

**DEVELOPING THE SCIENCE, ECONOMICS AND GOVERNANCE  
OF ECOSYSTEM SERVICE PAYMENTS.  
A CONTRIBUTION TO NORWAY'S SUPPORT OF REDD**

**REPORT FROM A WORKSHOP HOSTED BY SOKOINE UNIVERSITY OF  
AGRICULTURE (SUA), TANZANIA. 31 AUGUST - 3 SEPTEMBER 2009**

**COMPILED AND EDITED BY SALIM M.S. MALIONDO, THOR S. LARSEN  
AND J.A.A. BODDENS HOSANG**

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**DEVELOPING THE SCIENCE, ECONOMICS AND  
GOVERNANCE OF ECOSYSTEM SERVICE PAYMENTS IN  
CLIMATE-PRONE SOCIO-ECONOMIES IN AFRICA:  
GETTING SCHOLARS AND PRACTITIONERS TOGETHER  
FOR RESEARCH AND CAPACITY BUILDING THAT  
MATTERS. A CONTRIBUTION TO NORWAY'S SUPPORT  
OF REDD**

**Report from a workshop hosted by Sokoine University of Agriculture  
(SUA), Tanzania, in cooperation with the Department of International  
Environment and Development Studies, Noragric (UMB) and the  
University of Florida/Center for African Studies & Department of  
Geography**

**31 August – 3 September 2009**

Compiled and edited by  
Salim M. S. Maliondo, Thor S. Larsen and  
J.A.A. Boddens Hosang

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Studies, Noragric**

## Norwegian University of Life Sciences

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Department of International Environment and Development Studies, Noragric  
Norwegian University of Life Sciences (UMB)

P.O. Box 5003

N-1432 Aas

Norway

Tel.: +47 64 96 52 00

Fax: +47 64 96 52 01

Internet: <http://www.umb.no/noragric>

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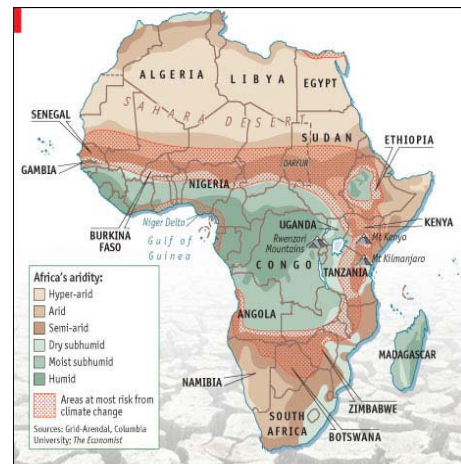
## LIST OF ACRONYMS

ARU	Ardhi University (Tanzania)
CBNRM	Community Based Natural Resource Management
CGIAR	Consultative Group on International Agricultural Research
CCIAM	Climate Change Impacts, Adaptation and Mitigation in Tanzania
CIFOR	Center for International Forestry Research
GHG	Greenhouse Gases
ICRAF	World Agroforestry Centre
IIED	International Institute for Environment and Development
IRA	Institute for Resource Assessment
IPCC	Intergovernmental Panel on Climate Change
MNRT	Ministry of Natural Resources and Tourism (Tanzania)
NOK	Norwegian kroner
PES	Payment for Environmental Services
REDD	Reducing Emissions from Deforestation and forest Degradation
SUA	Sokoine University of Agriculture (Tanzania)
TAFORI	Tanzania Forestry Research Institute
TFCG	Tanzania Forest Conservation Group
TMA	Tanzania Meteorological Agency
UDSM	University of Dar es Salaam
UF	University of Florida
UMB	Norwegian University of Life Sciences

## 1. INTRODUCTION: JUSTIFICATION FOR THE WORKSHOP

The areas in Africa most prone to climate change (see map) are home to some of Africa's poorest communities and are also subject to rapid habitat conversion (see photo). In many of these areas agriculture is already marginal, yet growing seasons are expected to shorten by 20% as rainfall declines and becomes more erratic.

However, these areas provide many environmental services that are not paid for including carbon sequestration, water, and natural resources and biodiversity conservation. Several researchers suggest that, globally, the value of environmental services exceeds the value of the formal economy, but are not valued in the market place and are often managed through commons arrangements.



This provides both an ethical and economic argument for paying these communities for environmental services. However, the challenge is to measure what environmental services they are providing, what these are worth, and how to pay them in ways that are both socially equitable and economically efficient. Resolving these challenges will involve, on the one hand, advances in the science and economics of environmental services, and on the other

challenges of governance, including the avoidance of elite capture and generating full, equitable participation. So far, the only environmental services entering the market-place have been wildlife. This has spawned a range of community-based natural resource management (CBNRM) initiatives, the success of which has been closely correlated with how closely these programmes have adhered to economic and governance principles.

However, the emergence of climate change as the dominant global issue of our time, and of carbon markets and payments, provides an enormous opportunity to address issues of poverty, governance and environmental management in these agriculturally and politically marginal areas. These are complex issues that will require inter-disciplinary learning, research and capacity-building. It is anticipated that addressing them will require integrated progress in at least the following areas:

- The science of monitoring ecosystem services, especially carbon production and auditing;
- Understanding of local governance, and of local-central governance arrangements, including an ability to effectively monitor the performance of governance regimes without which systems are inequitable, do not link the production of environmental services with payments, and therefore likely not to work;
- Inter-African and international partnerships for research and capacity-building.

It was therefore proposed to hold a planning workshop with +/- 15 participants in early 2009. The workshop would address:

- The science and economics of environmental services in climate-prone zones, and particularly issues of carbon and climate variability;
- Governance and performance monitoring.
- Research and capacity-building.

At the core of this meeting will be a university from East Africa (e.g. Sokoine Agricultural University), with participation from other African universities, but also from international institutions with strong track records of interdisciplinary research and training in developing countries. The participation of key practitioners with considerable experience in community environmental service management is important. The intention is to build an inter-African learning process. A quality facilitator will add value to such a meeting.

It is anticipated that the meeting will consist of:

1. A set of presentations aimed to provide intellectual excitement and background,
2. A participatory process including a situation and problem analysis, and
3. Recommendations for the way forward in the form of a roadmap for further collaboration or even a project proposal.

The anticipated project will contain:

1. The development of carbon monitoring pilot projects in varying habitats.
2. Pilot sites in countries to be selected with working models for effective governance regimes.
3. A programme to develop African capacity in carbon, climate change, remote sensing, environmental resource economics and policy, and governance that involves:
  - a. Practical inter-disciplinary cross-cultural, cross-institutional field research (to create African data and African solutions)
  - b. Carbon monitoring, remote sensing and carbon auditing capacity in key sites in Africa.
  - c. The linking of this research and monitoring into the capacity building of Africa faculty.
  - d. The development of expertise and experience in research and development into the curricular and training of trainers for Universities, vocational training centers, and even the private sector.

In this background, the Sokoine University of Agriculture (SUA), Morogoro, Tanzania, the Norwegian University of Life Science (UMB)/ Noragric and the University of Florida/ Center for African Studies & Department of Geography proposed a workshop with +/- 15 participants to be held at SUA with participation from other African universities and international institutions with strong track records of interdisciplinary research and training in developing countries. As the workshop was planned, the organizers found that their vision and objectives are shared with several other projects currently in the pipeline, and that there were interesting and challenging opportunities for synergy and win-win opportunities, e.g.:

1) A new programme “Climate Change Impacts, Adaptation and Mitigation in Tanzania (CCIAM)” has been under preparation for some time. The main objectives under CCIAM are “*To develop and sustain adequacy in national capacity to participate in climate change initiatives and address the effects and challenges of climate change with particular emphasis to the REDD initiatives,*” whilst CCIAM’s specific objectives include:

1. To determine and develop appropriate climate change mitigation and adaptation strategies in forestry, other land uses, ecosystems and biodiversity management
2. To assess climate change impacts and vulnerability on ecosystem services and livelihoods under REDD initiatives
3. To conduct policy analysis of climate adaptation and mitigation with emphasis on economic efficiency, ecological effectiveness and wider political legitimacy
4. To develop and undertake capacity building, dissemination and strategic interventions for adaptation and mitigation to climate change.

Institutions involved in CCIAM are SUA (lead agency), the University of Dar es Salaam (UDSM), the Ardhhi University (ARU) and the Tanzania Meteorological Agency (TMA). It has been decided that the Norwegian University of Life Sciences (UMB) through Noragric, will serve as an anchoring institution in the north for the purpose of identifying and engaging participating Norwegian institutions as sought by the programme.

2) UMB/Noragric has, together with IIED and other partners, submitted a project proposal to Norad: “*Poverty and sustainable development impacts of REDD architecture; Options for equity, growth and the environment.*”

3) The University of Florida (UF) has been funded by USAID to “*Transform(ing) CBNRM Education in southern Africa*” working with 11 universities and 11 colleges in southern and East Africa. UF also has a MacArthur grant to develop an environment-based Masters in Development Practice with partners at the University of Botswana and the Free University of the Yucatan. UF is working closely with regional CBNRM programmes and is extending CBNRM towards environmental services and governance.

The organizers behind the workshop found important synergy opportunities between their plans and other initiatives which share similar visions and have comparable objectives. The organizers agreed therefore that the workshop would serve as a stepping stone and catalyst for project proposals under CCIAM which could be harmonised with activities under the other projects, e.g. as mentioned above. The intention and hope was that the workshop could contribute to inter-African learning processes including a situation and problem analysis, but also recommendations for the way forward in the form of a roadmap for further collaboration or even project proposals.

Because the deadline for applications to the CCIAM programme probably would be in late autumn 2009, it was agreed that the workshop should be held in late August/early September.

The workshop should introduce and discuss projects and programmes already launched or in the pipeline, allow for keynote talks and presentations followed by plenary discussions, and then form working groups which could brainstorm, develop new networks, suggest key project



priorities and even start to develop some project proposals for CCIAM, with linkages with other initiatives when possible and relevant.

The workshop was then planned as follows:

Monday 31 August:

Presentations of projects and programmes which are being implemented or are in the pipeline and address the impacts of climate change and REDD.

Tuesday 1 September – afternoon:

- Kick-start discussions about priorities in REDD related research, training and other activities and opportunities for cooperation and partnerships with like-minded stakeholders.
- Consider and recommend themes and topics for working groups.

Wednesday 2 September, morning:

- Continuation of presentation and discussion of topics of particular relevance and importance for climate change challenges and for REDD.

Wednesday 2 September, afternoon – Thursday 3 September:

- Formulation of working groups for
  - Discussions about concept notes and/or tentative project proposals.
  - Recommendations about the way forward.
- Reports presented by working groups to plenary session for joint discussions.
- Plenary deliberations, recommendations and conclusions.

Time	Event	Responsible person(s)	Other actors
Day 1:31 <sup>st</sup> AUGUST 2009. Chairperson: Prof. Jairos Matovelo, Rapporteur: Dr. Damas Phillip			
08:00 – 08:35	Arrival and Registration at the Workshop venue	Workshop Secretariat	All Participants
08:35 – 08:50	Arrival of Guest of Honour and other dignitaries	Workshop Secretariat	All Participants
08:50 – 08:55	Opening remarks	Prof. Salim Maliondo	All Participants
08:55 – 09:05	Introduction and objectives of the workshop	Prof. Thor S. Larsen	
09:05 – 09:15	Speech from the VC, SUA and D-VC (Academic), SUA and Directorate of Research and Post-Graduate Studies, SUA	Prof. Gerald C. Monela, Prof. Dominic Kambarage and Prof. Jayros A. Matovelo	
09:15 – 09:30	Statement from the Royal Norwegian Embassy	Mr. Yassin B. Mkwizu	
09:30 – 09:50	Official Speech from the Guest of Honour, Minister for Education and Vocational Training,	Prof. Jumanne A. Maghembe (MP)	
09:50 – 10:00	Group photo	Workshop Secretariat	All Participants
10:00 – 10:30	HEALTH BREAK		
10:30 – 11:00	Climate Change Impacts, Adaptation and Mitigation: An overview of the CCIAM programme	Prof. Salim M.S. Maliondo	
11:00 - 11:30	Climate change mitigation related to Tanzanian forests – Key factors for analysis and research prioritizing	Prof. Ole Hofstad	
11:30 – 12:00	The CIFOR Project on REDD	Dr. Louis Verchat	
12:00 – 12:30	Plenary Group Discussions	Chairperson	
12:30 – 13:30	LUNCH BREAK		
	Chairperson: Prof. Yonika Ngaga, Rapporteur: Mr. Erneus Kaijage		
13:30 – 14:00	Preparing roadmap for REDD intervention in Tanzania – potential challenges	Prof. Claude Mung'ong'o, IRA/ University of Dar es Salaam	

14:00 – 14:30	Transforming CBNRM Education in Southern Africa	Prof. Brian Child	
14:30 – 15:00	Poverty and sustainable development impacts of REDD architecture, options for equity, growth and the environment	Prof. Pål Vedeld	
15:30 – 16:00	Plenary Group Discussions	Chairperson	All Participants
16:00 – 16:30	HEALTH BREAK		
16:30	End evening session		All Participants
19:00 – 21:00	Cocktail Party at the ARC		All Participants
Day 2: 1 <sup>st</sup> SEPTEMBER 2009 Chairperson: Prof. S. Mwakalila, Rapporteur: Dr. Paul Kusolwa			
08:15– 08:30	Registration	Workshop Secretariat	All Participants
08:30 – 08:45	Recap	Rapporteur – Day 1	All Participants
08:45 – 09:15	Synergies between adaptation and mitigation through Agroforestry and community forestry	Dr. Louis Verchot	
09:15 – 09:45	The REDD direction and the potential for reduced carbon emissions, and increased development: a special focus on Uganda and Tanzania"	Prof. Pål Vedeld	
09:45 – 10:15	The science and economics of environmental services in climate-prone zones	Prof. Brian Child	
10:15– 10:45	HEALTH BREAK		
10:45– 11:15	New collaboration agreement between the University of Oslo and the University of Dar es Salaam	Prof. Desmond McNeill Prof. Signe L. Howell	
11:15 – 11:45	Methodologies of carbon estimation	Dr. Eliakimu Zahabu	
11:45 – 12:30	Legal challenges to successful REDD design and implementation	Dr. Christina Voigt	
12:30 – 13:30	LUNCH BREAK		
13:30 – 14:00	African Forest Forum position on African forests in present and emerging climate change arrangements	Prof. Godwin Kowero	

