers and kilns in multiple industries in Kenya. The proposed project entails the following:

- Constructing a plant for the manufacturing boilers, kilns and associated equipment;
- Replacing low-efficiency boilers and kilns in industry; and
- Implementing measures for regular tuning of boilers.

The project is intended to achieve the following objectives:
- Reduce energy losses in boilers and kilns;
- Reduce fuels used in boilers and kilns; and
- Reduce greenhouse-gas emissions from boilers and kilns.

5.2.2 Project Summary

The following Table presents a summary of key project data.

Proposed mitigation measures	**CO_2 abatement: Increased energy efficiency**: The proposed project entails the following: • Constructing a plant for the manufacturing boilers, kilns and associated equipment; • Replacing low-efficiency boilers and kilns in industry; and • Implementing measures for regular tuning of boilers.
Project location	Most boilers and kilns in Kenya will be replaced. This project may be extended to the East African Community and COMESA.
Project baseline	**Business as usual scenario**: Continued use of low-efficiency boilers and kilns in industry.
Crediting period	**Twenty-one years**: The project seeks Certified Emission Reductions (CERs) for three 7-year "renewal" periods depending on baseline development. The project is estimated to commence in 2003 and continue through 2024.
Estimated CO_2 reduction	Anticipated Annual Emission reductions (ERs) Order of magnitude estimate: Annual avoided CO_2 emissions are estimated at 70 ktonnes in the first year, increasing at 5% per year for the duration of the credit period. Total cumulative avoided CO_2 emissions are estimated at 2.5 megatonnes over 21 years.
Sources of ERs	CERs will be achieved through the increased efficiency of boilers and kilns, which will lead to reduced fuel consumption and subsequent emissions reductions.
Sustainable development impact	This project will contribute to the national goals of poverty reduction, job and wealth creation, efficient use of resources and a better environment in the following ways: • Increased energy efficiency in boilers and kilns; • Reduced demand on imported oils and savings in foreign exchange; • Funds saved from reduced demand for fuel will be used to develop other sectors; and • Increased profits in industry will lead to better job opportunities.

Project financing	The following will finance the project: • Industrial enterprises; • International private lenders e.g. IFC (equity participation); and • ODA support.
Anticipated sources of revenue	• Savings resulting from saved energy; • Sale of boilers, kilns and spare parts; • Sale of CO_2 emission reductions (ERs).
Host country approval	The Stakeholders including the Ministries of Energy, Industry and Environment (represented by the National UNFCCC focal point) have endorsed the project.

5.3 Run-of-river hydroelectricity production, Webuye Falls, Kenya

5.3.1 Project Description

The proposed project involves the construction of a run-of-river hydroelectric power plant at Webuye Falls in Kenya. The project is intended to achieve the following objectives:

(a) Supply cheaper and cleaner electricity to the grid;
(b) Avoid greenhouse gas emissions from oil- and diesel-fired power plants;
(c) Contribute to the country's sustainable development goals.

5.3.2 Project Baseline

The project site is located 3 kilometers from the national grid. The project is assumed to avoid either grid-based electricity or the construction of off-grid diesel-fired generator sets to supply electricity to the area.

5.3.3 Project Summary

The following Table presents a summary of key project data.

Proposed mitigation measures	**CO_2 abatement: Renewable electricity supply**: The project involves the construction of a run-of-river hydroelectric power plant in lieu of diesel-fired electricity generation.
Project location	The project will be located on Webuye falls on River Nzioa in Western Kenya approximately 400 KM from Nairobi.
Project baseline	**Business as usual scenario**: The Government of Kenya has developed the "Least Cost Generation Plan" to year 2017. This project takes this plan as a baseline for the future power generation mix. Oil and diesel-fired plants future prominently in this plan. Mini-hydro plants have not been included in the plan as they deemed to be not economical for commercial operation due to the small power generated.
Crediting period	**Twenty-one years**: The project seeks Certified Emission Reductions (CERs) for three 7-year "renewal" periods depending on baseline development. The project is estimated to commence in 2005 and give a crediting period of 21 years up to 2026.
Estimated CO_2 reduction	Anticipated Annual Emission reductions (ERs) Order of magnitude estimate: The annual reduction in CO_2 is estimated at 135 tonnes, increasing by 5% per year for the duration of the credit period. Cumulative emissions reductions are estimated to total nearly 5 ktonnes CO_2 over 21 years.
Sources of ERs	Ceq. ERs will be achieved through avoided demand for oil-fired electricity generation.
Sustainable development impact	This project will contribute to the national goals of poverty reduction, job and wealth creation, efficient use of resources and a better environment in the following ways: • Lower charges for electricity; • Reduced demand on imported oils and savings in foreign exchange; • Funds saved from reduced demand for fuel will be used to develop other sectors; • More jobs created; • Technology transfer to Kenya; • Capacity building; and • Model plant to spur further development of mini-hydro.
Project financing	The project will be financed through: • Private local and international investors (Company); • International private lenders e.g. IFC (equity participation) • ODA support
Anticipated sources of revenue	The project will generate revenue through the following: • Electricity sales; • Sale of CO_2 emission reductions (ERs).
Host country approval	The Stakeholders including the Ministries of Energy, Industry and Environment (represented by the National UNFCCC focal point) have endorsed the project.

ANNEX 2: INCEPTION WORKSHOPS HELD ON MARCH 1-2, 2001

A2.1 Core Group Meeting held on the 1st March 2001

On March 1, 2001, the core group members held a meeting with the Project Manager (PM), Peter Pembleton and the project Chief Technical Advisor (CTA), Pim Kieskamp. The meeting was split into two parts: A half-day workshop was held between 9:00 AM and 1:00 PM at the Milimani Hotel and consultations with individual core group members were made between 2:00 to 4:00 PM at the offices of 4up ISL.

Workshop proceedings

(a) Self-introduction of participants
(b) Presentation by Project Manager
- Background to project and previous studies;
- Preparatory assistance for phase II;
- Activities for Phase II.

(c) Presentation by Chief Technical Advisor
- Capacity building proposal

(d) Presentation by Team Leader
- Activities of the core group

(e) Discussion by participants

Key issues emerging from the Core Group Meeting

Information on Industry and CDM

Information exchange amongst the core group, stakeholders and other participants from outside Kenya was discussed at length. It was agreed that Dr. James Kulubi, the information expert, explores the possibilities of 4up ISL hosting a "copy" of the project WebBoard. It was further agreed that he will continue to update the project WebBoard before we are able to host our own Web locally.

