



UNITED NATIONS DEVELOPMENT PROGRAMME ETHIOPIA
PROJECT DOCUMENT

SUPPORT FOR OPERATIONAL RESEARCH AND KNOWLEDGE SHARING FORUM
AND EXPO ON CLIMATE CHANGE ADAPTATION AND MITIGATION

UNDP Strategic Plan Outcome(s):

Expected Project Outcome: Knowledge sharing and dissemination of good practices for climate change adaptation strengthened.

Expected Project Output(s):

1. Operational research on climate change adaptation findings documented
2. Enhanced dissemination of knowledge on climate change adaptation and mitigation interventions.

Executing Entity: UNDP Ethiopia Country Office

Implementing Agency: Bio Economy Association

Project Site: Yeha University, Addis Ababa, Ethiopia

Project Brief Description

The project supports the deepening of operational research on food security and climate change adaptation in Ethiopia with the ultimate aim of supporting the scaling up and transfer of sustainable techniques for food production (that have been developed) to vulnerable communities to enhance their capacities to mitigate against food insecurity. The project will deliver two outputs. The first is a document of the findings of operational research on climate change adaptation and mitigation. For this output the following activities will be undertaken: the establishment of demonstration farms; data collection (survey), analysis and compilation from East, West and Southern Africa; analysis of Integrated Bio-economy systems in different ecosystems; display and validation of knowledge and experience in selected parts of Africa; and procurement of audio-visual and display equipment. The second is Enhanced dissemination of knowledge on climate change adaptation and mitigation interventions. For this output the following activities will be undertaken: presentation of research analysis by specialists, academics and practitioners; establishment of a knowledge network and web-based platform; establishment of a resource centre in Ethiopia and two satellite resource centres in Mozambique and cote D'Ivoire.

Project title: Support for operational research and knowledge sharing forum and expo on climate change adaptation and mitigation

ATLAS Award:

Estimated start date: Dec 2009

Estimated end date: May 2010

PAC Meeting date: Nov 24, 2009

Total resources required USD355, 300

CSO/NGO Contributions:

Cash

In-kind: All available tools, materials, facilities, equipments, demonstration models etc. will be made available for the facilitation of the project.

Agreed by Bio Economy Association:

Signature

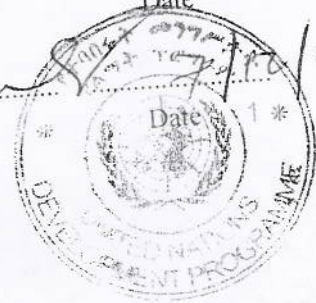
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Agreed by UNDP:

Signature

Date



ABBREVIATIONS

BEA
UNDP

Bio Economy Association
United Nations Development Programme

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By

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I. SITUATION ANALYSIS

Climate change is the main driving force behind the recent droughts, the failed harvest, famine, floods and the polluted air that suffocates city after city. They are symptoms of a sick and gloomy planet. Nothing on earth is more important to our survival than the air we breathe, the food we eat, and the water we drink. These life sustaining essentials (i.e. ecological services) are being either contaminated or whittled away by man himself. In some countries the state of the environment is already life-threatening. Millions of people across the world are suffering from adverse effects of global catastrophic changes in climate. Food insecurity, water scarcity, vulnerability to natural disasters and infectious diseases and migration are among the major effects of climate change. Women, children and poor farmers are the most vulnerable groups to climate change. Climate change is accelerating unless we work proactively and energetically and take urgent and concrete measures.

The Intergovernmental Panel on Climate Change (IPCC) predicts that global temperatures will rise between 1.8 °c and 4.0 °c by the last decade of the 21st century. Warming of a few degrees seems inconsequential compared with day to day, or seasonal variations in temperature. However, in global terms it is much larger than any of the climatic changes experienced during the past 10,000 years, since the rise of agriculture and civilization.

Climate changes over recent decades have already affected some health outcomes. The World Health Organization estimated, in its "World Health Report 2002", that climate change was estimated to be responsible in 2000 for approximately 2.4% of worldwide diarrhea, and 6% of malaria in some middle-income countries. Epidemics of weather and climate sensitive infectious diseases such as malaria and meningitis will have a devastating effect on human health and socio-economic development and severely overburdens health systems in many parts of the world.