14: 00 – 14:30	National Forest Monitoring Assessment (NAFORMA) and REDD	Prof. Rogers Malimbwi & Dr. Eliakimu Zahabu	
14:30 – 15:00	Competence and capacity building: Experiences from PANTIL	Prof. Emmanuel J. Luoga	
15:00 – 16:00	The role of different remote sensing techniques in REDD initiatives.	Dr. Jaclyn Hall	
16:00– 16:30	HEALTH BREAK		
16:30 – 17:30	Group feedback on discussed issues	Chairperson	All Participants
17:30	End evening session		
Day 3:2 <sup>nd</sup> SEPTEMBER 2009 Chairperson: Prof. George Kajembe, Rapporteur: Dr. Jumanne Abdallah			
08:30 - 08:55	Registration	Workshop Secretariat	All Participants
08:55 – 09:10	Recap	Rapporteur – Day 2	All Participants
09:10 – 09:30	Payments for ecosystem Services	Prof. Yonika Ngaga/Dr. Kassim Kulindwa	
09:30– 10:00	Ecosystem Services under REDD initiative - opportunities from Kenya	Prof. Kingiri Senelwa	
10:00 – 10:30	HEALTH BREAK		
10:30 – 11:00	PES and governance	Prof. Brian Child	
11:00 – 11:30	Indicators of climate change in Tanzania and likely impacts on social economic development	Mr. Augustine Kanemba	
11:30– 11:40	Vulnerability Assessment	Prof. Desmond McNeill	
11:40-11:50	Possible synergies with proposed triangular NOMA master study and developing new idea of research collaboration	Profs. Bishal Sitaula, Jairos Matovelo & Gerald Kimbi	
11:50-12:30	Presentation of conceptual note for group work.	Panel: Prof. Maliondo, Prof Child and Prof. Hofstad	All Participants
12:30 – 13:30	LUNCH BREAK		
13:30 – 16:00	Group work	Chairperson	All Participants
16:00– 16:30	HEALTH BREAK		
16:30 – 17:30	Group work	Chairperson	All Participants
17:30	End evening session		
Day 4: 3 <sup>rd</sup> SEPTEMBER 2009 Facilitator: Prof. George Kajembe, Rapporteur: Dr. Jaclyn Hall			

08:00 - 08:30	Registration	Workshop Secretariat	All Participants
08:30 – 10:30	Presentation of group work and discussion	Facilitator	All Participants
10:30 – 11:00	<b>HEALTH BREAK</b>		
11:00 – 12:30	Presentation of group work and discussion	Facilitator	All Participants
12:30 – 13:30	<b>LUNCH BREAK</b>		
13:30 – 14:00	Deliberations and recommendations	Prof. George Kajembe and secretariat (Prof. Salim Maliondo/Prof. Thor S. Larsen and Ms. Joanna Boddens-Hosang)	All Participants
14:00 – 14:30	Closing Ceremony	Dr. Felician Kilahama, Director of Forestry and Beekeeping Division MNTR	All Participants
14:30	Departure		All participants

*(Presentations are available on the UMB/Noragric website under Institutional Cooperation, <http://www.umb.no/noragric/article/institutional-cooperation-2>)*

## **2. MONDAY 31 AUGUST**

The organizers' first plans called for +/-15 participants from Tanzania and other African universities and research institutions, but also from international institutions with strong track records of interdisciplinary research and training in developing countries. It soon became evident, however, that many researchers and other stakeholders expressed an interest in participation and in contributing to the workshop. The organizers therefore allowed for a broader participation. The final list of participant's counts 86 people, and almost all of them participated actively from the workshop's start until it was closed on Wednesday 3 September (see Appendix I).

The workshop opened with words of welcome by Prof. Salim Maliondo on behalf of the host, SUA. Prof. Thor S. Larsen spoke on behalf of UMB/Noragric and gave a brief overview about the history behind the workshop and its main objectives (see Appendix II). He thanked SUA for the dedication, professionalism and hard work for the preparations for the workshop. This event had originally been planned for only +/- 15 participants but because of the interests expressed by researchers and others in Tanzania and elsewhere, which was much appreciated, the list of participants could now count more than 80 persons.

The next speaker was the Vice Chancellor of SUA, Prof. Gerald C. Monela (see Appendix III) who thanked the Minister for his attendance and for taking time to address the participants, the organizers for the preparations and the Royal Norwegian Embassy for Norway's financial support. Prof. Monela emphasized that the workshop was important and timely because "we cannot afford not to discuss climate change and variability". Climate change is affecting the whole world and developing countries are very much hit because of limited financial resources and institutional capacity. As rainfall declines and becomes erratic, it will have a consequence for people and life expectancy. There is a loss of ecosystems of local and global significance. There is a need for incentive schemes to reduce carbon emissions. Payment for ecosystem services is a relatively new and complex concept. Tanzania's national REDD framework has been adopted (with the support from Norway) and the workshop will contribute to the national REDD initiative. Interdisciplinary approaches and international cooperation will be required and the partnership between SUA, UMB and UF is therefore appreciated. Through North-South and South-South partnerships achievements can be made. The necessary changes need to be made e.g. through dialogue between researchers and policy makers. Prof. Monela thanked the Minister and the Government for the development of a REDD framework for Tanzania.

The Deputy Vice Chancellor (Academic) of SUA, Prof. Dominic Kambarage, and the Director of Research and Post-Graduate Studies of SUA, Prof. Jayros A. Matovelo, also addressed the workshop which was followed by a statement from the Royal Norwegian Embassy, presented by Mr. Yassin B. Mkwizu (see Appendix IV). He stated that the topic of the workshop was timely and of high relevance, including for the global community, because climate change is one of the most important challenges we face today. In the past, most programmes have focused on emissions, but with little attention on how e.g. Tanzania would adapt to changes. It is important also to consider how climate change is not only a threat but also poses opportunities. The workshop and the roles SUA and others have taken on under the REDD research agenda are

therefore important. Norway has been and will continue to be a supporter of research and training and is prepared to assist Tanzania on REDD activities. Deforestation is particularly important, and the partnership between Tanzania and Norway is important in addressing common challenges. Norway's support to REDD in Tanzania comes in addition to other support, which amounts to 500 million NOK for research, training, monitoring etc. CCIAM is the single largest programme at almost 100 million NOK. If successful in reducing deforestation, Tanzania has much to gain. Tanzania will be well placed for the climate change negotiations in Copenhagen in December, and can count on Norway as a partner.

Thereafter, the Guest of Honour, the Tanzanian Minister of Education and Vocational Training, Prof. Jumanne A. Maghembe, gave the Official Speech. The Minister referred to his close ties with UMB and said that several researchers there should regard SUA and Morogoro as their second home. He mentioned the importance of the workshop for students at SUA and elsewhere and said that he was particularly pleased about the partnership in organizing the workshop, and that the workshop was held in Morogoro, which would be conducive. The Minister emphasized the importance of climate change for local people who are custodians of natural resources and who derive their livelihood from plantations. Local people do not benefit from carbon credits today, something which has to be addressed. We also have to address gender balance because climate change will affect women more than men. Forest management must be based upon sound evidence and manpower motivation. It is important that all scholars participating in the workshop benefit and that the workshop sets the stage for new opportunities for innovation and progress.

Thereafter, presentations were given on projects and programmes which are being implemented or which are in the pipeline and address the impacts of climate change and REDD.

The first presentation was by SUA/ Prof. Salim Maliondo, about the “***Programme on Climate Change Impacts, Adaptation and Mitigation (CCIAM)***” in Tanzania. Tanzanian partners are SUA (lead agency) and UDSM, ARU and TMA. Partners in Norway are UMB and other institutions. CCIAM initially has a five-year duration (Sept 2009 – Aug 2014) with a mid-term review after every 24 months. The programme's estimated cost is NOK 94 million over a period of five years. The goal is better management of natural resources and the environment through appropriate adaptation and mitigation strategies and participation in climate change initiatives. CCIAM's problem statement is that there is limited information on climate change impacts on ecosystem services under REDD initiatives. There is inadequate human capacity and infrastructure to support implementation of REDD initiatives. There is low awareness on climate change issues in terms of vulnerability and adaptation options. There is no focused or sustained long-term action with cumulative impacts on climate change. There is also limited information on better management of forests and other land resources for REDD readiness. Justification for the programme is to support the promotion of REDD initiatives aimed at increased carbon sequestration as a mitigation and adaptation mechanism to climate change. The programme will contribute to enhancement of a much greener environment as per the REDD initiative and better agricultural practices for improved livelihoods. The programme will contribute to building institutional capacities and knowledge on challenges and opportunities of climate change. The main objective is to develop and sustain adequacy in national capacity to participate in climate change initiatives and address the effects and challenges of climate change with particular emphasis to the REDD initiatives. Specific objectives are to determine and develop appropriate

climate change mitigation and adaptation strategies in forestry, other land uses, ecosystems and biodiversity management, to assess climate change impacts and vulnerability on ecosystem services and livelihoods under REDD initiatives, to conduct policy and legal framework analysis of climate change adaptation and mitigation with emphasis on economic efficiency, ecological effectiveness and wider political legitimacy, and to develop and undertake capacity building, dissemination and strategic interventions for adaptation and mitigation to climate change. The speaker described research areas and strategic interventions with examples, human capacity building, documentation, promotion and publicity and target groups. During autumn 2009, there would be a call for proposals and concept notes and a review process which should demonstrate technological innovations turning scientific knowledge into products, product development and technological diffusion and applicability to areas outside the immediate target group, output with potential commercial values and quantifiable emission reductions and interventions that are likely to involve and address the needs of women and disadvantaged groups in society.

The second paper was presented by UMB Prof. Ole Hofstad, "*Climate Change Mitigation Related to Tanzanian Forests - Key Factors for Analysis and Research Prioritizing*". Some of the main areas covered by the presentation are mitigating climate change through REDD, monitoring forest ecosystems, and carbon accounting. Large quantities of carbon are stored in forests throughout the world, but Africa may not be the most important region. Forest degradation is, however, very important in Africa and control of degradation is therefore important. There is a need for estimates of vegetation types and of average biomass. This involves measurements on the ground, but also via photos or satellite images and remote sensing (radar, satellite, etc.) The speaker described techniques for biomass density estimates from plots in the field. A research project for Tanzania with the use of available data has been proposed: Remote sensing of biomass density in forests with the use of airborne laser and GPS against ground truth studies. There is a need to establish sample plots throughout the country, e.g. sample plots for the FAO global inventory. There is a need for studies of stratification of forest types, agro-ecological zones, biomass density, etc. Precision of inventory is a challenge and depends upon the number of plots and spatial variation. Frequencies are also important because with a higher frequency results will be better, but there will also be higher costs. There is a need to know more about carbon in living biomass against dead wood and soils. Field as well as laboratory measurements of wood density are therefore required. Land use changes including agricultural changes, extraction of fuel wood and logging are important. What are the consequences of climate change for rural populations? What happens in adjacent areas (leakage)? What about global trade in forest products? The speaker presented cost curves and land use models. Appropriate policy must address good governance, sector specific measures, cost effectiveness and efficiency. The speaker presented a schematic overview of a REDD – PES system developed by UMB professors Ole Hofstad and Arild Angelsen.

During the discussion following this presentation, participants raised their concerns about:

- Challenges in measuring wood density in a country such as Tanzania which has a lot of tree species
- Incorporating the data collected by REDD in data bases which are used by numerical weather prediction models (Climate Change Models).



- Avoiding duplication of efforts by using existing data sets for work that has been going on in Tanzania at sites which will be covered by REDD.
- Low precision of the allometric equation in estimating biomass.
- The high cost of the proposed method for assessing the C-stock makes it unsustainable for poor countries, such as Tanzania.
- Criteria for selecting areas for C-stock assessment.

The third paper was presented by CIFOR/Dr. Louis Verchot, “*CIFOR’s Global Comparative Study*”. Dr Verchot started by giving an introduction about CIFOR. CIFOR has 200 staff globally, with headquarters in Bogor, Indonesia, and regional offices and 37 research sites throughout tropical regions of the world in partnerships with institutions. CIFOR is member of CGIAR. The presenter also described CIFOR’s strategic research agenda and its relationship with CGIAR. Moreover, he explained how CIFOR can support the REDD initiative, how Tanzania can benefit from lessons learned in other countries and vice versa. CIFOR has six strategic research agenda items. The overall objective is to support REDD policy arenas. CIFOR focuses upon three outcomes: effectiveness, efficiency and equity. National initiatives include identifying likely determinants of success or failure of the REDD process. Interaction at the international, national and sub-national levels is a priority, including country-level analysis of key factors in national REDD processes, reviews of lessons learned from selected forest policies in the tropics and conducting assessments of national REDD strategies. There is an enhanced design of first generation demonstration activities with a review of design principles and of assessment methods to maximize learning. CIFOR is seeking to derive best practices for REDD projects. Monitoring and carbon baseline studies are frequent challenges. CIFOR has developed scenarios for future emissions for 5-6 case study countries and supports development of nationally appropriate factors for IPCC equations. CIFOR has a research-based strategy for sharing knowledge, dissemination and outreach. CIFOR participated in the UNFCCC COP 13, 14 and 15 in 2007-2009 ‘on the road to Copenhagen’.