Involving all stakeholders from the beginning

The mix of the selected core group members was discussed. It was emphasised that both public and private sector be represented on core group. A cordial relationship between those working in Government and private firms is to be encouraged. Further it was agreed that assistant team leader and assistant national experts be identified for proper and timely response to issues relating to this project.

Funding for Phase II

It was pointed out that the funds made available by UNIDO were to be used as seed money. Members of the core group are expected to contribute to the project at this preparatory stage since this is an investment into the future. National experts will be paid at local rates for services they render to this project.

Legal and regulatory

Mrs. Grace Nzioka, the legal expert, pointed out some of the legal barriers to technology transfer including:

- Incorporation of CDM into the national legal system;
- Procedures for clearing prospective foreign investors;
- The need to strengthen the Investment Promotion Centre;
- Inadequate regulatory framework for technology transfer;
- Intellectual property rights;

It was agreed that she raises these issues during stakeholder meetings where the Kenya Intellectual Property Office, KIPO, the Attorney Generals Chamber and University of Nairobi (Faculty of Law) will be invited.

Energy

Mr. Aduda, the energy expert will prepare data on renewable energy technologies including co-generation, solar energy and mini-hydros for inclusion as possible CDM projects. He will also look into energy efficiency projects at factory level.

A2.2 Stakeholders' Meeting held on March 2, 2000

The meeting was organised in two sessions. A workshop of key stakeholders took place in the morning and individual discussions took place in the afternoon.

Peter Orao, on behalf of Professor Rueben Olembo, the Chairman of the National Environment Management and Co-ordination Agency (NEMCA) made opening remarks at the workshop. Peter Pembleton, the Project Manager (PM) and Pim Kieskamp, the Chief Technical Advisor (CTA) made presentations. The PM gave an overview of the project including background studies and the preparatory assistance. The CTA presented the project framework on the current and planned capacity building activities. The TL presented the national activities since phase I, planned activities for phase II and emphasised the roles of the core group and stakeholders.

Key issues emerging from Stakeholders' Meeting

After the main presentations, discussions took place where questions were raised and clarifications sought. The following are some of the issues discussed and agreed upon.

Information on Industry and CDM activities

Ways and means of improving information exchange were discussed. It was agreed that stakeholders make use of the existing project WebBoard. Those who wish to do so should contact 4up ISL for assistance. The core group will continue to update the Kenyan pages and look into the possibility of hosting the WebBoard locally.

On-line conferencing

The Project Manager has set up this feature. Those stakeholders who wish to participate should get in touch with 4up ISL for further assistance.

Publicity of the newly enacted Environment Act

It was pointed out that most stakeholders in industry were not familiar with the newly enacted Environment Act. Representatives from the National Environmental Secretariat were requested to look into this issue and disseminate the highlights of the new Act as widely as possible.

Learning by doing

The proposed Integrated Project will adopt the strategy of "Learning by Doing". Stakeholders were therefore encouraged to participate fully in this preparatory phase as they stand to benefit at the implementation phase.

Project ownership

It was emphasised that all stakeholders should be involved in the programme formulation, as this was a Kenyan issue. UNIDO was simply facilitating the formulation of the programme. The role of 4up ISL is to co-ordinate local activities. Both industry (private sector) and Government agencies should join hands to put up a Kenyan programme acceptable to all parties.

Possibility of CDM not being ratified

The possibility of CDM not be ratified was raised. It was pointed out, however, that the capacity to be developed would still be necessary for other investment opportunities other than CDM.

Publicity for CDM

Some representatives from industry expressed concern that they knew very little about CDM. It was therefore agreed that NES and 4up ISL distribute information on Industry and CDM.

Role of NEMCA and NES in Kenya

The Government representative explained to the participants that the National Environment Management and Co-ordination Agency (NEMCA) is under formation and will eventually take over the management and co-ordination of all environmental issues currently being undertaken by the National Environment Secretariat (NES). These changes are part of the new Act.

Inclusion of non-industry GHG emission sources

It was pointed out that this UNIDO facilitated project is restricted to Industry and CDM. As such inclusion of other sources of GHG in this project e.g. automotive emissions was not possible. In any case other groups were addressing these non-industry-related emissions.

Taxes on CP technologies

Participants were informed that the Government had removed import duty all solar energy components. The issue of duties will be discussed further in future meetings.

Emission standards; baselines, standards

It was explained at the workshop that an Air Quality Bill has been drafted. Further, emission standards have been drawn out but due to poor dissemination, most stakeholders are not aware of them.

Conclusion and resolutions

At the end of the workshop the following were agreed upon:

- Phase II objectives and outputs were endorsed and the project cleared to proceed;
- The list of stakeholders was expanded and approved;
- The project will be included amongst Government plans as a national programme;
- Sustainable Development be emphasised whilst developing prospective CDM projects;

ANNEX 3: PROCEEDINGS OF THE WORKSHOPS ON BARRIERS AND CAPACITY NEEDS IDENTIFICATION

ANNEX 3A: PROCEEDINGS OF THE WORKSHOPS HELD AT ELDORET, BUNGOMA AND KERICHO

ELDORET WORKSHOP
ON JUNE 22, 2001 AT WAGON HOTEL

BUNGOMA WORKSHOP
ON JUNE 23, 2001 AT BUNGOMA COUNTRY SIDE HOTEL

KERICHO WORKSHOP
ON JUNE 26, 2001 AT MID-WEST HOTEL

Workshop objectives

The objectives of the workshop were:

1.1. To raise awareness on the on-going activities on preparation of national programme for capacity building to implement industrial CDM projects;
1.2. Identify barriers to technology transfer; and
1.3. Identify and prioritize capacity building needs.

