

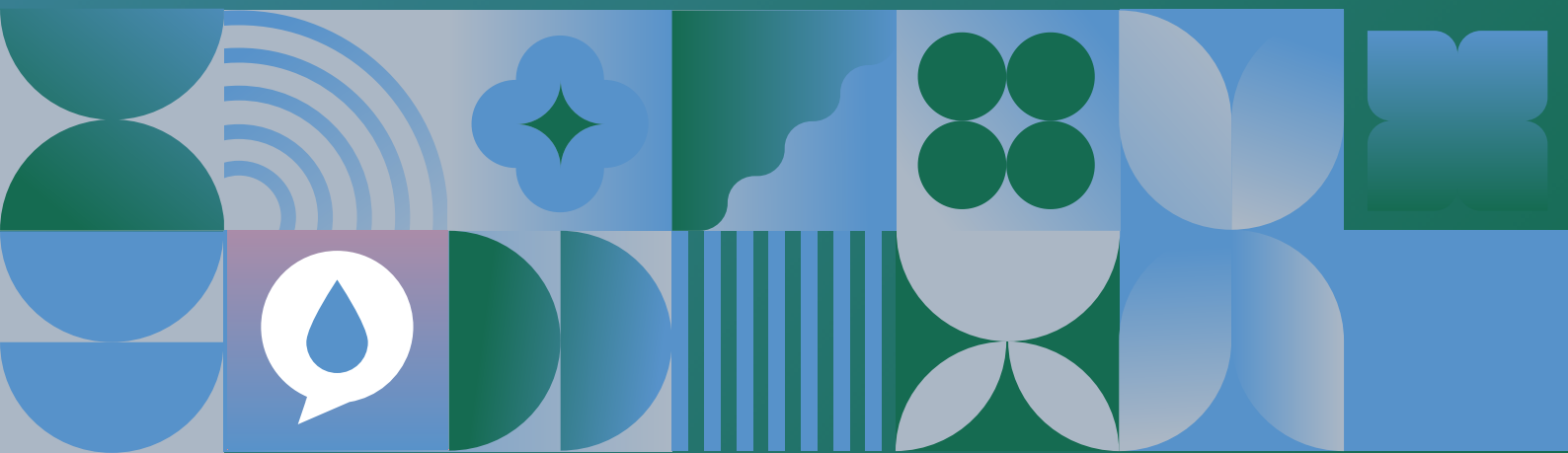


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AGRIFOOD LEADERSHIP EDUCATION PROGRAMME ON WATER ACTION

Portfolio





JOSHUA AMAITUM ELUKUT

FAO headquarters

Joshua Aमितum is a Forestry Consultant based at FAO headquarters in Rome, supporting the Forests and Climate Change team in the Forestry Division. He contributes to FAO's work on peatlands, focusing on restoration for people, climate and biodiversity. With a background in forestry, Joshua is passionate about the forestry-water-agrifood nexus. He employs innovative initiatives, geospatial tools and cross-sectoral collaboration to enhance actions towards addressing global challenges, including water security, agrifood resilience and climate action.



Mentor: Virginie Gillet, Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

Peatlands, covering just 3–4 percent of land yet storing 25 percent of global soil carbon, face severe degradation from drainage and agriculture, disrupting water cycles, emitting greenhouse gases and threatening smallholder farmers' livelihoods and food security. The proposed “NextGen Peatland Network” empowers youth to restore these vital ecosystems, linking peatland rehabilitation with water security and agrifood resilience. Key activities include training in mapping and monitoring, community-based citizen science and advocacy campaigns with mentorship from experts. Through partnerships with NGOs, youth chapters and other stakeholders, the initiative will generate real-time data, boost water availability, increase crop yields, reduce emissions and build youth leadership for long-term climate-resilient development in East Africa.



