



Food and Agriculture
Organization of the
United Nations



MINISTRY OF
AGRICULTURE AND
COOPERATIVES

Bangkok, Thailand | 09-11 December 2024



International
Soil & Water
Forum
2 0 2 4

*Managing water scarcity
and reversing soil degradation
for sustainable and resilient
agrifood systems*

F O R U M P R O G R A M

Monday, 9th December

08.00 – 09.00

Registration and Morning Coffee

Location: Ballroom Foyer

09.00 – 10.30

Inauguration

Location: Ballroom

Master of Ceremony: **Ms Cholaphansa Narula**

Thailand cultural performance

Welcome remarks

H.E. Prof. Dr. Narumon Pinyosinwat, Minister for Agriculture and Cooperatives, Kingdom of Thailand

QU Dongyu, Director-General, FAO

H.E. Francisco Kalbuadi Lay, Deputy Prime Minister, Coordinating Minister for Economic Affairs and Minister for Tourism and Environment, Timor Leste

H.E. Retno L.P. Marsudi, UN Special Envoy for Water

VIP group photo

10.50 – 11.30

1st Ministerial Dialogue

Location: Ballroom

Master of Ceremony: **Michèle Piraux**, Knowledge Management Officer, Land and Water Division, FAO

Ministerial Dialogue

Part 1 of the Ministerial Dialogue will facilitate Ministers' statements and discussion on strategic issues in soil and water management as fundamental in the transformation to sustainable and resilient agrifood systems and achieve the Sustainable Development Goals.

Moderator: **Mr Thanawat Tiensin**, Assistant Director General, FAO

The session will be in English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

11.30 – 12.00

Opening of the Innovation Marketplace

Location: Monthathip 1

The innovation marketplace is a space dedicated to companies, research institutions and universities, non-governmental organization, government agencies and entrepreneurs and startups to display products, technologies, and innovations for the sustainable management of land, soil and water resources.

Exhibitors

Stand 1: Department of Royal Rainmaking and Agricultural Aviation (DRRAA)

Stand 2: Royal Irrigation Department (RID)

Stand 3: Department of Water Resources (DWR)

Stand 4: Department of Groundwater Resources (DGR)

Stand 5: Office of the National Water Resources (ONWR)

Stand 6: Land Development Department (LDD)

Stand 7: Agricultural Land Reform Office (ALRO)

Stand 8: Warm Heart Foundation.

Stand 9: Regional Agriculture Innovation Network, RAIN

Stand 10: Stockholm Environment Institute

Stand 11: Alluvium

12:00-13.30

Lunch

12.00-13.30

Special Partner and Side events

12.00-13.00

Side event: Journey to Success: from Dirt to Living Soil

Location: Ballroom

Host: **Agri-Nature Foundation, World Soil Association (Thailand), Land Development Department.**

Experience a traditional Muay Thai performance and a dramatic portrayal of soil restoration efforts, highlighting youth involvement in conservation. The event features success stories from farmers and showcases abundant food produced within the Agri-Nature Network

12.00-13.00

Side event: Enhancing farmers' capacities for soil health development and production of nutritious food by the GSP with support of the German government

Location: Suriyanchandra

Moderator: **Mr Mahmoud Abdelfattah**, Senior Land and Water Officer, FAO

The side event will present the Soil4Nutrition project, which empowers farmers to improve soil fertility and food nutrition. It will focus on a workshop in Thailand to establish methodologies for the Global Soil Doctors Programme (GSDP) in Burkina Faso, Colombia, and Mexico. The project, funded by the German Federal Ministry of Food and Agriculture (BMEL), promotes sustainable soil management for nutrition-sensitive agriculture.

Opening remarks

H.E. S Hans-Ulrich Südbeck, Deputy ambassador of Germany to Thailand (TBC)

Mr Lifeng Li, Director of Land and Water Division, FAO (TBC)

Presentation of the Soils 4 Nutrition project.

Mr Yuxin Tong, Land and Water Officer, FAO

Round table on the importance of improving soil fertility for increasing the nutritional value of food.

Mr Romba Rasmane, Director of Fertility and Water and Soil Conservation, The National Bureau of Soils (BUNASOLS), Burkina Faso

Ms Blanca Lucía Prado Pano, Senior Researcher, Institute of Geology (UNAM), Mexico.

Ms Habibata Ouedraogo, The National Bureau of Soils (BUNASOLS), Burkina Faso

Ms Martha Marina Bolaños Benavides, Head of Sustainable Intensive Production, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia.

Mr Mario E. Perez Hernandez, Director, Ministry of Agriculture and Rural Development, Mexico

Ms Béatrice W. Bonkougou, Farmer, Burkina Faso

Mr Yonier Benito Bolaños Imbachi, farmer, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia

Mr Mario Zúñiga Ríos, Soil Doctor, Mexico

Questions & Answers

12.00-13.00

Special FAO event (By invitation only) Inauguration of the Steering Committee of the inter-regional technical platform on Water Scarcity

Location: Monthathip 4

The event will inaugurate the iRTP-WS Steering Committee (SC) and secure its endorsement of the 2024-2025 strategic work plan. It will focus on resource mobilization strategies and the composition of the Technical Advisory Committee (TAC) to ensure the platform's sustainability. The meeting will also explore financial support and governance frameworks for the platform's continued operations.

12.00-13.30

Special Partner event: Managing soil and water in fragile context

Location: Monthathip 3

Moderator(s): **Mr Rajendra Aryal**, FAO Representative for Indonesia and Timor Leste

The event will focus on water as a catalyst for peace and sustainable development, highlighting the role of women in water management and the unique challenges of fragile and landlocked states. Examples from Bhutan and the Cook Islands will showcase effective water governance. Key discussion points will include strategies to address water scarcity, contamination, and conflict, and how water can promote peace and regional cooperation.

Speakers:

Soil and Water Management for Climate Resilience in Small Island Developing States

Honourable Te- Hani Rose Alexandra Brown, Associate Minister, Cook Islands (TBC)

Hindu Kush Himalaya Perspective

Ms Bandana Shakya, Action Area Coordinator on Ecosystem and landscape restoration and Resilient mountain economies and landscapes, International Centre for Integrated Mountain Development (ICIMOD)

Water, Happiness, and Resilience in Bhutan

Mr Dasho Thinley Namgyel, Secretary of the Ministry of Agriculture and Livestock, Kingdom of Bhutan (TBC)

Water Scarcity, Contamination, and Climate Change

Mr Mahamat Fayiz Abakar, Assistant Professor, Institut de Recherche en Élevage pour le Développement (IRED), Chad

Water for Peace and Security in Fragile States

Mr Sayed Sharif, National Professional Officer, FAO Afghanistan

Questions & Answers. Plenary discussion

13.30 – 16.30

Thematic sessions

13.30 – 15.00

Soil and water management in saline environments in addressing SDGs.

Location: Monthathip 3.

Moderator(s): **Ms Lucrezia Caon**, Land Management Officer, FAO Regional Office for Asia and the Pacific

The event will highlight the challenges of soil salinization and sodicity, especially in arid regions and Small Island Developing States. Topics will include advances in monitoring, policy recommendations, potential of saline agriculture, sustainable soil and water management.

Keynote presentation: Soil and water salinity: status, trends and sustainable management

Ms Maria Konyushkova, International Consultant in Sustainable Soil Management, Global Soil Partnership, FAO

Presentations:

Mitigating salinity and climate change impacts in rice-wheat cropping systems through sesbania green manure and sustainable soil management

Mr Muhammad Rehan, Lecturer, University of Agriculture, Faisalabad, Pakistan

Improved crop production under conditions of drought and seawater intrusion by integrated rice-upland crops rotation and soil management

Mr Chau Minh Kho, Associate Professor, Can Tho University, Viet Nam

Salt-affected soils of atolls

Mr Nat Tuivavalagi, Agronomy Researcher, College of Micronesia-FSM

Mr Rickyes Ikin, Research Assistant, College of Micronesia-FSM

Questions & Answers

Panel discussion

Mr Jorge Batlle-Sales, Chair, International Network of Salt-Affected Soils (INSAS)

Mr Leo Kris M. Palao, Associate Climate Change Officer, Asian Development Bank, Philippines

Mr Jamshid Abduzukhurov, Head, Department of Soil, Water, and Agrotechnologies, Ministry of Agriculture and Water Resources, Uzbekistan

Mr Somchai Anusontpornperm, Associate Professor, Kasetsart University, Thailand

15.00 – 16.30

Halting agricultural burning, Improving soil fertility

Location: Monthathip 3.

Moderators:

Ms Lucrezia Caon, Land Management Officer, FAO Regional Office for Asia and the Pacific

Mr Brett Shields, Chief Technical Advisor, FAO Regional Office for Asia and the Pacific

This session discusses the pros and cons of fire in agriculture, highlighting when it's necessary and when alternatives should be used. It also examines global efforts to reduce burning and successful public-private partnerships driving sustainable land management.

