**NEWS**

**National Research Workshop on**

**Sustainable natural resources management for combating desertification and land degradation in arid and semi-aridareas of Ethiopia**

After the Bonn challenge established in 2011, Ethiopia made the largest pledge, aiming to rehabilitate and restore 22 million hectares of degraded lands. Over the last decade, rehabilitation of degraded lands and degraded forests has become a priority in the country’s development agenda. Participatory forest management, area exclosure, soil and water conservation, tree planting, and watershed management are some of the mechanisms that are being used to rehabilitate and restore degraded landscapes.

Though there is reasonable knowledge on the impacts of land degradation, research based investments on remedial actions (rehabilitation technologies) to mitigate the problem are still very limited. Comprehensive knowledge on economic returns from already done investments on land degradation is also lacking. Thus, bridging these major gaps through research would be a priority agenda to circumvent the current complex issues of land degradation in Ethiopia and would contribute a lot to gear future endeavors in the right track.

To this end, a national research workshop on sustainable natural resources management for combating desertification and land degradation in arid and semi-aridareas of Ethiopia has taken place from August 14-15, 2018 at Adama. More than 75 participants invited from the federal and regional research, higher learning and development institutions have attended the workshop. The workshop was organized by Ethiopian Environment and Forest Research Institute (EEFRI) in collaboration with the United Nations Food and Agriculture Organization (FAO). The workshop is part of a project named as "Integrated Landscape Restoration and Livelihood Improvement in three Woredas of Amhara, Tigray and Afar Regions” which is being carried out by EEFRI within the framework of Action Against Desertification (AAD) mega project.

The workshop objectives were:-

* To communicate research findings on Sustainable natural resources management for combating desertification and land degradation in arid and semi-arid areas of Ethiopia to relevant stakeholder
* To establish and strengthen linkages among stakeholders and partners who are active in SNRM, combating desertification and land degradation in arid and semi-arid areas of Ethiopia
* To ensure sustainable management of natural resources in arid and semi-arid areas of the country.

According to the workshop program which is shown below, a welcome speech was made by Dr. Abiyot Birihanu, Director General of EEFRI, who emphasized the importance of the event and the expected outputs that he is anticipating. Then, the workshop was officially opened by His Excellency Ato Kebede Yimam, State Minister of the Ministry of Environment, Forest and Climate Change (MEFCC) who explained the on-going effort being made by the government to rehabilitate and restore degraded lands. He pointed out that technologies and information being generated by research and higher learning institutions are crucial and will enhance and consolidate the on-going efforts of combating desertification (speech is attached). Then, 17 research papers were presented of which 15 are papers submitted in response to a call for paper issued by the project and the other two were focused on the status of AAD project and the research experience of EEFRI on rehabilitation and restoration of degraded landscapes (See the workshop program below)

All papers presented have provided participants valuable information which can be an input for the on-going effort by different actors on sustainable natural resources management for combating desertification and land degradation in arid and semi-aridareas of Ethiopia. Papers presented by Dr. Mulubirihan from Mekele university on community based natural resource conservation and land rehabilitation in northern Ethiopia: A systematic review of interventions, impacts and challenges and *Ficus thonningii* silvopastures for livelihood improvement, climate change adaptation and environmental resilience have received special attention and appreciation. His research works were end-to-end and one was an input for the other.

Following the presentations, a very interactive and vibrant general discussion on future direction of research and development on combating desertification and land degradation has taken place and minutes were captured accordingly which will be communicated later on to the participants and stakeholders through e-mail. Then, the workshop was closed by the closing remark of Dr. Agena Anjulo, Deputy Director General of EEFRI.

**የክቡር ሚኒስቱር ዴኤታው ንግግር**

ክቡር ዶ/ር አብዮት ብርሃኑ፣ የአትዮጵያ የአካባቢና የደን ምርምር ኢንስቲትዩት ዋና ዳይሬክተር

የተከበራችሁ ጥሪ የተደረገላችሁ እንግዶች

የዓውደ ጥናቱ ተሳታፊዎች

ከሁሉም አስቀድሜ በእኔና በሚኒስቴር መ/ቤቱ ስም እንኳን ወደዚህ ዓወደ ጥናት በደህና መጣችሁ ለማለት እወዳለሁ፡፡

በአገራችን ከሕዝብ ቁጥር መጨመር፣ ሳይንሳዊና ዘላቂ ካልሆነ የመሬት አጠቃቀምና ከተለያዩ የተፈጥሮ ክስተቶች ጋር በተያያዘ ከፍተኛ የመሬት መራቆትና መጎሳቆል (Land degradation) ተከስቷል፡፡ ለመሬት መራቆትና መጎሳቆል ምክኒያት የሆኑ ነገሮች ብዙና እርስበርሳቸው የተያዙን የተደጋገፉ ናቸው፡፡ ከኢነዚህ ምክኒያቶች ውስጥ የዕፅዋት መመንጠርና መመናመን (removal of vegetation cover) ዋነኛው ነው፡፡ የመሬት መራቆትና መጎሳቆል ለምርታማነት ማሽቆልቆልና ለምግብ ዋስትና መታጣት ምክኒያት ከመሆኑም በላይ ህብረተሰቡን ለከፋ ድህነት ዳርጓል፡፡ በተጨማሪም ክስተቱ ለአየር ንብረት ለውጥ፣ ለብዝሐ-ሕይወት መመናመንና ለሥርዓተ-ምዕዳር መዛባት አስተዋጽኦ አድርጓል፡፡

