



INITIATIVE ON
NEXUS Gains



Scoping study of capacities and needs for strengthening water-energy-food-ecosystems (WEFE) NEXUS approaches with a gender and youth focus among public sector institutions in Uzbekistan

**Orifjan Namozov
Zuhra Babajanova
Liliana Sinn
Aygul Djumanazarova**

Tashkent – 2023



Local market in Karakalpakstan. 2019. Photo by Liliana Sinn



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Orifjan Namozov – DEKMAN Associates
Zuhra Babajanova – DEKMAN Associates
Liliana Sinn – DEKMAN Associates
Aygul Djumanazarova – DEKMAN Associates

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Disclaimer

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The CGIAR Initiative on NEXUS Gains aims to realize multiple benefits across water, energy, food and ecosystems in selected transboundary river basins, by leading global nexus thinking and providing tools, guidelines, training and facilitation for analysis and research for development. on.cgiar.org/NEXUSGains

Cover image: photo by Liliana Sinn

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EXECUTIVE SUMMARY

Part 1: NEXUS Gains Work Package 5

1. The CGIAR Initiative on NEXUS Gains works at the critical intersection of food, energy, and water security while preserving the ecosystems underlying food systems in selected trans-boundary river basins.
2. Work Package (WP) 5 of the NEXUS Gains initiative (Developing capacity of WEFE actors, including emerging women leaders) focuses on capacity strengthening for developing and implementing inclusive Water-Energy-Food-Ecosystems (WEFE) nexus solutions. This WP pursues two primary goals, to: 1) strengthen capacities to develop and implement nexus solutions among relevant (men and women) stakeholders who have a critical role to play in this area; and 2) advance gender equality by enhancing women professionals' influence and leadership in this area.
3. This report of a Nexus Capacity Assessment provides a baseline understanding of the current capacity of relevant WEFE institutions and stakeholders to apply WEFE thinking and approaches. The key targeted stakeholders are the WEFE-related government ministries/departments and academic institutions, including women professionals within these institutions. A specific objective is to assess capacities and the enabling environment for the leadership of women and young professionals in Uzbekistan's public WEFE institutions to develop fit-for-purpose capacity development programs for these groups.

Part 2: Theory of change of capacity-building interventions to develop the WEFE nexus

4. The literature review emphasizes importance of clarity and consensus in understanding governance (decision-making) processes in the WEFE nexus approach. A comprehensive WEFE nexus capacity-building program should cover well-structured policy areas and related policy tasks for analysis and decision-making. The policy areas and tasks of policy integration, regional coordination, optimal governance, the scale of involvement (intervention), stakeholder participation, resource use, and sustainable development can serve as a good framework for designing and clustering the capacity-building types, activities, and tools.
5. One of the key objectives of WEFE capacity-building programs should be to raise awareness of the direct and indirect relationships among WEFE sectors, as well as methodological and practical cases of these linkages.

6. WEFE nexus capacity-building programs should promote theoretical and applied knowledge about the relationships among the four -main nexus sectors: water-energy-food-ecosystems.
7. Capacity-building programs should address two dimensions: interdisciplinarity and trans-disciplinarity. Also provide information on integrated analysis tools, methods of collaboration in analysis, monitoring, and solution development.
8. WEFE nexus capacity-building programs should demonstrate the theory of change which helps to operationalize the nexus approach to reach desired outputs and outcomes.

Part 3: Review of WEFE nexus initiatives and gender and youth profiling among professionals in Uzbekistan

9. Uzbekistan, like many countries, faces significant challenges in adopting WEFE nexus solutions due to a range of factors. These include limited institutional capacity, fragmented governance structures, inadequate financing and investment for sustainable infrastructure. In addition, the country's high dependence on agriculture and water-intensive industries, combined with its limited water resources and changing climate, make it particularly vulnerable to the impacts of nexus-related challenges. However, there are also opportunities to address these challenges through innovative approaches and policies, such as improving water governance, promoting sustainable agriculture practices, and investing in renewable energy sources.
10. There have been several studies and projects aimed at increasing the capacity of government bodies and public institutions in the WEFE nexus area in Uzbekistan. Overall, these studies, surveys, research, and projects demonstrate the importance of building capacity in government bodies and public institutions to effectively manage the WEFE nexus.
11. There is a need for further research to understand and help develop targeted policies and initiatives that address the unique challenges faced by women and young people in WEFE sectors and to ensure their meaningful participation in decision-making processes and governance structures.

Part 4: Assessment of the capacities and needs of WEFE professionals in Uzbekistan

12. Two methods were used to assess the WEFE nexus capacity of selected public organizations in WEFE sectors: 1) Semi-structured with officials of relevant WEFE public organizations (ministries and affiliated research organizations); and 2) An online surveys. The objectives of these two tools were to assess three dimensions of the capacity of public organizations in WEFE sectors: analytical capacity; governance capacity; and general skills.

13. Results show that the employment of women in the field of agriculture, water management, and other WEFE sectors is very low, and there are very few women in leadership and decision-making. Training and seminars on gender in WEFE sectors and on the national legislation of Uzbekistan on gender issues were insufficiently conducted in the surveyed institutions.
14. The survey showed that 24 (45%) respondents have some understanding of the WFE nexus approach, whereas 16 (30%) people believe they have a complete understanding of the approach and 13 people (24%) are not familiar with it at all.
15. Most respondents (39 or 74%) expressed interest in capacity building on WEFE nexus concepts and approaches as 47 people (89%) never participated in training related to the WEFE nexus approach.
16. The majority (51%) of respondents believe that the organization they work for should contribute to increasing their staff's knowledge about WEFE nexus approaches, whereas 24% disagree and the rest do not know. Although 19 people (35% of 53 respondents) noted that they practice a WEFE nexus approach in their current work, 21 people (40%) noted opposite, and 13 people (25%) do not know or are unsure.
17. Most respondents (46% or 24 out of 53) do not see opportunities in their organizations to improve their skills/technical knowledge of the WEFE approach.
18. At organizational level, 44% of respondents believe that their organizations do not use a WEFE nexus approach, whereas 23% of respondents (37 answers) disagree and the rest do not know.
19. Most respondents (27 people or 51%) agree or strongly agree with the importance of equality on the basis of gender and age in their work, whereas a significant proportion (18 people or 34%) do not see the important role of gender and youth equality in their work.
20. Approximately one third (32%) of respondents believe that their organization considers gender and youth issues in its activities; and the rest disagree (28%) or are unsure (40%).
21. Half (51%) of respondents believe that their organization should strengthen the leadership roles of women and youth, although 39% of respondents believe that women and youth have leadership roles in their organizations.

Part 5: Conclusion

22. The results of the survey indicate that there are gaps, demand, and potential for expanding learning and capacities on WEFE nexus approaches in Uzbekistan.
23. Gender equality and youth inclusion is still behind in WEFE institutions and will need to be addressed as a thematic area in future WEFE approaches, and as an area of concern in WEFE institutions.

PART 1.

SITUATING THE STUDY IN NEXUS GAINS WORK PACKAGE 5

The CGIAR Initiative on NEXUS Gains works at the critical intersection of food, energy, and water security while preserving the ecosystems underlying food systems in selected trans-boundary river basins. Work Package 5 (WP5) of the NEXUS Gains initiative (Developing capacity of WEFE actors, including emerging women leaders) focuses on capacity strengthening for developing and implementing inclusive WEFE nexus solutions. This WP pursues two primary goals (Table 1), to: 1) strengthen capacities to develop and implement nexus solutions among relevant (men and women) stakeholders who have a critical role to play in this area; and 2) advance gender equality by enhancing women professionals' influence and leadership in this area.