Keynote presentation: Challenges and solutions for the reduction of burning of crop residues from agricultural area

Mr Peeraphan Korthong, Director-General, Department of Agricultural Extension, Thailand

Panel Discussions:

ASEAN Guidelines for Reducing Crop Burning in the Region

Mr Pedcris Orenco, Senior Officer, ASEAN Secretariat, Indonesia

Panel Discussions:

Potential Impacts of the Straw Burning Policy on the Regional Ecological Environment in Northeast China

Mr Weiwei Chen, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, China

Experiences of participation of local communities in Bolivia in integrated fire management

Mr Carlos Pinto, Project Officer – Community Fire Management, Fundacion Amigos de la Naturaleza (FAN), Bolivia

Saving smallholder farmers with biochar

Mr Michael Shafer, Co-Founder/Executive Director, Warm Heart Worldwide, Thailand

Microbial Solutions: A simple solution to reduce agricultural burning

Mr William Sparks, Chief of Party, USAID Regional Agriculture Innovation Network (RAIN), Thailand

Catalyzing in-situ crop residue management in North-West India; key learnings from large- scale project implementation

Mr Gyan Prakash, Project Lead, The Nature Conservancy, India

Questions and Answers. Plenary discussion

13.30 – 15.00

Integrated Land Use Planning.

Location: Monthathip 4.

Moderator: **Mr Mahmoud Abdelfattah**, Senior Land and Water Officer, FAO

The session will present the updated FAO guidelines on integrated land use planning (ILUP) and discuss challenges and best practices. It will focus on sustainable soil and water management and the benefits of ILUP for food security and environmental sustainability.

Opening remarks

Mr Thaweesak Thana-dachophol, Director-General, Land Development Department, Ministry of Agriculture and Cooperatives, Thailand

Mr Lifeng Li, Director, Land and Water Division, FAO

Keynote presentation: Guidelines for Integrated Land Use Planning – an update

Mr Feras Ziadat, Technical Officer, Land and Water Division, FAO

Ms Qingqing Lyu, Junior Professional Officer, Land and Water Division, FAO

Case studies:

Case study 1: The implementation of integrated land use planning at the national scale in Thailand

Mr Nuntapon Nongharnpitak, Policy and Plan Analyst, Expert level, Policy and Land Use Plan Division, Land Development Department, Thailand

Case study 2: Integrated Land Use Planning in Black Soil Areas of Thailand: A Case Study of Nakhon Sawan Province

Ms Nathamon Phongphaewx, Policy and Plan Analyst, Senior Professional Level, Land Development Department, Thailand

Case study 3: Case study from China-Integrated land restoration impact assessment in the Chinese Loess Plateau

Mr Hao Chen, Assistant professor, Northwest Agriculture and Forestry University of China, China

Case study 4: Integrated development and utilization of saline-alkali land in Northeast China

Ms Miao Lu, Associate Professor, Institute of Agricultural Resources and Regional Planning (IARRP), China

Case study 5: Case study from Sri Lanka-Securing Land Tenure Rights of Small-Scale Fishers: Aligning ethics in SSF Guidelines

Ms Piyasiri Kaumi Lakmali, Scientist, National Aquatic Resources Research and Development Agency, Sri Lanka

Case study 6: Case study from Africa- Policy-Driven Approaches for Large-Scale Land Restoration: A Case Study of Africa's Great Green Wall Initiative

Mr Mohammed Abubakar, Professor, Irkutsk National Research Technical University, Russia

Case study 7: Water conscious sectoral and spatial planning for food security under changing climate conditions

Ms Afire Sever, Director General, General Directorate of Water Management, Ministry of Agriculture and Forestry of the Republic of Turkiye, Turkiye

Panel Discussion

15.00 – 16.30

Sustainable land management and tenure security.

Location: Monthathip 4.

Moderator(s): **Mr Daniel Hayward**, Land Tenure Specialist, FAORAP

This session will examine the role of land tenure in sustainable land management, with examples of regional projects and policy-level engagement. It will discuss key connections between land tenure and sustainable land practices.

Presentations:

Integrated climate resilient and participatory interventions: Replicable approaches to restore degraded mountain landscape in Nepal

Mr Bishnu Hari Poudyal, Deputy Project Manager and Forestry Expert, FAO, Nepal

Integrating land tenure into land degradation neutrality initiatives

Ms Aurelie Bres, Land and Water Officer, FAO

Linking tenure to degradation: results from a national consultation

Mr Bamunu Arachchige Jayananda, National Consultant, Ministry of Environment, Sri Lanka

Working to secure land tenure rights for forest communities in Asia

Ms Janita Gurung, Programme Lead - Governance and Rights RECOFTC, Regional Community Forestry Training Centre for Asia and the Pacific, Thailand

From land tenure security to climate smart agriculture in Sindh province, Pakistan

Mr Daniel Hayward, Land Tenure Specialist, FAO Regional Office for Asia and the Pacific

Questions & Answers. Plenary discussion.

13.30 – 16.30

Land Degradation, Restoration and Recarbonization.

Location: Ballroom.

Moderator: **Ms Natalia Rodriguez Eugenio**, Land and Water Officer, FAO

This session will present insights into achieving land degradation neutrality (LDN), with a focus on data collection, monitoring, and solutions. Country experiences and case studies will highlight successful approaches for soil recarbonization. It will also explore synergies between LDN initiatives and existing frameworks to help countries meet their targets.

Keynote presentation: Land Degradation Neutrality and implications for agrifood systems

Ms Martha Marina Bolaños Benavides, Head of Sustainable Intensive Production, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia.

Big Earth Data in support of Land Degradation Neutrality

Mr Xiasong Li, International Research Center of Big Data for Sustainable Development Goals (CBAS), Chinese Academy of Science, China

Land Degradation Neutrality in Africa: Pathways and Strategies for Achieving LDN by 2030

Ms Rukayat Bewaji ADEYINKA, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti, Nigeria

Repairing Australia's soils and waters

Mr Jamie Pittock, Professor of Geography, Australian National University, Australia

Questions & Answers. Plenary discussion.

FAO efforts to achieve LDN

Ms Aurelie Bres, Land and Water Officer, FAO

Towards LDN in Uzbekistan: Dryland restoration efforts

Mr Jamshid Abduzakhurov, Head, Department of Soil, Water, and Agrotechnologies, Ministry of Agriculture and Water Resources, Uzbekistan (TBC)

Thailand's Black Soil Database Project for Sustainable Soil Management: A Case Study of Nakhon Sawan Province

Mr Totsanat Rattanakaew, Expert Agricultural Research Officer, Land Development Department, Thailand

Trends in Soil Organic Carbon Content and Their Interrelationship with Sustainable Soil Management in Portugal

Mr Carlos Augusto da Silva Cunha, Associate Professor, Polytechnic Institute of Viseu, Portugal

Characteristics of paddy soil: specifics in dynamics in organic carbon cycling

Mr Tida Ge, Professor, Ningbo University, China

Provincial-Level Assessment of Land Degradation in Thailand Using Open-Source Data Analysis

Ms Wenchao Xue, Associate Professor, Asian Institute of Technology, Thailand

Questions & Answers. Plenary discussion.

13.30 – 16.30

Water tenure governance.

Location: Suriyanchandra.

Moderator(s): **Mr Benjamin Kiersch**, Senior Water Resources Expert, FAO; **Nathalie Dubler**, Junior Professional Officer, FAO; **Leeann Ji**, Water Programme Support Specialist, FAO Regional Office for Asia and the Pacific

This session will explore how advancements in water tenure arrangements can improve water allocation policies and governance. Concrete examples will highlight best practices for responsible policy development and implementation.

Welcoming Address

Mr Lifeng Li, Director, Land and Water Division, FAO

Mr Lerdphan Sukyirun, Director of River Basin Management Division, Office of National Water Resources, Thailand

H.E. S Hans-Ulrich Südbeck, Deputy ambassador of Germany to Thailand (TBC)

Water Tenure Assessment: Methodology and Application worldwide: Including Presentation of the publications: “Water Tenure Assessment” and “Water Tenure Perspectives”

Mr Benjamin Kiersch, Senior Water Resources Expert, FAO

Water tenure assessment, and their policy relevance - Case study 1: Sri Lanka

Mr Anandalal Nanayakkara, Water Tenure Consultant, FAO, Sri Lanka

Mr Prasanna Thilakarathna Kalubandage, Director of Irrigation, Irrigation Department, Sri Lanka

Water tenure assessment, and their policy relevance - Case study 2: Indonesia

Mr Mohamad Mova Al'Afghani, Director Center for Regulation, Policy and Governance, Indonesia

Mr Fany Wedahuditama, Chairman, Water Stewardship Indonesia, Indonesia

Looking forward: Thailand – perspectives for water tenure assessment - what can we learn from previous work?

Ms Karika Kunta, Assistant Professor, Graduate School of Environmental Development Administration, National Institute of Development Administration, Thailand

Mr Chatubhoom Bhoombonchoo, Assistant Professor, Naresuan University, Thailand

Mr Siriwat Boonwichai, Irrigation Engineer, River Basin Management Division, The Office of the National Water Resources (ONWR), Thailand

Moderated Discussion

The road to the Global Dialogue on Water Tenure: Lessons from the VGGT and recent FAO work

Mr Benjamin Kiersch, Senior Water Resources Expert, FAO

What constitutes responsible governance of water tenure? Global perspectives

Mr Irfan Saleh, Director of Water Resource, Ministry of National Development Planning (BAPPENAS), Indonesia

Ms Yanping Zhang, China Water Exchange, China

Mr Pedro Arrojo Agudo, UN Special Rapporteur on Human Right to Water and Sanitation

Ms Inga Jacobs-Mata, Director of Water, Growth and Inclusion, International Water Management Institute (IWMI), South Africa

Mr Lê Văn Chính, Dean of Economic and Management Faculty/ Associate Professor, Thuyloi University, Vietnam

Ms Solieng Mak, Chair, Cambodia Water Partnership, Cambodia

Wrap-up

Mr Benjamin Kiersch, Senior Water Resources Expert, FAO

Mr Lerdphan Sukyirun, Director of River Basin Management Division, Office of National Water Resources, Thailand

16.30-16.45

Coffee break and Poster presentations.