ANDRÁS KOVALOCZY

FAO Regional Office for Europe and Central Asia

András is an early career international development specialist focusing on rural and community development, youth engagement and land consolidation in Eastern Europe and Central Asia as a Junior Technical Officer at the FAO Regional Office for Europe and Central Asia. Previously, he worked in Tanzania, where he focused on understanding the impact of climate change on rural communities. He holds a BSc degree from the PPLE College of the University of Amsterdam and a joint sustainability MSc degree from Trinity College Dublin, Utrecht University, the University of Barcelona, Eötvös Loránd University of Budapest and the University of Montpellier (CHARM-EU).



Mentor: Morten Hartvigsen, Land Tenure Officer, Regional Office for Europe and Central Asia (REU)

PROJECT PROPOSAL

The project proposal integrates water management, land consolidation and youth empowerment to address growing climate change related challenges on rural communities in the ECA region, particularly in Georgia, linked to the recently started UTF/GEO/034/GEO-F project. In Georgia, fragmented land ownership limits coordinated water management, while limited opportunities for rural youth drive outmigration and depopulation. The initiative aims to contribute to climate-resilient agrifood systems and rural development by linking land consolidation with integrated water management and youth empowerment. Inspired by Hungary's Water into the Landscape program, which promotes water retention to combat drought and protect ecosystems and rural livelihoods, the proposal explores how these lessons could be adapted to Georgia, especially concerning its recent land consolidation efforts. The proposal would also examine how youth-led networks could collaborate with landowners and authorities, as well as other relevant stakeholders in Georgia to promote sustainable water management within land consolidation efforts.



ARAFAT HANANI

FAO Office for the West Bank
and Gaza Strip

Arafat Hanani is a Palestinian climate-resilient agriculture specialist dedicated to transforming water-stressed agrifood systems through innovation and youth leadership. With a PhD in Biological, Agricultural and Environmental Sciences, he works as a Value Chain Development Expert at FAO Office for the West Bank and Gaza Strip, where he designs and scales climate-smart solutions including hydroponics, wastewater reuse, smart irrigation and salinity mitigation. A certified Climate Change Professional and published researcher, he integrates scientific knowledge with field-based action to strengthen community resilience. His current focus is empowering young agronomists and innovators to co-create water-efficient agricultural futures using digital tools and climate-smart technologies.



Mentor: Livia Peiser, Senior Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

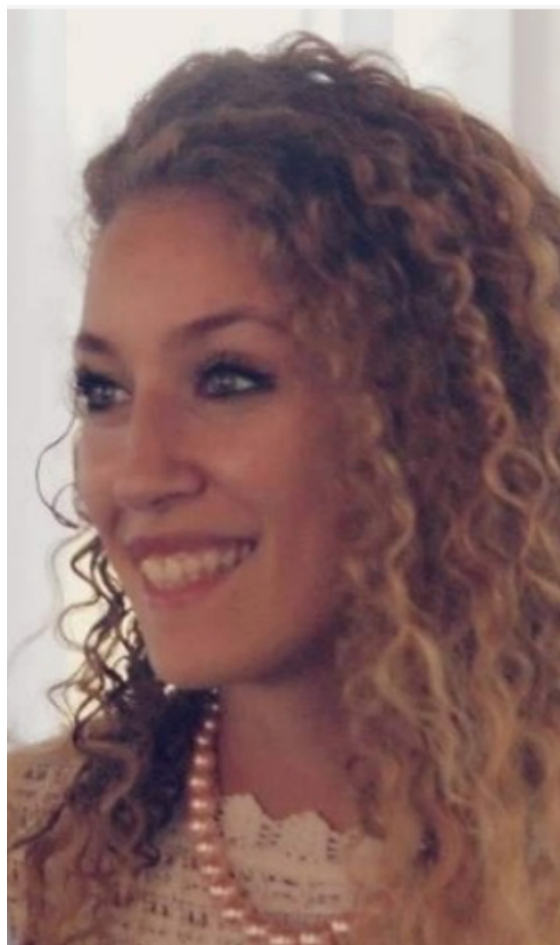
This initiative establishes a youth-led, cross-sectoral collaboration platform to address Palestine's critical water constraints through Integrated Water Resources Management (IWRM). Its core innovation is a live GIS-based Water Vulnerability Map that projects waterstressed areas, identifies real needs on the ground and links them to the most suitable climate-smart interventions. Youth agronomists, engineers, ICT innovators and cooperatives will design region-specific solutions such as hydroponics in water-scarce central and southern areas, electromagnetic ionizers to mitigate salinity in Jericho and smart irrigation systems in Tulkarem and Qalqilya. The platform supports evidence-based planning for the Ministry of Agriculture, offers farmers localized water-efficiency indicators, guides NGO and private-sector investment and elevates youth-driven innovation while contributing to FAO's Water Action Agenda and SDGs 2, 6, 12 and 13.