Table 1. WP5 Goals, desired outcomes, and outputs

Goals	Action area outcomes	Outputs
<ul style="list-style-type: none"> ▶ To strengthen capacities to develop and implement nexus solutions among relevant (men and women) stakeholders who have a critical role to play in this area ▶ To advance gender equality by enhancing women professionals' influence and leadership in this area 	<ul style="list-style-type: none"> ▶ National and local governments utilize enhanced capacity (skills, systems, and culture) to assess and apply research evidence and data in policymaking processes ▶ Women and youth are empowered to be more active in decision-making in food, land, and water systems 	<p>Output 5.1. Scoping Study on WEFE Nexus. Scoping study to identify current capacities and needs for WEFE nexus approaches and women's leadership in nexus sectors across Uzbekistan.</p> <p>Output 5.2. WEFE Nexus Leadership Program. Program to train WEFE nexus leaders, combining technical learning with general skills for developing and implementing WEFE nexus solutions, co-developed with partners. Leadership and mentoring component primarily targeted to women professionals in WEFE sectors. At least 40 trained professionals, with minimum 70% women, able to drive sustainable and equitable nexus solutions.</p> <p>Output: 5.3. WEFE knowledge products. WEFE knowledge products (case studies, success stories, guidelines, advocacy materials, e-learning modules on designing, implementing, and scaling integrated solutions, conceptual frameworks, toolkits) co-developed with and for use by WEFE nexus actors (governments, NGOs, civil society, donors, practitioners, researchers, and students).</p> <p>Output: 5.4. WEFE nexus academic courses/content in curricula. Development of WEFE nexus courses or integration of WEFE nexus concepts into existing courses and curricula. At least two curricula of academic partners improved by strengthening nexus lens.</p> <p>Output: 5.5. Tailored WEFE nexus trainings. Trainings developed and delivered to government actors, academics, students, civil society, NGOs. Trainings will consist of presentations, sharing of tools and resources for applying nexus thinking, group discussions, and sharing experiences.</p> <p>Output: 5.6. WEFE nexus community of practice (CoP). Community of practice (CoP) or network of professionals working on implementing nexus solutions. To strengthen the exchange of knowledge and collaboration among nexus actors.</p>

In this context, a Nexus Capacity Assessment was conducted under Output 5.1 **to inform a baseline understanding of the current WEFE nexus capacity of relevant institutions and stakeholders in Uzbekistan**. The key targeted stakeholders are WEFE-related government ministries/departments and academic institutions, including women professionals within these institutions. The assessment will support the design of fit-for-purpose capacity development programs. The study targets public institutions such as the Ministry of Water Resources, Ministry of Agriculture, Ministry of Energy, the Association of Women in the Agrosphere, councils of young researchers and young professionals in relevant organizations/institutions under the Ministry of Water Resources, Ministry of Agriculture, Ministry of Energy, the State Committee on Ecology and Environment Protection, the State Agency of Forestry, and academic institutions.

The assessment contributes to the primary goals of WP5:

- ▶ **Goal 1: Strengthening capacities to develop and implement nexus solutions among (men and women) stakeholders who have a critical role to play in this area.** The analysis helps to identify capacities, gaps, and learning preferences (desired skills, learning mode preferences, etc.) to contribute to the improvement of WEFE nexus resources management in the Aral Sea basin. It can inform the development of a comprehensive gender-responsive curriculum integrating best national and regional approaches to water, land and biodiversity management targeted at three groups: young researchers, practitioners and decision-makers, and farmers.
- ▶ **Goal 2: Advancing gender equality by enhancing women professionals' influence and leadership in this area.** The analysis helps to identify gaps in gender equity and scope for gender equity improvements (e.g., in the roles of women and youth, their engagement in decision-making processes) in WEFE sectors.

PART 2.

THEORY OF CHANGE ON CAPACITY-BUILDING IN THE WEFE SECTOR

The WEFE public sectors play a crucial role in ensuring sustainable and equitable development in Uzbekistan. However, gender and age inequalities persist, with women and young people facing significant challenges in accessing resources, participating in decision-making processes, and realizing their potential. This literature review examines the gender and youth capacity needs and gender issues in the WEFE public sectors.

The literature review explores the basics of the WEFE nexus and capacity-building approaches and interventions. The analysis covers the following topics:

- ▶ Definition (concept) of the WEFE nexus;
- ▶ Understanding capacities for development of the WEFE nexus;
- ▶ WEFE nexus decision-making;
- ▶ WEFE nexus sectors: Matrix of interlinkages;
- ▶ Theory of change of the WEFE nexus approach;
- ▶ Capacity-building for emerging WEFE actors (women and youth).

2.1 Conceptualizing the WEFE nexus

The definition of the water-energy-food-environment (WEFE) nexus is broad (Zolghadr-Asli et al., 2022) and lacking in consensus (Keskinen et al., 2016; Smajgl et al., 2016; Endo et al., 2017). The nexus idea merely asserts that water, energy, and food securities and the environment are interdependent (Figure 1), such that one cannot adequately address one security without addressing the others (Zhang et al., 2018; Zhang et al., 2019; Zolghadr-Asli et al., 2022).

As defined by Mabhaudhi et al. (2019), the WEFE nexus refers to the intricate and complex interconnections (synergies and tradeoffs) among its constituent sectors that must be managed in an integrated way to achieve sustainable development. A WEFE nexus approach should guide decision-making by identifying priority areas that require intervention, enhancing synergies, and minimizing trade-offs necessary for sustainable development (Mabhaudhi et al., 2019). Implementation of a WEFE nexus approach can enhance resource security and sustainable development (Naidoo et al., 2021). Operationalizing a WEFE nexus approach requires stakeholder engagement at all levels of the public and private sectors (vertical), as well as across sectors (horizontal), as driven by enabling institutional and governance instruments (Weitz et al., 2017). According to Naidoo et al. (2021, p.7), “Successful WEF nexus operationalization requires robust structures that promote stakeholder buy-in and evidence-based instruments and application tools to move the transformational process.”

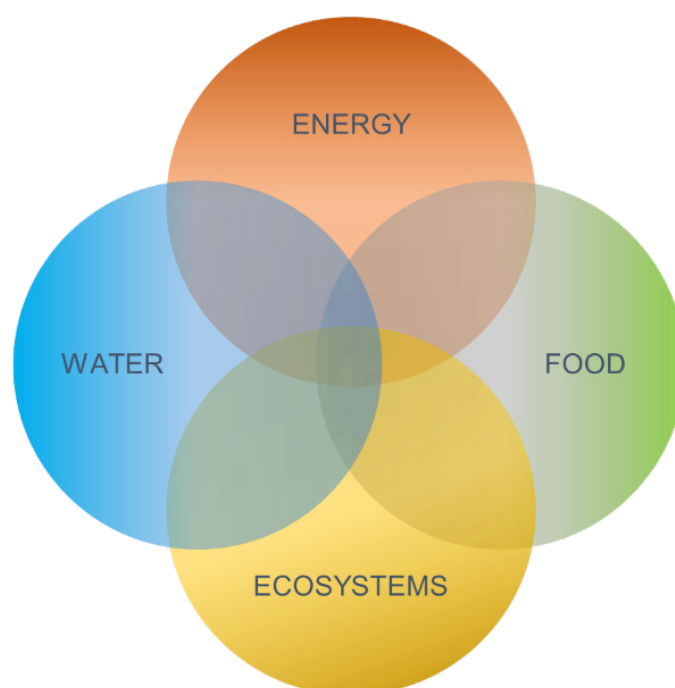


Figure 1. The WEFE nexus

Source: Adapted from Zolghadr-Asli et al. (2022)

Endo et al. (2020, p.46) consider the intersectoral nature of interconnections as the interdisciplinary dimension of the WEFE nexus, whereas its transdisciplinary (integrative) dimension “enhances cooperation with diverse groups of stakeholders and improves governance across sectors by translating systems thinking into government policy-making processes and balancing different user goals and interests” (Figure 2). This requires collaboration among institutions (groups, structures, organizations) working across various sectors (water, energy, food, environment) to achieve a holistic understanding, theory, model, and policy environment, with good-governance practices and cross-sectoral coordination playing a vital role in this process (Abdullaev & Rakhmatullaev, 2016).

However, instead of robust coordination, the current environment in most national contexts is characterized by a bureaucratic and administrative separation between sectors (Weitz et al., 2014; Golam & Sharma, 2016; Natcher & Ingram, 2021; Buchy et al., 2022). According to Buchy et al. (2022, p. 12), “In most countries, water, energy, food, and environmental sectors each have their ministry or implementing agency, leading to disparate policies and implementing procedures. These separations tend to keep WEFE actors divided rather than facilitating an integrated approach”.