The next speaker was University of Dar es Salaam-IRA Professor Claude G. Mung’ong’o who presented the “*Roadmap to REDD Implementation in Tanzania: Potential Challenges and Opportunities*” which also involves professors Pius Z. Yanda and Emma T. Liwenga. REDD is based on the idea of rewarding individuals, communities, projects and countries that reduce green house gas (GHG) emissions from forests. REDD is seen as a significant, cheap, quick and win-win way to reduce greenhouse gas (GHG) emissions. REDD is also based on the idea of reward to individuals, communities, projects and countries that reduce green house gas (GHG) emissions from forests. REDD has the potential to deliver large cuts in emissions at a low cost within a short time frame, enhances biodiversity conservation, enhances ecosystem management and contributes to reducing poverty. Ecosystem management and biodiversity conservation can encourage effective conservation of ecosystems, provide alternative livelihoods such as beekeeping and provide alternative sources of fuel wood through e.g. the establishment of woodlots. It is therefore important to support rural development activities with funding from REDD, to promote environmentally friendly livelihood activities like beekeeping and to encourage incomes from the carbon market. The audience was challenged to respond to some questions: What will be the rewarding arrangement? Should the out-grower approach be applied? What will be the basis for payment under such arrangement? Alternatively, is the rewarding package under PFM adequate for REDD? Can we improvise PFM packages to suit a REDD

rewarding scheme? Should we consider rewarding arrangements through improvement of landscape management with the aim of promoting land productivity? But then how does one discriminate among those individuals that have not complied? How does one reward individuals on the basis of compliance? How do we control land grabbing and marginalization of the poor anticipating commercialization of trees through REDD? How do we discourage shifting cultivation and enhance productivity per unit area? How do we reduce dependence on fuel wood and charcoal as major sources of energy? What are the implications to gender relations of transforming trees as a cash crop to the household livelihoods? The next steps should include national stakeholder workshops, results from zonal stakeholder consultations, in-depth studies and reports, expert group meetings to review thematic areas, drafting of a national REDD strategy, and sharing the draft with stakeholders for further improvement

In his presentation *“Transforming CBNRM Education: Experimenting with Ways to Make University Education more Relevant to Rural People and Environment”* University of Florida Professor Brian Child asked if there is a role which universities can play due to the complexity of the many issues. Universities have both strengths and weaknesses, but how do we link theory and practice? How do we work together across disciplines? We have to work from the inside and it is time consuming. It is therefore important to bridge theory and practice, to bridge disciplinary boundaries, to work on real problems and to develop long-term partnerships that are mutually beneficial. Prof. Child encouraged disciplines to work together. Researchers and locals must agree on research priorities, e.g. via stakeholder workshops. Facilitating local people to build capacity and relationships is an important challenge. The speaker challenged the audience to develop a research culture, to work in teams and to enjoy it. The speaker presented the practitioner’s question: How do we improve the governance of communities? Governance involves complex variables, e.g. on accountability, decision making, attitudes and economics and the speaker described how this could be approached. Objectives under transforming CBNRM education include creating a community of practice in southern Africa, to collect and to organize, create and consolidate CBNRM curricula and materials in durable formats including published books. It is important to allow research data back to communities and using data in focus groups to develop viable models. One thing is to collect data and to analyze them statistically – another is to ask what the explanations are for differences (e.g. perceptions about governance) and what can we do to “fix” the system? The challenge and dilemma is to change from pure science to being a development worker. Prof. Child and his colleagues in Africa have so far trained 17 young African professionals.

The speaker was concerned that donors often decide on priorities and change these constantly. The fact that developing countries have to recognize and abide by donors’ preferences and priorities and that hard facts are more easily “sold” are problems. We must, however, insist upon and be allowed to be project designers. All stakeholders have to recognize that improvement and changes can take 20-40 years.

UMB/Noragric Professor Paul Vedeld gave a presentation on the project *“Poverty and sustainable development impacts of REDD architecture”*, which is a joint research programme between the International Institute for Environment and Development (IIED) and three departments at the Norwegian University of Life Sciences (Noragric, IØR, INA) in partnership

with the Fundação Amazonas Sustentável (non-profit NGO, Brazil), Civic Response (Ghana), SNV Vietnam (Netherlands Development Organisation), SUA/Faculty of Forestry and Nature Conservation, Makerere University/ Faculty of Forestry and Nature Conservation, Uganda. The project is supported by the Norwegian Government. The project addresses global climate change/human influence which is real, and that poor people suffer most and also generate poverty, that both adaptation and mitigation are important, and that 17-18% of total emissions are generated by land clearing, logging and degradation activities. It is therefore important to maintain and enhance woodlands and forests, to reduce global carbon emissions, to increase sequestration, to secure biodiversity resources, and to secure incomes to nations and to local communities, which will allow for win-win-win situations globally, nationally and locally. The project partners want to investigate - and quantify - the possibilities, challenges and the potential for a multifunctional policy, securing real mitigation while at the same time addressing important goals for economic growth, poverty alleviation and even biodiversity conservation, and what it takes at different governance levels, from international, national to the sub-national level. Their ambition is to develop models that relate landholder behaviour and associated changes in land use and forest management to REDD policy choices in forest and related sectors such as agriculture. They also want to analyze the various proposed REDD payment mechanisms and packages and resulting actual and potential incomes/costs accrued at the household and community level based on improved knowledge of social and individual behaviour. How do/will households and farmers actually respond to policy instruments? The project will develop a multi-dimensional communications and influencing plan for the duration of the project using communication specialists at IIED, Noragric and the country-based partners with a focus on engagement with international climate change negotiators, national policy-makers and stakeholders, local stakeholders and with outputs tailored to the different audiences.

After a plenary session with comments, questions and discussions, the first day of the workshop was closed at 16:30.

**Recap from afternoon session Monday 31 August**

<b>RECAP DAY 1: MONDAY 31<sup>st</sup> AUGUST 2009</b>		
<b>Topic</b>	<b>Key discussion points</b>	<b>Questions/comments from the floor</b>
<p><b>Preparing Road Map for REDD intervention in TZ-Potential Challenges</b> (Claude G. Mung'ong'o)</p>	<ul style="list-style-type: none"> <li>➤ Definitions/summaries of what REDD is</li> <li>➤ Why REDD? Link to SD e.g. address GHG emissions, poverty &amp; enhance biodiversity conservation</li> <li>➤ Key forest types relevant for REDD                             <ul style="list-style-type: none"> <li>• Catchments forest, forest high in biodiversity resources, forest in fragile landscapes</li> </ul> </li> <li>➤ Critical challenges for implementation of REDD                             <ul style="list-style-type: none"> <li>▪ REDD a sufficient incentive?</li> <li>▪ Rewards- who to be rewards and whom not?</li> <li>▪ Timing for rewards</li> <li>▪ Approaches for rewarding e.g. discrimination of non complaints</li> <li>▪ Fulfilling social needs e.g. energy alternative, access to land and, gender issues</li> </ul> </li> <li>➤ Efforts by the National REDD Secretariat in addressing the above challenges                             <ul style="list-style-type: none"> <li>▪ National stakeholder consultation planned for 8 zones (two completed)</li> <li>▪ Planning a national stakeholder W/shop-to share results of zonal consultations and in-depth studies and do further planning</li> <li>▪ Also planning expert group meeting to review thematic areas</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>1. Pilots should not only focus on the mentioned forest types <b>INSTEAD</b> focus also on forest that are more threatened                             <ul style="list-style-type: none"> <li>▪ Response: Mentioned forest types are more conflict free that any other type and those government would protect with or without REDD anyway</li> <li>▪ But also question of desirable scale-can prioritize and start off with this forest categories</li> </ul> </li> <li>2. How can a system that actually rewards individuals be created                             <ul style="list-style-type: none"> <li>▪ Response: It is a challenge but still boils down to the question of scale. If focus is individual local communities then mechanism be designed that way</li> </ul> </li> <li>3. Do we have a clear REDD architecture at the national level?                             <ul style="list-style-type: none"> <li>▪ Response: It's a big challenge task force is still faced.</li> <li>▪ A reason task force is doing wider stakeholder consultations to be assisted and well guided</li> </ul> </li> <li>4. Mandate and thoughts of REDD secretariat on a National REDD Governance architecture, actors, design, transfer mechanism</li> </ol>

		<p><i>Response: Governance is one of the critical issues the secretariat is taking and working seriously</i></p> <p><i>5. a) Balancing the trade off between REDD and Socio-economic development ,i.e. feasible alternative development scenario?</i></p> <p><i>b) What % of Tanzania’s forest is represented by the 3 forest categories above? Possibility of leaving out a large of forest at risk of deforestation &amp; degraded?</i></p> <p><i>Response: a) Trade off to be made based on principle of SD e.g. use of sustainable agriculture etc.</i></p> <p><i>b) Again question of desirable SCALE BUT good point for consideration</i></p> <p><i>REDD discussions shouldn’t be biased on carbon sequestration but take a holistic look at roles diff. vegetation .types play in enhancing community adaptation address Climate C.</i></p>
<p><b><i>Transforming CBNRM Education in Southern Africa</i></b> <i>(Prof. Brian Child)</i></p>	<p><i>Human-Environment issues are very complex Require paradigm shift i.e. universities (researchers) need to look at different ways of doing researches that matter to communities. i.e. abandon approaches such as <b>distantiation?</b> and <b>prediction</b> (looking from the outside) and move to <b>adaptive learning/experimental</b> (i.e. <b>inductive-action</b> research, collaborative monitoring and social learning)</i></p> <p><i>University to become facilitator for local people to become scientists through capacity building</i></p> <p><i>Hints on how to achieve this</i></p> <ul style="list-style-type: none"> <li>▪ <i>Create interdisciplinary teams</i></li> </ul>	<p><i>1. Any conflicts encountered so far and how have these been solved?</i></p> <p><i>Response: Conflicts/challenges common but minimized by participatory through feedback provision</i></p> <p><i>Also adaptive learning minimizes conflicts</i></p> <p><i>2. Is establishment of the community subgroups for NRM really participatory?</i></p> <p><i>Response: Donors not interested in dealing the entire community.</i></p> <p><i>3.How to choose the process and level of community participation (e.g. adaptive leaning and problem-</i></p>

	<ul style="list-style-type: none"> <li>▪ <i>Develop cross disciplinary and cultural teams (i.e. different capabilities and skills.</i></li> <li>▪ <i>Involve local people to focus the research (i.e. make a problem-driven research)</i></li> <li>▪ <i>Promote social learning and adaptation</i></li> <li>▪ <i>Get project going-loved by community and also cost effective</i></li> <li>➤ <i>Exemplified this with the project “Transforming CBNRM Education-Bring practitioner and scientist together-Creating community of practice</i> <ul style="list-style-type: none"> <li>▪ <i>E.g. bringing leading scholars and practitioners together,</i></li> <li>▪ <i>developing training manuals etc</i></li> </ul> </li> </ul>	<p><i>driven approach) given donor preferences</i>  <i>Response: It’s a challenge but local can be confident and stick to their priorities before donors</i></p>
<p><b><i>Poverty and Sustainable development impacts of REDD architecture (Paul Vedeld)</i></b></p>	<ul style="list-style-type: none"> <li>➤ <i>A planned research project involving 5 countries</i></li> <li>➤ <i>Rationale of the project: to address uncertain tension of not knowing what REDD will look like in future</i></li> <li>➤ <i>Challenges</i> <ul style="list-style-type: none"> <li>▪ <i>Carbon sequestration/carbon emission-additionality, leakage, permanence etc</i></li> <li>▪ <i>Reduced biodiversity quality</i></li> <li>▪ <i>Economic and social development (trade offs)</i></li> <li>▪ <i>Governance,</i></li> <li>▪ <i>Transaction and opportunity costs</i></li> <li>▪ <i>How good is REDD? 80% good, 20% bad?</i></li> </ul> </li> </ul>	
	<ul style="list-style-type: none"> <li>➤ <i>Research focuses at 3 levels- international, national and local levels</i></li> </ul>	<p><i>1. Comment: Need to be clear that REDD is a desirable way of bringing developing countries to</i></p>

	<ul style="list-style-type: none"> <li>➤ <i>Outputs e.g. different options for REDD architecture and transfer mechanism at different levels</i></li> <li>➤ <i>Methodology-</i></li> <li>➤ <i>Communication strategy: to be a multidimensional communication strategy</i></li> <li>➤ <i>Relation with other projects e.g. in Tanzania</i> <i>We are not afraid of REDD. “We enter the project with open minds”</i></li> </ul>	<p><i>engage in addressing climate change but also gaining some cash for addressing their developmental needs</i></p> <p><i>2. Will this project use past experience to address benefit sharing challenges</i> <i>Response: It is a big challenge but doable. There is a lot of past experience, which should be used to give some useful hints.</i></p> <p><i>3. Comment: There seem to a lot of critical questions that need to be thought over very carefully probably before entering in the REDD process. So we should look at similar existing initiative to get clues on how we can these questions; e.g. the UNFF and UNCCD approaches to SFM contains some ideas that forest sector can look at for REDD</i> <i>Need to learn about the appropriate vehicle for channelling REDD e.g. market, funds etc</i></p>
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### **3. TUESDAY 1 SEPTEMBER**

Following a recap of Monday afternoon's session (above), four presentations were given in Tuesday's morning session. (*Presentations available on the UMB/Noragric website under Institutional Cooperation, <http://www.umb.no/noragric/article/institutional-cooperation-2>*)

Dr. Louis Verchot/CIFOR: *“Synergies between adaptation and mitigation through agroforestry and community forestry”*

Prof. Paul Vedeld/Noragric: *“The REDD direction and the potential for reduced carbon emissions, and increased development: a special focus on Uganda and Tanzania”*

Prof. Brian Child/University of Florida: *“The science and economics of environmental services in climate-prone zones”*

Professors Desmond McNeill and Signe Howell/University of Oslo: *“New collaboration agreement between the University of Oslo and the University of Dar es Salaam”*

Dr. Eliakimu Zahabu/SUA: *“Methodologies of carbon estimation”*

Prof. Christina Voigt/University of Oslo: *“Legal challenges to successful REDD design and implementation”*

#### **Afternoon session presentations**

Prof. Godwin Kowero/AFF: *“African Forest Forum position on African forests in present and emerging climate change arrangements”*

Prof. Rogers Malimbwi and Dr. Eliakimu Zahabu/SUA: *“National Forest Monitoring Assessment (NAFORMA) and REDD”*

Prof. Emmanuel J. Luoga/SUA: *“Competence and capacity building: Experiences from PANTIL”*

Dr. Jaclyn Hall/University of Florida: *“The role of different remote sensing techniques in REDD initiatives”*

#### **Preparations for group work**

Before the sessions closed on Tuesday 1 September, Prof. Larsen gave a brief summary about the workshop thus far and the way forward. Four panellists (Professors Malimbwi, Maliondo, Child and Voigt) presented their thoughts about what is important under REDD. REDD seems to be one of many current instruments and it is time to take stock of all instruments. Some have



failed in the past, and we should try to improve that. What is defined as a forest, what can we get out of them, how can we reduce degradation? It is important to avoid that REDD becomes an offset mechanism. It could potentially be used to increase the image of a country which tries to comply to REDD. There are also different legal rules in developing countries.