IMÈNE FERRAH

FAO Country Office in Algeria

Imène Ferrah is a Project Assistant and consultant at the FAO Country Office in Algeria, with a background in biology and plant biotechnology. She has been supporting FAO projects since 2017, working on project administration, communication, procurement and financial management. Her experience includes water scarcity-related initiatives such as the WEPS-NENA project and the WaPOR Phase II programme, focusing on land and water productivity monitoring through remote sensing. She has also led field missions, including preparing the Anhil Foggara SIPAM candidacy and actively contributes to participatory water management and youth engagement activities.



Mentor: Haocong Wang, Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

This project addresses water scarcity in arid regions of Algeria by revitalizing traditional foggara systems, underground canals that have sustainably managed groundwater for centuries. Threatened by climate change, urbanization and declining intergenerational knowledge, these systems risk disappearing. The initiative promotes a youth-led, integrated water resources management (IWRM) approach by documenting local knowledge, fostering cross-sector collaboration and engaging communities in co-designing climate-resilient solutions, including improved maintenance and integration with modern irrigation technologies. It also emphasizes capacity building through training and awareness activities that link traditional practices with modern tools such as remote sensing and WaPOR. The project aims to develop a scalable, youth-driven model that connects cultural heritage with contemporary water governance frameworks.



JEFFERSON JAIKISSOON

FAO Subregional Office for the Caribbean

Jefferson Jaikissoon is an agricultural development professional with experience in value chain analysis, programme coordination and project implementation across the English-speaking Caribbean and South America. He has worked with the FAO since 2018, supporting stakeholder engagement, technical assistance to national institutions and the design and implementation of value-chain interventions. He brings a big-picture, systems perspective to his work, connecting science, policy, markets and local livelihoods through market-oriented and ecosystem-based approaches. He is currently pursuing a PhD in Biodiversity at the University of Guyana, with research focused on payments for ecosystem services as an innovative financing mechanism for mangrove conservation and sustainable aquaculture in Guyana.



Mentor: Jim Hancock, Senior Natural Resources Management Officer, Asia and the Pacific Service, FAO Investment Centre (CFIB)

PROJECT PROPOSAL

THRIVE-Rice Guyana: Transforming hydrologic resilience and inclusive value-chain engagement in Guyana's rice industry

This proposal responds to increasing climate pressures on Guyana's freshwater resources and the resulting risks to the rice sub-sector, one of the country's most economically important food value chains. Drought and other extreme weather events threaten water availability and productivity. Industry sustainability is also affected by barriers that limit the participation of youth and women in production and enterprise development. The initiative will undertake a youth-sensitive value chain analysis linking climate resilience, market demand and entrepreneurship opportunities. It will bring together public and private institutions, youth, researchers, producers and technical experts to identify constraints and co-design practical responses, including integrated water resources management. The findings will inform a comprehensive action plan reflecting the needs of actors across the value chain. By meaningfully engaging youth and addressing both supply- and demand-side challenges, the project will strengthen collaboration that naturally leads to effective partnerships to support a more inclusive and climate-resilient rice industry.