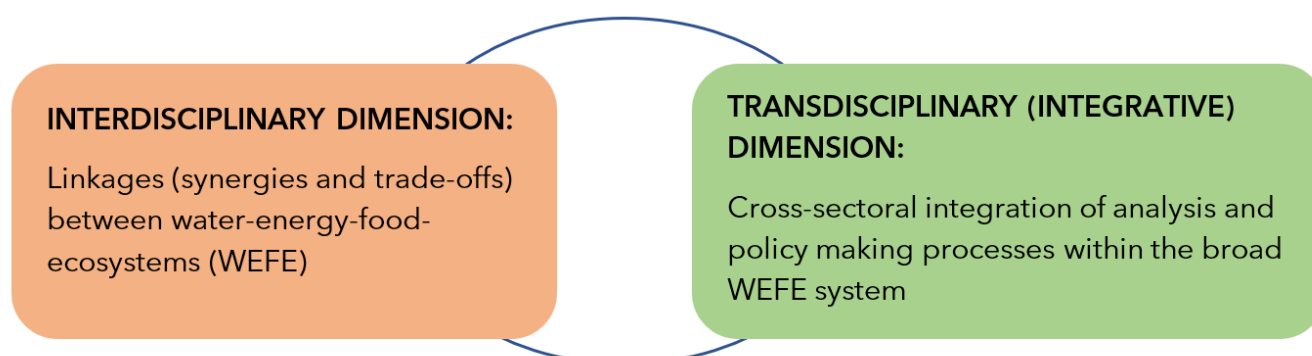


Figure 2. Dimensions of the WEFE nexus concept

Source: Dimensions of the WEFE nexus concept)

2.2 WEFE nexus sectors: Matrix of interlinkages

One of the key objectives of WEFE nexus capacity-building programs is to raise awareness of the direct and indirect relationships among WEFE sectors. Abdullaev & Rakhmatullaev (2016) suggest a matrix of interconnections among these sectors (Table 2). In turn, Mollinga et al. (2010) refer to the 'boundary concept' as when the control or management of a sector is tied to other sectors. The concept helps to link various disciplines and sectors to understand contextual aspects of natural resource management (NRM). For instance, a water-centric boundary concept implies that various sectors (socioeconomic development, agriculture, energy, and the environment) exercise control (managerial, technical, and socio-political) over the water sector. The WEFE nexus allows for identifying links among these sectors. operationalization requires robust structures that promote stakeholder buy-in and evidence-based instruments and application tools to move the transformational process."



Installation of a sculpture Symbol of Water and Life and tree planting campaign within the framework of the UzWaterAware project. CAREC, 2020 project. Photo by Liliana Sinn

Table 2. Areas of the interaction of WEFE nexus elements

	Energy	Water	Food	Environment
Energy		<ul style="list-style-type: none"> • Pumping • Infrastructure operation • Maintenance and construction 	<ul style="list-style-type: none"> • Agricultural operations • Agro-processing • Irrigation (pumping) • Transportation (Logistics) 	<ul style="list-style-type: none"> • Protection measures • Transport and protected zones
Water	<ul style="list-style-type: none"> • Hydro energy • Cooling and heating biofuels 		<ul style="list-style-type: none"> • Environmental demand/flows • Environmental services • Environmental protection and rehabilitation 	<ul style="list-style-type: none"> • Environmental demand/flows • Environmental services • Environmental protection and rehabilitation
Food	<ul style="list-style-type: none"> • Biofuels 	<ul style="list-style-type: none"> • Water saving efficiency • Water productivity • Virtual water 		<ul style="list-style-type: none"> • Food waste
Environment	<ul style="list-style-type: none"> • Alternative energy sources 	<ul style="list-style-type: none"> • Resources quantity • Resources quality 	<ul style="list-style-type: none"> • Environmental services, fishing, wildlife, protein sources 	

Source: Abdullaev & Rakhmatullaev (2016, p.3, Table 2)

2.3 Conceptualizing capacities for WEFE nexus approaches

The above suggests that WEFE nexus capacity-strengthening programs should include theoretical and applied knowledge about the relationships among the four main WEFE sectors. Programs should cover the two dimensions (interdisciplinary and transdisciplinary) described above and offer more than just theoretical and practical knowledge, but also learning on institutional arrangements that support intersectoral collaboration. Accordingly, Buchy et al. (2022) identify two types of capacities for supporting WEFE nexus approaches: 1) analytical capacity and 2) governance capacity. Analytical capacity refers to the capacity of individuals and of organizations or institutions to analyze, using appropriate methodologies, the interlinkages among WEFE sectors, including among disciplines and actors. Governance capacity refers to the existence of enabling policy and governance structures for co-developing, experimenting, and implementing integrated and sustainable solutions for nexus resource use and management. An enabling environment should provide WEFE actors (research institutions, government agencies, non-profit organizations, and the private sector) with adequate policies, resources, capabilities, and tools to conduct WEFE nexus activities (Table 3).

Table 3. Two types of capacities and skills and frameworks required for WEFE nexus approaches

Institutional level	Analytical capacity	Governance capacity
Academia	▶ Analytical skills	
Public sector	▶ Research skills	▶ Governance structures
Nonprofit organizations	▶ Marketing skills	▶ Policies
Private sector		

Source: Adapted from Buchy et al. (2022)

If nexus approaches are heavily reliant on institutional capacities and governance regimes (Abdullaev & Rakhmatullaev, 2016), capacity-building programs will need to address both. In addition to providing tools for integrated analysis, methods to support collaboration, monitoring, and solution development, specific assistance may be needed to establish structures, rules, and policies that increase the WEFE governance capacity.

Meyer (2019, p.13) conducted an institutional WEF (water, energy, and food security) capacity needs assessment for Central Asia to provide recommendations for targeted capacity building for WEF nexus planning and implementation of strategies, programs, and projects at national and regional levels. Meyer covered institutional capacities in four areas (dimensions) of the decision-making cycle: i) governance and decision-making; ii) institutional frameworks and processes; iii) knowledge creation, information, and data sharing; and iv) monitoring. Meyer (2019) notes that “There is a need for a step-by-step approach to introducing nexus thinking in Central Asia, starting with an understanding and official recognition of the need and usefulness of the WEF Security Nexus for the region. Capacity building efforts should enhance institutional frameworks as well as empower key stakeholders and decision makers by providing them with the required knowledge and skills.”

2.4 WEF nexus decision-making

Analytical and governance capacities of actors influence WEF nexus decision-making (Figure 3). WEF nexus decision-making includes dimensions of policy integration, optimal governance, scale integration, stakeholder participation, resource use, and sustainable development (Benson et al., 2015; Abdullaev & Rakhmatullaev, 2016) (Table 4).

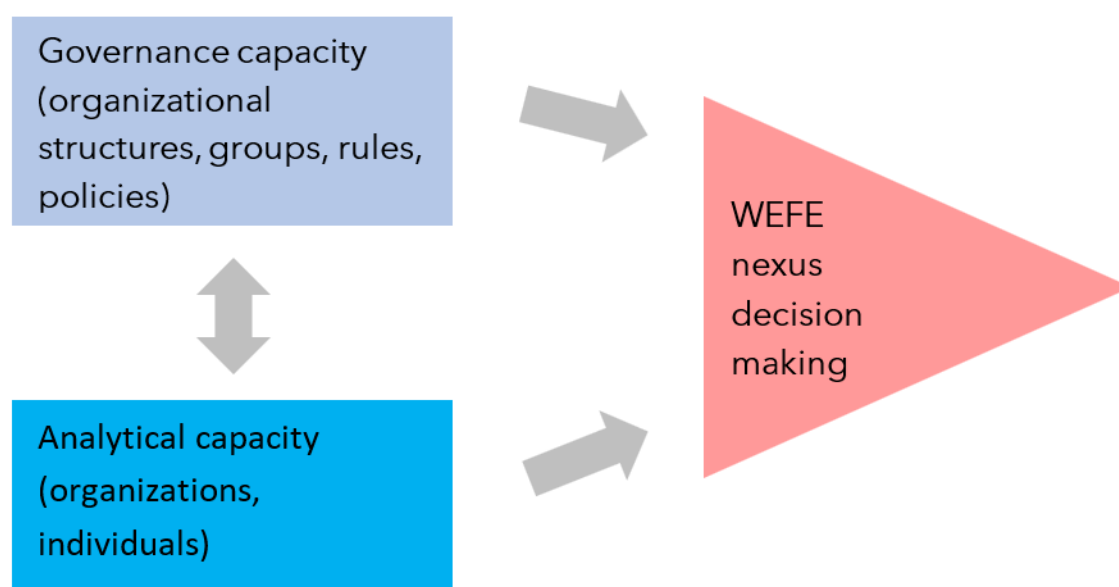


Figure 3. From WEF nexus capacities to decision making

Source: Adapted from Buchy et al. (2022)