Location: Ballroom Foyer

Infrared thermography for water management optimization in both field and greenhouse crops: INALARE Project

Authors: **Antimo Di Meo, Ida Di Mola, Lucia Ottaiano, Eugenio Cozzolino, Pasquale Mormile, Mauro Mori & Massimo Rippa.**

Harnessing Rainwater for Tomorrow: A Case Study of Community-Led Water Conservation in Dhvadi Village, Pune District, Maharashtra, India.

Author: **Amar M. Dhere**

Weather Modification Techniques in Response to Climate Change and the 2023 El Niño Event in Thailand

Authors: **Chanti Detyothin, Arisara Nakburee, Sritam Danpradit & Weeraphol Sudchada.**

Impact of fertilizers, FYM and lime on soil carbon fractions in an acidic Alfisol of North-Western Himalayas

Authors: **Ankita Mohapatra & Paul Raj Sharma.**

A feature-optimized and performance-weighted ensemble learning for estimating soil salinity using UAV imagery and soil auxiliary information

Authors: **Wang Li, Zha Yan, Lu Miao & Wu Xueping.**

Achieving Carbon Neutrality in Agriculture with Effective Microorganisms (EM)

Authors: **Toru Koshiji, Aly Adrian E. Bagnol, Masahiko Honzawa & Hiroshi Oneda**

Rice straw and gypsum amendments with saline water irrigation improve soil properties and rice yield in saline coastal soil

Authors: **Priya Lal Chandra Paul, Debjit Debjit Roy, Mst. Shetara Shetara Yesmin, Rezoan Bin Hafiz Pranto & Md. Mahbubul Alam.**

Comparing the Efficiency of Biochar and Boiler Ash in Carbon Mineralization and Nutrient Release: A Case Study on Acidic Soils

Authors: **Pornwinee Khamdee, Kanokpit Rotchum, Hatairat Phumpuang, Naphatsarnan Phasukarratchai, Witchaya Rongsayamanont & Wanwisa Pansak**

Enhancing Agricultural Productivity through Climate-Smart Renewable Energy Driven-Pumps Small-scale Irrigation System

Authors: **Karen S. Bautista, Edna D. Samar, Crisostomo V. Mamorbor, Excelso L. Liberato Jr. & Ladylene D. Gravidez**

Integrated Natural Resource Management for Nutrition-sensitive Climate-smart Agriculture in Southern Laos

Authors: **Krishna Prasad Pant, Rob Kelly, Brice Pletsers, Kuber Prasad Adhikari & Salaheddine Hafidi**

16.45 - 18.00

Ministerial Dialogue (continuation)

Location: Monthathip 3

In a roundtable discussion, Ministers, Vice Ministers and Heads of Delegation will continue deliberating on challenges in the shift toward sustainable and integrated land, soil and water management, the solutions and innovations across continents as well as discuss the Ministerial Declaration.

Moderator: **Ms Beth Bechdol**, Deputy Director-General , FAO

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

18.00 - 20.00

Welcome reception hosted by Royal Thai Government.

Location: Ballroom

Tuesday, 10th December 2024

Master of Ceremony: Ms Heba Al-Hariry, Land and Water Officer, FAO Regional Office for Near East and North Africa TBC

09.00 – 10.30

Plenary 1 - Managing Water Scarcity

Location: Ballroom

Moderator: **Mr John Dore**, Lead Specialist – Climate Resilience & Water Security, Department of Foreign Affairs and Trade (DFAT), Australia

This plenary will focus on (i) improving the understanding of the current trends in water scarcity, defining priority areas for countries in tackling water scarcity over the next decade, and (ii) identify ways in which international donors and partners can better support national efforts to build water resilience, including specific areas where assistance is most needed.

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

Keynotes:

Managing water scarcity -lessons learnt from Australia for the World

Ms Karlene Maywald, Former Minister for the River Murray and Water Security South Australia/Formal Chair of the National Water Commission, the Australian Government

Managing increased demands and uncertainty for basin water allocation – lessons learned

Mr Yuanyuan Li, Vice President of the General Institute of Water Resources and Hydropower Planning and Design, and President of the International Water Resource Association, Ministry of Water Resources of the People's Republic of China

Ms Meike van Ginneken, Water Envoy for the Kingdom of the Netherlands, co-chair of the Global framework for Water Scarcity (WASAG) (Video Message)

Questions & Answers

Panel Discussion

H.E. Aoun Diab Abdullah, Minister of Water Resources, Iraq (TBC)

Mr Hamadi Habaieb, State Secretary, Ministry of Agriculture, Hydraulic Works and Fishery, Tunisia.

Mr Mohamed Al Hamdi, Senior land and water Officer, Near-East and North Africa water scarcity Initiative, FAO

Ms Ximena Campos Fernández, General Director of Basins and Water Resources, Ministry of Environment and Water, Bolivia (TBC)

H.E. Musadik Masood Malik, Federal Minister for Water Resources, Pakistan (TBC)

Mr Chanthanet Boualapha, Vice Minister of Natural Resources and Environment of Lao PDR

Questions and Answers. Plenary discussion

Closing Remarks

Mr Jean Ruhiza Boroto, Coordinator of the Global framework for water scarcity (WASAG)

10.30 – 11.00

Coffee break and Poster presentations

Location: Ballroom Foyer

Infrared thermography for water management optimization in both field and greenhouse crops: INALARE Project

Authors: **Antimo Di Meo, Ida Di Mola, Lucia Ottaiano, Eugenio Cozzolino, Pasquale Mormile, Mauro Mori & Massimo Rippa**

Linking ecosystem net benefits and human activity: partition management implications on the China's Loess Plateau

Authors: **Deng Lei & Wang Xiaozhen**

Restoration of mined land for agricultural purposes: Challenges and opportunities

Authors: **Beatrice Otunola & Paida Mhangara**

Weather Modification Techniques in Response to Climate Change and the 2023 El Niño Event in Thailand

Authors: **Chanti Detyothin, Arisara Nakburee, Sritam Danpradit & Weeraphol Sudchada**

Enhanced Soil Erosion Assessment through the Raindrop Microphysical Characteristics Measurement System and the Surface Runoff and Suspended Sediment Concentration Instrument

Authors: **Shangyu Shi, Minghang Guo, Baoyuan Liu, Rui Li, Xiaoyun Zhan, Haijing Shi, Jun Zhao & JunFeng Shui**

Extracting gully using machine learning and deep learning algorithms in the loess hilly and gully region in China

Authors: **Liu Boyang, Yuan Ziyang, Guo Jialong, Wu Shufang, Feng Hao, Bu Chongfeng & H.M. Siddique Kadambot**

Well-canal conjunctive irrigation accelerates long-term salinization although reduces short-term soil salinity of well irrigation area in the arid irrigated regions - Evidences from 20-year observations

Authors: **Sun Guanfang, Zhong Zekun & Gao Zhaoliang**

Global soil erosion assessment and mapping-Some preliminary progress

Authors: **Rui Li, Baoyuan Liu, Qinke Yang, Fei Wang, Yun Xie, Jvying Jiao, Minghang Guo, Hongming Zhang, Xiaoping Zhang, Chunmei Wang, Haijing Shi, Guowei Pang, Jiaqiong Zhang, Wenyi Sun, Shangyu Shi, Chenglu Huang**

Effect of vegetation restoration on soil properties in severe soil erosion area-A meta-analysis

Authors: **Wenliang Geng, Xiaoping Zhang, Yangyang Li & Shunxia Duan**

Integrated Natural Resource Management for Nutrition-sensitive Climate-smart Agriculture in Southern Laos

Authors: **Krishna Prasad Pant, Rob Kelly, Brice Pletsers, Kuber Prasad Adhikari & Salaheddine Hafidi**

11.00-12.30

Thematic sessions and Special/Partner events

11.00 – 12.30

Water accounting for effective water allocation

Location: Suriyanchandra

Moderator: **Mr Benjamin Kiersch**, Senior Water Resources Expert, FAO

This session will enhance participants' understanding of water accounting, focusing on the latest tools, methodologies, and stakeholder engagement strategies. It will address challenges in data management and emphasize integrating environmental flows into water accounting. The goal is to develop strategies that link water accounting data with effective water allocation and policy decisions.

Opening

Ms Louise Whiting, Water Management Officer, FAO Regional Office for Asia and the Pacific

Keynote presentation: Water Accounting for Effective Allocation

Mr Peter Droogers, Senior Hydrologist, FutureWater, The Netherlands

Case Study - Connecting Water Accounting, Allocation, and on Farm Decision Making

Mr Tony Weber, National Lead - Water Modelling, Alluvium International, Australia

Panel Discussion | How to ensure Water Accounting Informs Priority Setting and Water Allocation.