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JIGCHEN NORBU

FAO headquarters

Jigchen L. Norbu works as a forestry innovation and watershed management consultant at FAO headquarters. Previously, she worked with the Royal Government of Bhutan, where she coordinated programmes and projects on drinking water, irrigation and hydropower development. Jigchen holds a Master's degree in Environmental Management, specializing in Water Resources Science and Management from the Yale School of the Environment, United States of America and a Bachelor's degree in Environmental Sciences from Mahidol University, Thailand. She is deeply committed to ensuring equitable and just access to safe drinking water and water for agriculture, while ensuring environmental flows. She is from Bhutan and loves hiking, running and reading.



Mentor: Abdourahman Maki, Land and Water Officer, Subregional Office for North Africa (SNE)

PROJECT PROPOSAL

This project aims to scale up water action in agrifood systems by strengthening FAO and its youth network's capacity to better consider forests and water interactions and youth engagement in Integrated Water Resources Management (IWRM) frameworks. Although IWRM is widely promoted, frameworks often tend to overlook or at least not explicitly state the role of forests, including their role in the management of "green water". Similarly, the role of youth is not explicitly considered in IWRM frameworks and capacity development efforts targeting youth are limited. The project will evaluate if and to what extent forestry and youth engagement are considered in IWRM frameworks and develop recommendations for better integration of forestry components and indicators to strengthen IWRM implementation. In parallel, it will work on building capacity of youth in IWRM through training on forest-water linkages.



MATTHEW CHAMPNESS

FAO Regional Office for Asia and the Pacific

Matt Champness is an irrigation and agronomy specialist working with FAO in the Asia and the Pacific region, focusing on climate-resilient agricultural systems and irrigation service transformation. He has worked for the World Bank to facilitate the Irrigation Operator of the Future (iOF) process across Pakistan, the Philippines and Timor-Leste supporting irrigation governance, performance assessment and service delivery reform. His work bridges field-level implementation, institutional capacity building and regional GEF and GCF programmes to improve water management outcomes under increasing climate stress.



Mentor: Robina Wahaj, Senior Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

This project proposes scaling and democratising the World Bank's Irrigation Operator of the Future (iOF) process through technology integration and strengthened national IWRM capacity. It addresses chronic irrigation underperformance caused by weak governance and reliance on costly international facilitators. The initiative focuses on upscaling high-resolution WaPOR satellite data to enable rapid irrigation performance assessment and priority setting, alongside a digital iOF facilitator training program and community of practice. Through collaboration between FAO, national agricultural extension services and regional partners, the project aims to improve irrigation service delivery, support climate-resilient agriculture and enable broader, cost-effective iOF implementation across Asia and the Pacific.



MOHAMED LANGSTON DIAGNE

FAO Country Office in Burundi

Mohamed Langston Diagne is a Junior Professional Officer with FAO Country Office in Burundi, where he works on climate resilience, sustainable natural resource management and climate-resilient agrifood systems. He has contributed to institutional capacity development on climate finance, environmental governance and sustainable investment planning and provided technical support to the development of GCF and GEF project proposals, contributing to climate finance mobilization, investment concept development, technical assessments and donor engagement.

Previously based in East Jerusalem with FAO's Office for the West Bank and Gaza Strip, he supported the integration of climate resilience into agricultural value chain planning and developed analytical reports, proposals, concept notes and other knowledge products to inform programming and policy. He also serves as a Youth Focal Point supporting the WFF Burundi Youth Chapter and engagement with the Chapter in Senegal. Through ALEP-WA, he seeks to connect his experience in climate resilience and environmental governance with youth engagement in water governance, strengthening links between community perspectives, national water planning and sustainable agrifood systems.



Mentor: Ruhiza Boroto, Senior Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

Youth Champions for Water Dialogues: Strengthening youth engagement through WFF National Youth Chapters in Senegal and Burundi

This project aims to strengthen meaningful youth participation in water governance and national water planning in Burundi and Senegal. Through the WFF National Youth Chapters, it will identify and support Youth Champions to build knowledge on Integrated Water Resources Management (IWRM), climate-water linkages and sustainable water management, while engaging young people, farmers and communities through awareness activities and consultations.