Key Issues raised in the Plenary Discussions

The following key issues were raised:

⇒ The participants noted the poor performance of the economy and expressed fear that this might pose an obstacle to industry's participation in CDM activities;
⇒ Wide spread poverty had reduced the purchasing power of most Kenyans leading to reduced domestic markets particularly in the textile sub-sector hence CDM must address poverty eradication;
⇒ More efforts are needed to inform industry on the advantages of CDM projects;
⇒ A good number of the industries are interested in alternative sources of power to replace firewood being used in their boilers;

⇒ There was concern over little exploitation of mini-hydro potential in western Kenya

Barriers to technology transfer

The following are some of the barriers identified:

⇒ Secretive operation of local industries; they do not share information freely;
⇒ Lack of Government subsidies to support industry to spur productivity and to create jobs;
⇒ Corruption and unprofessional conduct in public businesses;
⇒ General lack of commitment to work and poor time keeping;
⇒ The employees in industry are not conscious of the pollution around them;
⇒ Government controls and slow privatisation of agro-based industries are a potential threat to CDM projects in this sector;
⇒ Poor use of by-products due to lack of understanding and availability of clean production technologies e.g. making charcoal briquettes our bagasse instead of generating electricity;
⇒ Lack of equipment for monitoring of energy consumption and gasses emission;
⇒ Lack of data on emission from similar industries in other countries;
⇒ Lack of training opportunities in the management of energy and environment.

Capacity building needs

The following capacity needs were identified:

⇒ Need for a central agency to collect data on emissions and make it available to all interested parties;
⇒ Ability to share information with pear industries outside Kenya;
⇒ Ability of Government to make policies that reduce the cost of production e.g. subsidies;
⇒ Ability to reach staff in polluting industries and raise awareness on the dangers they are exposed to and the impact of their activities on climate change;
⇒ Ability of the Government to liberalise and privatise the agro-based industrial sub-sector;
⇒ Ability to access cleaner production technologies for processing industrial by-products;
⇒ Ability to monitor energy and emissions from industry;
⇒ Ability to access training through seminars, workshops, conferences. Etc.

ANNEX 3B: PROCEEDINGS OF THE WORKSHOP HELD ON 28TH JUNE 2001 AT MILIMANI HOTEL NAIROBI

Attendance

Twenty six (26) participants drawn from industry, Government, academia, NGOs, print media, and members of the core group (see attached list) attended the workshop.

Workshop objectives

The objectives of the workshop were:

1.4. To raise awareness on the on-going activities on preparation of national programme for capacity building to implement industrial CDM projects;
1.5. Identify barriers to technology transfer; and
1.6. Identify and prioritize capacity building needs.

Papers presented at the workshop

Three papers were presented at the workshop:

1. Harry L. KAANE: "An overview of the on-going activities on preparation of national programme for capacity building to implement industrial CDM projects"
2. Joe WAMBUA, Kenya Association of Manufacturers: "Barriers to the implementation of CDM projects and capacity building needs".
3. Paul Mbuthi, Ministry of Energy: "Climate change related activities at the Ministry of Energy".

Copies of the papers are annexed.

Key Issues raised in the Plenary Discussions

The concern of the participants over CDM and Industry at large were as follows:

- Identification of priorities of Kenya. It was noted that the prime concern of Kenyans is sustainable development and poverty eradication.
- Ratification of Kyoto Protocol: It was noted that the KYOTO PROTOCOL has not yet been ratified. However, the preparation for CDM should go on for the following reasons:
  - ⇒ If the Protocol is ratified, the country should already be prepared to continue with other countries.
  - ⇒ In the event that Kyoto protocol is not ratified, the preparations will still be a base for further development in the spirit of industrialization (which is independent of the Kyoto Protocol).

Discussions on the floor indicated that:

- Inventories on emissions have to be drawn to establish baseline.
- Since the small industries may not have the capacity to do the inventory, an agency (clearing house) should be formed to coordinate activities.
- Government policy should be streamlined to encourage CDM and related projects.
- There should be more vigorous campaigns to create more awareness in the industrial and the general population at large.
- Existing projects can be considered as CDM projects as long as there is proof of additionality.
- Channels for data collection from different sectors should be understood, since there is much suspicions on the data use (company secrets)
- There is need for assurance from the Government (at policy level) that it will support CDM projects. (As an example of Government policy which retard progress, Tea industry uses a lot of firewood in their boilers, yet some of their request to be allocated land to plant trees has been turned down. There is conflict on land policy.
- There is indication from the tea industry that industries are moving from burning wood in their furnaces to burning oil.
- There are computer packages on the market to help assess the operations of industry (These are COMFAR, IDENTIFY, READ, VEST). However, due to lack of information necessary for the packages to work, it is still difficult to maximize on their use. It was also noted that the packages are not user friendly. Demonstration on how COMFAR works can be done at KIRDI.

Barriers to technology transfer

The work group on Barriers identified the following:

- Lack of funds to purchase latest equipment.
- Lack of appropriate training.
- Government bureaucracy (clearing a technology is too slow, such that some technology become obsolete before they are finally cleared to the industry.
- Information flow is poor (poor access to information - no Data available)

Capacity building needs

The following are the capacity needs identified:

1. There is need to build capacity in the Legal Fraternity to be able to interpret the international treaties and advice Kenya on;
   - Drafting of CDM and related contracts
   - National issues (especially joining Kenyan National delegations in negotiations on national interest)
2. There is need to build capacities to identify and formulate bankable CDM projects.

3. There is need to create an agency/institution responsible for evaluation and monitoring of CDM projects. For this agency there is need to develop capacity in turn to be able to develop sustainable development indicators.
4. There is need to build capacity in the communication area (mass communication) This can be done through KAM, Universities, Association of media/Environmental Journalists networking, etc
5. There is need to integrate Environmental Studies (concerns) into national educational curriculum
6. There is need to build capacity in "Policy makers" (Government, industry, etc.) to be able to formulate supportive policies to CDM projects (need to give incentives to those who contributed to environmental friendly activities. The rewards can be drawn from penalties imposed on those polluting the environment).
7. There is need to build capacity in all sectors of the industry (economy) to enable development of baselines. (The same capacity will be helpful in subsequent measuring, monitoring and keeping of records).
8. For all the above needs to build institutional capacities (agency, institutions, etc).

ANNEX 4. PROCEEDINGS OF CONSULTATIVE MEETINGS ON BARRIER REMOVAL STRATEGY DEVELOPMENT HELD ON JULY 25 - 26, 2001

The meeting was held at Elgon Court Offices of 4up Industrial Services Ltd. on 25th July 2001 and 26th July 2001. The participants were as follows: -

Agenda

To develop and prioritize strategies for barrier removal

The following were discussed and agreed:

Policy Issues

1. *Participation in International Climate Change related meetings, conferences, workshops etc.*

   Quality and quantity should be based on issues that are likely to be discussed at the particular meeting. Funds required to enable best representation should have been already budgeted for in the annual national budget. Organizations like NCCACC could be used in implementing criteria set for selection of participants.