These introductions kick-started plenary discussions about REDD and related research, training and other activities, opportunities for cooperation and partnerships with like-minded stakeholders, and developing relevant research projects under CCIAM. Suggestions ranged from assessing carbon in order to estimate emissions from forests, biomass measurements, species registration, ecosystem sampling for REDD assessment and monitoring. It was noted that REDD is still a very unclear concept at this point. The governance aspect is also complex: how do we help ordinary people, who are the ones who will suffer if it is not managed well? Some of the comments were:

- Nobody seems to know what REDD really is and there is a need for a common objective. Research is important, but social processes to unify people are also important. REDD is not only for researchers but also politicians and decision makers.
- Most scientists come from very narrow, discipline oriented fields. There is a need to break this up and bridge with other disciplines. Ministries and also communities have to be involved in the processes to make things work.
- Does a market exist for carbon/emissions? Is there a market for land/resource use? The governance aspect is very complex.
- How do we help ordinary people – they are the ones who will suffer.
- It takes time to take stock of the use of various instruments. We have not done very well in the past and we have to try to improve that. We need to get into the specifics and then try to integrate this with what we are doing.
- We need a “crystal ball.” REDD is good in principle, but there are too many unanswered questions. Technical aspects and monitoring are important but there is more. REDD is not only about trees but also about energy.
- Very, very complex issue and the international community has never faced anything as complex as this. Complexity can be a danger.
- Once in a while we need to stop and re-consider which way to go to tackle the problems. Important to prevent REDD from being an offset. Care must be taken not to put too many components into REDD.
- Identify what the problems are and the issues for research, particularly in relation to Tanzania. REDD is an approach, like the CDM.
- There is a detrimental cycle of poverty which leads to the destruction of the environment. Measuring and monitoring can of course be done, but policies need to be put in place.
- Climate change challenges can be approached through, amongst others, livelihoods, natural resource and socio-economically. There is an opportunity now to approach the challenges from different angles.
- This workshop could be a stepping stone for REDD networking and subsequent collaboration, perhaps by setting up an informal REDD research network in Tanzania.
- Training and education should be addressed. We should also look at a division of labor when addressing communities so that they do not become overburdened by different researchers approaching them.

- We are in a detrimental cycle of poverty (caused by over-population and misuse of resources). We cannot rely upon foresters alone – if it was up to them everything would be covered by forests. We can measure and monitor – but who will put in place policies?

The participants were asked to consider and recommend themes and topics for working groups. Prof. Ole Hofstad suggested three main topics: 1) Monitoring and satellite imagery; 2) Increase agricultural production, reduce emissions; 3) Governance: how do institutions handle problems of distributing profits? He suggested forming interdisciplinary groups to address these three topics. Prof. Hofstad's suggestion was recommended as "food for thought" for group work the next day.

The afternoon session closed at 17:30

#### **4. WEDNESDAY 2 SEPTEMBER**

There were four presentations during the morning session. (*presentations available on the UMB/Noragric website under Institutional Cooperation, <http://www.umb.no/noragric/article/institutional-cooperation-2presentations> on URL*)

Prof. Yonika Ngaga/Dr. Kassim Kulindwa/SUA: "***Payments for ecosystem services***"

Prof. Kingiri Senelwa/Moi University: "***Ecosystem Services under REDD initiative - opportunities from Kenya***"

Prof. Brian Child/University of Florida: "***PES and Governance***"

Mr. Augustine Kanemba: "***Indicators of climate change in Tanzania and likely impacts on social economic development***"

Professors Bishal Sitaula/Noragric, Jairos Matovelo & Gerald Kimbi/SUA: "***Possible synergies with proposed triangular NOMA Master study and developing new ideas of research collaboration***"

#### **Group work on priority issues and recommendations**

In the morning of Tuesday 2 September, Prof. Larsen opened the session with a statement that the workshop was now in a position to formulate working groups for discussions about concept notes and/or tentative project proposals and to provide recommendations about the way forward. After agreement about the concept which would build on Prof. Hofstad's recommendations, the workshop would be divided in groups which would present their reports to the plenary session for joint discussion. The plenary session would then merge the recommendations from the working groups into a common set of recommendations and conclusions.

A panel was formed to introduce the topics for the group work and subsequent plenary discussions. The panellists were Prof. Maliondo, Prof. Child and Prof. Hofstad. Prof Maliondo explained that the workshop participants also were expected to provide inputs to the CCIAM programme. This would be an opportunity to develop research concepts that could be submitted following the call for proposals. The research focus areas include:

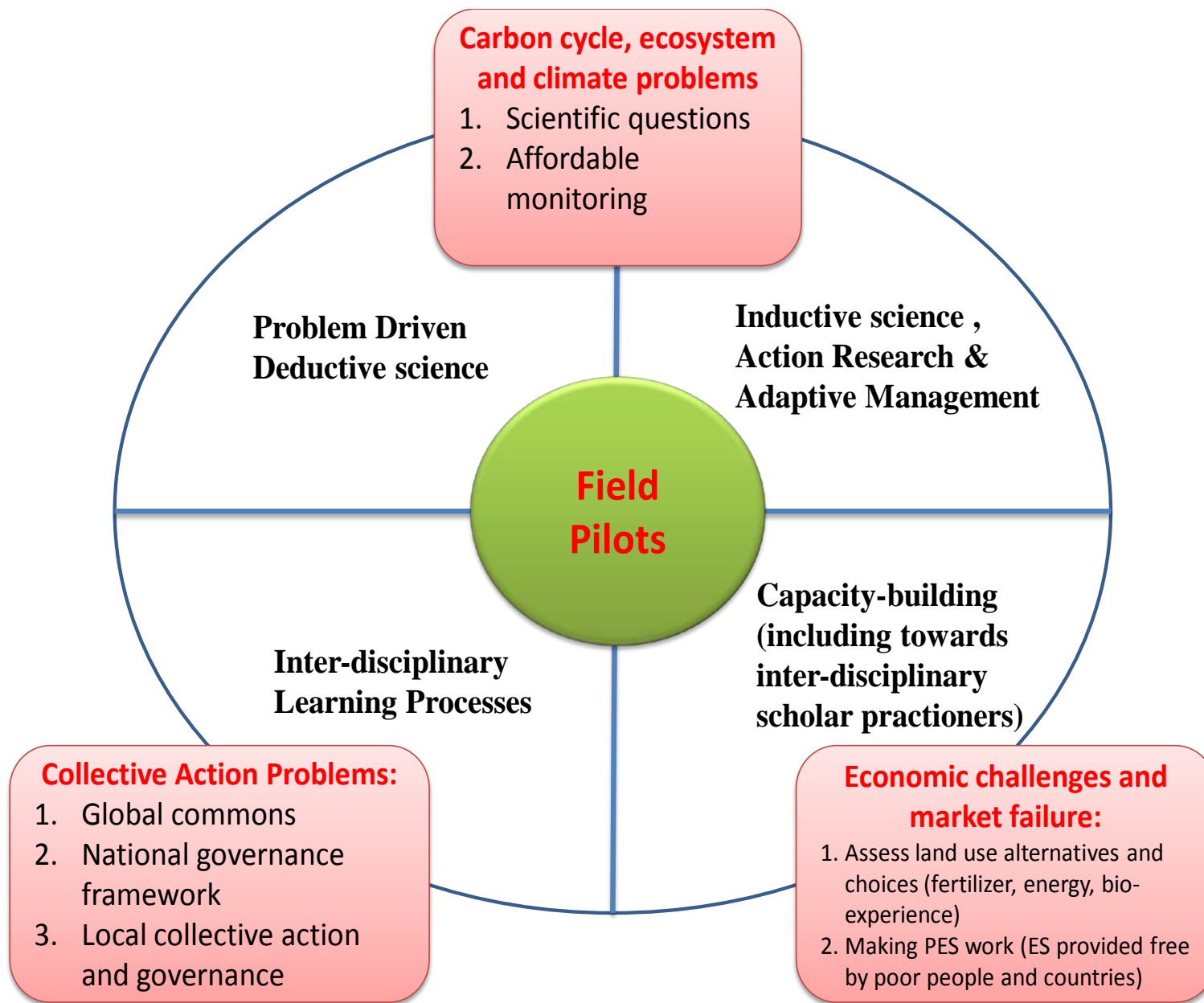
- Development of appropriate climate change mitigation and adaptation strategies in forestry, other land use, ecosystems and biodiversity management
- Assessment of climate change impact and vulnerability on ecosystems and livelihoods under REDD initiatives
- Policy and legal framework analysis of climate change adaptation and mitigation on economic efficiency and ecological effectiveness

The audience was challenged to identify research partners. It was important to form networks as well as extend the collaboration with non-CCIAM partners. It was expected that the workshop

come up with possible recommendations on long term collaboration, running short course and staff exchange programmes

Professors Maliondo, Child and Hofstad then presented a conceptual mode which built on what Prof. Hofstad had suggested earlier, that interdisciplinary working groups should address three main topics: 1) Monitoring and satellite imagery; 2) Increase agricultural production, reduce emissions; 3) Governance: how do institutions handle problems of distributing profits.

The recommended conceptual mode compiled and presented by Prof. Child now focused on three parts, see Figure on next page.



Prof. Brian Child explained that the conceptual mode needed to integrate the three areas aiming at solving field problems. After a plenary debate and discussion, the conceptual mode was endorsed.

Four working groups were then convened in the afternoon to discuss the conceptual mode and to recommend issue priorities under 1) Collective Action Problems, 2) Carbon cycle, ecosystem and climate problems and 3) Economic challenges and market failures. The working groups were also challenged to address REDD related concept notes and/or tentative project proposals for CCIAM and to provide recommendations about the way forward. The next day, each working group would present recommendations in the plenary session for discussions and to reach conclusions. Thereafter, a merging of what was agreed would be presented in plenary for final discussions and deliberations for a set of common priorities and recommendations to be made. There would also be opportunities to present project concept notes or even brief project proposals for the CCIAM programme during the workshop or later this autumn.

The session ended at 17:30.

## 5. THURSDAY 3 SEPTEMBER

### Group work presentations, discussions and deliberations of thematic areas

The plenary session started with presentations of four groups followed by discussion. Some of the questions, comments and responses are reflected below.

Questions/Comments	Response/Remarks
Why confine ourselves to the three grouped boxes as we will tend to think individually as opposed to inter-disciplinary?	
CCIAM has developed a project document; how can we expect the group to add input? Do the workshop participants represent the other partners? Has the document been approved by the Embassy?	The project document invites input from the workshop participants. However, most of participants have not seen the project document.
Issues are too ambitious to be accommodated by the programme.	Resources are limited but many projects can be identified and carried out. The point is to capture the key messages
Bench mark versus baseline on deforestation and degradation	What we have now is the baseline (identify forest cover). We need both bench mark and baseline. Clarification on terminology in relation to REDD is required (baseline vs benchmark)
NGOs can facilitate research depending on the situation on the ground.	NGOs normally work with village leaders and this has sustainability implications once the NGO leaves the community. The participatory approach is likely to be sustainable as it is built from the household level.
Remote sensing vs ground truth methods involving communities	
NGOs provide employment to MSc students. Data required is not only to collect carbon	
Need to see the role of NGOs in REDD implementation	

A summary of the working group's contributions and their prioritizations of thematic areas are in the table below:

<b>1<sup>st</sup> Thematic Area: Carbon cycle, ecosystem and climate problems (CC)</b>	<b>2<sup>nd</sup> Thematic area: Economic Challenges to Market Failure (EC)</b>	<b>3<sup>rd</sup> Thematic area: Collective Action Problems (CAP)</b>
Issues:	Issues:	Issues:
In order to ease comparison, develop a national land classification scheme that is consistent	Valuation for various scenarios to be able to make decisions on whether to leave trees standing or to cut them.	Streamline forest services under the same umbrella for PES to work
Describe/Analyze vegetation classes and quantify ecosystem carbon in each land cover type	How to operationalize Payment for Environmental Services (PES) in Tanzania	Strengthen capacity for participatory management rather than representative resource management
Develop models for estimating C stocks and map the C distribution in different land cover types representative of various vegetation classes and soils	Optimize land under forest cover, taking into consideration other land uses particularly crop farming and livestock keeping.	Assess the impact of various interventions e.g. licensing procedures which emphasise revenue collection rather than conservation
Efficient and legitimate monitoring and reporting carbon & verification (MRV)	Basic information acquisition, socio-economics and livelihoods in general	Understanding REDD processes
	PES (studies) – how can they change behaviour of people?	Analysis to fit different groups of people (focusing on pastoralists) under the REDD framework.
	What additional values does REDD bring to the already existing system	Tenure of resources
Baseline information on land use systems and their relation to ecosystem services including carbon	Economic analysis of REDD vs. other land use options	Review and collect lessons on the current management system
Optimize land-use under forest cover taking into consideration other land uses and other external effects	Valuation of carbon	How can we reduce emission without causing negative impacts on the livelihoods of people
Addressing drivers of deforestation and forest degradation	Analysis of REDD impacts on pastoralists' livelihoods in particular	How can we manage livestock without causing negative impact on environment and other land uses
Which ecosystem to focus on?	Baseline: How do we capture baseline for livelihoods?	Win-win-win situation: How to ensure this under REDD
Cost and accuracy of remote sensing and on the ground by communities	Land use approach where the land is allocated to a whole village land	How should REDD funds (+ information) flow? How will funds be distributed? Analysis at all levels is needed. How to involve communities in the



		whole process? Institutions at different levels are needed to ensure benefits to the end users. Tenure rights and how to avoid land grabbing
	Basic information acquisition, socio-economic and livelihoods in general	
	PES (studies) – how can they change behaviour of people?	
Climate change research (dynamical and statistical modelling) and impacts on different sectors	What additional values does REDD bring to the already existing system	
	Economic analysis of REDD vs. other land use options.	
	Modalities of different PES schemes	
	Awareness and knowledge of the concept of PES in the communities	
Knowledge and awareness of carbon storage and carbon cycle in communities	Alternative to forest products and how to address credit shortage	
	The chain of carbon market – how is it going to operate from the local to the global level	Institutional and capacity needed to address climate change
Standardized methodology to measure carbon stock	The risk associated for the communities in the implementation of REDD; market failure and natural hazards	Coordinated policies of climate change
	Tenure rights related to PES	What has failed in the previous conservation policies – lesson learnt from CDM, etc
		Revenue collection/benefit sharing at national and local levels

Recommended research themes were, with reference to Carbon Cycle, Ecosystem and Climate Problems (CC), Economic Challenges to Market Failure (EC) and Collective Action Problems (CAP):

- Policy and legal framework analysis. CAP
- Regeneration of indigenous forest species in Tanzania with the use of seeds and other methods. CC
- Measurement of biodiversity. CC
- Measures against forest threats, e.g. forest fires. CC
- Carbon mapping. CC

- Governance and how it operates at different levels. CAP
- Land-use and quantification of carbon sequestration/stock and greenhouse gases. CC
- Ethnographic studies of local communities and their Interaction with NGOs. EC

Recommended capacity building for the same themes includes:

- Climate change modelling. CC
- Collaboration with NGOs on climate change issues. CAP
- Sustainable land-use planning at district and local levels. CAP
- Long-term training and evaluative research. CAP

### **Deliberations and final conclusions and recommendations**

After the presentations and subsequent discussion, the workshop participants agreed on prioritizations of thematic areas as in the following Table.

**Prioritizations of thematic areas: Conclusions from the working group’s contributions**

<b>1<sup>st</sup> thematic Area: Carbon Cycle, ecosystem and climate problems (CC)</b>	<b>2<sup>nd</sup> Thematic area: Economic Challenges to Market Failure (EC)</b>	<b>3<sup>rd</sup> Thematic area: Collective Action Problems (CAP)</b>
Issues:	Issues:	Issues
Develop a national land classification scheme that is consistent and can be used as comparison	Valuation for various scenarios to be able to make decisions on whether to leave trees standing or to cut them	Streamline forest services under the same umbrella for PES to work
Describe/analyse vegetation classes and quantify ecosystem carbon in each land cover type	How to operationalise Payment for Environmental Services (PES) in Tanzania	Strengthen capacity for participatory management rather than representative resource management
Develop models for estimating C stocks and map the C distribution in different land cover types representative of various vegetation classes and soils	Optimize land under forest cover, taking into consideration other land uses, particularly crop farming and livestock keeping	Assess the impact of various interventions e.g. licensing procedures which emphasise revenue collection rather than conservation.
Efficient and legitimate monitoring and reporting carbon & verification (MRV)	Basic information acquisition, socio-economics and livelihoods in general	Understanding REDD processes
	PES (studies) – how can they change behaviour of people?	Analysis to fit different groups of people (focusing on pastoralists) under the REDD framework.
	What additional values does REDD bring to the already existing system	Tenure of resources
Baseline information on land use systems and their relation to ecosystem services including	Economic analysis of REDD vs. other land use options	Review and collect lessons on the current management system

carbon		
Optimize land-use under forest cover taking into consideration other land uses and other external effects	Valuation of carbon	How can we reduce emission without causing negative impacts on the livelihood of people
Addressing drivers of deforestation and forest degradation	Analysis of REDD impacts on pastoralists' livelihoods in particular	How can we manage livestock without causing negative impact on environment and other land uses?
Which ecosystem to focus on?	Baseline: How do we capture baseline for livelihoods?	Win-win-win situation: How to ensure this under REDD
Cost and accuracy of remote sensing and on the ground by communities	Land use approach where the land is allocated to a whole village	How will REDD funds (+ information?) flow? How will it be distributed? Analysis at all levels is needed How to involve communities in the whole process What institutions at different levels are needed to ensure benefits to the end users Tenure rights and how to avoid land grabbing
	Basic information acquisition, socio-economics and livelihoods in general	
	PES (studies) – how can it change behaviour of people?	
Climate change research (dynamical and statistical modeling) and impacts on different sectors	What additional values does REDD bring to the already existing system	
	Economic analysis of REDD vs. other land use options	
	Modalities of different PES schemes	
	Awareness and knowledge of the	

	concept of PES in the communities	
Knowledge and awareness on carbon storage and carbon cycle in communities	Alternative to forest products and how to address credit shortage	
	The chain of carbon market – how is it going to operate from the local to global level	Institutional and capacity needed to address Climate Change
Standardized methodology to measure carbon stock	The risk associated for the communities in the implementation of REDD; market failure and natural hazards	Coordinated policies of climate change
	Tenure rights related to PES	What has failed in previous conservation policies – lesson learnt from CDM, etc
		Revenue collection/Benefit sharing at national and local levels

## **6. CLOSING CEREMONY**

With the prioritization of recommendations of the thematic areas the Chair, Prof Maliondo, thanked the workshop participants for setting the basis for collaboration. The workshop which focused on REDD research in Tanzania, had a number of objectives but most important was the opportunity for synergy and networking. The four days consisted of hard work, heated discussions and debates on mechanisms, challenges and the way forward towards implementing REDD in Tanzania. Prof Maliondo expressed the hope that performance under REDD will help address climate change impacts, adaptation and mitigation in Tanzania under the agreement between Norway and Tanzania. The workshop brought together more than 80 scholars, NGOS and media from Kenya, Uganda, Norway, USA and other countries. The challenges of governance and monitoring, capacity building and participation were discussed. Group discussions led to research areas under which different research topics were highlighted. The workshop increased awareness on climate change and REDD in particular, cultivated cooperation and enabled participants to identify contacts for drafting concept notes for implementation under CCIAM and for future cooperation. The secretariat would prepare the workshop proceedings before the onset of CCIAM. Scholars were encouraged to sustain impetus on climate change and he trusted that governments, institutions and donors would remain committed to facilitate cooperation and project implementation.

Prof. Larsen thanked SUA professors Maliondo and Matovelo, and Professor Child from UF, for the good cooperation. There has been a close and fruitful partnership between UMB and SUA over many years, and he appreciated that the cooperation now also included the UF. Professor Larsen also thanked Prof. Kajembe, who was one of his former students at UMB/Noragric, for his fine work as facilitator during the group work and subsequent plenary sessions.

SUA's Director for Research and Postgraduate Studies, Professor Matovelo, welcomed the Guest of Honour, Dr. Felician Kilahama, Director of Forestry and Beekeeping, Ministry of Natural Resources and Tourism (MNRT) and thanked him for dedicating his precious time to attend the workshop and to address the participants on this occasion (see Appendix V for the whole speech).

The Guest of Honour, Dr. Felician Kilahama, then addressed the participants and expressed his appreciation for the fact that the workshop had brought together so many disciplines and experiences from scholars from many countries. The full speech can be found in Appendix VI.

The workshop was closed at 13.28.

**APPENDIX I****List of participants**

S/N	Name	Institution	Contact Address & Telephone	Email address
1	Sawe, C.T.	MNRT, Morogoro	Box 289, Morogoro Tel: 0787 738930	<a href="mailto:Sawe59@yahoo.com">Sawe59@yahoo.com</a>
2	Doris S. Matovelo	SUA, Morogoro	Box 3022, Morogoro Tel: 023 2604639	<a href="mailto:dmatovelo@suanet.ac.tz">dmatovelo@suanet.ac.tz</a> or <a href="mailto:dmatovelo@yahoo.com">dmatovelo@yahoo.com</a>
3	Wayne Lotter	Songea	Box 552, Songea Tel: 0784 988838	<a href="mailto:wlotter@gauff.com">wlotter@gauff.com</a>
4	Krissie Clark	PAMS Foundation, Dar es Salaam	Box 32095, Dar es Salaam Tel: 0764 807889	<a href="mailto:krissie@pamsfoundation.com">krissie@pamsfoundation.com</a>
5	G.G. Kimbi	SUA, Morogoro	Box 3044, Morogoro Tel: 0754 388148	<a href="mailto:gkimbi@yahoo.com">gkimbi@yahoo.com</a>
6	Amon P. Maerere	SUA, Morogoro	Tel: 0754 863202	<a href="mailto:maerere@suanet.ac.tz">maerere@suanet.ac.tz</a>
7	Vedasto Msungu	ITV & Radio One	Box 159, Iringa Tel: 0784 640700	<a href="mailto:vmsungu@yahoo.com">vmsungu@yahoo.com</a>
8	Christina Voigt	Faculty of Law, University of Oslo, Norway,	0047 66913314	<a href="mailto:christina.voigt@jus.uio.no">christina.voigt@jus.uio.no</a>
9	Felician Kilahama	Forestry and Beekeeping	Box 426, Dar es Salaam	<a href="mailto:fkilahama@gmail.com">fkilahama@gmail.com</a>
10	Paul Vedeld	UMB/Noragric	UMB/Noragric, Ås, Norway Tel. +47-64965307	<a href="mailto:palve@umb.no">palve@umb.no</a>
11	Brian Child	University of Florida, USA	University of Florida, USA Tel: 352 392 0494	<a href="mailto:bchild@africa.ufl.edu">bchild@africa.ufl.edu</a>
12	Louis Verchot	CIFOR	Box 0113 BOCBD, Bogn 1600 Indonesia	<a href="mailto:l.verchot@cgiar.org">l.verchot@cgiar.org</a>
13	Jumanne M. Abdallah	SUA	Box 3011, SUA Tel: 0787 255301	<a href="mailto:abdallah@suanet.ac.tz">abdallah@suanet.ac.tz</a>
14	Rogers E. Malimbwi	SUA	Box 3013, Morogoro Tel: 0754 305950	<a href="mailto:remalimbwi@yahoo.com">remalimbwi@yahoo.com</a>
15	Ndumbaro Festo J.	UDSM	Box 35049, Dar es Salaam Tel: 0759 330818	<a href="mailto:fndumbaro@yahoo.co.uk">fndumbaro@yahoo.co.uk</a>
16	Ernest Mauya	SUA, Morogoro	Box 3012, Morogoro Tel: 0784 687590	<a href="mailto:ernestmanuya@yahoo.com">ernestmanuya@yahoo.com</a>
17	Vedasto R.M. Muhikambe	SUA, Morogoro	Box 3151, Morogoro Tel: 0755 024244	<a href="mailto:muhika@suanet.ac.tz">muhika@suanet.ac.tz</a>
18	Simon Salatiel Moyo	SUA, Morogoro	Box 3024, Morogoro Tel: 0754 825763	<a href="mailto:salatielmoyo@yahoo.com">salatielmoyo@yahoo.com</a>
19	S. Augustino	SUA, Morogoro	Box 3014, Morogoro Tel: 0757 685064	<a href="mailto:sanhemati@yahoo.com">sanhemati@yahoo.com</a> or <a href="mailto:snyefwe@suanet.ac.tz">snyefwe@suanet.ac.tz</a>