Youth Champions will document community priorities, challenges and locally grounded solutions and translate these perspectives into Youth Perspectives Briefs for engagement with relevant stakeholders and national water planning and dialogue processes. The initiative will help connect community-level knowledge and youth perspectives with decision-making, while strengthening collaboration among WFF Youth Chapters, FAO, government institutions and other water governance stakeholders.

The project will initially focus on Burundi and Senegal, with opportunities for peer learning on water governance, including experiences from the Lake Tanganyika and Senegal River Basin contexts. By linking youth capacity development, community consultation, policy engagement and regional learning, the initiative seeks to contribute to more inclusive, participatory and climate-resilient water governance and sustainable agrifood systems transformation.



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MUSTAFE JIRDE

FAO Country Office in Somalia

Mustafe Ibrahim Jirde is a Hydro-Informatics and Remote Sensing Senior Support Specialist with FAO Country Office in Somalia under the SWALIM programme. He has over eight years of experience in integrated water resources management, flood and drought early warning, geospatial analysis and climate risk assessment in fragile and data-limited contexts. His work focuses on applying satellite data, GIS and digital platforms to support evidence-based decision-making, anticipatory action and capacity development for government institutions and youth networks across the Horn of Africa.



Mentor: Livia Peiser, Senior Land and Water Officer, Land and Water Division (NSL)

PROJECT PROPOSAL

The Horn of Africa Youth Water Resilience Network is a youth-led initiative aiming to strengthen regional collaboration on early warning systems and integrated water resources management across Ethiopia, Kenya and Somalia. The project connects young professionals, FAO Offices and WFF National Youth Chapters to co-develop digital tools integrating satellite data, field observations and hydroclimatic analysis for flood and drought monitoring. Through regional trainings, technical exchanges and policy dialogues, the initiative builds youth capacity in geospatial analysis, anticipatory action and water governance while promoting cross-border learning and scalable solutions aligned with FAO's WaLaSA framework.



NASER ABAWI

FAO Country Office in Jordan

Naser Abawi is a Finance Specialist with a strong commitment to translating financial data into meaningful support for programmes and people. He works closely with colleagues to streamline processes and develop practical solutions that enhance team efficiency. Known for being approachable and reliable, he values collaboration, transparency and continuous learning. He takes pride in fostering a positive work environment where finance is a strategic partner in advancing the Organization's mission and delivering tangible impact.



Mentor: Giovanni Muñoz, Chief, Africa Service, FAO Investment Centre (CFIA)

PROJECT PROPOSAL

The project addresses Jordan's severe water scarcity by promoting more accessible and inclusive water-smart agriculture. The initiative introduces a youth-led blended finance model that enables smallholder farmers, particularly women, to access affordable financing for water-saving technologies such as drip irrigation and rainwater harvesting. By bringing together community-based organizations, agricultural banks, digital financial tools and donor support, the project reduces financial barriers while strengthening transparency and long-term sustainability. Youth play a central role in innovation and coordination, while women are empowered as both beneficiaries and decision-makers. Ultimately, the project aims to improve water efficiency, enhance livelihoods and support resilient, gender-inclusive agrifood systems in Jordan.



RICCARDO D'ANGELI

FAO headquarters

Riccardo D'Angeli is a Nutrition and Food Systems Policy Consultant with FAO's Food and Nutrition Division, working under the Better Nutrition for the Most Vulnerable (BN2) Programme Priority Area. His work focuses on designing and scaling nutrition-sensitive agrifood and resilience interventions to prevent child wasting in fragile and protracted crisis contexts, including the Democratic Republic of the Congo, Nigeria, Somalia, South Sudan and Yemen. He works closely with country offices, applying economic and policy analysis to inform programme design, investment priorities and resource allocation for healthy diets, while supporting multisectoral coordination across agriculture, nutrition, water and social protection.