Climate change involves complex interactions between climatic, environmental, economic, political, institutional, social, and technological processes. To eliminate or reduce the risk of climate change to human life and property, both policy instruments and technology must be used in the context of sustainable development.

The anthropogenic effect on nature is growing because humans modify all forms of their interaction with the environment, and transform, "the technology of life" itself. The growing impact of man on nature causing depletion of resources, and above all the pollution of the environment are matters of growing concern for global warming and climatic changes that face livelihood security that currently in need of adapting to climate change to secure livelihood.

The world head of states have signed and ratified the Kyoto protocol to combat global warming and climate changes at a conference hold in Kyoto, Japan, in 1997. The parties adapted the Kyoto protocol, which commits industrialized countries to attaining legal binding GHG emission reduction targets during the period between 2008 and 2012. The Kyoto protocol was an early attempt at such a system; with the aim of having developed countries reduce their carbon emission.

Several meetings and conferences were held to discuss climate change with much focus on adaptation and reducing the greenhouse gas emissions. However, some nations have made it clear that the issue is beyond reducing carbon emission and suggested other actions to be

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taken to address global warming and changes in climate. The problem and its impacts are now becoming very much complicated and winning the attention and concern of the world community. Nations and leaders of the world should think of very sounding and practically applicable strategies and work together in collaboration to adapt and mitigate changes in climate.

The struggle against climate change should never be left only to leaders and policy makers. Every community and everyone have a stake in it. It is everybody's agenda and concern. Climate change is happening now. The earth is getting warmer and warmer and the change is affecting everyone and everything.

Africa, though it is the least contributor to climate change, has started to sense the negative impacts of climate change on its development process. The issue has now become a question of survival. The problem requires joint actions and efforts and commitment and hard work. We have to be very much dedicated to advocate for climate change and influence policy makers to take concrete actions to stop the problem. In order to reduce and finally eliminate this challenge Africa should use the farming community (i.e. 80% of the jobs of the African people) in developing new coping and adaptation mechanism to deal with climate change.

Climate change will affect major MDGs and PASDEP programs in developing countries. It will certainly affect livelihood improvement programs. For instance, in 2008, 4 million Ethiopians faced food shortage and drought; furthermore, in 2009 6.2 million Ethiopians are facing food shortage and severe malnutrition. This clearly shows the adverse effect of climate change. It is therefore obvious to embark on a major climate change adaptation and mitigation to reverse the gloomy situation facing the African continent.

The recent proposal attempts to collect information and review on how communities can adapt/mitigate using indigenous and experimental knowledge. This will finally lead to come up with the robust method and strategy to address the issues of climate change.

Integrated Bioeconomy System and its contribution to climate change adaptation and mitigation

Integrated Bioeconomy System is a holistic, nature based, demand and science driven, participatory ecosystem and resource management approach designed to improve livelihood, restore environment, biodiversity and create wealth. The basic principles of the bioeconomy system include work with nature rather than against nature, return whatever you take, cooperate rather than compete, use indigenous knowledge and resource to enhance small and medium enterprise solution to create wealth and promote technologies, skills and knowledge, which ultimately help to build a strong eco-friendly green trading African nations.

The Bioeconomy is an initiative built upon indigenous knowledge and skills destined to serve as a prototype model of holistic, restorative, adaptive, environmentally friendly ecosystem services. The model has been used for hands-on capacity development, information, knowledge, skills and interactive technology exchange and transfer. Its purpose focuses on:

- Promoting learning in the real world,
- Developing and validating different sustainable technologies for energy and water utilization.