Table 4. Policy areas and policy tasks in WEFE nexus decision making

Policy areas		Policy tasks in the WEFE nexus approach
1	Policy integration	▶ Integration among interconnecting policy sectors (water-energy-food-environment)
2	Optimal governance	▶ Governance structures that support WEFE nexus policy
3	Scale (scale at which the nexus is anticipated)	▶ Multiple scales
4	Stakeholder participation	▶ Public-private partnerships – multi-stakeholder platforms for increasing stakeholder collaboration
5	Resource use	▶ Economically rational decision-making ▶ Cost recovery
6	Sustainable development	▶ Securitization of resources

Source: Benson et al., 2015; Abdullaev & Rakhmatullaev, 2016

The policy areas and policy tasks shown in Table 4 can be brought together in various configurations. For example, a national government can develop a national level WEFE policy that includes tailored governance structures with vertical and horizontal power authorities and accountability. Regional authorities can develop a program based on WEFE interconnectivity and address challenges and opportunities in water, energy, food, and ecology simultaneously. At a regional level, WEFE nexus coordination may involve several nations. Integrated planning in such a case would be facilitated by the integration of policies across the region (Qin et al., 2022).

A comprehensive WEFE nexus capacity-building program should cover well-structured policy areas and related policy tasks for analysis and decision-making. The policy areas and tasks shown in Table 4 can serve as a good framework for this purpose. WEFE nexus capacity-strengthening programs should also demonstrate the theory of change through which a nexus approach can achieve desired outputs and outcomes of resource security, job and wealth creation, improved livelihoods and well-being, and regional integration (Naidoo et al., 2021).

2.5 Capacity-building for WEFE actors, including women and youth

The literature review highlights the importance of integrating gender equality and social inclusion (GESI) considerations in WEFE nexus capacity-strengthening programs, and of addressing gender and age inequalities in WEFE public sectors to improve their effectiveness and resilience, promote sustainable and equitable development, and contribute to achieving the Sustainable Development Goals. A study by Alliance Biodiversity & CIAT highlighted that while there are training materials and manuals on WEFE nexus overall, very few of them include gendered aspects of the subject matter (Zaremba et al. 2023). For example, even in research for development, most of the social and gender analysis conducted in the field of NRM remain largely theoretical. There are few effective educational programs dedicated to systemic capacity building for gender and social analysis in NRM (Vernooy 2006). Key underlying challenges that need to be addressed include:

- ▶ Limited familiarity with social science research among researchers involved in natural resource management.
- ▶ Insufficient integration of social science components with natural science in the majority of research endeavors.
- ▶ Divergent starting points, interests, and expertise pertaining to social and gender issues among researchers and research organizations.
- ▶ Prevalent “gender blindness” in both research and the formulation of research policies.
- ▶ The limited impact of short-term training initiatives.
- ▶ The potential benefits of networking, while recognized, prove challenging to realize in practical terms.

Flintan and Tedla (2007), drawing from research findings throughout eastern and southern Africa, concluded that there is a general consensus among researchers and development practitioners that neglecting gender-related issues in the design of research projects diminishes the value and relevance of the outcomes. They have identified six key gender-related differences to consider in relation to natural resources and their management:

1. Collection and Utilization
2. Forests and Forests Products as a 'Safety Net'
3. Access and Control
4. Marketing
5. Commercialization
6. Conservation and Natural Resource Management.

Flintan and Tedla (2007) highlight various justifications and reasons as to why gender analysis is needed in NRM. For example, while most assume that access to resources to be one of the main causes of gender inequality in NRM, because women generally have less access to land and weak inheritance rights. However, in some countries like Malawi even if the "land is inherited through women" and they have the right to sell or rent land, implying women's guaranteed access to land, men are often the ones to benefit financially from sale or rental of land. And in Zambia, despite a 30% land reservation for women, obtaining land title is challenging, with some districts requiring married women to seek spousal permission.

Jibat et al. (2007) emphasize the significance of involving women in the planning and implementation of agricultural projects and interventions. Their research reveals that the absence of such inclusion can lead to adverse effects, especially for women. There was a substantial rise in women's workload without corresponding economic or other advantages, as decisions were made without their input but had significant repercussions for them (Jibat et al. 2007). Although these findings pertain to gender analysis in NRM, their relevance extends to gender and youth considerations in Water, Energy, and Food Security (WEFE).

These studies demonstrate that capacity-strengthening programs should support the analysis of gender and social impacts of different WEFE nexus options. Moreover, they suggest that inequalities based on gender and age should be tackled in public sector WEFE institutions. Relatedly, they indicate that women and young people should be involved in the programs themselves, to gain capacities, resources, and influence in WEFE decision-making.

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PART 3.

REVIEW OF WEF NEXUS INITIATIVES AND GENDER AND YOUTH PROFILING AMONG PROFESSIONALS IN UZBEKISTAN

By adopting nexus solutions, Uzbekistan can enhance the resilience and sustainability of its water, energy, and food systems and ecosystem, and promote long-term prosperity for its people and the environment. Uzbekistan, like many countries, faces significant challenges in adopting WEF nexus solutions due to a range of factors. These include limited institutional capacity, fragmented governance structures, and inadequate financing for and investment in sustainable infrastructure. In addition, the country's high dependence on agriculture and water-intensive industries, combined with its limited water resources and changing climate, make it particularly vulnerable to the impacts of nexus-related challenges. However, there are also opportunities to address these challenges through innovative approaches and policies, such as improving water governance, promoting sustainable agriculture practices, and investing in renewable energy sources.

Effective adoption of WEFE nexus solutions is subject to the capacity of the government and its institutions. Building capacity in leadership and governance is also critical. Leaders must be able to understand the complexity of the nexus, communicate the benefits of integrated approaches, and engage stakeholders in the decision-making process. This requires developing the leadership skills of decision-makers and stakeholders, as well as building relationships and networks that enable effective collaboration.

3.1 Featured studies and projects on WEFE nexus in Uzbekistan

It is crucial to highlight that, until recently, most literature, international projects, and programs on water in Uzbekistan primarily concentrated on integrated water management among Central Asian countries, river-basin states, or the promotion of a transboundary approach to natural resources management. The adoption of this inter-sectoral nexus approach represents a recent development in the discourse on resource management. Nonetheless, there have since been a few studies and projects aimed at increasing the capacity of government bodies and public institutions in WEFE nexus sectors.

The United Nations Development Programme (UNDP) implemented a project in Uzbekistan aimed at strengthening the capacity of government institutions to manage the WEFE nexus. The project **“Integrated Water Resource Management and Water Efficiency Plan for Zarafshan River Basin (2010-2013)”** focused on building capacity in the areas of integrated planning and management, stakeholder engagement, and monitoring and evaluation. Through this project, the government developed a National Integrated Water Resources Management Plan and established an inter-ministerial working group to coordinate nexus-related policies and strategies. The project introduced gender aspects into water resource management. Three elements were considered to facilitate project effectiveness:

- a. Each initiative is to include measures aimed at acknowledging the differences and relations between men and women in each separate situation (gender analysis);
- b. On the basis of such analysis, all initiatives should include opportunities for men and for women, consider their needs and interests, and where applicable, facilitate the promotion of women;
- c. Participatory approaches should be used, facilitating equitable participation of men and women (especially at the decision-making level). It is important to pay special attention to the need for activities that would create conditions for women to realize that their participation is essential for water resources management at the local level.