አገራችን እያስመዘገበችው ያለውን የኢኮኖሚ ዕድገት ዘላቂና ቀጣይነት እንዲኖረው ለማድረግ መንግሥት ለተፈጥሮ ሃብት ልማትና አካባቢ ጥበቃ ከፍተኛ ትኩረት ሰጥቷል፡፡ መንግሰት ለአየር ንብረት ለውጥ የማይበገር አረንጓዴ ኢኮኖሚ ስትራቴጂ (CRGE) ቀርፆ ወደ ሥራ የገባ ሲሆን ስትራቴጂውን መሠረት በማድረግ ሰፋፊ የተፋሰስ ልማቶችን ተግባራዊ እያደረገ ከመሆኑም በላይ ለእርሻና ለሌሎች የመሬት አጠቃቀም ያልዋሉ የተራቆቱ አካባቢዎችን ከልሎ ከንክኪ በመጠበቅ በተከላ በማበልፀግና ወደ ምርት እንዲገቡ በማድረግ ፣ በስፋት ማኅበረሰቡን በማሳተፍ የተፋሰስ ልማት ሥራዎችን በማከናወን እንዲሁም ደን ልማትን በማስፋፋት አበረታች ተግባራት እያከናወነ ይገኛል፡፡

እነዚህ ተግባራት ዘላቂና ቀጣይነት ያለው የተፈጥሮ ሃብት ልማትና ጥበቃን ለማረጋገጥ የራሳቸው አስተዋፅዖ ያላቸው ከመሆኑም በላይ የምግብ ዋስትናን ለማረጋገጥ፣ ድህነትን ለመቀነስና የኢኮኖሚ ዕድገትን ለማስመዝገብ እየተደረገ ላለው ጥረት የማይተካ ሚና ይኖራቸዋል፡፡

በሌላ በኩል በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ዘላቂ የተፈጥሮ ሃብት አያያዝን ተግባራዊ ለማድረግና በረሐማነትንና የመሬት መጎሳቆልን ለመከላከል በርካታ ጥረቶች እየተደረጉ ቢሆንም በእነዚህ አካባቢዎች በአሁኑ ጊዜ እየታየ ያለው የደን፣ የዕፅዋትና የተፈጥሮ ሃብት መመናመን ይህም በምርታማነት እና በህብረተሰብ አኗኗር ላይ እየስከተለ ያለው አሉታዊ ተፅእኖ አሁንም ከፍተኛ ትኩረት ሊሰጠው የሚገባ ጉዳይ ነው፡፡

በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች የሚገኙ አርሶአደሮችና አርብቶአደሮች የአየር ንብረት ለውጥ እያስከተለባቸው ያለውን ተፅእኖ ለመከላከል የሚረዱ በምርምር የወጡ ቴክኖሎጂዎችና የተሻሻሉ አሰራሮችን እንዲሁም መረጃዎችን እንዲጠቀሙ ያለሰለሰ ጥረት ቢደረግም እነዚህን ቴክኖሎጂዎችና የተሻሻሉ አሰራሮችን ተጠቅሞ ከችግሩ ለመውጣት የተኬደበት ርቀት እምብዛም ነው፡፡ ስለሆነም በእነዚህ አካባቢዎች አሁንም ከተፈጥሮ ሃብት ልማትና ጥበቃ፣ የመሬት መራቆትንና በረሐማነትን ከመከላከል አንፃር ሰፊ የምርምር፣ የልማት እና የግንዛቤ ማሳደግ ስራ በቀጣይ መከናወን ይኖርበታል፡፡