2. *Nationalisation of UNFCCC related conventions, protocols and mechanisms.*

   NES to be strengthened to have strong industrial representation to form CDM clearing house. What is cleared should straight pass to AG's chambers and parliament for incorporation into national laws. AG's chamber and parliament should be sensitised over this.

3. *Awareness raising*

   The Public/Private sector link in ministry of Trade and Industry to be used to prepare information in form of newsletters, websites etc. They should be invited to subsequent workshops for the purpose of awareness creation.

   KAM, FKE, IPC, National Chamber of commerce and Industry, Ministry of Transport and Information should undertake dissemination of information. Networking should be achieved through setting up national website on the Internet, regular appraisal releases through the electronic and print media, seminars and workshops. In future we should involve education and training institutions so that we can offer university level education on climate change.

   Some industrialists know reasonably well about CDM but they are selfish, preferring to hide information to benefit themselves, especially the larger organizations. We should target mainly small and medium enterprises, as most times they are the ones that lack awareness because of their limitations in

communication. They might not be in a position to link to the Internet to monitor the technological changes.

4. *Institutional rationalisation*

To make sure there are properly qualified people in these institutions by setting criteria for their selection.

5. *Exploitation of Natural resources*

Barrier: Lack of survey maps showing existence of various natural resources and failure to pass on information.
Strategy: To sensitise Ministry of Environment and Natural Resources to take action.

6. *Fiscal and monetary strategies*

Strategy: To sensitise Central Bank and Treasury to reduce duties on imported technologies.

7. *Recognition and reward to role models:*

Barrier: Lack of incentives to industries applying clean production technologies.
Strategy: (i) Stakeholders should be sensitised to reward companies involved in cleaner production
(ii) Donors to be requested to fund young or new investors in micro-industrial projects to create jobs while keeping CDM role models to be rewarded.

8. *Credit and bank transactions*

Strategy: Sensitise Treasury and Bank industry to make positive decisions regarding interest rates to be charged.

9. *Access to Energy (Electricity)*

Barrier: High cost of installing electricity. Lack of technology awareness in solar, wind etc. and no wind maps.

Strategy: To sensitise the government, Ministry of Energy, Ministry of Finance to review policies governing electricity. Electricity sector to be liberalised. Wind maps to be provided by meteorological department. They should be sensitised. Technologies should also be shopped elsewhere which are applicable to Kenya in the New and Renewable Energy sources.

10. *Transportation , communication, water use*

Strategies: Liberalization of the service sector. Government to be sensitised to speed up the process.

11. Insecurity, Settling of Commercial disputes, land use, Governance Donor relations and Political Instability.

Strategy: Lobby Government for change.

12. Access to domestic markets

Barrier: Failure to recognise and reward producers of goods for the local market by lowering taxes.
Strategy: Raise awareness by sensitising Treasury and central bank.

Satisfaction of local markets saves foreign exchange by limiting importation. Export of products earns the country foreign exchange. The two are therefore equally important and hence the need to study what other countries are selling on our local market and encourage our local industries to produce the same. We should bear in mind that there are two competing needs in a product i.e. price and quality and to succeed we have to discriminate between the two. To sensitise courts that it is important to settle disputes quickly as this will encourage investors.

13. Restoration of self-confidence in Kenyans.

Strategy: All people to be sensitised through print and electronic media regarding the importance of their role as individuals in the development of this nation. Stress that by whatever anybody does, their activity is either promoting or destroying development.

CDM Specific Issues

1. Identification and development of investment opportunities, formulation of CDM projects, Negotiation for FDI.

Barrier: Lack of experience arising from inadequate training and exposure.
Strategy: Training of trainers to be effected abroad. Upon graduation they become trainers in the universities and other institutions. Others become consultants.
Critical mass to be built for the purpose of developing software.
We shall identify five projects to be funded by donors for capacity building on a learn-by-doing basis.

2. Development of natural resources

Barrier: Most of the natural resources have not been mapped.
Strategy: Ministry of Environment and Natural Resources to be avail maps on our Natural resources.

3. Green House Gas emissions

Barrier: No data available for various industry emissions.
Strategy: To request Donors to provide a number of gas samplers to be given to industries on loan basis. These can then be used to determine emission levels.

Conclusion and Comments

For the success of this project there must be networking by stakeholders and this point should be brought out clearly during workshops or seminars. KAM and FKE were called upon to mobilise their members in industry to appreciate the role being undertaken at this forum.

The government must be brought to understand that since they need industry and cannot do without it, it is of critical importance that they should not only support but initiate moves, on their own to promote industry. To waive some duties on raw material or industrial plant should not be given a second thought if the ultimate goal is enhancement of efficiency and industrial growth. An efficiently functioning industry is the heartbeat of the national economy.

The government should also cultivate the spirit of brotherhood between public and private sector so that each one does not view the other with suspicion. Information should flow between them without fear.

All the government bodies and institutions mentioned in this report in connection with capacity building to be invited to subsequent workshops for the purpose of awareness building and strengthening of networking with the other stakeholders.

ANNEX 5: PROCEEDINGS OF THE WORKSHOP ON PROGRAMME DEVELOPMENT HELD AT HOTEL MILIMANI ON SEPTEMBER 13, 2001

Participants

See annex 1.

Presentations

The workshop started at 9.00a.m with a brief introduction of the participants present. Dr. Kaane made the National Project the opening remarks the National Project co-ordinator. It was then followed by a presentation of Barriers, Capacity Building Needs and Strategies for Barrier Removal by the National Project co-ordinator Dr. H. L. Kaane.

The presentation was followed by a brief plenary discussion. The participants were divided into 3 groups, which were to discuss the various barriers and their removal strategies. The conclusions of the discussions are hereby attached. The conclusions of each group were presented during the plenary discussion.