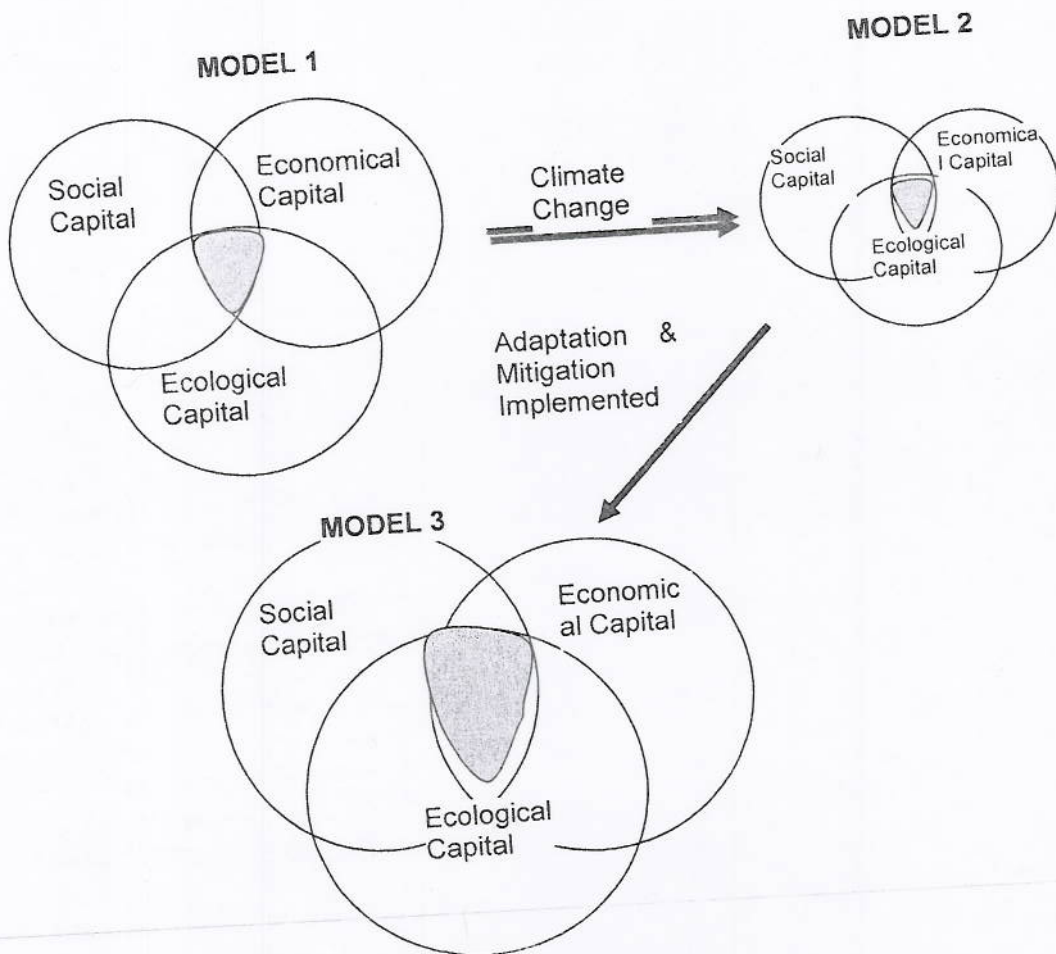
- Developing and promoting biointensive systems for food production, soil fertility, environment protection and ecological restoration and income generation,
- Enabling people establish an integrated and diversified production system to support their livelihood and
- The integrated Bioeconomy system and technology transfer intervention involves capacitating the community to diversify, integrate economic activities and function according to principles of the ecosystem.

The major objectives of the Bioeconomy system are technology and skill transfer, information and knowledge sharing and exchange, practical training, backstopping, education, demonstration and demand driven applied research to bring about significant and sustainable changes in social, economical and ecological capital building using adaptive management system.

Bioeconomy system clearly demonstrates that ecological factors influence or limit social, cultural and economic dynamic of the society. Several appropriate technologies (e.g. biogas, solar panels, biointensive production techniques, and water harvest and utilization techniques hydroponics, modern beehives, botanicals, vermiculture, viticulture, sericulture, horticulture, mushroom production, Spirulina production and integrated pest and vector control management have been tested, validated and demonstrated and practiced. The Bioeconomy system highly promotes afforestation activities. It is a well known fact that forests (carbon sink) store 40% of the terrestrial carbon, and can store the carbon dioxide in the atmosphere. Plants perform photosynthesis to convert carbon dioxide into carbohydrates, releasing oxygen in the process. Therefore, Bioeconomy technologies and activities have the potential to improve the environment, restore the ecology, help to maintain the balance in the carbon cycle, improve livelihood and create wealth. The Bioeconomy system avails opportunities to develop climate adaptation capacity development programs through knowledge, information, skill and technology sharing and transfer.