ስለሆነም የዚህ ዓውደጥናት ዋና ዓላማ በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ከዘላቂ የተፈጥሮ ሃብት አያያዝ፣ የአየር ንብረት ለውጥን ከመከላከል እና ኑሮ ከማሻሻል አንፃር አስካሁን የተከናወኑ የምርምር ሥራዎች ያስገኟቸው ግኝቶች በባለድርሻ አካላት እንዲታወቁ ማድረግና በግኝቶቹ ላይ ውይይት ማድረግ ሲሆን በተጨማሪም በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ዘላቂ የተፈጥሮ ሃብት አያያዝን ተግባራዊ ለማድረግና በረሐማነትንና የመሬት መጎሳቆልን ለመከላከል በሚንቀሳቀሱ ባለድርሻ አካላት መካከል በቀጣይ ሊኖር ስለሚገባው ትብብር መወያየትና መግባባትን መፍጠር እንዲሁም በእነዚህ አካባቢዎች የሚኖሩ የህብረተሰብ ክፍሎች በምርምር የወጡ መረጃዎችንና ቴክኖሎጂዎችን ተጠቅመው ዘላቂ የተፈጥሮ ሃብት ልማትን በማረጋገጥ በረሐማነትንና የመሬት መጎሳቆልን የመከላከል አቅም እንዲኖራቸውና ኑሯቸው እንዲሻሻል ማድረግ ነው፡፡

በዚህ ዓውደጥናት በተለያዩ የከፍተኛ ትምሀርትና ምርምር ተቋማት ውስጥ ያሉ ባለሙያዎች በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ያከናወኗቸው የምርምር ስራዎች የሚቀርቡ ሲሆን በምርምር ግኝቶች ላይ ሰፊ ውይይት በማካሄድ ትልቅ የግንዛቤ ማስጨበጥ ሥራ ይሰራል ተብሎ ይታሰባል፡፡

ከዚህ የምርምር ዓውደጥናት በኋላ በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ከዘላቂ የተፈጥሮ ሃብት አያያዝ፣ የአየር ንብረት ለውጥን ከመከላከል እና ኑሮ ከማሻሻል አንፃር የተከናወኑ የምርምር ሥራዎች ውጤቶቻቸው በባለድርሻ አካላት ዘንድ ይታወቃሉ በባለድርሻ አካላትም መካከል በቀጣይ ሊኖር ስለሚገባው የስራ ግንኙነትና ትብብር መግባባት ይፈጠራል እንዲሁም በምርምር የወጡ መረጃዎችንና ቴክኖሎጂዎችን በመጠቀም በደረቅና ከፊል ደረቅ በሆኑ አካባቢዎች ዘላቂ የተፈጥሮ ሃብት ልማት ለማረጋገጥ እንዲሁም በረሐማነትንና የመሬት መጎሳቆልን ለመከላከል የሚያስችል አቅም ይፈጠራል ተብሎ ይጠበቃል፡፡

ይህ ዓውደ ጥናት የተዘጋጀው በኢትዮጵያ የአካባቢ እና የደን ምርምር ኢንስቲትዩት (EEFRI) ከተባበሩት መንግስታት የምግብና የእርሻ ድርጅት (FAO) ጋር በመተባበር ሲሆን ዓውደጥናቱ ኢንስቲትዩቱ በተባበሩት መንግስታት የምግብና የእርሻ ድርጅት (FAO) የፋይናንስ ድጋፍ እያካሄደ ያለው በ Action Against Desertification (AAD) ፕሮጀክት ስር የ “Integrated Landscape Restoration and Livelihood Improvement in Metema, Raya Azebo and Golina weredas of Amhara, Tigray and Afar Regions, respectively under the Great Green Wall of the Sahel and the Sahara Initiative (GGWSSI)” ፕሮጀክት አካል ነው፡፡ ስለሆነም ሁለቱንም ተቋማት በሚኒስቴር መ/ቤቴ ስም ላመሰግን እወዳለው፡፡ በመጨረሻም የዓወደጥናቱ ተሳታፊዎች ያላችሁን ዕውቀትና ልምድ በመጠቀም ለዐውደ ጥናቱ ስኬት የበኩላችሁን አስተዋፅኦ እንድታደርጉ እያሳሰብኩ እና ዓውደ ጥናቱ ስኬታማ እንዲሆን እየተመኘሁ ዓውደጥናቱ በኦፊሲየል የተከፈተ መሆኑን አበስራለሁ........አመሰግናለሁ፡፡

**National Research Workshop program on**

**Sustainable natural resources management for combating desertification and land degradation in arid and semi-aridareas of Ethiopia**