Mentor: Khairullah Turan, National Professional Officer, FAO Representation in Afghanistan (FAOAF)

PROJECT PROPOSAL

Water for Nutrition: Integrated Water Resource Management to Prevent Child Wasting

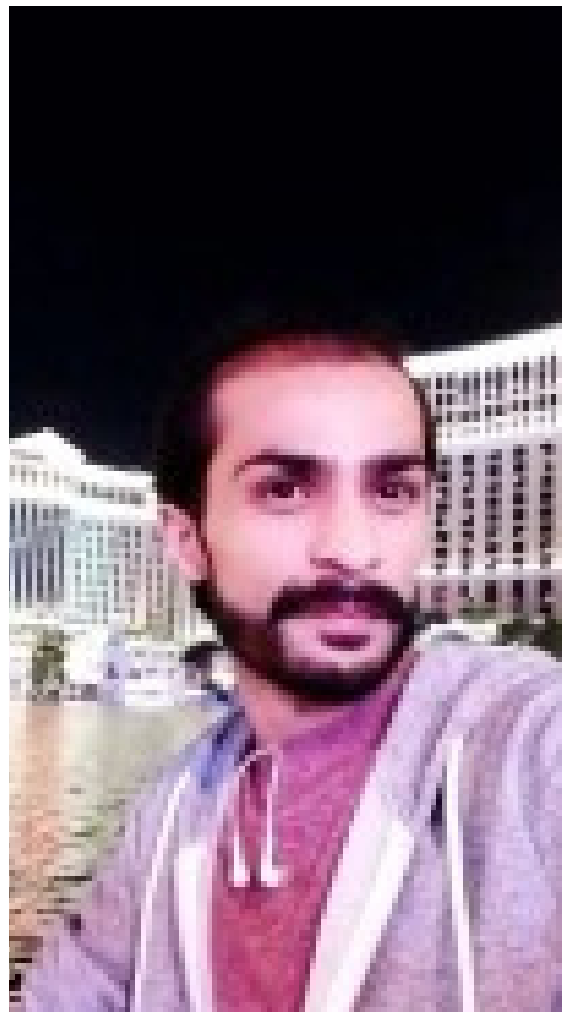
This youth-led initiative addresses the water-nutrition nexus in fragile contexts, where water scarcity undermines food production, dietary diversity and child nutrition. Building on FAO's BN2 programme and the Global Action Plan on Child Wasting, the project integrates IWRM into nutrition-sensitive resilience packages. Activities include water-smart microgardening, linking small livestock to safe and efficient water use, cash+ programming paired with water-saving technologies and combined food, nutrition and WASH education. Youth and women will lead community-based water governance, participatory mapping and training through Farmer Field Schools. The project aims to strengthen equitable access to water, improve diets and prevent child wasting, while enhancing youth leadership in the transformation of agrifood systems.



TALAL NASEER

FAO Country Office in Pakistan

Talal Naseer is a Civil Engineer with an MS in Integrated Water Resources Management (IWRM), specializing in sustainable water resources planning, policy reform and environmental management. An exchange research scholar at the University of Nevada, Las Vegas, he developed expertise in remote sensing, GIS and scientific research, with work presented at national and international forums, including those hosted by the European Space Agency. He has worked on USAID-funded research and as an individual consultant for the Asian Development Bank, contributing to watershed management planning in Balochistan. Currently, he works with FAO, leading IWRM policy development, water legislation and institutional reforms, while integrating biodiversity considerations into provincial water governance frameworks.



Mentor: MohammadKhalid Noorzai, Regional Agroforestry and Watershed Assistant, Africa Service, FAO Representation in Afghanistan (FAOAF)

PROJECT PROPOSAL

Balochistan, Pakistan's largest province, faces severe water challenges including scarcity, groundwater depletion, floods and droughts, that threaten agrifood systems and rural livelihoods. Although the province adopted its first Integrated Water Resources Management (IWRM) Policy in 2024, implementation lags due to fragmented governance, weak coordination, limited enforcement and low public awareness.