Bioeconomy follows the "PRAXIS Accord"¹ which is based on three major and critical pillars. These include **social, economical and ecological** capital building process. The interaction and integration of the three pillars is given below.

¹ "The PRAXIS Accord" also known as PRAXIS Ethiopia Alliance is an international network of educators, scientists and entrepreneurs dedicated to sustainable, science-based, community-driven poverty reduction, wealth creation and environmental restoration in Ethiopia. Its aim is to support policy-makers and promote the implementation of policy to accelerate advances in environment, agriculture, health and education.



BEA believes that, in order to promote and enhance climate change adaptation and mitigation, knowledge sharing on climate change adaptation and mitigation should be facilitated to create and develop awareness of issues of climate change to bring positive attitudinal changes, advocate for issues of climate change, enhance common understanding and build consensus; and establish and strengthen network and partnership to embark upon major adaptation, mitigation interventions.

To this effect, Bio-Economy Association in partnership with the UN system plans to organize and facilitate a knowledge *forum* and *expo on livelihood and Climate Change Adaptation and Mitigation.*" This project is designed to serve this purpose. Higher officials, policy makers, development practitioners, stakeholders and community members and youth will take active part in the forum. The forum and expo will be opened for the public for about three to six months.

II. PROJECT IMPLEMENTATION STRATEGY

Objective of project

The overall objective of the project is to propose sustainable approach that will allow farmers and rural communities to cope and even expand their livelihood opportunities in the face of climate change.

Specific objectives of the project include:

- To identify promising adaptation/mitigation approaches and test their validity in the African context and improve their efficiency and effectiveness using scientific methods
- To organize and facilitate knowledge sharing and experience exchange forum and expo on climate change adaptation and mitigation to enhance common understanding and build consensus,
- To create and develop awareness of issues of climate change to bring positive attitudinal changes,
- To facilitate establishment of networks and partnerships for joint actions on climate change adaptation and mitigation among different parts of Africa

Implementation strategies

The following strategies will be employed to facilitate the implementation of the project.

- **Operational research** to test existing or promising adaptation/mitigation approaches using different ecosystems.
- **Discussion forum** to share knowledge and information on issues of climate change and climate change adaptation and mitigation. Experts from Africa and Europe will meet and share practical knowledge with the view of establishing data base of the adaptation/mitigation approach
- **Practical demonstration** to show the relationship between livelihood promotion and climate change adaptation using the integrated Bioeconomy system and technology,
- **Exhibition** on integrated Bioeconomy system and technology and its contribution to climate change adaptation/mitigation and
- **Development of an Integration model of Bioeconomy system and climate change adaptation/mitigation analysis on knowledge and experience for various part of Africa.**

Expected results and project outputs

Expected results of the project include:

- Knowledge and information on climate change adaptation and mitigation shared among stakeholders/participants.
- Awareness of issues of climate change adaptation and mitigation enhanced.
- A climate change adaptation/mitigation model for sustainable livelihood developed.
- Practical knowledge and skills on integrated Bio-economy system and technology shared with participants of the forum.
- Climate change adaptation/mitigation resource centers established.

The project will support the production of two outputs indicated below.

Output 1: Operational research on climate change adaptation findings documented

For this output the following activities will be undertaken: the establishment of demonstration farms; data collection (survey), analysis and compilation from East, West and Southern Africa; analysis of Integrated Bio-economy systems in different ecosystems; display and validation of knowledge and experience in selected parts of Africa; and procurement of audio-visual and display equipment..

Output 2: Enhanced dissemination of knowledge on climate change adaptation and mitigation interventions

For this output the following activities will be undertaken: presentation of research analysis by specialists, academics and practitioners; establishment of a knowledge network and web-based platform; and establishment of a Resource Center in Ethiopia; and two satellite resource centres in Mozambique and Cote D'Ivoire.