Moderator: **Ms Domitille Vallée**, Senior Water Specialist, FAO regional Office for Asia and the Pacific

Mr Mohammad Irfan Saleh, Director of Water Resource, Ministry of National Development Planning (BAPPENAS)

Mr Lerdphan Sukyirun, Director of River Basin Management Division, Office of National Water Resources (ONWR), Thailand

Ms Karlene Maywald, Former Minister for the River Murray and Water Security South Australia/Formal Chair of the National Water Commission, the Australian Government

Mr Jelle Beekma, Team leader and policy expert, Landell Mills International, United Kingdom

Table Discussions

Table 1: Water Data Management

Moderator: **Ms Rosanna Keam**, Programme Technical Manager (GEF International Waters), FAO Regional Office for Asia and the Pacific

Table 2: Incorporating the Environment and Ecosystem Health into Water Accounting

Ms Tania Imran, Water Management Expert, FutureWater, The Netherlands

Table 3: Mechanisms to Ensure Water Accounting Informs Priority Setting and Water Allocation

Ms Louise Whiting, Water Management Officer, FAO Regional Office for Asia and the Pacific

Summary and closing

Ms Domitille Vallée, Senior Water Specialist, FAO Regional Office for Asia and the Pacific

11.00 – 12.30

Enabling socio-economic and political environments to sustainable soil and land management

Location: Monthathip 3

Moderator(s): **Ms Lucrezia Caon**, Land Management Officer, FAO Regional Office for Asia and the Pacific

This session explores the socio-economic and political barriers to SSLM adoption, showcasing successful initiatives and providing practical recommendations for policymakers. It will emphasize the importance of effective governance in supporting sustainable land and soil management practices.

Keynote presentation: Supporting sustainable soil and land management – finding success between the carrot and the stick

Mr Jason Condon, Associate Professor in Soil Science, Charles Sturt University, Australia

Presentations:

Inclusive Business Model for Sustainable Soil and Water Management in Seed Village

Mr Mohammad Asaduzzaman, Regional Coordinator/Field Coordinator and M&E Officer, FAO, Bangladesh

Policy and research on soil: an EU perspective

Mr Benjamin Van Doorslaer, Directorate-General Agriculture and Rural Development of the European Commission, Belgium

The Jigmechu Ecotourism Community Project: participatory community-driven initiative applying Sufficiency Economy Philosophy concept to secure soil sustainability and creating sustainable livelihoods for future generations

Mr Choki Dorji, Program Manager, Jigmechu Ecotourism Community Group, Bhutan

Towards systematic enabling environment technical assistance for agribusinesses scaling soil and water solutions in Africa

Ms Inga Jacobs-Mata, Director of Water, Growth and Inclusion, International Water Management Institute (IWMI), South Africa

Panel discussion

Mr Mohammad Asaduzzaman, Regional Coordinator/Field Coordinator and M&E Officer, FAO, Bangladesh

Ms Salma Akhter, Farmer Business Facilitator/Accountant and Farmer Business Facilitator Vegetable Seed Unit, Sara Bangla Krishak Society, Bangladesh

Mr Mario E. Perez Hernandez, Director, Ministry of Agriculture and Rural Development, Mexico

Mr Mario Zúñiga Ríos, Soil Doctor, Mexico

Mr Romba Rasmene, Director of Fertility and Water and Soil Conservation, The National Bureau of Soils (BUNASOLS), Burkina Faso

Ms Béatrice W. Bonkougou, Farmer, Burkina Faso

Mr Boonsuthee Jeravongpanich Director of Forest Economics Office, Ministry of Natural Resources and Environment, Thailand

Mr Petch Chaipong, Head of Community Council Organization, Pa Leaw Luang Community Council Organization, Thailand

11.00 – 12.30

Land, soil and water conservation and management

Location: Monthathip 4

Moderator: **Mr Mahmoud Abdelfattah**, Senior Land and Water Officer, FAO

This session focuses on showcasing innovations in land, soil, and water conservation, addressing challenges, and fostering international collaboration. It aims to integrate science into policy and raise awareness of the importance of innovative management practices.

Opening Remarks and Introduction

Mr Rui Li, Professor, Institute of Soil and Water Conservation, Northwest Agriculture and Forestry University of China, China

Keynote presentation: Recent advances in soil erosion and the necessary improvements to soil and water conservation programs and practices

Mr David Lobb, Professor, Landscape Ecology at the University of Manitoba, Canada.

Mr Li Sheng, Research Scientist, Agriculture and Agri-Food Canada, Canada

Co-evolution of soil and water conservation policy and human–environment in the Yellow River Basin since 1949

Mr Fei Wang, Professor, Institute of Soil and Water Conservation, Northwest Agriculture and Forestry University of China, China

Integrated Climate-Resilient Soil Management in Thai Rice Agriculture: A Regenerative Approach, A Case Study

Mr Fooyontphanich Kim, Senior Project Manager, Livelihoods Funds, Thailand

Design and implementation of Standardized country – based soil Data for the management and use of Soil

Ms Rafla Attia, Director of Soil, Ministry of Agriculture, Hydraulic Resources, and Fisheries, Tunisia

Assessment of soil nutrients and most vulnerable erosion areas in different ecoregions of Mexico

Ms Blanca Lucía Prado Pano, Senior Researcher, Institute of Geology (UNAM), Mexico.

Optimizing Cropland Layout Through Insights from China's Third National Soil Census

Mr Kening Wu, Professor, School of Land Science and Technology, China University of Geosciences, China

Evaluation of soil degradation in Burkina Faso: methods and monitoring

Mr Romba Rasmane, Director of Fertility and Water and Soil Conservation, The National Bureau of Soils (BUNASOLS), Burkina Faso

11.00 – 12.30

Special/Partner event: Integrating Nature-Based Solutions in Water Resources Management

Location: Ballroom

Moderators: **Miss Sasaluk Jeensombut**, Civil Engineer, Royal Irrigation Department, Thailand; **Mr. Preamanun Nitiprateep**, Civil Engineer, Royal Irrigation Department, Thailand

The session aims to exchange knowledge on the application of Nature-based Solutions (NbS) in water management across rural and urban areas. It will explore NbS integration for climate change adaptation, water security, and ecosystem restoration. Discussions will focus on scaling NbS solutions to enhance resilience and sustainability.

Opening Session

Mrs. Patcharawee Suwannik, Executive Advisor on Water Resources Management, Acting Deputy Secretary – General of the Office of The National Water Resources

Mr Satit Maneepai, Senior Advisor of Royal Irrigation Department, Thailand

Keynote presentation

Mr Tjitte Nauta, Regional Manager Asia, Deltares, the Netherlands

Panel discussion

Moderators: **Ms Sasaluk Jeensombut**, Royal Irrigation Department, Thailand & **Mr Preamanun Nitiprateep**, Royal Irrigation Department, Thailand

Mr Marco Arcieri, President, International Commission on Irrigation and Drainage, India

Mr Julian Tost, Deputy Cluster Coordinator of the Agriculture and Food Cluster, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Thailand

Mr Jianbin Wang, Chief Innovation Officer, Monash University, Australia

Mr Simon Tilleard, General Manager, Alluvium Consulting, Australia

Mr Adisorn Champathong, Senior Expert on Hydrology, Royal Irrigation Department, Thailand

Ms Nantawan Suwansatit, Office of National Water Resources, Thailand

Questions & Answers

13.00-14.00

Special partner and Side events

13.00 – 14.00

Opportunities for Improved Water Resources Management – Water, Sanitation & Hygiene (WRM-WASH) Integration

Location: Suriyanchandra

Moderator: **Ms Brooke Yamakoshi**, Wash Manager, United Nations Children's Fund (UNICEF), Thailand

The session will explore the integration of WRM and WASH for sustainable water management, showcasing successful examples from Timor-Leste, Vietnam, and Vanuatu. It will focus on overcoming fragmentation and maximizing cooperation to achieve more equitable and resilient water management.

Opening

Ms Karlene Maywald, Former Minister for the River Murray and Water Security South Australia/Formal Chair of the National Water Commission, the Australian Government

Strengthening collaboration on WRM and WASH – UNICEF & FAO

Ms Rosanna Keam, Programme Technical Manager (GEF International Waters), FAO Regional Office for Asia and the Pacific

Framework for WRM-WASH cooperation (UN-Water, SIWI, UNICEF, UNDP)

Ms Silvia Gaya, Regional Adviser, WASH, Climate & Environment, UNICEF East Asia and Pacific Regional Office

WRM-WASH cooperation case studies:

Timor-Leste – Catchment management to improve water retention

Mr Eugenio Lemos, Executive Director, Permakultura Timor Lorosa'e (PERMATIL), Timor Leste

Viet Nam – Circular economy approaches to rural grey wastewater treatment management for reuse in drought-prone areas of Viet Nam

Mr Dinh Van Dao, Senior Researcher, Institute of Water Resources Economics and Management, Viet Nam

Vanuatu – Advancing climate-resilient drinking water safety and security planning (DWSSP) to meet national goals in Vanuatu

Mr Erie Sami, Acting Manager Operations and Projects, Department of Water Resources Ministry of Lands and Natural Resources, Vanuatu

13.00 – 14.00

Water Productivity as the agriculture Water Performance Indicator

Location: Monthathip 4

Moderator: **Mr Maki Abdourahman**, Land and Water Officer, FAO, sub-regional office for North Africa, Tunisia

This session will discuss water productivity as a performance indicator and explore methods to enhance it while ensuring water sustainability. It will feature case studies and strategies for balancing productivity with sustainable water use.