Group Discussions

Group I: *Policy and National Strategies*

Objective:

The following programme objectives were set:

- It was noted that laws on CDM are already in place but they are not implemented.
- Lack of implementation was linked to lack of capacity to translate these laws in Regulations to the people down who need to be aware of them.
- The same problem draws us back to the lack of funds to facilitate the capacity to translate the laws in regulations.
- It was argued that the procedures retailing to investment logistics and establishment are long and cumbersome.
- It was thus suggested that the said barriers could be removed by creating a "One stop shop" for registration and licensing procedures.
- Another problem was lack of incentives for Role models investing in cleaner production and emission reduction technologies.
- Investment incentives in so far as fund investment into CDM is concerned are still obscure.

STRATEGIES FOR BARRIER REMOVAL

CONTENTS

-MATRIX 2-

1.1 POLICIES AND NATIONAL STRATEGIES: LEGAL AND REGULATORY BARRIERS

Item	Barrier	Removal strategy	Implementing (lead) agency	Urgency	Complexity	Chances of implementation	Implementing speed
1	UNFCCC, its protocols and mechanisms not integrated into national laws	Sensitise and lobby Ministries responsible for environment, foreign affairs and Attorney General's chambers to take immediate action	UNFCCC focal point	High	Low	High	Slow
2	Delayed ratification of the Kyoto Protocol			High	Low	High	Slow
3	High import duties on industrial materials and technologies	Research and lobby the Fiscal and Monetary Directorate to take appropriate action	Kenya Association of Manufacturers (KAM)	High	High	Low	Slow
4	High interest rates on borrowed money	Lobby Central Bank to reduce interest and inflation rates	Kenya Association of Manufacturers (KAM)	High	High	Low	Slow
5	High licence fees on new investments in information and communication technologies	Lobby and sensitise the Treasury and Ministry responsible for communications to appreciate the need for reasonable fees	Kenya Society of Electrical and Electronic Engineers (KSEEE)	High	High	Low	Slow
6	Bureaucratic procedures in authorising investments in the electricity sector	Sensitise the Ministry of Energy to amend the electricity Act and promote investments in power generation	Kenya Society of Electrical and Electronic Engineers (KSEEE)	High	High	High	Slow
7	Lack of incentives for role models investing in cleaner production and emission reduction technologies	Formulate a programme for recognition of leaders in emission reduction	Kenya National Cleaner Production Centre (KNCPC)	High	Low	High	Fast
8	Unreliable supply and high cost of electricity	Lobby ministry of Energy to immediately liberalise the power sector	KSEEE	High	High	High	Slow
9	Subsidies that reduce viability of investments in renewable energy technologies	Use research data to lobby Treasury and Ministry of Energy to enact policy changes that promote RETs	Moi University – Faculty of Technology	High	High	Low	Slow
10	Unreliable supply of agricultural produce (raw material for industry)	Lobby and sensitise Ministry of Agriculture and Treasury to liberalise industrial processing of agro-produce.	Department of Industry	High	High	High	Slow
11	Bureaucratic business licensing procedures	Strengthen one-stop licensing office	Department of Industry	High	High	High	Slow
12	Lack of funds for R&D in clean production and low emission technologies	Lobby for increased allocation of public funds to R&D	KIRDI	High	High	High	Slow

1.2 BUSINESS ENVIRONMENT BARRIERS

Item	Barrier	Removal strategy	Implementing lead agent	Urgency	Compl-exity	Chances of implem.	Imple-. menting speed
1	Poor condition of transport infrastructure	Formulate new strategy for road maintenance	University of Nairobi – Civil Engineering	High	Low	High	Slow
2	Poor information and communication infrastructure	Lobby for rapid liberalisation of the information and communication sector	KSEEE	High	High	High	Slow
3	Long duration of settlement of commercial disputes in courts	Sensitise Judges and Magistrates in commercial courts to take necessary action	Faculty of Law - University of Nairobi	High	High	High	Slow
4	Unreliable supply of water	Lobby for privatisation of water supply in Municipalities	Faculty of Technology - Moi University	High	High	Low	Slow
5	Economic instability	Lobby and sensitise Members of Parliament on the need for urgent action	Kenya Association of Manufacturers (KAM), Federation of Kenya Employers (FKE), and National Chamber Of Commerce and Industry (NCCI)	High	High	High	Slow
6	Political instability			High	High	High	Slow
7	Poor governance			High	High	High	Slow
8	Poor relations with development partners	Lobby and sensitise Government on the need for urgent action		High	High	High	Slow
9	Wide spread insecurity	Sensitise public order enforcement organs and speed up poverty reduction and job creation efforts.		High	High	High	Slow
10	Lack of self-confidence in Kenyan industrialists	Sensitise Kenyan industrialists on their role as ambassadors of Kenya in attracting foreign investors		High	High	High	Slow
11	Lack of land for private development of commercial forests (raw material to industry)	Allocate public forest land to private investors to develop commercial forests	Department of Industry	High	High	Low	Slow
12	High cost of production and business	Take simultaneous action on above listed issues to improving business environment	KAM, FKE, NCCI	High	High	High	Slow

1.3 FINANCE BARRIERS

Item	Barrier	Removal strategy	Implementing lead agent	Urgency	Complexity	Chances of implem.	Implem. speed
1	Poor access to capital funds for investments in cleaner production and emission reduction technologies	Set up a fund to support investors in emission reduction technologies	KAM / FKE / NCCI	High	High	High	Slow
2	Lack of venture capital for innovative investments in cleaner production and emission reduction technologies	Set up an venture capital fund to support young entrepreneurs with innovative ideas invest in emission reduction technologies	KNCPC	High	High	High	Slow
3	High interest rates on borrowed capital and operations funds	Sensitise commercial and development banks on the need for low interest and transaction charges	KAM / FKE / NCCI	High	High	High	Slow
4	High bank transaction costs			High	High	High	Slow

2 INFORMATION AND AWARENESS BARRIERS

Item	Barrier	Removal strategy	Implementing lead agent	Urgency	Compl-exity	Chances of implem.	Implem. speed
1	Poor participation and representation in "Industry and Climate Change" activities at national, regional and international levels	Constitute "National Committee on Industry and Climate Change" (NCICC) to formulate strategies on representation in all meetings. Members of the NCICC will be facilitated to participate in UNFCCC activities	NES / NEMA / NCICC	High	Low	High	Fast
2	Lack of information amongst stakeholders on activities and potential benefits accruing from implementation of CDM projects	A programme for development of information materials on UNFCCC, Kyoto Protocol and CDM for industry will be developed. Such a system will use both electronic and print media.	NES / NEMA / NCICC	High	Low	High	Fast
3	Little knowledge on the new Environmental Act and its implications in most industries	Summaries of the Act shall be prepared and circulated to industry; Full details will be available on internet for interested parties	NEMA	High	Low	High	Fast
4	Weak information exchange mechanisms amongst stakeholders	A network for information exchange amongst all stakeholders, on a continuos basis, will be developed and implemented. The use of internet will be given priority and key stakeholders will be supported to build capacity to use internet services.	NES / NEMA / NCICC	High	Low	High	Fast