Sustainability of the project

The sustainability of the project is dependent up on the commitment, will and extent of participation of the various stakeholders. In order to ensure the sustainability of the project, a strong network and partnership system which will serve to promote joint efforts and collaboration and enhance sharing of knowledge, skills, best practices and technologies among the participating regional states and countries will be put in place. To this effect, a joint committee to facilitate the network and partnership among the regional states will be formed and become functional. As to the network and partnership among countries in West Africa, Eastern Africa and Southern Africa, BEA, in collaboration with UNDP, will facilitate knowledge and experience sharing forums as required



III. RESULT AND RESOURCES FRAMEWORK

Outcomes

Relevant UNDP Strategic Plan Outcome(s):

Knowledge and dissemination of good practices for climate change adaptation strengthened

Expected Project Outcome:

Outcome Indicators:

1. A number of replicable good practices are identified and documented.
2. Knowledge networks contribute to better disseminate good practices on small scale climate change adaptation

Applicable Strategic Plan Area of Support:

Partnership Strategy

The project will leverage the partnerships that exist between Yeha University and its international collaborators.

Project Title and ID (ATLAS Award ID):

Support for operational research and knowledge sharing forum and expo on climate change adaptation and mitigation
ATLAS Award ID:

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INTENDED OUTPUTS	OUTPUT TARGETS	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS (Total)	INPUTS (UNDP)
OUTPUT 1 Operational Research on climate change adaptation findings documented	1. Document innovations and technologies to address of climate change adaptation initiatives in selected African countries.	<ul style="list-style-type: none"> Establishment of demonstration farms Data collection (survey), analysis and compilation from East, West and Southern Africa Analysis of Integrated Bio-economy systems in different ecosystems Display and validation of knowledge and experience in selected parts of Africa. Procurement of audio-visual and display equipment. 	BEA	55,000	55,000
Baseline: only scattered information is available			BEA	45,000	45,000
Indicators			BEA	30,000	30,000
• tbd			BEA	13,000	13,000
OUTPUT 2					

		BEA	10,000	10,000	
Enhanced dissemination of knowledge, on climate change adaptation and mitigation interventions	1. Forum and Expo on climate change adaptation and mitigation experiences conducted.	<ul style="list-style-type: none"> • Presentation of research analysis by specialists, academics and practitioners. • Establishment of a knowledge network and web-based platform. 			10,000
Baseline: tbd	2. Three resource centres for livelihood and climate change adaptation initiatives established	<ul style="list-style-type: none"> • Establishing a resource centre in Ethiopia. • Establishing two satellite resource centers in two other African countries. 		45,000	45,000
Indicators tbd	3. Web-based database and knowledge platform available			70,000	70,000
Project Management Travel and accomod. Coordination and Admin				20,000 15,000 20,000 16,150	20,000 15,000 20,000 16,150
Consultancy Fee Contingency (5%)					
Project M+E (5%)					16,150

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Total Budget					355,300	355,300
Project Summary					Total	UNDP
Output 1 Operational research on climate change adaptation findings documented					143,000	143,000
Output 2 Enhanced dissemination of knowledge on climate change adaptation and mitigation interventions					125,000	125,000
Project Management and M+E					87,300	87,300
Total Budget					355,300	355,300

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IV. MANAGEMENT ARRANGEMENTS

BEA will be responsible for the day-to-day follow-up and monitoring of the project and provision of backstopping services. BEA will avail all its available resources (materials, tools, facilities, equipments, demonstration centres, etc.) to ensure the smooth operation of the project. A technical committee comprising UNDP, BEA, and some partners will be formed to monitor and guide the implementation of the project. The team will meet regularly to review progress and make appropriate recommendations. BEA will provide to UNDP both technical and financial reports.