20	Moses Kahale	SUA, Morogoro	Box 3009, Morogoro Tel: 0754 972840	<a href="mailto:myoka@suanet.ac.tz">myoka@suanet.ac.tz</a>
21	Emmanuel Joachim Luoga	SUA, Morogoro	Box 3013, Morogoro Tel:0688213333/0768213333	<a href="mailto:eluoga@suanet.ac.tz">eluoga@suanet.ac.tz</a> <a href="mailto:eluoga@gmail.com">eluoga@gmail.com</a>
22	Eliakimu Zahabu	SUA, Morogoro	Box 3013, Morogoro Tel: 0787-316933	<a href="mailto:zahabue@yahoo.com">zahabue@yahoo.com</a>
23	Gerald Kamwenda	IRA, University of Dar es Salaam	Box 11979 Dar es salaam Tel: 0713-325708	<a href="mailto:kamwendabros@gmail.com">kamwendabros@gmail.com</a>
24	Pius Yanda	University of Dar es Salaam	Box 35097, Da re Salaam Tel: 0754 265580	<a href="mailto:yanda@ira.udsm.ac.tz">yanda@ira.udsm.ac.tz</a>
25	Prof. George C. Kajembe	SUA, Morogoro	Box 3013, Morogoro Tel: 0754 497530	<a href="mailto:kajembe@suanet.ac.tz">kajembe@suanet.ac.tz</a>
26	Cellina L. Mongo	SUA, Morogoro	Box 3013, Morogoro Tel: 0754 476452	<a href="mailto:mongolina2004@yahoo.com">mongolina2004@yahoo.com</a>
27	Phillip K. Mwanukuzi	University of Dar es Salaam	Box 35049, Dar es Salaam Tel: 0754 018648	<a href="mailto:pmwanukuzi@udsm.ac.tz">pmwanukuzi@udsm.ac.tz</a>
29	Francis Faustin, Laswai	SUA, Morogoro	Box 3010, Morogoro Tel: 0784 698140 or 0715 698140	<a href="mailto:laswayf@yahoo.co.uk">laswayf@yahoo.co.uk</a>
29	Isaya Yerima Mwangwone	Olmotonyi	Box 843, Arusha Tel: 0754 274459/255 0272509637	<a href="mailto:Mnangwone2650@yahoo.com">Mnangwone2650@yahoo.com</a>
30.	Chelestino Balama	TAFORI	Box 1854, Morogoro Tel: 0784 404873	<a href="mailto:balamapc@yahoo.co.uk">balamapc@yahoo.co.uk</a>
31	Yassin Mkwizu	Royal Norwegian Embassy	Box 2646, Dar es Salaam Tel: 0782 777025	<a href="mailto:ybm@mfa.no">ybm@mfa.no</a> <a href="mailto:yassinbm@gmail.com">yassinbm@gmail.com</a>
32	Paul Kusolwa	SUA, Morogoro	SUA, Morogoro	<a href="mailto:kusolwa@gmail.com">kusolwa@gmail.com</a>
33	Claude Mung'ong'o	IRA, UDSM	Box 35097, Dar es Salaam Tel: 0754 566530	<a href="mailto:claudem@ira.udsm.ac.tz">claudem@ira.udsm.ac.tz</a>
34	Theron Morgon – Brown	University of Florida, USA	803 O1150 Ave, NE, Dondon, or 97414 +255(0)788 183309	<a href="mailto:kimbiage@ufl.edu">kimbiage@ufl.edu</a>
35	P.T.K. Munishi	SUA, Morogoro	Box 3010, Morogoro Tel : 0754 591849	<a href="mailto:Pmunishi2001@yahoo.com">Pmunishi2001@yahoo.com</a>
36	J.F. Kessy	SUA, Norogoro	Box 3011, SUA Tel: 0754 948708	<a href="mailto:jfkessy@yahoo.com">jfkessy@yahoo.com</a>
37	Yonika M. Ngaga	SUA, Morogoro	Box 3011, Morogoro Tel : 0754 483935	<a href="mailto:yngaga@yahoo.co.uk">yngaga@yahoo.co.uk</a> <a href="mailto:ngaga@ngaga@suanet.ac.tz">ngaga@ngaga@suanet.ac.tz</a>
38	Mathew Mpanda	ICRAF	ICRAF – Tanzania Tel: 255 786 106500	<a href="mailto:Mshauri2005@yahoo.com">Mshauri2005@yahoo.com</a>
39.	Ole Hofstad	UMB/INA	UMB/INA, Ås, Norway	<a href="mailto:ole.hofstad@umb.no">ole.hofstad@umb.no</a>



40	Shadrack Mwakalila	WWF – TCO	Box 35049, Dar es Salaam Tel : 0713 271299	<a href="mailto:smwakalila@wwftz.org">smwakalila@wwftz.org</a>
41	Said Iddi	SUA, Morogoro	Box 3014, Morogoro Tel: 0774 374879/0784 520505	
42	Sammy Carsan	ICRAF	Vix 30677, Nairobi Tel: +254 733 851611	<a href="mailto:S.carsan@cgiar.org">S.carsan@cgiar.org</a>
43	G.E. Mbeyale	SUA, Morogoro	Box 3013, Morogoro Tel: +255 754 818514	<a href="mailto:gimbage@yahoo.com">gimbage@yahoo.com</a>  <a href="mailto:mbeyale@suanet.ac.tz">mbeyale@suanet.ac.tz</a>
44	Lars Olav Eik	UMB/Noragric	UMB/Noragric, Ås, Norway Tel. +47-64965315	<a href="mailto:lars.eik@umb.no">lars.eik@umb.no</a>
45	Geoge Migunga	SUA	Box 3012, Morogoro Tel: 0784 608825	<a href="mailto:gmigunga@suanet.ac.tz">gmigunga@suanet.ac.tz</a>
46	Eranous Kaijage	Clinton Foundation	Box 77277, Dar es Salaam Tel: 0712 682885	<a href="mailto:ekaijage@clintonfoundation.org">ekaijage@clinton foundation</a>
47	Peter Nicky Mlonganile	Tanzania Meteorological Agency	Box 3056, Dar es Salaam Tel: 022 2460772	<a href="mailto:pmlanganile@yahoo.co.uk">pmlanganile@yahoo.co.uk</a>
48	Faustine Fidelis Tilya	Tanzania Meteorological Agency	Box 3056, Dar es Salaam Tel: 22 2460772	<a href="mailto:fitilya@mateo.go.tz">fitilya@mateo.go.tz</a>
49	Nuhu Swalehe	Green Resources As	Box 171, Pangani	<a href="mailto:Nuhugri2004@yahoo.com">Nuhugri2004@yahoo.com</a>
50	Seif S. Madoffe	SUA, Morogoro	Box 3010, Morogoro Tel: 0754 362337	<a href="mailto:madoffe@suanet.ac.tz">madoffe@suanet.ac.tz</a>
51	Saidi Baruti Mbwana	Wildlife Conservation Society of Tanzania	Box 70919 Dar es Salaam Tel: 0754 809547	<a href="mailto:Sb-mbwana@yahoo.co.uk">Sb-mbwana@yahoo.co.uk</a>
52	Jayro Aolos Matovelo	SUA, Morogoro	Tel: 023 2604388/2603511	<a href="mailto:matovelo@suanet.ac.tz">matovelo@suanet.ac.tz</a>
53	Charles Meshack	TFCG	Box 23410, Dar es Salaam Tel: +255 22 2669007 or 255 754 380603	<a href="mailto:cmeshack@tfcg.or.tz">cmeshack@tfcg.or.tz</a>
54	Godwin Kowero	African Forest Forum (AFF)	Box 30677 – 00100, Nairobi, Kenya Tel: +254 20 7224203	<a href="mailto:g.kowero@cigiar.org">g.kowero@cigiar.org</a>
55	Evarist Sabas	TAFORI	Box 1854, Morogoro Tel: 0784 602793	<a href="mailto:tafori@morogoro.net">tafori@morogoro.net</a>
56	Joanna Boddens - Hosang	UMB/Noragric	UMB/Noragric, Ås, Norway Tel: +47 64965092	<a href="mailto:Joanna.boddens-hosang@umb.no">Joanna.boddens-hosang@umb.no</a>
57	Thor S. Larsen	UMB/Noragric	UMB/Noragric, Ås, Norway: Tel. 47 90929282	<a href="mailto:thor.s.larsen@umb.no">thor.s.larsen@umb.no</a>
58	Fred Midtgaard	UMB/ INA	UMB/INA, Ås, Norway Tel: 0788 470028, or	<a href="mailto:fred.midtgaard@umb.no">fred.midtgaard@umb.no</a>

			+4794842184	
59	A.N. Songorwa	SUA, Morogoro	Box 3237, Morogoro Tel: 0754 877019	<a href="mailto:bhugoji@yahoo.com">bhugoji@yahoo.com</a>
60	Luther L.L.L. Lulandala	SUA, Morogoro	Box 3010, Morogoro Tel: 0754 458783	<a href="mailto:lulandala@suanet.ac.tz">lulandala@suanet.ac.tz</a>
61	Ladislaus Nshubumuki	TAFORI	Box 1854, Morogoro 023 2613725, 023 2613398	<a href="mailto:tafori@morogoro.net">tafori@morogoro.net</a>
62	M.J.F. Lwehabura	SUA, Morogoro	Tel: 0754 015328	<a href="mailto:julwe@yahoo.com">julwe@yahoo.com</a>
63	Emmanuel Fred Nzunda	SUA, Morogoro	Box 3013, Morogoro Tel: 9765 815265	<a href="mailto:emmanuelnzunda@yahoo.com">emmanuelnzunda@yahoo.com</a>
64	Vicent Vyamana	CARE International, Tanzania	Box 289, Morogoro	<a href="mailto:vyamana@yahoo.com">vyamana@yahoo.com</a>
65	Festo Liheta	SUA, Morogoro	Box 3022, Morogoro Tel: 0784 783837	<a href="mailto:festo@suanet.ac.tz">festo@suanet.ac.tz</a>
66	Robert B. Kiunsi	Ardhi University	Box 35176, Dar es Salaam Tel: 0784 432121	<a href="mailto:kiunsi@aru.ac.tz">kiunsi@aru.ac.tz</a>
67	Signe Howell	Dept. Social Anthropology, University of Oslo	University of Oslo, Norway Tel: +47 22855620	<a href="mailto:s.l.howell@sai.uio.no">s.l.howell@sai.uio.no</a>
68	Desmond McNeill	SUM, University of Oslo	Box 116 Blindern, 0317 Oslo, Norway Tel: 0047 22858991	<a href="mailto:desmond.mcneill@sum.uio.no">desmond.mcneill@sum.uio.no</a>
69	Therese Dokken	UMB/IØR	UMB/IØR, Ås, Norway Tel: +4790536572	<a href="mailto:Therese.dokken@umb.no">Therese.dokken@umb.no</a>
70	Nazael Amos Madalla	SUA, Morogoro	Box 3004, Morogoro Tel: 0769 220212	<a href="mailto:nmadalla@suanet.ac.tz">nmadalla@suanet.ac.tz</a> <a href="mailto:nmadalla@gmail.com">nmadalla@gmail.com</a>
71	Jabir A. Jabir	SUA, Morogoro	Box 3000, Morogoro Tel: 0773 718725	<a href="mailto:jabirj@suanet.ac.tz">jabirj@suanet.ac.tz</a>
72	Evaristo J. Liwa	Ardhi University	Box 35176, Dar es Salaam Tel: 0784 303056	<a href="mailto:liwa@aru.ac.tz">liwa@aru.ac.tz</a>
73.	Anthony Zozimus Sangeda	SUA, Morogoro	Box 4012, Morogoro Tel: 0784 541833	<a href="mailto:sangeda@yahoo.com">sangeda@yahoo.com</a>
74	Heini Vihemaki	ICRAF	ICRAF, UN Avenue, Gigiri, Nairobi Tel: +254 718 771502 or 020 772 4124	<a href="mailto:h.vihemaki@cgiar.org">h.vihemaki@cgiar.org</a>
75	Damas Philip	SUA, Morogoro	Box 3007, Morogoro Tel: 255 23 2603415	<a href="mailto:philip@suanet.ac.tz">philip@suanet.ac.tz</a>
76	Kingiri Senelwa	Moi University, Kenya	Box 3900 – 30100, Eldoret, Kenya Tel: +254 722 430 883	<a href="mailto:ksenelwas@yahoo.co.uk">ksenelwas@yahoo.co.uk</a>
77	Hamza Athuman Kabelwa	Tanzania Meteorological Agency	Box 3056, Dar es Salaam Tel: +255 222460735	<a href="mailto:hkabelwa@meteoo.go.z">hkabelwa@meteoo.go.z</a> <a href="mailto:hkabelwa@hotmail.com">hkabelwa@hotmail.com</a>

78	Lawrence Mbwambo	SUA, Morogoro	SUA, Morogoro Tel: 0754 439576	<a href="mailto:lrnwambo@yahoo.com">lrnwambo@yahoo.com</a>
79	Patrick P. Mwangingo	SUA, Morogoro	Box 3038, Morogoro Tel: 023 2603404/0716 070045	<a href="mailto:pmwangingo@yahoo.com">pmwangingo@yahoo.com</a>
80	Fadhili Hamza Mgumia	SUA, Morogoro	Box 3013, Morogoro Tel: 0754 475624	<a href="mailto:fmgumia@yahoo.com">fmgumia@yahoo.com</a>
81	Deo D. Shirima	SUA, Morogoro	Box 3010, Morogoro Tel: 0784 783700	<a href="mailto:sengua2002@yahoo.com">sengua2002@yahoo.com</a>
82	Jeddy Emanuel Lema	Maliasili na Utalii Idara ya Misitutu	Box 9372, Dar es Salaam Tel: 0754 267 892	<a href="mailto:jedy@uahoo.com">jedy@uahoo.com</a>
83	Libuhi Salehe	ITV	Box 189, Iringa Tel: 0714 438282	<a href="mailto:Libuhi2000@yahoo.com">Libuhi2000@yahoo.com</a>
84	Jaclyn Hall	University of Florida	Box 3779 NW 27 <sup>th</sup> St. Gainesville Fl 32605, Tel: 0001 823 875 7676	<a href="mailto:jaclynha@ufl.edu">jaclynha@ufl.edu</a>
84	Gadosa Lamtey	The Guardian	Box 31042, Dar es Salaam Tel: 0717 939893	<a href="mailto:Gadyz2@yahoo.com">Gadyz2@yahoo.com</a>
85	Alea M. Lwassy	WWF	Box 63117, Dar es Salaam Tel: 0784 700094/013 700094	<a href="mailto:alealowassary@yahoo.com">alealowassary@yahoo.com</a>
86	Abid Mohammed	TFCG	Box 23410, Dar es Salaam	

## APPENDIX II

### **Introduction and objectives of the workshop**

By Prof. Thor S. Larsen, UMB/Noragric, Norway

Honourable Minister, Prof. Maghembe

Vice Chancellor at SUA, Prof. Monela

Mr. Mrwizu from the Royal Norwegian Embassy

Dear colleagues and friends from Africa and elsewhere, who are with us here today.