A **study from Rakhmatullaev et al. (2017)** sheds light on the significance of adopting a WEFE nexus approach in Central Asia. They specifically highlight the intricate interconnections and dynamics that exist among the water, energy, and food sectors, as well as the environment. The research underscores the crucial role of integrated approaches and institutional capacities in effectively managing resources and promoting sustainable development in the region. The study also draws attention to the challenges faced, such as weak enforcement capacities, power imbalances, and resource competition, which hinder inter-sectoral coordination and governance at the national level. These complexities are further compounded by cross-border dimensions, necessitating a more comprehensive and collaborative approach to address these issues effectively.

The **Transboundary Water Management in Central Asia Programme** implemented by GIZ between 2009–2014 aimed to foster regional institutional cooperation around water management. The program supported capacity development and provided technical assistance. The relevant regional, national, and local institutions were supported in their joint development of practical approaches for sustainable water management and were advised on various topics, such as the formulation of legal provisions and guidelines for water management. Furthermore, staff of water management organizations in selected transboundary river basins received trainings on river basin planning and management. Stakeholder dialogues and policy meetings were a regular part of the project. Information materials on basin planning were developed and disseminated in the region. Further networking between European and Central Asian water management organizations provided a space for an exchange of best practices between water specialists from both regions. Capacity building activities were complemented by selected pilot projects, which range from the rehabilitation of safety systems for smaller dams to the introduction of water saving technologies and the reconstruction of traditional water supply systems.

The nexus assessment of the Syr Darya River Basin was conducted in the framework of the **Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) (UNECE, 2015)**, with the support of the government of Finland. In collaboration with local experts, UNECE produced a training manual designed as a methodological handbook for educating professionals in higher education institutions. This manual serves not only to enhance the knowledge of government officials engaged in water resources management, food security, energy, ecosystem preservation, and infrastructure development but also caters to a broader audience. It acts as an introductory resource for adopting an integrated approach to address cross-border challenges in macro regions that transcend singular issues. Among the significant recommendations arising from the nexus assessment, particularly on institutional and governance aspects, is the need to enhance institutional capacities. The aim is to facilitate the optimal allocation of basin resources and foster integrated strategies for managing land, water, energy, and ecosystems. The guide also emphasizes the importance of efficient resource management at the local level, encouraging local authorities and water user associations to play a pivotal role in this process.

A project was implemented by CAREC in partnership with the International Union for Conservation of Nature (IUCN) (2016–2019) as part of the Central Asia nexus dialogue project: **“Fostering water, energy and food security nexus dialogue and multi-sector investment (nexus)”**. The project targeted national ministries and agencies in five Central Asian countries dealing with water resource management, agriculture, energy, economy, and investment issues. The overall objective of the project was to create a multi-sectoral enabling environment to facilitate sustainable and climate-resilient investments for increased water, energy, food security and ecosystems in Central Asia. Specific objectives included: 1) Support of intersectoral cooperation in view of the “water-energy-food security” nexus approach in the investment planning process; 2) Strengthening of capacities of regional partners in intersectoral planning; 3) Mainstreaming of the “water-energy-food” nexus in linkages with ecosystems nexus approach, and available solutions on the basin, national and regional levels. Under the framework of this project, since 2019, the Regional Environmental Centre for Central Asia (CAREC) publishes a bulletin for capacity building in Central Asia.

Overall, these studies, surveys, research, and projects demonstrate the importance of building capacity in government bodies and public institutions to effectively manage the WEFE nexus. By investing in capacity building, governments can improve their ability to implement integrated approaches, enhance stakeholder engagement, and achieve more sustainable and resilient management of these critical systems. The review also emphasizes the need for further research to understand and help develop targeted policies and initiatives that address the unique challenges faced by women and young people in the sector and ensure their meaningful participation in decision-making processes and governance structures. This is not only a matter of social justice, but also a key factor in achieving sustainable and equitable development.

3.2 Women’s empowerment in Uzbekistan

The government of Uzbekistan has made considerable progress in promoting gender equality and women’s empowerment in recent years. However, women remain underrepresented in leadership positions and decision-making roles within the government and are still limited in terms of economic activity. The UNDP report “Sustainable employment in Uzbekistan: status, problems and ways to solve them” indicates that from 2014–2018, the level of women’s economic employment was about 48% (UNDP, 2018). During the same period, this figure was 76% for men. Data from the State Statistics Agency shows that the economic activity rate (calculated as the ratio of the economically active population to the working-age population) was 67% for women and 80% for men (Table 5). Women’s low level of economic participation in the region is due to a number of factors, including cultural attitudes, limited access to education and training opportunities, and lack of affordable childcare options, and other factors.

Table 5. Economically active women in Uzbekistan for years 2018-2022 (beginning of year, thousands of people)

		2018	2019	2020	2021	2022
1	Resident population of women	16,258.8	16,544.9	16,859.9	17,180.5	17,527.1
2	Able-bodied women	9,413.8	9,480.2	9,542.7	9,638.3	9,710.0
3	Economically active women	6,246.0	6,434.7	6,383.8	6,451.8	6,520.5
4	Economically active women (%)	66%	68%	67%	67%	67%

Source: Calculated from data of State Statistics Agency (2023)

Women are underrepresented in local government in Uzbekistan, holding only a small percentage of the seats on local councils. This is due in part to discriminatory cultural attitudes towards women in leadership positions, as well as a lack of opportunities for women to run for office and engage in political life.

It is crucial for the government to address these challenges and create opportunities for women to participate in the workforce, in politics, in the judiciary, and in government, to have a voice in decision making. Representation of women in decision-making processes is critical for promoting gender equality. Women's perspectives and experiences bring valuable insights to policy making and can help to challenge existing gender-based inequalities. When women are involved in the design and implementation of policies, they are also more likely to understand and support the policies, leading to better implementation and greater success.

3.3 Youth capacity development needs

The active engagement of youth in sustainable development efforts is central to achieving sustainable, inclusive, and stable societies by 2030 (UN DESA, 2018). Correspondingly, there is a call for a shift in public governance toward inclusive and participatory governance where citizens, including youth, actively engage and participate in policy processes and act as co-creators of government policies and services (UN DESA, 2023). Yet, we found that youth participation in decision-making in Uzbekistan is limited and that there is a need for greater youth engagement in the water, food, energy, and environment sectors. Key challenges include a lack of awareness of government sector organizations on the importance of youth participation, limited access of young people to information and resources, and a lack of capacity and skills among youth to effectively participate in decision-making (Tables 13, 14).

Opportunities for increasing youth participation in decision-making in Uzbekistan include the development of youth-friendly policies and programs, the establishment of youth-led initiatives, and the promotion of youth-led research and advocacy. The government of Uzbekistan should develop a comprehensive youth policy that outlines the roles and responsibilities of youth in decision-making, to create an enabling environment for youth participation in decision-making. Providing youth with access to information and resources can create further opportunities to enhance their participation in decision-making processes.



PART 4.

ASSESSMENT OF THE CAPACITIES AND NEEDS OF WEFE ACTORS (MEN, WOMEN, AND YOUTH) IN UZBEKISTAN

4.1 Methodology

To assess the capacities of actors from selected public organizations in the WEFE sector to implement nexus approaches, two main methods were adopted:

1. Semi-structured interviews ([Annex 1](#)) with officials of relevant WEFE public organizations (ministries and affiliated research organizations); and
2. An online survey (forms.gle/YHYExUcrG879wKHm8).

Drawing on the capacity strengthening frameworks presented above, these methods were used to assess three dimensions of the capacity of public organizations in WEFE sectors (Table 6), namely analytical capacity, governance capacity, and soft skills of staff.

Table 6. Capacity dimensions and methods to explore WEFE nexus capacities

Capacity dimensions	Interview and face-to-face meetings	Online survey
a. Analytical capacity		✓
b. Able-bodied women		✓
c. Economically active women	✓	✓

Analytical capacity encompasses abilities and skills in terms of quantity and quality related to the understanding of interlinkages among WEFE dimensions: data collection, data and information analysis, generation of new knowledge, and policy analysis. An effective capacity-building program should target individual skills as well as enabling factors that drive the analytical capacity of individuals and organizations.

Governance capacity encompasses the capabilities (availability, quality, maturity, and efficiency) to adopt nexus approaches along all processes of the policy-making and implementation cycle (organization, planning, coordination, implementation, monitoring, and evaluation).