V. Monitoring and Evaluation

A Steering Committee composed of UN and BEA will be formed to monitor and guide the implementation of the project. The team will meet regularly to review progress and make appropriate recommendations. BEA will receive/collect implementation track records from each research sites on regular basis and compiles periodic progress reports. On top of this, there will be arrangements for field visits to share experience depending on the availability of additional funds to meet this requirement. Websites will be developed to share and exchange knowledge, skills and technologies that contribute towards climate change mitigation and adaptation. To this end, an interactive website will be available at BEA.

It is expected that the knowledge shared during the forum will be useful for the African countries and development partners including the UN system in proposing and implementing robust adaptation/mitigation solution to climate change. To that effect, BEA will propose based on the result of the forum the establishment of a knowledge sharing Network among specialists/practitioners in different countries of Africa, universities and Research Centers.

BEA will also establish a climate change adaptation/mitigation resource centre to continue promoting practical research on climate change adaptation/mitigation and sharing knowledge of practitioners, policy makers and students. At the end of the project, BEA will provide to UNDP both technical and financial reports.

Five percent of the amount has been set aside for project monitoring and evaluation.

VI. Risks and Challenges that may affect Implementation

The challenges likely to affect implementation shall include unexpected shocks.

VII Legal context

This project forms part of an overall programmatic framework under which several separate associated country level activities will be implemented. When assistance and support services are provided from this Project to the associated country level

activities, this document shall be the "Project Document" instrument referred to in: (i) the respective signed SBAs for the specific countries; or (ii) in the Supplemental Provisions attached to the Project Document in cases where the recipient country has not signed an SBA with UNDP, attached hereto and forming an integral part hereof

This project will be executed by the agency BEA ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. The Implementing Partner shall: (a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; (b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999).

VIII Budget Estimates

Estimated budget for the 6 month project period is about US \$355,300. If more resources are available, then the activities can be deepened and scaled up at a faster pace. This would require that output 3 is developed earlier in the project's life.

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Annex I - Annual Work plan

Intended Outputs	Indicative Activities	Responsible party		Planned Budget			
		Q1	Q2	Funding Source	Budget Description	Amount	
OUTPUT 1 Operational Research on climate change adaptation findings documented Baseline: only scattered information is available Indicators <ul style="list-style-type: none"> tbd 	<ul style="list-style-type: none"> Establishment of demonstration farms Data collection (survey), analysis and compilation from East, West and Southern Africa Analysis of Integrated Bio-economy systems in different ecosystems Display and validation of knowledge and experience in selected parts of Africa. Procurement of audio-visual and display equipment. 	X		BEA		55,000 ✓	
		X		BEA		45,000 ✓	
		X		BEA		30,000 ✓	
		X		BEA		13,000 ✓	
		X		BEA		0 25,000 ✓	
OUTPUT 2							

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Enhanced dissemination of knowledge, on climate change adaptation and mitigation interventions	<ul style="list-style-type: none"> • Presentation of research analysis by specialists, academics and practitioners. 	X	BEA	UNDP	10,000
Baseline: tbd	<ul style="list-style-type: none"> • Establishment of a knowledge network and web-based platform. 	X	BEA	UNDP	45,000
Indicators	<ul style="list-style-type: none"> • Establishing a resource centre in Ethiopia. 	X	BEA		70,000
tbd	<ul style="list-style-type: none"> • Establishing two satellite resource centers in two other African countries. 	X	BEA		
Project management and M+E					87,300
Total Budget					355,300

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Annex II – Physical Plan

Description of activities	Year 2009		Year 2010										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	
	1. Establish main resource centre for livelihood and climate change adaptation and mitigation												
2. Establish satellite resource centers in two countries in Africa													
3. Operational research (survey, data collection, analysis and compilation in selected countries in Africa)													
4. Study and analysis of contribution of Integrated Bioeconomy system to climate change adaptation/mitigation;													
5. Conduct a poverty mapping exercise using remote sensing and satellite imagery													
6. Organization of a scientific Forum to share knowledge and validate key findings and reports													
7. Establishment of a web-based data base of best practices and proven innovations and technologies to adapt/mitigate against climate change;													
8. Procurement of demonstration materials and equipments (traps, hives, alternative energy models)													
9. Purchase of audio-visual equipments and exhibition materials													

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