3 INSTITUTIONAL BARRIERS

Item	Barrier	Removal strategy	Implementing lead agent	Urgency	Compl-exity	Chances of implem.	Implem. speed
1	Weak and ineffective representation and participation in "Industry and Climate Change" activities at national, regional and international levels	Constitute "National Committee on Industry and Climate Change" (NCICC) to formulate strategies on representation in all meetings	UNFCCC focal point	High	Low	High	Fast
2	Poor implementation of UNFCCC agreements and commitments	Lobby Government for fast action	UNFCCC focal point and NCICC	High	Low	High	Slow
3	Late submission of "National Communications" to the UNFCCC secretariat	Build capacity for data collection and processing on a continuos basis	UNFCCC focal point and NCICC	High	High	High	Fast
4	Poor co-ordination of Industry and Climate Change activities	Form task forces under the NCICC with specific tasks	UNFCCC focal point and NCICC	High	Low	High	Fast
5	Weak implementing institutions	Build capacity in selected institutions and industries	NCICC	High	High	High	Fast

-MATRIX 7-

STRATEGIES FOR BARRIER REMOVAL

4 CAPACITY BARRIERS

Item	Barrier	Removal strategy	Implementing lead agent	Urgency	Compl-exity	Chances of implem.	Implem. speed
1	Lack of data and information on domestic natural resources potential that could attract CDM investments	Provide technical assistance and consultants services to undertake survey and provide data	Investment Promotion Center (IPC)	High	High	Low	Slow
2	Lack of capacity to identify, develop and formulate investment opportunities under CDM	Selected persons from private and public institutions shall be equipped and trained to undertake tasks as required	National Co-ordinating Committee on Industry and Climate Change (NCCICC)	High	Low	High	Fast
3	Lack of capacity to determine and set baselines			High	Low	High	Fast
4	Lack of capacity to monitor CDM projects	Capacity in industries with potential for CDM projects) will be built for this task	NCCICC	High	Low	High	Fast
5	Lack of capacity to certify CDM projects	Selected consultants will be trained and equipped for this purpose	NCCICC	High	Low	High	Fast
6	Lack of capacity to identify and acquire technology under CDM	Persons from selected industries will be trained in technology management	4up ISL	High	Low	High	Fast
7	Lack of capacity to innovate, adopt and adapt technologies acquired under CDM	Capacity will be built in selected Research and Technological Organisations to undertake this task	KIRDI	High	Low	High	Slow
8	Lack of capacity to Standardise products and services related to CDM projects	Capacity shall be built at the Kenya Bureau of Standards (KEBS)	KEBS	High	Low	High	Fast
9	Lack of capacity to enforce intellectual property rights	Capacity will be built at the Kenya Intellectual Property Office (KIPO)	KIPO	High	Low	High	Fast
10	Lack of capacity to negotiate for FDI under CDM	Selected consultants will be trained for this task	IPC	High	Low	High	Fast
11	Lack of capacity to co-ordinate and implement CDM projects	Selected industries and public agencies will be trained	NCCICC	High	Low	High	Fast

- Mainly because it's not yet clear how people will gain or get payback in such projects. Thus facilitation of more workshops to inform and sensitise people on the gains of such CDM projects.

It was agreed that the following outputs be set in order to achieve the above objectives:

(a) UNFCCC protocols and mechanisms incorporated in national laws and ratified;
(b) Import duties and taxes on imported CDM technologies removed;
(c) Investment approvals and procedures simplified and licence fees reduced;
(d) Fiscal and monetary incentives for CDM investors developed and; implemented;
(e) Agro-based industries privatized;
(f) Physical infrastructure development opened to private investors;
(g) Subsidies on technologies fossil fuels and burners removed
(h) Public funds allocated development on innovation systems, structures and institutions increased.
(i) Venture capital to support innovation created;
(j) Bank interest rates reduced;
(k) Macro-economic stability achieved
(l) Political stability and good governance achieved;
(m) Time taken to settle commercial disputes reduced

Group 2: *Information and Awareness Barriers*

Review of strategies was done as follows:

Barrier: Poor participation and representation in Industry and Climate Change activities at national regional and international levels

Strategy: Having a committee "National Committee on Industry and Climate Change" (NCICC), with balanced participation from government, Ministry of Energy, organisations like Kenya Association of Manufactures, FKE, Kenya National Chambers of Commerce, NGO council, relevant institutions i.e. research and learning institutions, IEC, LSK and development parties and donors/facilitators.

Barrier Lack of information amongst stakeholders on activities and potential benefits accruing from implementation of CDM projects.

Strategy: Formation of a sub-committee from the main committee i.e. NCICC which will be responsible for collecting, processing and dissemination of information in different ways e.g. media prints, forms, workshops and electronically.

Barrier: Weak information exchange mechanisms amongst stakeholders.

Strategy: Having a good unit in the selected committee to ensure that all the necessary expertise are included to ensure a strong mechanism of information exchange. Having a directory of all stakeholders and

WebBoard access to all stakeholders including an automatic mailing list.

Institutional Barriers

The following strategies were adopted:

- Some committee developed earlier should be held with the responsibility of formulating strategies on representation in all meetings.
- Lobbying for the Attorney General's office to constitute the NCICC for fast action of implementation of the policies by UNFCCC.
- Immediate funds from donors to build up the human and technology capacity.
- The earlier identified sub-committee will act as a task force in co-ordinating all activities.
- Identify the institutional weakness and then carry out the capacity building.