This youth-led initiative bridges the policy–practice gap by:

- Enhancing cross-sectoral coordination among irrigation, agriculture, livestock and environment departments through dialogue platforms;
- Piloting localized IWRM solutions for efficient, equitable water use in agrifood systems;
- Raising awareness and engaging farmers, women and youth in participatory governance; and
- Generating field evidence to inform adaptive policy implementation.

Leveraging his current role as Water Management Consultant and prior experience co-authoring the IWRM Policy, he will mobilize youth, apply technical tools (GIS, WEAP, SWAT) and integrate their contributions into ongoing reforms. This collaboration strengthens water governance, food security and climate resilience in Balochistan.



TAMAR SHERVASHIDZE

FAO Country Office in Georgia

Tamar Shervashidze is the Climate Change and Environment Protection Programme Coordinator at FAO Country Office in Georgia. She has over seven years of experience in project and programme management, as well as in proposal development and has successfully led both regional and national initiatives. Her professional expertise covers climate change policy, disaster risk management and waste management. Tamar is particularly interested in community empowerment and participatory approaches, with a focus on bottom-up processes that enhance resilience, alongside the application of innovative technologies to advance climate action.



Mentor: Rohit Sharma, Institutional Capacity Specialist, Africa Service, FAO Representation in India (FAOIN)

PROJECT PROPOSAL

The proposed initiative aims to strengthen food security and enhance the resilience of Georgia's agricultural sector to increasing climate and water-related risks, with a particular focus on drought-prone regions and vulnerable farming systems. The project addresses growing drought and water scarcity, low agricultural productivity, limited access to localized climate information, insufficient uptake of climate-resilient agricultural practices and limited opportunities for youth engagement and innovation in agriculture. It will promote an integrated approach combining drought risk management and IWRM, climate information services, digital agro-advisory services and climate-resilient agricultural production.

Key actions include strengthening drought preparedness and coordination mechanisms, expanding climate information systems and early warning systems to better reach vulnerable communities, promoting water-efficient agricultural practices and drought-tolerant crop varieties and establishing demonstration plots and Farmer Field Schools. Youth will be actively engaged through capacity building, mentorship, networking, innovation initiatives and opportunities to develop and apply digital and climate-resilient agricultural solutions.

Through practical demonstrations, knowledge-sharing and awareness-raising, the project will engage youth, women, farmers, research institutions, extension services and local authorities, supporting more productive, inclusive and climate-resilient agrifood systems and contributing to long-term food security in Georgia.



TANIA SHARMA

FAO headquarters

Tania Sharma is a Land Data Specialist with the Land Tenure Team in FAO. With a background in economics, she works on methodological development and analysis for the Global Land Observatory, supporting global monitoring frameworks including the SDGs, CBD and UNCCD and contributing to flagship reporting on land tenure and governance. Previously, she worked on FAO's SDG monitoring work, supporting country work by developing guidance and training and outreach materials.



Mentor: Benjamin Kiersch, Senior Water Resources Specialist, Land and Water Division (NSL)

PROJECT PROPOSAL

The Engaging Youth for Equitable Water Governance project aims to strengthen equitable water governance by positioning youth as active stakeholders in decision-making. Building on ongoing water tenure work, the proposal seeks to integrate youth perspectives in an institutionalized manner through consultations with the existing networks of youth ambassadors on responsive governance of water tenure, creating direct engagement with water tenure experts currently engaged in regional water dialogues, building towards a Global Dialogue on Water tenure. It will leverage existing youth platforms to disseminate knowledge and provide support through research, facilitation of youth engagement and cross-sectoral collaboration between land, water and agrifood governance actors.