The NEXUS Gains Initiative seeks to increase the leadership and influence of emerging women and young leaders in WEFE sectors through leadership training, mentorship, and coaching. “It will enhance capacities to develop future decision-makers and strong negotiators, increase their influence and support their career progression” (CGIAR, 2022). Hence, as a basis for capacity strengthening, this study also examined the general skills (leadership, negotiation, etc.) specifically of women and young people working in WEFE sectors.

Semi-structured interviews focused mostly on this last dimension. The main objective of the interviews was to collect primary data from public sector stakeholders involved in WEFE policymaking and research, including experts and decision-makers, to explore capacities, needs, and opportunities for developing capacity-strengthening activities. Five interviews were conducted in person and two virtually, with a total of seven (7) key informants: WEFE government

officials from the Ministry of Water Resources, the Ministry of Agriculture, the Association of Women in the Agrosphere, the State Committee for Ecology and Environmental Protection, and the State Forestry Agency, as well as academic institutions.

The **online survey** gathered information on all three dimensions: analytical capacities, governance capacity, and general skills. Its aims were to:

- ▶ Assess capacities of relevant government and government-affiliated institutions to understand and apply WEFE nexus approaches as well as gaps for doing so (at the individual and institutional levels); and
- ▶ Identify demand in terms of capacity-building for strengthening WEFE nexus approaches in the public sector, to feed into capacity strengthening and leadership development programs for target stakeholders.

Survey respondents (n=53) were from the following key institutions in WEFE sectors:

- Center for Space Monitoring and Geoinformation Technologies;
- Committee for Veterinary and Livestock Development;
- Committee of Forestry;
- Council of Farmers, Dehkan Farms and Homestead Landowners;
- Ministry of Agriculture;
- Ministry of Energy;
- Ministry of Natural Resources;
- Ministry of Water Resources.

The survey consisted of 24 questions focused on:

- ▶ The profile (education, gender, age, employment, competencies, professional experience) of respondents;
- ▶ Capacities of respondents to understand and apply WEFE nexus approaches; and
- ▶ Gender- and age-specific leadership roles in WEFE organizations.

4.2 Results

4.2.1 Interviews

Key results from the interviews are presented in [Table 7](#). Official figures show that women's employment in agriculture, water management, and other WEFE-related institutions is very low, and the number of women in leadership and decision-making is even lower.

Of the seven organizations involved in the interviews, only the International Center for Strategic Development of Food and Agriculture had a gender specialist on staff. It was required to do so to integrate gender in its international projects. In the rest of the organizations, responsibility for gender issues is entrusted to a human resources specialist or a women's affairs specialist, who tend to have a low level of knowledge and understanding of gender strategies and gender policy. Only the State Forestry Committee had a gender strategy, developed in close cooperation with FAO.

According to interviewees, training, and seminars on the basics of gender approaches in WEFE sectors and the national legislation of Uzbekistan were not sufficiently conducted in their institution. Only gender specialists and employees whose responsibilities already included gender issues participated in seminars and training on gender equality.

4.2.2 Profile of survey respondents

Survey results provide further information on capacities and gaps for implementing WEFE nexus approaches in Uzbekistan. Two thirds of the 53 respondents were men, and 18 (34%) were women. In terms of age, 33 respondents (62%) were 39 years old or younger, and 20 (48%) were older (40 years old or more) ([Figure 4](#)). When broken down by gender, 66% of male respondents were young and 34% were older, whereas 56% of female respondents were 39 years old or less, and 45% were 40 years old or older.

Most respondents (39 people or 73%) work in public institutions (government bodies and state organizations), with just over a quarter of respondents employed by other types of organizations ([Figure 5](#)). Half of respondents (49%) are employed by the Ministry of Agriculture ([Figure 6](#)).

The main areas or sectors of expertise of the respondents are food/agriculture, and planning of development and research, followed by water management, energy, and climate. Since respondents could select more than one area of competence, a total of 65 responses were received from the 53 survey respondents ([Figure 7](#)).

Table 7. Economically active women in Uzbekistan for years 2018-2022 (beginning of year, thousands of people)

Public agencies and organizations	Gender profile
Ministry of Agriculture	<ul style="list-style-type: none"> ▶ Total number of employees of the Ministry of Agriculture: 10,095 employees, of which 1,946 (19%) are women. ▶ Total number of women employees holding leadership positions: 147 (8%). ▶ Total number of professional staff: 1,013, of which 52% are women. ▶ Total number of technical workers: 786 people, of which 40.4% are women.
Ministry of Water Resources	<ul style="list-style-type: none"> ▶ Total number of employees in the central office: 104, of which 16 are women, 21 are young (14-29 years old).
Subordinated/affiliated public organizations	<ul style="list-style-type: none"> ▶ Total number of employees in subordinate organizations (research institutes, agencies, centers, state unitary enterprises, and so on): 32,800 people, of which 2,200 are women, 659 are young. ▶ Number of women holding leadership positions in the central office: 0. ▶ Number of women holding leadership positions in subordinate organizations: 4. ▶ Number of women who took part in internships / advanced training seminars for 2022 in the central office: 2. ▶ Number of women who took part in internships/seminars to improve their skills in subordinate organizations: 23.
International Center for Strategic Development in Food and Agriculture (ISCAD)	<ul style="list-style-type: none"> ▶ Total number of employees in ISCAD: 165 people, of which 34 (21%) are women.
Kengash (Council) of farmers, dehqan farms and homestead landowners	<ul style="list-style-type: none"> ▶ Total number of farms: 82,249, of which 5,659 (7%) are managed by women. ▶ Total number of farms led by young farmers: 11,051, of which 1,141 (10%) are women.

More than 40% of respondents have been working in their respective areas or sectors for 2 to 5 years (Figure 8), which is in line with the age profile of respondents, more than half of whom are under 40 years old.

Most of the respondents (22 people) work as Chief Specialist, whereas 10 respondents work as Leading specialists (Figure 9). Junior and middle personnel (specialists and heads of divisions) make up nearly 80% of the sample (42 respondents). The vast majority 96% (51 people) of respondents have higher education (Figure 10).

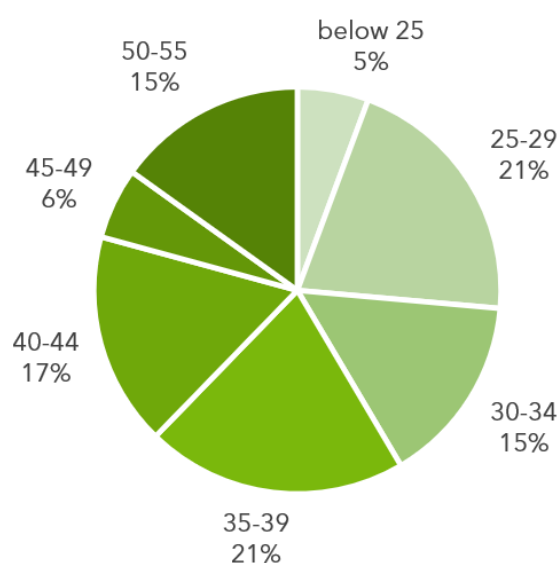


Figure 4. Age groups of respondents (n=53)