Funds for the above tasks would be sought from the following:

- Directly form the government i.e. included in the government budget.
- Donors
- Contributions form umbrella organisations e.g. KAM

To achieve the objective of implementing mechanisms for stakeholder awareness creation, information exchange, networking and participation in CDM activities, the following was agreed upon:

a) Kenyan Forum for Sustainable Industrial Development (KFSID) created;
b) National Committee on Industry and Climate Change (NCICC) created
c) Information gathering and dissemination agency created;
d) Inventory of greenhouse gases emissions established;
e) Database on greenhouse gasses emission reduction technologies established;
f) Website on Industry, Climate Change and CDM established;
g) Newsletter on Industry, Climate Change and CDM established;
h) Almanac for national, regional and international CDM related activities established.

Group 3: Capacity Barriers

The group reviewed barriers and strategies and agreed as follows:

- Industries to give projects/proposals seeking funds for the technical assistance form Global Environmental facilities i.e. World Bank;
- Involve the umbrella organisations i.e. KAM, FKE, to provide extension programme on training to the specific industries and involve trained government employees;
- The training must be done to non-independent personnel i.e. government, universities etc;
- Develop an exchange program especially between government and private sector industry;
- Identify development projects and formulate investments;

- Human resources need to be developed to have the capacity required to remove the above barrier;
- Have nationally certified organs that will be in line with the International standards;
- The main problem is to acquire technology; consequently we need to set a team to vet the technology coming in;
- Products should be made more specific to CDM. Train staff to integrate CDM products & services into their mainstream activities; and
- Empower KIPO in terms of training on CDM products and services.

The following outputs were agreed upon in order to achieve the objective of developing capacity for formulation, marketing, implementation, monitoring and certification of industrial CDM projects:

a) Core group of 50 Economists trained in development and marketing of industrial CDM projects;
b) Core group of 50 Engineers and Lawyers trained in identification and acquisition of CDM technologies;
c) Core group of 50 Lawyers trained in contracting of CDM projects;
d) Core group of 50 Engineers trained in monitoring and certification of greenhouse gas emissions;
e) Core group of 50 Industrialists trained in negotiation of Direct Foreign Investment;
f) Trained personnel facilitated to acquire tools and instruments for practising of the knowledge acquired;
g) Selected institutions facilitated to acquire information

- ANNEX -18-

ANNEX 1 LIST OF CORE GROUP MEMBERS, STAKEHOLDERS AND PARTICIPANTS AT VARIOUS MEETINGS

Type	Organization	Acronym	Family name(s)	First name(s)	E-mail	Tel	Fax	Meetings attended										
								1-Mar	2-Mar	29-Apr	1-May	22-Jun	23-Jun	26-Jun	28-Jun	26-Jul	26-Jul	13-Sep
Core Group	4 UP INDUSTRIAL SERVICES LTD	4UP ISL	KAANE L	HARRY	htkaane@africaonline.co.ke	254-2-721500		X	X	X	X	X	X	X	X	X	X	X
	MOI UNIVERSITY	MU	SIMIYU SITATI	STANLEY	simiyusitati@yahoo.com	254-321-43620 Hs 31656		X	X			X	X	X	X			X
	KENYA INDUSTRIAL RESEARCH & DEVELOPMEN INSTITUTE	KIRDI	ODHENGO	PETER	odhengo@hotmail.com	254-2-554710		X	X	X					X			
	MOI UNIVERSITY	MU	SIMIYU MUSE	GELAS	gelasmuse@yahoo.com	254-321-43260			X			X	X	X	X			
	KENYA INDUSTRIAL RESEARCH & DEVELOPMEN INSTITUTE	KIRDI	ADUDA	KENNETH	fsp@arcc.or.ke	254-2-554710		X	X	X					X	X		X
	PRINCE AUTOMATION		AGUYA	WILSON		254-721500									X	X	X	
	SOFTCORE		KULUBI	JAMES	softcore@africaonline.co.ke	254-2-536348		X										
	FEDERATION OF KENYAN EMPLOYERS	FKE	KYULE	HENRY	fke@arcc.or.ke	254-2-721929			X							X		
	TEKNOSELL		OTSIENO	ANDREW	andrew@teknosell.co.ke	254-720371/715565		X	X									
	KENYA INDUSTRIAL RESEARCH & DEVELOPMEN INSTITUTE	KIRDI	WAKO	ADAM	omukhavi@hotmail.com	254-2-535966/84				X					X	X		
	KENYA INDUSTRIAL RESEARCH & DEVELOPMEN INSTITUTE	KIRDI	MACHARIA	SIMON		254-2-535966/84				X								
	MINISTRY OF TRADE, TOURISM & INDUSTRY	MTTI	MAKHANU	JOAN	jmakhanu@yahoo.com	254-2-313010 ex 58511			X		X							
	COMMERCIAL COURTS		NZIOKA	GRACE		254-2-716263/715927		X	X	X					X			X
			KANGAHI	STANLEY	kstanley2002@yahoo.com	254-2-608008		X	X	X	X							X
Government	MINISTRY OF TOURISM,TRADE AND INDUSTRY	MTTI	MUNYAO	GREOGORY	gregmusia@hotmail.com				X									
			ONYAIT	MACTILDA		254-337-30553							X					
	MINISTRY OF ENERGY	MoE	MBUTHI	PAUL		254-2-330048	254-2-240910		X						X			
	MINISTRY OF ENVIRONMENT & NATURAL RESOURCES	MENR	OJOO-MASSAWA	EMILY	climate@nbnet.co.ke	254-2-210379			X									
	MINISTRY OF LOCAL GOVERNMENT	MoLG	KIPSANG	DAVID		254-321-61176												
	NATIONAL ENVIRONMENT MANAGEMENT & CO-ORDINATION AGENCY	NEMCA	ORAWO	PETER		254-2-716103			X						X		X	
	MINISTRY OF FOREIGN AFFAIRS	MFA																