Water productivity and performance, Why monitor when water is free?

Mr Neil Lazarow, Program Manager for Water, Australian Centre for International Agricultural Research, Australia

Water Productivity monitoring via remote sensing, WaPoR

Ms Livia Peiser, Lead of Geospatial Unit, Land and Water Division, FAO

Achievements in the disaggregation of SDG 6.4.2 (level of water stress) by river basin and sub-basins

Mr Riccardo Biancalani, Project Coordinator, FAO

Agriculture Advisory Service Apps (IREY) for Field Crops Using WaPor for Improved Water Productivity in Tunisia

Mr Anis Bouselmi, Director of Studies and Technology Transfer, National Institute of Field Crops, Tunisia

Discussion

Synthesis and conclusion

13.00 – 14.00

Inter-regional policy dialogue on the water-energy-food-ecosystems (WEFE)

Location: Monthathip 3

Moderator: **Ms Tania Imran**, Water Management Expert, FutureWater, The Netherlands

The session will address the methodological gaps and data challenges in managing the WEFE Nexus and foster the exchange of regional best practices. It will explore strategies for improving cross-sectoral and regional collaboration in data sharing. The focus will be on enhancing decision-making frameworks and tools for more effective management of the WEFE Nexus.

Opening

Mr Mohamed AlHamdi, Senior Land and Water Officer, FAO Regional Office for Near East and North Africa

Keynote Presentation: Methodological and Tool Needs in the WEFE Nexus

Mr Pieter Droogers, Senior Hydrologist, FutureWater, the Netherlands

Panel Discussion: Regional Challenges, Opportunities, and Best Practices

Moderator: **Ms Tania Imran**, Water Management Expert, FutureWater, The Netherlands

Mr Akmal Kosimov, Deputy Minister for Agriculture, Republic of Uzbekistan (TBC)

Mr Iván Ramos Pastor, Vice-Minister of Family Agriculture and Agrarian Infrastructure and Irrigation, Peru (TBC)

Mr Lee Baumgartner, Executive Director, Gubali Institute, Charles Sturt University, Australia

Mr Thanapon Piman, Senior Research Fellow, Stockholm Environment Institute (SEI), Thailand

Mr Walidd Hakiki, Head of planning, Ministry of Water Resources and Irrigation, Egypt

Mr Mohamed Aldwairi, Assistant Secretary-General for Strategic Planning, Ministry of Water and Irrigation, Jordan

Ms Asma Lasram, Associate professor, High Agronomic Institute of Chott Mariem, Tunisia

Summary and Closing Remarks

Mr Mohamed AlHamdi, Senior Land and Water Officer, FAO Regional Office for Near East and North Africa

13.00 – 14.00

Securing food and nutrition security in emergencies and fragile contexts through integrated livelihoods approach focusing on enhanced soil and water health, access and governance

Location: Ballroom

Moderator: **Ms Gwenaelle Luc**, Emergency and Resilience Specialist, FAO Emergency and Resilience

In emergency contexts, humanitarian interventions often focus on immediate needs like food and medical supplies, while neglecting the fundamental drivers of food insecurity and acute malnutrition. These drivers are intrinsically linked to livelihoods that depend on the health, access, and governance of land, soil, and water resources. Land, soil, and water resources form the backbone of sustainable livelihoods, and their management must be woven into humanitarian systems to provide lasting solutions.

Opening

Mr Malo Meshack, FAO representative, South Sudan

Conceptual Framework: Seasonality and Environment, Institutions and livelihoods systems impact on Child Acute Malnutrition

Ms Helen Young, Professor, Feinstein International Center, TUFTS University, USA

Agro-pastoral Livelihood Systems in Chad: Seasonality, Land and Water access and governance, and Links to Acute Malnutrition

Mr Modibo Keita, Information Management Specialist for the Food Security Cluster, FAO, Chad

A One Health Approach: Examining Water and Soil Contamination, Zoonotic Diseases, and Livelihood Systems as Drivers of Child Acute Malnutrition in Chad

Mr Mahamat Fayiz Abakar, Assistant Professor, Institut de Recherche en Elevage pour le Développement (IRED), Chad

Conflict, Landmines and Soil Pollution: Impacts on Food Security and Safety

Ms Natalia Rodriguez Eugenio, Land and Water officer, FAO, Italy

Agriculture in Mine Action: Prioritization, Soil Analysis, Rehabilitation, and Food Security Recovery Programming – A Case Study from Ukraine

Ms Tiphaine Anne Lucas, Programme Coordinator on Mine Action and Land Rehabilitation, FAO, Ukraine

Questions & Answers

14.00 – 16.00

Ministers and Stakeholders Dialogue – Youth, Gender Equality and Social Inclusion

Location: Ballroom

Moderators: **Ms Inga Jacobs-Mata**, Director of Water, Growth and Inclusion, International Water Management Institute (IWMI), South Africa & **Mr Lifeng Li, Director**, Land and Water Division, FAO

Ministers and stakeholders will (i) share innovative solutions by Youth; (ii) discuss the importance of gender-responsive policies for equitable access to land, soil, and water for marginalized groups, (iii) share successful examples and challenges in integrating these perspectives in national strategies and programmes, (iv) discuss the role of policy reforms and partnerships in promoting inclusivity and just transition, and (v) regional and international cooperation to enhance Youth and Women engagement and leadership and gender equality in sustainable land, soil and water management for agrifood systems transformation.

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

Opening remarks

Mr Lifeng Li, Director, Land and Water Division, FAO Headquarters

Panel discussion | Challenge, contributions and pathways for gender equality and rural women's empowerment

Panelists:

The Honourable Dr. Demba Sabally, Minister of Agriculture, Republic of The Gambia (TBC)

The Honourable Deepak Khadka, Minister for Energy, Water Resources and Irrigation, Ministry of Energy, Water Resources and Irrigation, Nepal (TBC)

The Honourable Te Hani Rose Alexandra Brown, Associate Minister Environment, the Cook Islands

H.E. Aderito Hugo da Costa, Vice Minister for Parliamentary Affairs, Timor Leste

Ms Sara Duerto Valero, Regional Advisor on Gender Statistics, UN Women Regional Office for Asia and the Pacific, Thailand

Ms Tamisha Lee, President, Jamaica Network of Rural Women Producers (JNRWP) (TBC)

Ms Kamonwan Roongprasertwong, Young Farmer/innovator, Thailand

Ms Sothearith Sok, Founder, JUNLEN, Cambodia

Mr Miller Alexander Rajendran, CEO, SenzAgro Solutions, Sri Lanka

Mr Opeyemi Elujulo, Climate change advocate, official focal point for SDG2 and agribusiness related matters for the Major Group for Children and Youth, the official UN youth constituency, Nigeria

Ms Latania Belai Diandam, Associate Board Member/ Dayak Climate Activist / Planetary Health Practitioner, Health in Harmony (indigenous), Indonesia

Ms Tamisha Lee, President, Jamaica Network of Rural Women Producers (JNRWP) (TBC)

Ms Sara Duerto Valero, Regional Advisor on Gender Statistics, UN Women Regional Office for Asia and the Pacific, Thailand

Ms Kamonwan Roongprasertwong, Farmer, Thailand

Closing remarks

Mr Lifeng Li, Director of Land and Water Division, FAO, Italy

16.00 – 16.30

Coffee break and Poster presentations

Location: Ballroom Foyer

Linking ecosystem net benefits and human activity: partition management implications on the China's Loess Plateau

Authors: **Deng Lei & Wang Xiaozhen.**

Enhanced Soil Erosion Assessment through the Raindrop Microphysical Characteristics Measurement System and the Surface Runoff and Suspended Sediment Concentration Instrument

Authors: **Shangyu Shi, Minghang Guo, Baoyuan Liu, Rui Li, Xiaoyun Zhan, Haijing Shi, Jun Zhao & JunFeng Shui.**

Impact of fertilizers, FYM and lime on soil carbon fractions in an acidic Alfisol of North-Western Himalayas

Authors: **Ankita Mohapatra & Paul Raj Sharma.**

Extracting gully using machine learning and deep learning algorithms in the loess hilly and gully region in China

Authors: **Liu Boyang, Yuan Ziyang, Guo Jialong, Wu Shufang, Feng Hao, Bu Chongfeng & H.M. Siddique Kadambot.**

A feature-optimized and performance-weighted ensemble learning for estimating soil salinity using UAV imagery and soil auxiliary information

Authors: **Wang Li, Zha Yan, Lu Miao & Wu Xueping.**

Achieving Carbon Neutrality in Agriculture with Effective Microorganisms (EM)

Authors: **Toru Koshiji, Aly Adrian E. Bagnol, Masahiko Honzawa & Hiroshi Oneda**

Global soil erosion assessment and mapping-Some preliminary progress

Authors: **Rui Li, Baoyuan Liu, Qinke Yang, Fei Wang, Yun Xie, Jvying Jiao, Minghang Guo, Hongming Zhang, Xiaoping Zhang, Chunmei Wang, Haijing Shi, Guowei Pang, Jiaqiong Zhang, Wenyi Sun, Shangyu Shi, Chenglu Huang**

Comparing the Efficiency of Biochar and Boiler Ash in Carbon Mineralization and Nutrient Release: A Case Study on Acidic Soils

Authors: **Pornwinee Khamdee, Kanokpit Rotchum, Hatairat Phumpuang, Naphatsarnan Phasukarratchai, Witchaya Rongsayamanont & Wanwisa Pansak**

Enhancing Agricultural Productivity through Climate-Smart Renewable Energy Driven-Pumps Small-scale Irrigation System

Authors: **Karen S. Bautista, Edna D. Samar, Crisostomo V. Mamorbor, Excelso L. Liberato Jr. & Ladylene D. Gravidez**

Effect of vegetation restoration on soil properties in severe soil erosion area-A meta analysis

Authors: **Wenliang Geng, Xiaoping Zhang, Yangyang Li & Shunxia Duan**

16.30-18.00

Thematic sessions and Special/Partner events

16.30 – 18.00

Technologies and Tools for climate resilient land, soil and water management

Location: Suriyanchandra

Moderator(s): **Ms Livia Peiser**, Senior Land and Water Officer, FAO

The session will focus on technologies and tools that promote climate resilience and nature-positive management of land, soil, and water resources. It will discuss the integration of these systems for ecosystem restoration and highlight innovations like AI and geospatial systems. Insights from global initiatives and regional projects will inform actions for leveraging these tools at various levels.