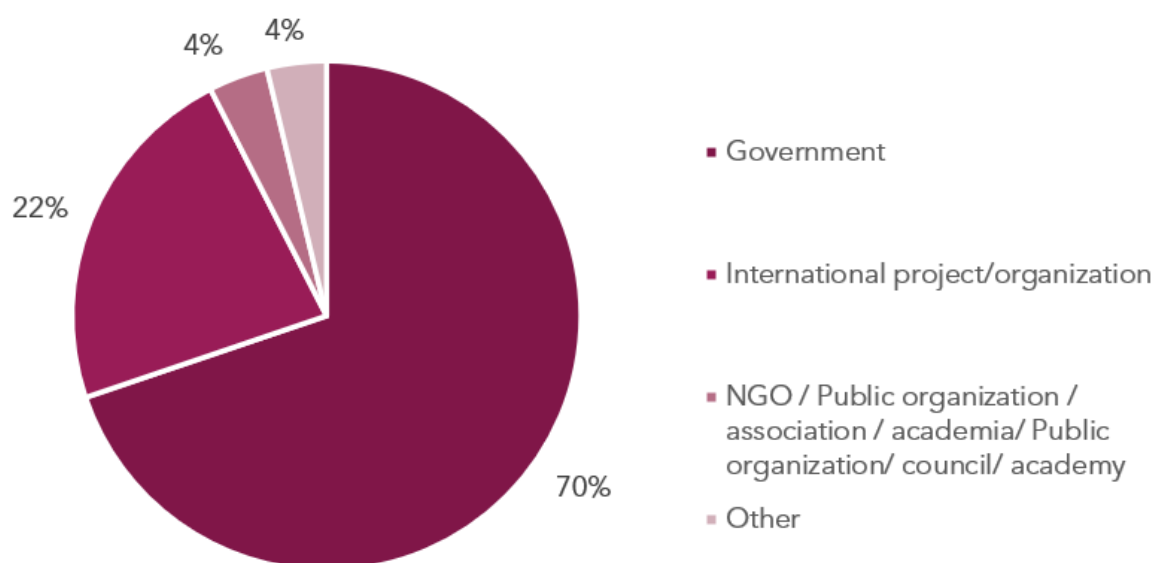


Figure 5. Breakdown of respondents according to type of organization they work for (n=53)

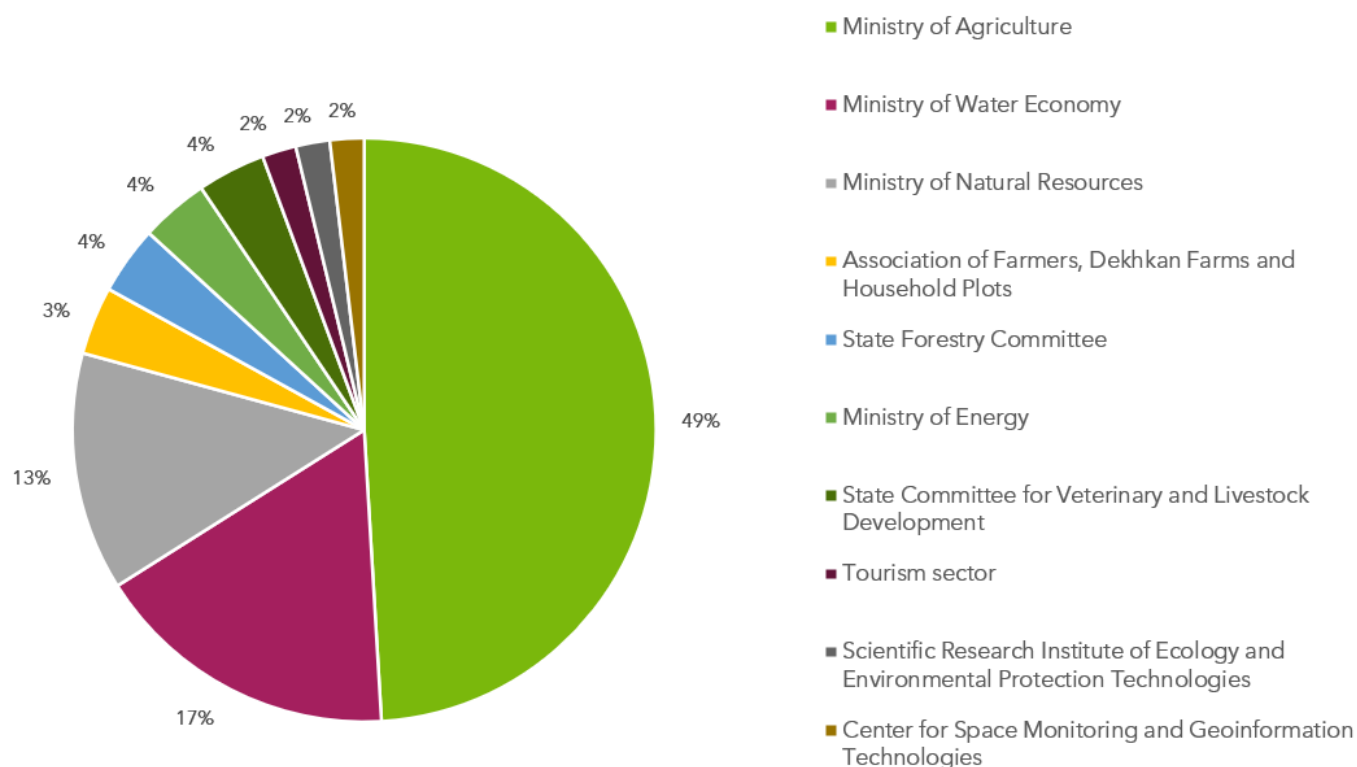


Figure 6. Organizational affiliations of respondents (n=53)

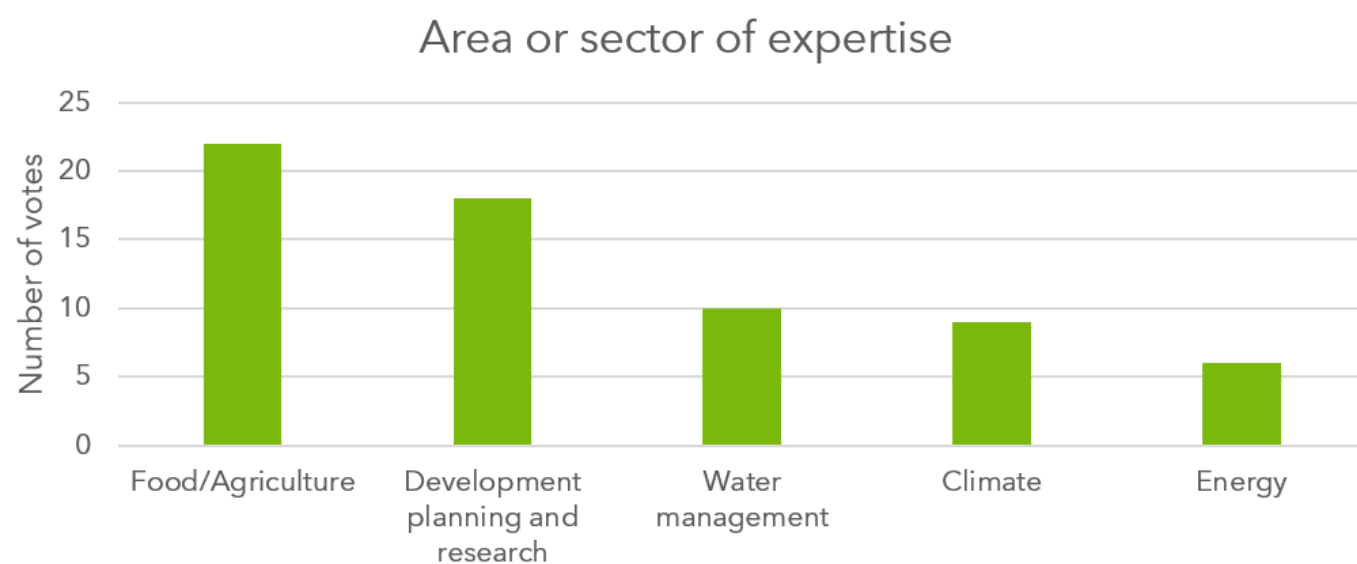


Figure 7. Main area or sector of expertise of respondents (53 respondents, 65 responses)

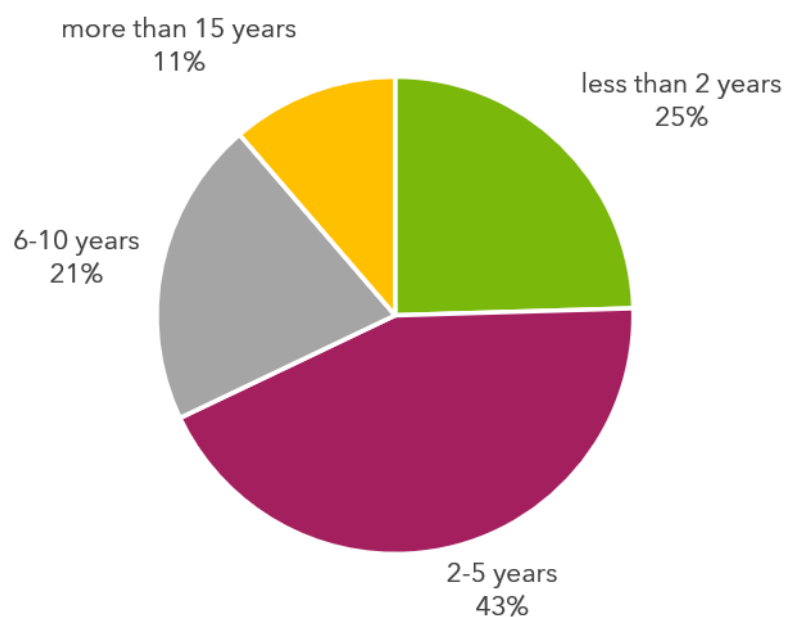


Figure 8. Number of years respondents have been working in this sector/area (n=53)