ANNEX –19-

	KENYA ASSOCIATION OF MANUFACTURERS	KAM	WAMBUA	JOE	joewambua@kam.co.ke	254-2-746005/7			X					X		X		
			ANDY	YAGER		254-2-746005/7			X							X		
	INVESTMENT PROMOTION CENTRE	IPC	ADI	GURACHA	ipc@nbnet.co.ke	254-2-336663			X					X		X		
Private Sector	KENYA NEWS AGENCY	KNA	OTIENO	OWITI		254-2-218473								X				
			KIBUI	IMMACULATE	I-culate@yahoo.com	254-2-573411								X				
			MURIUKI	PATRICK	murukike@yahoo.com	254-2-218473								X				
	THE EAST AFRICAN STANDARD NEWSPAPER		MARINDANY	KURGAT	kmarindany@yahoo.com									X				
	PAN PAPER MILLS		SABOO			254-337-41622												
			DAMANI	B.	bddamani@panpaperkenya.co.ke	254-337-41622						X						
			LUKORITO	J		254-337-41622						X						
Industry	EAST AFRICA PORTLAND CEMENT	EAPC	CHARO	CHARLES	info@eapcc.co.ke	254-150-20406			X					X				X
	KEN KNIT (K) LTD		KHANYAKO	AUGUSTINE		254-321-32644/5						X						X
	FIRESTONE EAST AFRICA	FEA	GATHUMBI	JAMES	gathumbi@firestone.co.ke	254-2-530722			X									
			MATHENGE	JUVENAL	mathenge@firestone.co.ke	254-2-530722/13								X				
	KENYA BREWERIES LIMITED	KBL	KANGA	ERASTUS	ekanga@kenyabreweries.co.ke	254-2-864000			X									X
	MAGADI SODA		GUDA	JOHN	jguda@magadisoda.co.ke	245-303-33249									X			
	TWIGA CHEMICALS		MACHARIA	HEZEKIAH	macharia@twigachem.com	254-2-555777			X									
			WANYANGA	FRANCIS	wanyanga@tmc.twiga-chem.com	254-2-533061								X				
	RAI PLYWOOD		ODHIAMBO											X				
	ATHIRIVER MINING																	
	ROMIL																	
	GENERAL PLASTICS																	
	MUMIAS SUGAR CO.LTD																	
	SONY SUGAR CO. LTD																	
	KENYA REFINERIES																	
Industry	KAPA OIL REFINERIES																	
	CLAY WORKS																	
	HERITAGE																	
	THIKA TEXTILES																	
	AGROCHEMICAL & FOOD CO LTD		AUMA	STEPHEN		254-341-51077	254-341-51260						X					
			OYUYO	FREDRICK		254-341-51077	254-341-54260											

ANNEX –20-

Industry	CASTLE		JOHNSTONE	DAVE	davej@castle.co.ke	254-150-30530/30489											X			
	NZOIA SUGAR CO. LTD		WAMAI	ERIC		254-337-20741/2/3										X				
	CHEMELIL SUGAR CO. LTD		KIBANANI	HELLEN		254-337-20741/2/3										X				
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	BAMBURI PORTLAND CEMENT																			
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PROGRAMME, OBJECTIVES, OUTPUTS AND ACTIVITIES

Programme Component	Component Objectives	Objective Outputs	Output Activities
Information Exchange and Networking	Develop and implement mechanims for stakeholder awareness creation, information exchange, networking and participation in CDM activities	(a) Kenyan Forum for Sustainable Industrial Development (KFSID) created;	(i) Organize Inception workshop of key stakeholders (ii) Hold workshop
		(b) National Committee on Industry and Climate Change (NCICC) created;	Covered under activity (a)
		(c) Information gathering and dissemination agency created;	Covered under activity (a)
		(d) Inventory of greenhouse gases emissions established;	Collect data and process
		(e) Database on greenhouse gasses emission reduction technologies established;	Collect data and process
		(f) Website on Industry, Climate Change and CDM established;	Design and implement website
		(g) Newsletter on Industry, Climate Change and CDM established.	Design news bulletin and print
		(h) Almanac for national, regional and international CDM related activities established	Collect data and prepare almanac

Programme Component	Component Objectives	Objective Outputs	Output Activities
Capacity Building	Develop capcity for formulation, marketing, implementation, monitoring and certification of industrial CDM projects	(a) Core group of 50 Economists trained in development and marketing of industrial CDM projects; (b) Core group of 50 Engineers and Lawyers trained in identification and acquisition of CDM technologies; (c) Core group of 50 Lawyers trained in contracting of CDM projects; (d) Core group of 50 Engineers trained in monitoring and certification of greenhouse gas emissions; (e) Core group of 50 Industrialists trained in negotiation of Direct Foreign Investment; (g) Trained personnel facilitated to to acquire tools and instruments for practicing of the knowledge acquired; (e) Selected institutions facilitated to acquired information processing and internet access equipment.	(I) Document on training methodologies (ii) Indentify persons to be trained (iii) Identify training institutions (iv) Admit to and monitor training

Programme Component	Component Objectives	Objective Outputs	
Policy, Legal and Regulatory Environment	Develop, implement and enforce olicy, legal and regulatory instrument to create an enabling and competitiv environment for implementing industrial CDM projects	New policy instruments created with inputs from consultants and involvement of key stakeholders in the following areas: (a) UNFCCC protocols and mechanisms incorporated in national laws and ratified; (b) Import duties and taxes on imported CDM technologies removed; © Investment approvals and procedures simplified and licence fees reduced; (d) Fiscal and monetary incentives for CDM investors developed and; implemented; (e) Agro-based indutries privatized; (f) Physical infrastructure development opened to private investors; (g) Subsidies on fossil fuel technolo-gies and burners removed (h) Public funds allocated dev. of innovation systems, structures and institutions increased	For each identified output undertake following activities: (I) Review existing policy instruments and identify existing lacunae (ii) Develop new policy instrument (iii) Develop and implement measures to ensure laws and regulations are enforced

Programme Component	Component Objectives	Objective Outputs	
		(i) Venture capital to support innovation created; (j) Bank interest rates reduced; (k) Macro-economic stability achieved (l) Political stability and good governance achieved; (m) Time taken to settle commercial disputes reduced;	
CDM Pilot and Demonsatration Projects	Implement pilot and demonstration industrial CDM projects	(a) Pilot industrial CDM projects implemented	(a) Complete financial, administrative and legal issues with funding partners (b) Acquire technology for pilot projects © Monitor and certify performance of pilot projects
CDM Projects Portfolio	Develop, formulate and market industrial CDM projects	(a) Inventory of bankable industrial CDM projects produced	Pre-feasibility studies: document Feasibility studies: document Market CDM projects / Intermediaries
Sustainable Industrial Development Support Fund	Set up a fund to support private sector acquire tools and instruments for monitoring and regulation of gree house gases from industrial processe	(a) Greenhouse gas monitoring and regulation equipment acquired by selected industries and service providers;	(a) formulate administrative and legal instruments to govern fund (b) Set-up implementstion unit © issue funds and monitor repayment