Opening

Mr Pedcris Orencio, Senior Officer, ASEAN Secretariat, Indonesia and **Ms Livia Peiser**, Senior Land and Water Officer, FAO

Enhancing sustainable water and land resources management in Somalia through data and information services: The FAO SWALIM approach

Mr Ugo Leonardi, Technical Adviser, FAO, Somalia

Demystifying Science of Aquifers for Community-driven Sustainable Land and Water Resource Management

Ms Ankita Yadav, Researcher, Watershed Organization Trust, India

Enhancing Drought Resilience in Tropical Perennial Crops through Innovative Stable Isotope Techniques

Mr Gerd Dercon, Laboratory Head, International Atomic Energy Agency, Austria

BNI System – Development of planet-friendly agricultural production system using biological nitrification inhibition (BNI) technology

Mr Yoshihashi Tadashi, Senior researcher (Project Leader), Biological Resources and Post-harvest division, Japan International Research Center for Agricultural Sciences, Japan

Questions & Answers

Moderator: **Ms Livia Peiser**, Senior Land and Water Officer, FAO

Mr Setiari Marwanto, Head of Research Center for Estate Crops, BRIN, Indonesia

Mr Tony Weber, National Lead - Water Modelling, Alluvium International, Australia

Ms Heba Al-Hariry, Land and Water Officer, FAO Regional Office for Near East and North Africa

Mr Hamid Mehmood, Economic Affairs Officer, UNESCAP

Closing remarks

Mr Sion Chiew, Soil and climate data specialist, FAO Regional Office for Asia and the Pacific, Thailand

16.30 – 18.00

Soil erosion assessment, monitoring and prevention.

Location: Monthathip 3

Moderator(s): **Mr Yuxin Tong**, Land and Water Officer, FAO

The session will focus on the latest methods for assessing soil erosion and promoting innovative tools and technologies for improved monitoring. It will review current methodologies and discuss their limitations. The session will also encourage collaboration among researchers, policymakers, and practitioners to enhance global efforts in combating soil erosion effectively.

Opening

Mr Lifeng Li, Director, Land and Water Division, FAO

Keynote Presentation: Regional Soil Erosion Assessment and Mapping: Contents, Methods and Application- Perspective of Soil and Water Conservation Needs

Mr Baoyuan Liu, Faculty of Geographical Science, Beijing Normal University, China

Global Soil Erosion Mapping - Achievements and Issues

Mr Qinke Yang, Professor, Northwest University, China

Impacts of Land Use Change on Soil Erosion and Degradation in the North Khong Watershed, Thailand

Ms Sunsanee Arunyawat, Director of Research and Development on Soil and Water Conservation Group, Land Development Department, Thailand.

Soil erosion management practices validated in the south-central region of Burkina Faso

Ms Habibata Ouedraogo, The National Bureau of Soils (BUNASOLS), Burkina Faso

Estimating biological conservation measures factor B in the CSLE using Google Earth Engine

Ms Haijing Shi, Associate Professor, Northwest Agriculture and Forestry University of China, China

Group discussion

16.30 – 18.00

Valuing bioeconomy in integrated resource management strategies

Location: Monthathip 4

Moderators: **Mr Lev Neretin**, Senior Natural Resources Officer, FAO & **Ms Hitomi Rankine**, Chief, Environment and Development Policy Section, UNESCAP

The session will highlight the role of bioeconomy in sustainable production and resource management. It will focus on integrating bioinnovations into soil, land, and water management practices to promote sustainable agriculture.

Facilitated dialogue | How bioeconomy principles and practices can add value for advancing sustainable and more integrated agricultural systems

Mr Osamu Kubota, Deputy Assistant Minister, Export and International Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries, Japan

Mr Iván Ramos Pastor, Vice-Minister of Family Agriculture and Agrarian Infrastructure and Irrigation, Peru (TBC)

Mr Jamshid Abduzukhurov, Head of the Department of Soil, Water, and Agrotechnologies, Uzbekistan (TBC)

Panel Discussion | Bioeconomy developments and lessons learnt: integrated land, water and energy management in various strategies, lessons from policy process, innovations in soil microbiome, digital agriculture, biobased inputs to improve productivity and address climate change (biobased pesticides, fertilizers and etc.), and soil remediation using biobased methods

Mr Calogero Schillaci, Scientific project officer, Joint Research Centre of the European Commission, Belgium

Mr Mamadou Diakhite, Head of Environmental Sustainability Division, African Union Development Agency, South Africa

Mr Dian Sukmajaya, Senior Officer of Food, Agriculture and Forestry Division, ASEAN Secretariat, Indonesia

Ms Nana Kuenkel, Cluster Coordinator, Agriculture & Food, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Thailand

Mr Ahmed Fahmi, Programme Specialist, UNESCO

Ms Luciana Rossi, Professor, University of Milan, Italy

Mushtaq Memon, UNEP (TBC)

Mr Jamshid Abduzukhurov, Head, Department of Soil, Water, and Agrotechnologies, Ministry of Agriculture and Water Resources, Uzbekistan (TBC)

Mr Wichien Yongmanitchai, Field Technical Specialist, Winrock International, Thailand

Mr Faizal Hamid, Assistant Vice President, Bioeconomy Corporation, Malaysia

Facilitated Plenary Discussion: what/where are the opportunities/challenges for advancing bioeconomy-related strategies/actions for integrated land, soil and water management

Moderator: **Ms Hitomi Rankine**, Chief Environment and Development Policy Section, UNESCAP

Closing remarks

Mr Illias Animon, Forestry Officer, FAO Regional Office for Asia and the Pacific

16.30 – 18.00

Water Scarcity Program Regional Cooperative Platform

Location: Ballroom

Moderator: **Mr Benjamin Kiersch**, Senior Water Resources Expert, FAO Headquarters

The event will showcase regional efforts to address water scarcity, focusing on policies, strategic frameworks, and cross-sectoral collaborations. It will facilitate knowledge exchange and technical dialogue among experts to share solutions and best practices. The session aims to strengthen regional cooperation and networks in tackling water scarcity issues.

Opening

Mr John Dore, Lead Specialist – Climate Resilience & Water Security, Department of Foreign Affairs and Trade, Australia

Introduction to the water scarcity program

Ms Louise Whiting, Water Management Officer, FAO Regional Office for Asia and the Pacific

Panel Discussion | Government Panel

Moderator: **Ms Karlene Maywald**, Former Minister for the River Murray and Water Security, South Australia/Formal Chair of the National Water Commission, Australian Government, Australia

Mr Lerdphan Sukyirun, Director River Basin Management Division, Office of National Water Resources, Thailand

Mr Mohammad Irfan Saleh, Director of Water Resources, BAPPENAS, Indonesia

Mr Thach Sovanna, Director of Department of Water Resources Management and Conservation, Ministry of Water Resources and Meteorology, Cambodia

Mr Buyannemekh Boris, Director General of the Department of Audits, Monitoring, and Evaluation, Ministry of Environment and Climate Change, Mongolia

Mr Kingkham Manivong, Deputy Director General of the Department of Water Resources, Ministry of Natural Resources and Environment, Lao PDR

Panel Discussion | Technical Panel

Moderator: **Mr Jippe Hoogeveen**, Senior Land and Water Officer, FAO

Mr Chhuon Kong, Assistant Professor, Institute of Technology of Cambodia, Cambodia

Mr Fany Wedahuditama, Chairman, Water Stewardship Indonesia, Indonesia

Ms Mayvong Sayatham, Water Resources Management Specialist, FAO, Lao PDR

Mr Thanapon Piman, Senior Research Fellow, Stockholm Environment Institute (SEI), Thailand

Mr Quoc Quan Tran, Water Resources Expert, Vietnam National Committee on Large Dams and Water Resources Development (VNCOLD), Institute of Hydropower and Renewable Energy, Viet Nam

Mr Munkhtsetseg Zorigt, Senior Lecturer, National University of Mongolia, Mongolia

Closing Remarks

Mr Benjamin Kiersch, Senior Water Resources Expert, FAO Headquarters

Wednesday 11th December 2024

09.00 – 10.30

Plenary 2 –Reversing Land and Soil Degradation, Restoring Ecosystems

Location: Ballroom

Master of Ceremony: **Louise Whiting**, Land and Water Officer, FAO Regional Office for Asia and the Pacific

Moderator: **Mr Ewald Rametsteiner**, Deputy Director of Forestry Division, FAO

This Plenary will draw on Thematic Session on land and soils, to discuss how the UN Decade on Ecosystem Restoration can enable scaling up land and soil restoration, sharing inspirational restoration cases including through FAO publications, and launch the regional forest landscape restoration initiative – the RESULT Asia-Pacific.