The title of this workshop is *“Developing the science, economics and governance of ecosystem service payments in climate-prone socio-economies in Africa: Getting scholars and practitioners together for research and capacity building that matters. A contribution to Norway’s support of REDD.”*

Pretty long title for an event like this, but it has its rationale. When the Sokoine Agricultural University (SUA), the University of Florida and we at UMB started the preparations for a REDD planning workshop, we planned for participation from African universities and institutions, and from international institutions in Africa and elsewhere, who had strong track records of interdisciplinary research and training in developing countries. And as Prof. Matovelo wrote to you some weeks ago: *“The workshop is essentially on REDD-related research and capacity building: Opportunities for synergy with other Initiatives...”*

Prof. Matovelo has also emphasised that this workshop will provide opportunities for sensitizing potential actors. That is indeed important. I have been educated and trained as an ecologist, and my particular interests are in management and sustainable use of wildlife and other natural resources. But after more than 40 years in research and teaching, and with field experiences ranging from the High Arctic, to former East Bloc countries, to tropical countries, I have learned to recognize that the important interactions between economic, ecological and social systems are a prerequisite for sustainable development. Sustainable development paths require that healthy ecosystems are maintained, but also that options are socially desirable and economically viable. Options must also be technologically feasible and supported by sufficient institutional capacity. Decisions must be recognised as politically legitimate. Proper governance is crucial. I therefore need to work together with colleagues who have expertise in other disciplines than my own, in order to learn and understand more and to do some sensible work which can contribute to recommendations for the way forward. Interdisciplinary approaches are particularly important today when climate change may have devastating consequences for poor and marginalized people who depend upon natural resources for their livelihood and survival.

This workshop will therefore start with presentations of some important projects and programmes which are being implemented or which are in the pipeline and which are addressing the impacts of climate change, such as:

1): A new programme “Climate Change Impacts, Adaptation and Mitigation in Tanzania (CCIAM)” has been under preparation for some time. Institutions involved in Tanzania are the SUA, University of Dar es Salaam (UDSM), Ardhi University (ARU) and Tanzania Meteorological Agency (TMA). The Norwegian University of Life Sciences (UMB) will

serve as an anchoring institution in the North. We will hear more about this very challenging programme today.

2): University of Florida is working with universities and colleges in southern and East Africa on "Transforming CBNRM education in southern Africa," and is cooperating closely with regional CBNRM programmes, which are relevant in REDD contexts.

3): We will also hear about climate change mitigation related to Tanzanian forests, about remote sensing, about CIFOR's project on REDD, about poverty and sustainable development impacts of REDD architecture, about legal challenges related to REDD, about forest monitoring and REDD, about competence and capacity building under the PANTIL programme, about payments for ecosystem services, and much, much more.

The next step will identify gaps in research and knowledge. We will present and discuss topics of particular relevance and importance for climate change challenges and REDD, and – in my view – the impacts of climate change upon local people who depend so much upon ecosystem services and environmental health. Our intention and hope is also that the workshop can contribute to inter-African learning processes including situation and problem analyses.

These sessions will hopefully kick-start discussions about priorities in research, training and other activities. The workshop should be in a good position to discuss opportunities for cooperation and partnerships with like-minded stakeholders. On the workshop's third day, i.e. on Wednesday, we foresee some very intense and fruitful plenary group discussions, thereafter we form working groups which break up in sessions to explore partnerships and which start preparations of joint concept notes or even project proposals. Together we should encourage and facilitate synergy and win-win opportunities between stakeholders who share similar visions and have comparable objectives. We must also work together for ongoing and planned activities to be harmonized so that we can avoid re-invention of wheels.

Together we face many interesting and challenging opportunities. The first plans for this workshop suggested only about 15 participants. According to the last list I saw we are now more than 60. That is encouraging, but also challenging indeed. All in all, we hope that the participants can form new academic and professional alliances and together prepare for relevant REDD related research, education and action. When we wrap up the workshop on Thursday afternoon, I hope it has served as a catalyst for development of new project concepts and proposals and that we together will be able to present a roadmap for further collaboration with some good recommendations for the way forward.

Thank you, and good luck with the days ahead.

### **APPENDIX III**

**A note of welcome by Prof. Gerald C. Monela, Vice Chancellor, SUA, to the Guest of Honour, the Hon. Prof. Jumanne A. Maghembe (MP), Minister for Education and Vocational Training, at the opening of the workshop on REDD-related research and capacity building in Tanzania held at the Hotel Oasis, Morogoro, 31 August to 3 September 2009.**

Distinguished Guest of Honour, Minister for Education and Vocational Training, Honourable Prof. Jumanne A. Maghembe (MP), Your Excellency, Representative from the Royal Norwegian Embassy, Director of Forestry & Beekeeping, Dr Felician B. Kilahama, Representatives from regional and international research organizations, Representatives from NGOs, workshop participants, invited guests, media, Ladies and Gentlemen,

Good morning to you all.

Honourable Guest of Honour, I wish, on behalf of Sokoine University of Agriculture and on my own behalf, to welcome you very warmly, the Guest of Honour, to the University and to this ceremony, in particular. I wish, also, to express our deep appreciation to you, distinguished Guest of Honour, for accepting our invitation to officiate the opening of the workshop on REDD-related research and capacity building in Tanzania. We feel greatly honoured for the privilege to host you today. I am also pleased to extend a very warm welcome to the representatives from the Royal Norwegian Embassy and workshop participants from different countries to the Sokoine University of Agriculture and to this workshop. In the coming three days, workshop participants will discuss various topics on REDD-Related Research and Capacity Building in Tanzania focusing on Opportunities for Synergy with Other Initiatives. These topics are very relevant to current international discussions aimed at addressing the impacts of climate change.

Honourable Guest of Honour, this workshop brings on board representatives from different countries namely, Kenya, Uganda, Norway, USA, and the host Tanzania. Participants have come from various Universities; Norwegian University of Life Sciences (UMB), University of Florida (UF), Oslo University (OIU), UDSM, ARU, Moi, Makerere and the host SUA), research institutes (TMA, TAFORI, KEFRI, CIFOR and ICRAF), Tanzania government Ministries (MNRT, VPO (Environment), Non-government organisations are also represented and include the African Forest Forum, Clinton Foundation, WWF, TFCG, WCST and CARE.

Honourable Guest of Honour, Tanzania is one of the countries in Africa that are most vulnerable to climate change. Being one of the poorest countries in the world, its local communities and their environment are very susceptible to severe impact due to climate change. In many of these areas agriculture is already marginal, and growing seasons are expected to shorten as rainfall decline and become more erratic. Communities are therefore increasingly being forced to exploit unsustainably their surrounding natural forests and woodlands for sustenance of life leading to escalating deforestation and forest degradation. Since these forests and woodlands provide many environmental services that include carbon sequestration, water, and natural resources and biodiversity conservation, the loss of these ecosystems through deforestation and forest degradation is both of local and global significance.

Moreover, since deforestation and forest degradation activities are estimated to account for 18-20% of total global emissions from anthropogenic activities, reducing or arresting these activities may contribute to global climate change initiatives aimed at reducing greenhouse gas emissions. Yet despite various national and international commitments to reduce deforestation in the wider context, the task is proving very daunting and challenging. One of the initiatives under international discussion includes assigning economic values to some of these environmental services - including activities aimed at reducing C emissions, by establishing incentive schemes such as payment for environmental services (PES) to ensure sustainable management of these ecosystems. However, the PES concept is relatively new and very complex, and there are many issues that need to be addressed to make it workable for poor countries with limited financial and technical capacities and weak governance structures, as well as weak legal and policy frameworks.

Honourable Guest of Honour, environment in Tanzania and sustainable development efforts are severely affected by the impacts by climate change and climate variability. Fortunately, Tanzania is committed through various local and international initiatives to address the impacts of global warming, partly resulting from increased emission of Green-house Gases (GHC) largely caused by anthropogenic activities. As a case in point, Tanzania has signed the Kyoto Protocol which includes several activities aimed at minimising greenhouse gas emissions. However, since the Kyoto Protocol will end in 2012, other initiatives to succeed it are under serious discussions. One of these initiatives under discussion is the **Reducing Emissions of Greenhouse Gases from Deforestation and forest Degradation (REDD)**, with a potential to reduce by 18-20% global emissions from anthropogenic activities. However, because of the complexities of issues related to deforestation and forest degradation, and the paucity of scientific information to successfully implement it, the REDD initiative is being piloted in various tropical countries to obtain information on the factors which are likely to affect its potential for success.

Honourable Guest of honour, it is no accident therefore that Tanzania is one of the countries piloting REDD-related activities in various ecosystems, and through the support from the Royal Norwegian Government, the National REDD Framework has been developed. The National REDD initiative was launched on 24th August 2009, and various activities are planned to be embarked upon within this initiative, culminating into the National REDD Strategy in the next two years. These activities include setting up pilot areas in various forest ecosystems and conducting short-term in-depth studies on relevant topics. It is our expectation that this workshop will contribute some information towards the development of the National REDD Strategy.

Honourable Guest of Honour, there is a consensus that climate change, carbon markets and payment for ecosystem services are global issues that need urgent attention in order to address poverty, governance and environmental management in agriculturally and politically marginal areas. Addressing these complex issues will require integrated approaches for monitoring ecosystem services and governance arrangements including ability to effectively monitor the performance of various schemes to ensure equitability. It is therefore important to work out mechanisms to link the production of environmental services with payments.

For Africa, progress towards addressing climate change will require inter-African and international partnerships in research and capacity building. It is on this premise that the NORAGRIC at UMB, the University of Florida and Sokoine University of Agriculture are

organizing this workshop on REDD-related research and capacity building in Tanzania: The workshop provides an opportunity for participants with long track record of interdisciplinary expertise to share knowledge and experiences towards a better understanding of the potential of REDD Initiative.

Honourable Guest of Honour, during the workshop participants will address various issues with particular focus on:

- The science and economics of environmental services in climate-prone zones and particularly on carbon and Climate variability,
- Governance and performance monitoring,
- Research and capacity building,
- Methodologies of carbon sequestration estimation, monitoring, and reporting,
- Vulnerability assessment.

Honourable Guest of Honour, This workshop is timely and will serve as an input to the recently launched Tanzania National REDD Initiative. The REDD pilot initiative is supported by Royal Norwegian Government which is also sponsoring this workshop. Furthermore, this event comes shortly before the launching of a programme on Climate Change Impact, Adaptation and Mitigation (CCIAM). CCIAM is a collaborative research and training programme involving four Institutions in Tanzania (SUA, UDSM, and ARU & TMA) and the Norwegian University of Life Sciences and other research institutions in Norway. May I, on behalf of the collaborating Institutions, extend my appreciation to Royal Norwegian Government for this generous support.

In conclusion, it is therefore, anticipated that this workshop will act as a foundation and catalyst for the cooperation in developing research and training activities under the CCIAM programme. This workshop will not only contribute to inter-African learning processes including situational and problem analysis, but also provide recommendations on a roadmap for further collaboration and forging new regional and international collaborative research and training programmes.

Distinguished Guest of Honour, once again, I wish to thank you most sincerely for accepting to grace this occasion this morning. It is now my singular honour and privilege to invite you to address the audience before you and to open the workshop.

Thank you for your attention.



## APPENDIX IV

### **Statement from the Royal Norwegian Embassy at the opening of the REDD workshop at Sokoine University of Agriculture, 31 August 2009 by Yassin B. Mkwizu, Programme Officer (Environment, Natural Resources and Climate Change).**

Honourable Minister – Ministry of Education and Vocational Training , Vice Chancellor - Sokoine University of Agriculture (SUA), Directors, Professors, Scholars, Ladies and Gentlemen

It gives us great pleasure and honour to be given this opportunity to share with you a few words in the opening of this important REDD workshop. The topic of the workshop *‘Developing the science, economics, and governance of ecosystem services in Climate – prone social-economies in Africa: Getting scholars and practitioners together for research and capacity building that matters’* is of high relevance at this particular time, not only to both of our Governments, but also to the global community.

Climate change constitutes one of the biggest challenges the world is facing today. Various factors related to human development and the livelihood of our people are known to contribute towards Climate change. Challenges posed by climate change has necessitated intervention through programmes at various levels and by different stakeholders. This event we are starting today is a witness that researchers and practitioners are joining hands to address climate change.

In the past, most climate change programmes focused more on the emission contribution from the developed world as a result of industries and transportation systems. Not much attention was paid on the way developing countries contributed to the emission of greenhouse gases. Nowadays, however, developing nations are considered to be important partners in the climate change agenda. For example, the role they can play in reducing emissions from deforestation and forest degradation. As we are embarking on REDD discussions and what research areas could be of relevance, it may be worthwhile considering Climate change not only as a threat, but where possible, thinking of possible opportunities.

Tanzania has started a programme on Reduced Emissions from Deforestation and Forest Degradation (REDD). Various stakeholders will be involved in different ways and at various stages and levels. To ensure that the programme is done successfully, researchers and practitioners need to play a key role in conducting research which will help to inform and guide the programme. It is therefore worthwhile for stakeholders to sit together and discuss research issues which will be of relevance to the programme. We are very appreciative of the role that SUA has taken to facilitate discussion amongst this important group of participants on the REDD research agenda.

Norway has been, and will always be, a strong partner in supporting Tanzania development projects as well as research and training programmes. We are proud to be one of (and currently the main) supporters of the Tanzania REDD programme. We are happy to see the strong commitment to a process of building knowledge and awareness on the importance of forests to the global climate agenda through research.

We all know that deforestation is an important contributor to greenhouse gases, and that the increased concentration of these gases causes changes in the global climate. We also know

that developing countries like Tanzania are likely to suffer the most from such changes in climatic conditions as already evidenced in the increased problems linked to changes in weather patterns, like more droughts, more flooding, and more frequent extreme weather conditions. To successfully address such challenges, partnerships are needed and our two Governments have demonstrated that.

The partnership on climate and forests between Tanzania and Norway was signed last year, and it is a part of a larger global effort supported from Norway to help reduce deforestation globally. It is important to note that the support from Norway to REDD comes over and above our regular development assistance including support to research and training programmes already in place. Under this partnership, Norway is intending to support Tanzania with financial assistance of up to NOK 500 million to undertake various activities such as development of a national REDD strategy, REDD pilot projects, research and training, public private partnership projects, investments in forest monitoring and a national REDD Trust Fund arrangement, and support to UN REDD. The research and training programme will be the biggest single agreement under this partnership – amounting to around NOK 94 million which is about 20% of the entire partnership amount. Details of the programme will be presented later in this workshop.