**Adama, August 14-15, 2018**

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| **Date** | **Time** | **Presentations** | **Responsible/Presenter** | **Facilitator/Rapporteur** |
| Day 1 (14/08/2018)Morning | 8:30-9:00 | Registration | Organizers |  |
| 9:00-9:05 | Introduction of the workshop program and objectives  | Dr Teshome Tesema and Ato Berhane Kidane | Dr Agena Anjulo (EEFRI DDG) |
| 9:05-9:20 | Welcome speech | Dr Abiyot Berhanu (EEFRI DG) |
| 9:20-9:35 | Opening speech | H.E. Ato Kebede Yimam (State Minister, MEFCC)  |
| 9:35-9:55 | The status of AAD project in Ethiopia  | Dr Yigremachew Seyoum |
| 9:55-10:20 | Overview of the experience of EEFRI on Rehabilitation and restoration of degraded landscapes | Dr Teshome Tesema |
| 10:20-10:50 | Tea Break | Organizers | Dr Adefires WorkuRapp : Mr Ashenafi Manaye |
| 10:50-11:10 | Sustaining the pastoral livelihood through Viable Development Policy Options; A comparative Analysis of Villagization vs Mobility | Mohammed Yimer |
| 11:10-11:30 | Community Based Natural Resource Conservation and Land Rehabilitation in Northern Ethiopia: A systematic review of interventions, impacts and challenges | Mulubrhan Balehegn |
| 11:30-11:50 | Environmental and Anthropogenic Impacts on the Sustainability of Nech Sar National Park, Southern Ethiopian Rift Valley  |  Shetie Gatew |
| 11:50-12:10 | Factors Affecting Farmers Choices of Climate Change Adaptation Decisions in Arsi Negele Districts, West Arsi Zone  | Abrham Belay |
| 12:10-12:40 | Discussion on the presentations |  |
|  | 12:40-14:00 | Lunch Break | Organizers  |  |
| Afternoon | 14:00-14:20 | Upgrading the value chain of Myrrh from the *Acacia-Commiphora* forests of Eastern Ethiopia: a public private partnership (PPP) approach | Asmamaw Alemu | Dr Yigremachew SeyoumRapp: Belayneh Azene  |
| 14:20-14:40 | Patterns of Changes to Woody Vegetation near Resettlement Sites in Semi-arid Northwestern Ethiopia | Kidane Hintsa |
| 14:40-15:00 | Exclosures recovered woody species diversity and carbon stocks of previously degraded open grazing land in Semi-arid region of Northern Ethiopia | Ashenafi Manaye |
| 15:00-15:30 | Discussion on presentation |  |
| 15:30-15:50 | Tea Break | Organizers |  |
| 15:50-16:10 | Farmers Perception and Reasons to Practice Farmer Managed Natural Regeneration in Arid and Semi-arid areas of Tigray Region, northern Ethiopia | Tigist Kibru | Dr Yigremachew SeyoumRapp: Berihu Tesfamariam |
| 16:10-16:30 | Overview of Current State of Knowledge for Thickets, Bush Lands and Shrubs in Eastern Africa | Mesele Negash |
| 16:30-17:00 | Climate Change Impact on Spatio-Temporal Dynamics of Coffee and the Pollinator Bee Interaction in Raya Azebo, Ethiopia | Haftu Abrha  |
| 17:00-17:30 | Discussion on presentations |  |
| DAY 2 (15/08/2018)Morning | 8:30-9:00 | Registration | Particiapants | Dr. Abdu AbdulkadirRapp: Dr Tatek Dejene |
| 9:00-9:20 | Spatial sediment yield prediction for watershed prioritization and management: Case study of Tekeze dam watershed, Northern Ethiopia | Kidane Welde |
| 9:20-9:40 | Impact of Climate Change on Groundwater Recharge and Base Flow in the Sub-Catchment of Tekeze Basin, Ethiopia | Kiflom Degef |
| 9:40-10:00 | Arbuscular Mycorrhizal fungi inoculum influences the growth and nutrient uptake of *Faidherbia albida* (Del.) A. Chev. tree seedlings | Mengsteab Hailemariam |
|  | 10:00-10:30 | Discussions on presentation |  |
| 10:30-11:00 | Tea Break | Organizers |  |
| 11:00-11:20 | Modeling the impacts of climate change and cochineal (*Dactylopiuscoccus*) invasion on the future distribution of Cactus (*Opuntia ficus-indica*) in Northern Ethiopia | Haftu Abrha | Dr. Asmamaw AlemuRapp: Abera Tesfaye |
| 11:20-11:40 | *Ficus thonningii* silvopastures for livelihood improvement, climate change adaptation and environmental resilience | Mulubrhan Balehegn |
| 11:40-12:00 | Evaluation of *Acacia saligna* Provenances for Environmental Rehabilitation and Fuel Wood Potential in the Semi-arid midland of Tigrai, Ethiopia | Girmay Darcha |
| 12:00-12:30 | Discussion on presentations |  |
| 12:30-14:00 | Lunch Break | Organizers |  |
| Afternoon | 14:00-15:00 | General discussion on future direction of research and development on combating desertification and land degradation |  | Dr Agena Anjulo and Dr Teshome Tesema Rapp: Dr Tatek Dejene and Abera Tesfaye |
| 15:00-15:30 | Tea Break | Organizers |  |
| 15:30-17:00 | Closing Remarks | Dr Agena Anjulo/Dr Abiyot Berhanu |  |
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