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

Launch of the Global Status of Salt-Affected Soils report

Ms Maria Konyushkova, International Consultant in sustainable soil management, Global Soil Partnership, FAO

Keynote Presentation on restoration of degraded ecosystems and agricultural lands

Mr Robert Nasi, Director General, Center for International Forestry Research (CIFOR), India

Panel Discussion

Ms Stella Khachatryan, Communication and Public Relations Officer, Ministry of Economy, Armenia

Mr Raquibul Amin, Head of Programme, Science and Strategy Group, International Union for Conservation of Nature, Thailand

Mr Mario E. Perez Hernandez, Director, Ministry of Agriculture and Rural Development, Mexico

Mr Jamie Pittock, Professor of Geography, Australian National University, Australia

Towards action in addressing degradation and restoration to meet the land degradation neutrality and other Rio Convention targets

H.E. John Dahmasing Salong, Minister of Climate Change Adaptation, Meteorology and Geo-Hazards, Energy, Environment and Disaster Management, Vanuatu (TBC)

Mr Chanthanet Boualapha, Vice Minister of Natural Resources and Environment of Lao People's Democratic Republic

H.E. Marcos da Cruz, Minister of Agriculture, Livestock, Fisheries, and Forestry, Democratic Republic of Timor-Leste

Mr Osamu Kubota, Deputy Assistant Minister, Export and International Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries, Japan (TBC)

H.E Jambaltseren Tumur-Uya, State Secretary, Ministry of Food, Agriculture and Light Industry, Mongolia

Dasho Thinley Namgyel, Secretary of the Ministry of Agriculture and Livestock, Kingdom of Bhutan (TBC)

H.E Musadik Masood Malik, Federal Minister for Water Resources, Ministry of Water Resources, Pakistan (TBC)

Mr Chan Saruth, Under Secretary of State, Ministry of Agriculture, Forestry and Fisheries, Cambodia (TBC)

Mr Yuanyuan Li, Vice President of the General Institute of Water Resources and Hydropower Planning and Design, and President of the International Water Resource Association, Ministry of Water Resources of the People's Republic of China, China (TBC)

Closing Remarks

Mr Ewald Rametsteiner, Deputy Director, Forestry Division, FAO

10.30 – 11.00

Coffee break and Poster presentations

Location: Ballroom Foyer

Infrared thermography for water management optimization in both field and greenhouse crops: INALARE Project

Authors: **Antimo Di Meo, Ida Di Mola, Lucia Ottaiano, Eugenio Cozzolino, Pasquale Mormile, Mauro Mori & Massimo Rippa**

Harnessing Rainwater for Tomorrow: A Case Study of Community-Led Water Conservation in Dhavadhi Village, Pune District, Maharashtra, India

Authors: **Amar M. Dhere**

Restoration of mined land for agricultural purposes: Challenges and opportunities

Authors: **Beatrice Otunola & Paida Mhangara**

Well-canal conjunctive irrigation accelerates long-term salinization although reduces short-term soil salinity of well irrigation area in the arid irrigated regions - Evidences from 20-year observations

Authors: **Sun Guanfang, Zhong Zekun & Gao Zhaoliang**

Rice straw and gypsum amendments with saline water irrigation improve soil properties and rice yield in saline coastal soil

Authors: **Priya Lal Chandra Paul, Debjit Debjit Roy, Mst. Shetara Shetara Yesmin, Rezoan Bin Hafiz Pranto & Md. Mahbubul Alam.**

11.00 – 12.30

Thematic sessions and Special/Partner event

11.00 – 12.30

Financing for sustainable land, soil and water management

Location: Monthathip 3

Moderator(s): **Ms Sarah Wheeler**, Professor of Water Economics, Flinders University, Australia

The session will highlight recent developments in sustainable finance and explore new financial instruments supporting integrated land, soil, and water management. It will address key challenges and opportunities in financing climate-resilient actions and discuss how financial strategies can align with international sustainability commitments. Stakeholders will share insights to advance sustainable financing for resource management.

Opening

Ms Sarah Wheeler, Professor of Water Economics, Flinders University, Australia

Challenges and opportunities in financing sustainable land, soil and water management – sharing insights from Bolivia

Ms Ximena Campos Fernández, General Director of Basins and Water Resources, Ministry of Environment and Water, Bolivia (TBC)

Mobilizing finance at a landscape scale for sustainable land, soil and water management – new strategies and mechanisms

Ms Lucy Garrett, Landscapes Lead, Landscape Finance Lab, United Kingdom

Sustainable finance for smallholder agroforestry – turning the tide of climate change through advanced agroforestry, tracking technology and carbon offsetting

Mr Harm Haverkort, Director Partnerships Acorn - Asia&Pacific, Rabobank, The Netherlands

Sustainable finance for smallholder farmers – new finance instruments for integrated land, soil and water management at scale

Mr Beau Damen, Natural Resources Officer, FAO Regional Office for Asia and the Pacific

Emerging opportunities in financing sustainable land, soil and water management – insights from the 29th United Nations Climate Change Conference (COP29) and the Food and Agriculture for Sustainable Transformation (FAST) Partnership

Panel discussion

Moderator: **Ms Sarah Wheeler**, Professor of Water Economics, Flinders University, Australia

Closing remarks

Ms Sarah Wheeler, Professor of Water Economics, Flinders University, Australia

Mr Beau Damen, Natural Resources Officer, FAO Regional Office for Asia and the Pacific

11.00 – 12.30

Governance for integrated land, soil and water management

Location: Monthathip 4

Moderator: **Ms Aurelie Bres**, Land and Water Officer, FAO

This session addresses challenges in integrated land, water, and soil management through governance and shares solutions from stakeholders at different levels. It will identify gaps in support and knowledge for improving governance and management practices.

Opening

Ms Aurelie Bres, Land and Water Officer, FAO

Keynote presentation: Governance matters for Integrated Land, Soil, and Water Management

Mr Robert Nasi, Director General, Center for International Forestry Research (CIFOR), Indonesia

Sorting Governance for Integrated Water Management in the (semi) arid multi basin Balochistan Province of Pakistan

Mr Jelle Beekma, Team leader and policy expert, Landell Mills International, United Kingdom

Restoring Afghanistan's Landscapes through Integrated Soil and Water Management Strategies with active Community Engagement

Mr Muhammad Safi, National Professional Officer, FAO Afghanistan

Thailand Community Water Resource Lesson Learn towards sustainable extension

Ms Karika Kunta, Assistant Professor, Graduate School of Environmental Development Administration, National Institute of Development Administration, Thailand

Nature-based Solutions for Restoring Soil and Water: Transforming Urban and Rural Landscape into Multi-functional Land Systems Delivering Multiple Ecosystem services

Mr Jianbin Wang, Chief Innovation Officer, Monash University, Australia

Great Green Wall Initiative Policy-Driven Approaches for Large-Scale Land Restoration: A Case Study of Africa's Great Green Wall Initiative

Mr Mohammed Abubakar, Professor, Irkutsk National Research Technical University, Russia

The power of intersectoral and multipartite synergies in ecosystem restoration for a landscape-based climate-resilient system in Madagascar

Ms Manitrana Rasoanaivo, Biodiversity Forest and Landscape Restoration Projects Coordinator, FAO, Madagascar

11.00 – 12.30

National water roadmaps towards SDGs

Location: Suriyanchandra

Moderator: **Mr Lifeng Li**, Director, Land and Water Division, FAO

Water is essential for agriculture and achieving SDGs, but its management requires more coordinated action. This session aims to inform countries about the overall role of water for sustainable development and to provide a platform for all stakeholders, including governments, international organizations, civil society, the private sector and academia, to discuss and develop country-specific National Water Roadmaps, taking into consideration of regional and national perspectives.

Opening

Mr Lifeng Li, Director, Land and Water Division, FAO

Keynote presentation: National Water Roadmap towards SDGs Initiative

Mr Jippe Hoogeveen, Senior Land and Water Officer, FAO

High-Level Panel: National Perspective on Water governance and management

The Honourable Dr. Demba Sabally, Minister of Agriculture, Republic of The Gambia (TBC)

Technical Segment: The way towards National Water Roadmaps for resilient agrifood systems based on the SDG6 Accelerator Framework

Financing Accelerator

Mr Qingfeng Zhang, Senior Director, Agriculture, Food, Nature, and Rural Development Sector Office, Asian Development Bank, the Philippines

Data & Information Accelerator

Ms Patricia Mejias Moreno, Land and Water Officer, FAO

Capacity Development Accelerator

Ms Zelina Zaiton Ibrahim, Vice chair of Malaysia Water Partnership, Global Water Partnership, Malaysia

Innovation Accelerator

Mr Yuanyuan Li, Vice President of the General Institute of Water Resources and Hydropower Planning and Design, and President of the International Water Resource Association, Ministry of Water Resources of the People's Republic of China, China

Governance Accelerator

Mr Mohamad Mova Al'Afghani, Director, Center for Regulation, Policy and Governance, Indonesia

Panel Discussion

Question & Answers

11.00 – 12.30

Special/Partner event: UN Decade on Soil Health

Location: Ballroom

Moderator: **Hang Thi Thanh Pham**, Senior Resilience Officer, FAO Regional Office for Asia and the Pacific

This session will showcase the importance of soil for sustainable development and discuss the role of the Global Soil Partnership (GSP) in advancing soil health. It will focus on advocating for soil's role in food security and ecological balance.