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TAREK EL KHAYAT

FAO Country Office in Lebanon

Civil and Water Engineer with over seven years of experience delivering water, wastewater, irrigation and renewable energy projects in development and humanitarian contexts. Has worked across the full project cycle, from design and tendering to construction supervision, stakeholder coordination and monitoring. Experience includes nature-based adaptation technologies to reduce water pollution, irrigation efficiency improvement, water balance analysis, non-revenue water reduction and solar energy solutions for water utilities and farmers. Worked in close coordination with government institutions, donors, contractors and local communities. Holds a Master's degree in Civil Engineering and is PMP certified.



Mentor: Atanu Bhattacharjee, National Climate Smart Agriculture Specialist, FAO Representation in Bangladesh (FAOBD)

PROJECT PROPOSAL

The proposal presents a youth-led Water User Association (Youth-WUA) model to address water scarcity in Lebanon by combining improved irrigation governance with practical, field-tested innovations. It pilots Youth-WUAs as "irrigation innovation labs" that promote equitable water allocation, promote drip irrigation in areas practicing furrow irrigation, use soil-moisture sensors to reduce over-irrigation, reuse treated wastewater from decentralized constructed wetlands, harvest rainwater from greenhouses and encourage responsible solar pumping to protect aquifers. Youth act as early adopters, governance pioneers and community multipliers, sharing results through field demonstrations.



TIWINE ZIMBA MUCHIPA

FAO Country Office in Zambia

Tiwine Zimba Muchipa is a dynamic Communications and Engagement Specialist passionate about empowering young people and driving impactful development initiatives. With over six years of experience at national, regional and international levels, Tiwine excels at crafting innovative advocacy campaigns, building strategic partnerships and amplifying voices through storytelling and digital platforms. Skilled in communications, web management, content creation and youth engagement, she leverages technology and social media to inspire change. Committed to advancing the well-being of children, youth and women, Tiwine combines creativity, leadership and resilience to deliver results and foster meaningful community transformation.



Mentor: Krishnan P.V.Sarma, Senior Specialist - Strategy, Innovation & Partnerships, FAO Representation in India (FAOIN)

PROJECT PROPOSAL

Improving Water Action through Women and Youth Leadership is an initiative: the project aims to support Zambia's Nationally Determined Contributions (NDCs) to address climate change. The project will be focused on empowering traditional leaders, women and youth as key drivers of sustainable water management and climate resilience. Through capacity building, leadership development and inclusive participation, it aims to strengthen community engagement and promote innovative solutions for water security. By leveraging partnerships with local leaders, the Nation Youth Chapter and the Ministry of Green Economy and Environment, the project will foster collaboration across sectors to enhance advocacy, knowledge sharing and policy implementation. Ultimately, the project seeks to create a transformative impact by integrating gender and youth perspectives into national climate action strategies.



VAN HAI NGUYEN

FAO Country Office in Viet Nam

Hai Van Nguyen is a Programme Analyst at the FAO Country Office in Viet Nam, where she has been working for the past four years. She currently manages the Country Office's water project portfolio, including initiatives on integrated water resources management (IWRM) approaches to ecosystem restoration in the Red River Basin, nutrient pollution reduction in the Gulf of Tonkin, the piloting of the WaPOR tool for drought monitoring and support to the RAP Water Scarcity Programme. While her role is not primarily technical, she is responsible for coordinating stakeholders, shaping project activities and ensuring alignment with national priorities and FAO's strategic frameworks.



Mentor: Chhean Suon, Technical Specialist Engineering, FAO Representation in Cambodia (FAOKH)

PROJECT PROPOSAL

The initiative empowers youth groups to design and pilot a low-cost, AI-driven system for early detection of water quality deterioration in irrigation networks. Cameras at sluice gates and canals, combined with a mobile app for photo uploads, will feed images into AI models that identify signs of salinity intrusion or pollution and generate real-time alerts. These alerts will guide farmers, Water User Associations, aquaculture producers and irrigation companies to take timely action, reducing risks to agrifood production. Starting with a single canal pilot, the project aims to build youth capacity in AI and citizen science while creating scalable solutions for integrated water resources management.