As Tanzania is quickly taking a front-runner position on REDD in Africa, it is important that researchers are equally moving at the same speed to ensure all information and knowledge gaps are filled. There are many REDD related issues which Tanzania as a country needs to know before a complete and effective REDD framework is practically happening in Tanzania. Most of such issues and answers will be known through research work, and it is equally important to create mechanisms that ensure the knowledge acquired from research reaches and influences decision makers.

We all hope for a positive decision on REDD during the international climate change conference to be held in Copenhagen in December this year, UNFCCC CoP15. That would be the starting point for a process of developing the detailed regulations for a future global REDD mechanism. By being one of the early starters, Tanzania will be well placed to influence and contribute to what the details of a global REDD regime will look like. The architecture of the global REDD regime is not yet ready, and development of methodologies, principles of what is rewarded and by how much are yet to be agreed. Research is a pillar in realizing these expectations. Your work can play an important role in all REDD processes and can help in testing methodologies, trying out reward systems, developing research capacity, and many other aspects to REDD.

We would like to conclude our remarks by saying that, if successful in reducing rates of deforestation, Tanzania stands to benefit substantially from REDD. To realize this opportunity, researchers' contributions are needed.

We wish you, Honourable Minister, Sokoine University of Agriculture and the entire team of researchers and practitioners the best of luck in the process of developing sound REDD research areas for Tanzania. You can count on Norway as a committed partner.

## APPENDIX V

### **Speech of the Director for Research and Postgraduate Studies, SUA, Prof Jairos Matovelo, on inviting the Guest of Honour Dr. Felician B. Kilahama to close the workshop on REDD-related Research and Capacity Building in Tanzania, Oasis Hotel, Morogoro, Tanzania, 31.8 – 3.9.09**

Guest of Honour, Chair of the Organising Committee, Participants, Scholars, Practitioners, Organisers, Scholar Thor Larsen, Ladies and Gentlemen

It is with a sense of great gratitude that we appreciate the honour you have accorded this workshop and agreed to invest part of your very valuable time to come and close this workshop on that in brief has been about “REDD-related Research and Capacity Building in Tanzania”.

We have stayed gathered here in this workshop for 4 days of hard work looking at mechanisms, challenges, opportunities and way forwarded toward implementation of the research and capacity building component of the REDD initiative in Tanzania. Particularly with respect to the CCIAM programme that is to start soon  
The workshop has brought together about 70 scholars/participants, NGOs and Media from Tanzania, Norway, Kenya, Uganda and USA.

Over the four days we have delved on:

- (1) The Science and Economics of Climate Change in general and REDD in particular
- (2) Challenges of governance and performance monitoring again with respect to the REDD Agenda
- (3) Research and Capacity Building for appropriate adoption and mitigation strategies as well as participation in climate change initiatives in general.

We have had a total of 22 presentations, one session of 3 groups’ discussion and two sessions for presentation/feed back on discussed issued. The discussions have a essence looked at the 3 researches focus areas under CCIAM and re-baptized them as Thematic Areas, under which a number of outlined research issues/questions have been discussed, consolidated and/or rephrased.

The general outcomes of the workshop include:

- I. Crystallization of understanding and interpretation of the incoming CCIAM programme for REDD
- II. Increased awareness and understanding of issues, challenges and opportunity pertaining to climate change in General and REDD in particular
- III. Networking and acquaintance among and between scholars, practitioners, NGOs Media, and Government with interest and jurisdiction for climate change in general and REDD in particular.
- IV. Reiteration of commitment to cooperates in implementation of CCIAM
- V. Identification and strengthening of contacts for mobilization of reviewers for concept notes /proposals as well as authors for the same.

## **The way forward**

The way forward entails measures to:

- Consolidate and sustain synergy and networking and communication among scholars, practitioners and regulations etc for purposes of this initiative to include those present here and those are not here today.
- Prepare the proceedings of this workshop as soon as possible and have in ready during inception of the CCIAM programme.
- Encourage scholars/practitioners and regulators to sustain interest and impetus on climate change issues and the REDD initiative.

## **Assumptions**

The Government institutions and donors remain committed to the course of this initiative and support it accordingly with gratitude to the Government of Kingdom of Norway for supporting this workshop. It is now my honour to invite the Guest of Honour to officially close the workshop that has been made possible by the kind and generous support of the Government of the Royal Kingdom of Norway.

## APPENDIX VI

### **CLOSING REMARKS. Dr. Felician Kilahama, Director of Forestry and Beekeeping, Ministry of Natural Resources and Tourism (MNRT), Dar-es-Salaam.**

Mr. Chairman, Professors and Scholars, Distinguished guests, Workshop participants, Members of the press, Ladies and Gentlemen.

Chairman, on the outset let me express my sincere thanks to the Almighty God for enabling me to be with you since the start of the workshop until the closing time. Sometimes I wonder and you may not believe that my being here for the entire four days in Morogoro is basically not my will but this has happened due to the will of God.

Chairman, I have had a privilege of attending this important workshop under the auspices of SUA. The workshop has dwelled about REDD but is well linked with other aspects like Economics, Academics, the Environment and Research. I therefore thank the workshop organizers for inviting me to attend the workshop but more so to allow me to say some closing remarks not as the Guest of Honour but as one of the workshop participants as we wind up the business. I feel very encouraged after attending and listening to the well structured papers and presentations. The discussions have been very lively, fascinating and in most cases useful. Despite the four days of sitting here, and mind you keeping such a gathering of eminent and well learned, Profs. from University of Florida, University of Oslo, the University of Life Sciences of Norway, Moi University, Ardhi University, University of Dar-es-Salaam not forgetting the host Sokoine University of Agriculture is not a simple matter. It is something to be highly appreciated by many of us. I know that Profs. are very busy people whose time are very limited and with lots of demands on their tables from both academic and research work. Thus, for these Profs., who are with us have managed to travel from USA, Europe, Kenya and Dar es Salaam and have been able to sit and work seriously for four continuous days in Morogoro is something to recognise with great appreciation.

Chairman, I have also been amused by the way and manner this workshop has been organized and conducted. Despite having many papers but all have been presented and time was almost adequate as we also managed to have lunches and health breaks. Furthermore, all the participants were active and the facilitation responsibilities were well shared amongst the participants. I have never seen a workshop like this one where well renowned and reputable Profs. like Kajembe being able to facilitate the discussions by moving around with a microphone thereby encouraging participants to speak. I therefore, commend you all for these efforts and for such a spirit of cooperation during the workshop. You have demonstrated the real team work spirit, which sometimes is lacking in our originations.

Chairman, the project that has been approved by Royal Embassy of Norway for funding is about Climate Change Impacts, Adaptation and Mitigation (CCIAM) with REDD at the centre will definitely lead to improved capacity building through research, training and effective service delivery to communities or the grassroots. If I got it well and among other things, the aim is to produce 50 Masters and 17 Ph D holders within the next 5 years. This is good at the higher professional level. We still face a serious challenge at the technical (certificate and diploma in forestry) level. There is growing demand for trained staff at that level. Experience is showing that the private sector participation in forestry is expanding and at the same time the Forestry and Beekeeping Division (FBD) is anticipating to employ more technical staff especially forest guards. The idea is have about 3000 staffs who could manage

about 13 million forest reserves scattered through out the country. The capacity of the forestry training institute at Olmotonyi (roughly about 100 students annually) is inadequate to make this dream true in the near future.

Chairman, this workshop is another step towards addressing climate change impacts including REDD through appropriate adaptation and mitigation measures. It has revealed interesting lessons, experiences and yet some challenges. It is not possible to go through all but will highlight on some them. Basically REDD (*Reducing Emissions from Deforestation and Forest Degradation*) is about Avoiding Deforestation and forest Degradation. The basic question before us is how can this be achieved? But again why worry about deforestation and forest degradation? Indeed the world is faced with one of the greatest challenges: global warming. According to the Intergovernmental Panel on Climate Change (IPCC) fourth global assessment report industrial emissions contribute to about 7 billion tonnes of Green House Gases (GHGs) while land use changes mainly leading to deforestation and forest degradation account for 1.6 billion tonnes of emissions: Carbon dioxide (CO<sub>2</sub>) as the main element but there others, which include methane and nitrous oxide. Tanzania's rate of deforestation and forest degradation is about 500,000 ha annually. This could probably fuel about 30-40 million tons of CO<sub>2</sub> into the atmosphere. This is what we should avoid thereby leading to improved and better environmental and atmospheric conditions.

The papers presented were on: Payment for Environmental Services (PES); Science and Economics; Carbon Assessment, Measurements, Monitoring and Valuation and Reporting; Capacity Building; Vulnerability or what is happening on the ground with Kenyan experiences and indicators of climate change impacts were meant to try to answer how to achieve avoided deforestation and forest degradation with sensible adaptation and mitigation focused approaches.

The secretariat to the National REDD strategy formulation Taskforce (IRA) presented their overview on the Roadmap for REDD in Tanzania. The secretariat gave their ideas, which do not necessarily represent the national position or consensus. What was presented should be viewed as the secretariat inputs into the national process. On the other hand, the workshop has demonstrated that REDD must help Tanzania to know or understand with reasonable degree of accuracy the value of our forests in terms of carbon and other environmental services. That is why the National Forest Resources Monitoring and Assessment (NAFORMA) project is expected to generate data or information beyond traditional forest inventory data. Another attribute of this workshop is that REDD should ensure that the local communities or people at the grassroots who depend on forests should be the actual beneficiaries. That means REDD should act as a platform for providing some incentive schemes or alternative economic options for the local communities to be able to make genuine livelihoods. Prof. Kowero of the African Forest Forum emphasized that if nothing will be done to enable the poor farmers improve their land management practices or improve their livestock management avoiding deforestation will remain a historical issue. This is a challenge to us on how to make things work and using REDD to enable us make a right turn and ensure that things are getting better and done in the right way on the farmers' land, crop fields or rangelands.

Chairman, the collaborative project, is involving eminent researchers from participating Universities, it will be looked at as the engine towards attaining sustainable development through research and capacity building. We need reliable data to enable us make informed

decisions. The farmers and livestock keepers would be interested to know what the future would look like in 10 or 20 years to come. What kind of weather patterns and so on? This is where research or data collection on certain parameters of the environment become critical. For us in the decision making machinery reliable data or reliable weather forecasting is important. When one says: there will be enough rainfall or prolonged dry spell, let it be so and not the other way round. We sometimes tend to consider advice or suggestions from University institutions as being too academic and therefore not attractive in making decisions. How research is designed (methodology), conducted and analyzed would matter a lot in terms of data use. Many of you have been conducting research if asked why the answer would be for publishing papers and get promotions to advance in your academic ladder or carriers and very little in advancing land management practices. On the other hand, there has been a gap between the researchers and data or information users i.e. the extension officers. The dissemination part of research data has been inadequate to warrant prompt changes at the field level.

Chairman, the CCIAM research and training project should strive to make a difference: that is making REDD a reality on the ground. How? Perhaps, through practical research and putting the farmer at the centre of the business. This will probably help to improve the situation. Furthermore, we need to attain Sustainable Forest Management (SFM). The Collaborative Partnership on Forests (CPF), the UN Forum on Forests (UNFF) and the FAO Committee on Forests (COFO) all advocate for the need to attain SFM. Not only that but also our national forest policy including the national forestry and beekeeping programmes are for SFM. On the other hand, attaining SFM would not be the case if the poor farmers are neglected. This is one of the issues that the workshop has emphasized: REDD becoming an incentive to the farmers and forest dependent communities to improve their livelihoods. Already we have the Participatory Forest Management (PFM), which makes a good entry into empowering the farmers through REDD.

The need to have integrated efforts cannot be over emphasized. This is important in order to avoid duplication of efforts and ensure effective use of resources for the good of all. As we advocate KILIMO KWANZA we should be careful not to marginalize the forests and woodlands. Forests and woodlands are important for the enhancement of agriculture. Thus, they should be high on the agenda within the KILIMO KWANZA context. What about wildlife? Equally important.

Chairman, the governance issue was well discussed. Here we need good governance and what is good governance is all about? It is about institutions and the people within it including their behaviour, culture, norms, laws, rules, regulations and administrative procedure. Under the REDD initiatives we need to make things better. No cheating or corruptive engagements. What about the early catchers? We need to see benefits flowing to the people at the grassroots and not to the elite the so called "early catchers"

Chairman, as we have observed during these four days here in Morogoro there is still a lot of work ahead of us and challenges are many but we have no excuse whatsoever we have to face the reality and forge ahead. There is no blue print for the implementation of REDD. It is through learning while doing we shall achieve the objectives and that is Avoiding Deforestation and forest Degradation. In this context research and good governance become elements of paramount importance in attaining REDD objectives. It is my sincere hope that the views and contributions from this workshop will help SUA to polish the project research themes so that you have a better roadmap to accomplish project objectives.

Finally but not the least we need to sensitize and educate the communities more carefully without raising too much expectations. Already some people are asking where the money from Norway how can one access and so on is the trend. But we all agree that the local people should be the prime beneficiaries but when will this take place I cannot tell? It is process and that would take time. We still wait to see what will be the outcome of the negotiations in Copenhagen in December this year.

Chairman, let me finish my closing remarks by thanking the Norwegian government for the bold decision made to finance REDD processes including the money offered to the Universities to undertake research and capacity building. On behalf of the Ministry of Natural resources and Tourism and the people of Tanzania as a whole, I thank the people of Norway for their generous support to the people of Tanzania. We hope that other development partners will take a similar initiative and support our national efforts to attain SFM including KILIMO KWANZA.

Chairman, Profs., distinguished Guests, Ladies and Gentlemen, having said these few remarks it is now my pleasure and privilege to announce that the workshop on REDD hosted by Sokoine University of Agriculture is officially closed.

I thank you all for your kind attention: ASANTENI SANA