Opening

Minister of Ministry of Agriculture and Cooperatives (TBC)

The importance and prospects of soil health

Ms Temarama Anguna-Kamana, Secretary for Agriculture, Ministry of Agriculture, the Cook Islands (TBC)

Mr Chan Saruth, Under-Secretary of State, Ministry of Agriculture Forestry and Fisheries, Cambodia (TBC)

Mr Safdar Niazi Shahraki, Deputy Minister for Water Resources, Islamic Republic of Iran (TBC)

Mr Akmal Kosimov, Deputy Minister for Agriculture, Republic of Uzbekistan (TBC)

Mr Iván Ramos Pastor, Vice-Minister of Family Agriculture and Agrarian Infrastructure and Irrigation, Peru (TBC)

Mr Dindioque Konlani, Chief of Cabinet, Ministry of Agriculture, Village Water Supply and Rural Development, Togo (TBC)

Sharing experiences from the ground: how farmers improve soil health

Ms Orathai Nisailert, Soil Doctor from Thailand (TBC)

Ms Béatrice W. Bonkougou, Farmer, Burkina Faso and **Ms Habibata Ouedraogo**, The National Bureau of Soils (BUNASOLS), Burkina Faso

Mr Yonier Benito Bolaños Imbachi, farmer, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia

Mr Diego Hernan Meneses Buitrago, Associate Researcher, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia

Mr Mario Zuñiga, Soil Doctor/Farmer, Mexico and **Ms Blanca Lucía Prado Pano**, Senior Researcher, Institute of Geology (UNAM), Mexico

Poster display and soil-inspired art

Refreshment

13.00 – 14.00

Side events and Thematic sessions

13.00 – 14.00

Capacity development - technical and functional skills in management of land, soil and water resources: experiences from Farmer Field Schools, SDG 6 monitoring, and soil projects

Location: Monthathip 3

Moderator(s): **Mr Riccardo Biancalani**, Project Coordinator, FAO, **Lucie Chocholata**, Capacity Development Officer (NSL), **Stefano Mondovi**, Agricultural Officer (OIN)

The event will focus on capacity development for sustainable land, soil, and water management, showcasing integrated approaches that combine technical skills with agroecological principles. It will emphasize the importance of Farmer Field Schools in promoting soil health and climate-resilient practices. The session will also explore how capacity development aligns with global efforts like SDG 6 and the Global Soil Partnership.

Capacity development in land, soil and water sector: managing complexity

Mr Riccardo Biancalani, Project Coordinator, FAO

Farmer Field Schools in ecosystem restoration and soil health to mitigate and adapt to climate change

Mr Johannes Ketelaar, Regional Farmer Field School Coordination and Innovation Specialist, FAO Regional Office for Asia and the Pacific

Case study 1: SDG 6.4 capacity development

Mr Riccardo Biancalani, Project Coordinator, FAO

Case study 2: SoilFER and Global Soil Partnership

Mr Mahmoud Abdelfattah, Senior Land and Water Officer, FAO

Case study 3: FFS and Global Soil Doctor Programme – experiences from Asia

Ms Prapa Taranet, Land Development Department, Thailand

Case study 4: FFS - experiences from Latin America (video)

Mr Stephen Sherwood, Fundación EkoRura

Questions & Answers

13.00 – 14.00

Silvopastoral systems for dryland sustainable management and global decarbonization action

Location: Monthathip 4

Moderator(s): **Mr Thomas Hofer**, Senior Forestry Officer and Team Leader, FAO

The event will explore the potential of silvopastoral systems (SPS) in drylands for carbon sequestration and improving livelihoods. Through collaboration with FAO and the Alliance Biodiversity-CIAT, the session will present scientific findings on sustainable land management practices and their climate impact. Participants will engage in discussions about best practices and how to contribute to global efforts in managing dryland ecosystems.

Opening

Mr Ewald Rametsteiner, Deputy Director, Forestry Division, FAO

The Committee on Forestry Working Group on Drylands and Agrosilvopastoral Systems

Mr Thomas Hofer, Senior Forestry Officer and Team Leader, FAO

Keynote presentation: the decarbonization potential of pastoral systems

Mr Joshua Philp, Scientist, Tropical Forages Program, International Center for Tropical Agriculture (CIAT), Lao PDR

Promoting tenure security for sustainable Agrosilvopastoral Systems

Ms Aurelie Bres, Land and Water Officer, FAO

Sustainable Landscape Production Framework (SLPF): An Integrated Approach for the Sustainable Management of Dryland Landscapes

Mr Marcelo Rezende, Natural Resources Officer, FAO

Closing remarks

Mr Thomas Hofer, Senior Forestry Officer and Team Leader, FAO

13.00 – 14.00

Thematic session (continued): National water roadmaps towards SDGs

Location: Suriyanchandra

13.00 – 14.00

Food Security Green Bonds: enabling private finance to support smallholder farmers in sustainable land, soil and water management to address climate change

Location: Ballroom

Moderator: **Mr Chi Xiang Wong**, Senior Market Analyst & ASEAN Specialist Lead, Climate Bonds Initiative

This session will discuss green bonds as a tool for supporting smallholder farmers and sustainable agriculture, addressing finance gaps to enhance climate resilience and food security. It will discuss strategies for using green bonds to advance climate adaptation and national climate objectives.

Opening

Mr Chi Xiang Wong, Senior Specialist, Climate Bonds Initiative

Keynote presentation: Food Security Green Bonds to finance smallholder farmers at scale

Mr Beau Damen, Natural Resources Officer, FAO Regional Office for Asia and the Pacific

Designing green bonds for sustainable, resilient agriculture

Ms Meggie Eloy, Senior Technical Specialist, Climate Bonds Initiative

Questions & Discussion

Closing remarks

Mr Chi Xiang Wong, Senior Specialist, Climate Bonds Initiative

14.00 – 15.30

Plenary 3 - Climate Resilient Integrated Land, Soil and Water Management

Location: Ballroom

Master of Ceremony (MC) : **Ms Domitille Vallée**, Senior water specialist, FAO regional Office for Asia and the Pacific

Moderator: **Ms Inga Jacobs-Mata**, Director of Water, Growth and Inclusion, International Water Management Institute (IWMI), South Africa

This Plenary will consolidate discussions to (i) build a common understanding of the principles of integrated land, soil, and water management for climate resilience, (ii) identify best practices for sustainable management of land, soil, and water resources in the face of climate change, (iii) share examples of successful integrated management approaches, and (iv) define strategies and next steps in promoting climate-resilient integrated land, soil and water management for sustainable and resilient agrifood systems.

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

Opening

Ms Domitille Vallée, Senior Water Specialist, FAO Regional Office for Asia and the Pacific

Keynote speech

Mr Chandrashekhhar Biradar, CDM, The Global Green Growth Co, India

Panel Discussion: Policy making to enable climate smart & integrated management of soil, land and water at landscape level

Mr Chandrashekhhar Biradar, CDM, The Global Green Growth Co, India

Mr Diego Canga Fano, Director, DG AGRI, European Union (online)

Ms Martha Marina Bolaños Benavides, Head of Sustainable Intensive Production, Colombian Agricultural Research Corporation (AGROSAVIA), Colombia

Mr Eugenio Lemos, Executive Director, Permakultura Timor Lorosa'e (PERMATIL), Timor Leste

H.E. Franklyn Derek Wasi, Minister of Agriculture and Livestock (MAL), Solomon Islands

The Honourable Dr. Demba Sabally, Minister of Agriculture, Republic of The Gambia

Mr Iván Ramos Pastor, Vice-Minister of Family Agriculture and Agrarian Infrastructure and Irrigation, Peru (TBC)

Closing Remarks

Mr Jean Boroto Ruhiza, Senior Land and Water Officer, FAO

15.30 – 16.30

Closing ceremony - Adopting the Ministerial Declaration

Location: Ballroom

English with interpretation to 5 other UN languages (Arabic, Chinese, French, Russian, Spanish) and Thai.

Chair: **Ms Beth Bechdol**, Deputy Director-General, FAO

Summary of the key discussions at the Forum

- Summary of Thematic sessions
- Summary of Special/Partner and side events
- Summary of Plenary sessions

Presentation of the Ministerial Declaration

Ministry of Agriculture and Cooperatives, Kingdom of Thailand

Closing remarks

Prof. Dr. Narumon Pinyosinwat, Minister, Ministry of Agriculture and Cooperatives, Kingdom of Thailand

Ms Beth Bechdol, Deputy Director-General, FAO

16.30 – 17.30

Afternoon tea - Farewell



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