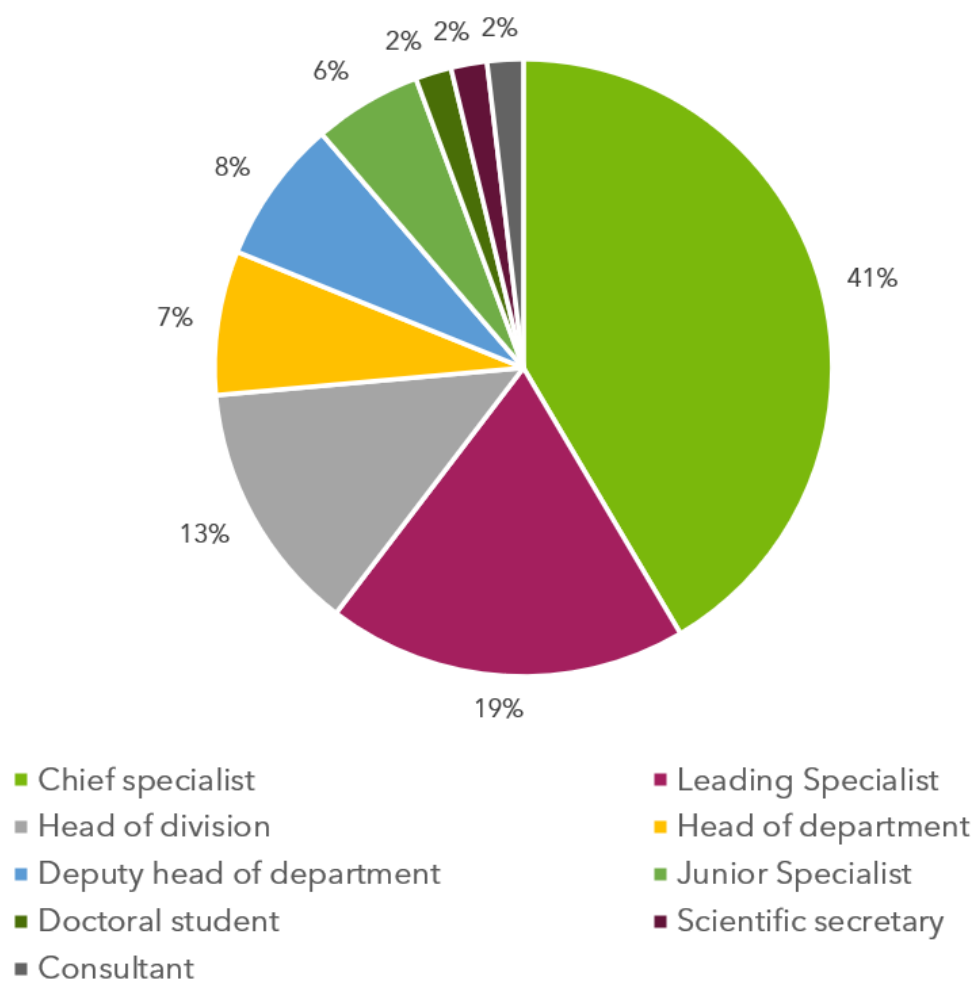


Figure 9. Job title (managerial level) of respondents (n=53)

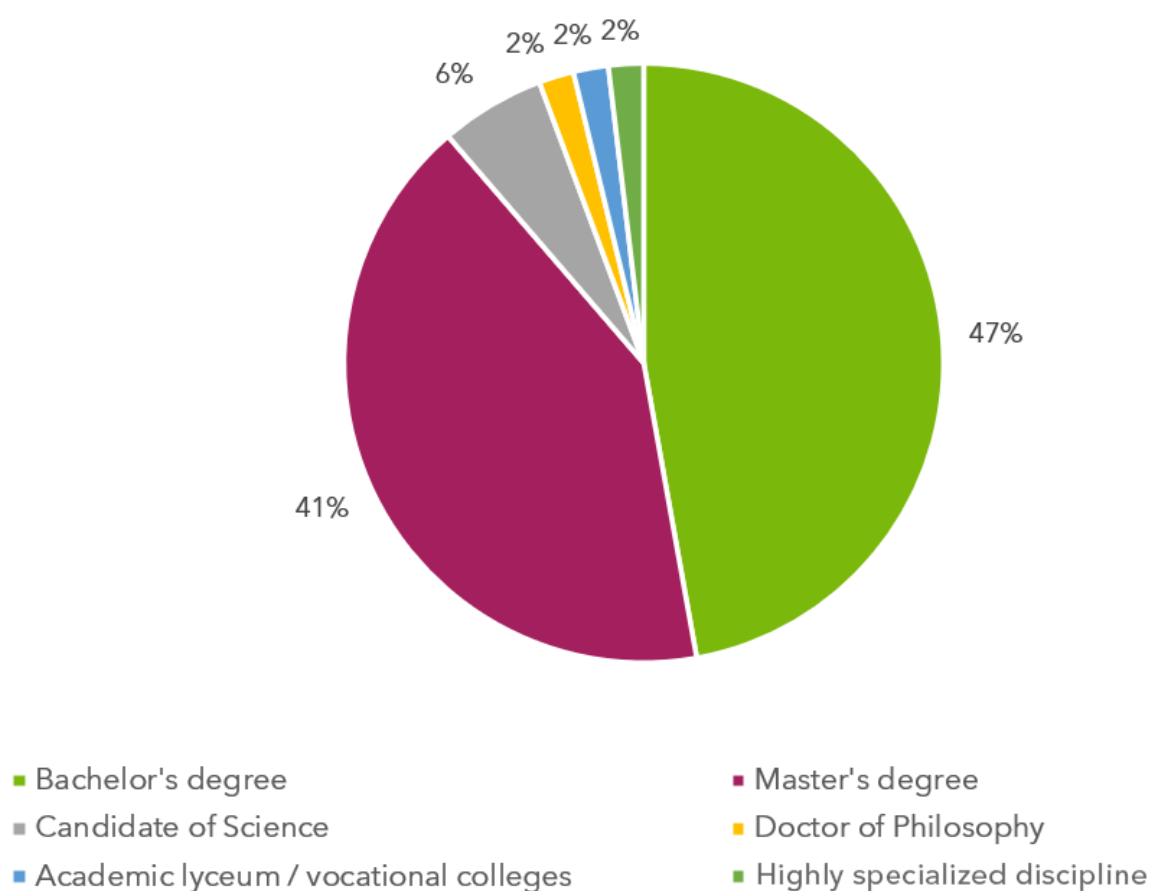


Figure 10. Education level of respondents (n=53)

4.2.3 Capacities and perspectives of survey respondents

Results suggest that 45% of respondents have some understanding of the WFE nexus approach (Figure 11). Most respondents (89%) have never participated in training related to the WEFE nexus approach; four (4) have participated in only one such training, and two have (2) participated in two or more WEFE trainings.

Nearly half (26/53) of respondents lacked knowledge and competencies in other WEFE sectors than their own; whereas 17 people have gained knowledge in related sectors of WEFE through work, and the rest of respondents through university programs (Figure 12). Almost three-quarters (39, or 73.6%) of respondents had no experience in other WEFE sectors.

The extent to which respondents use a WEFE nexus approach in their work is shown in Table 8. Just over one-third of respondents (35%) stated that they use such approaches in their work. Moreover, 39% of respondents consider that they often interact with other organizations in WEFE sectors (Table 8).

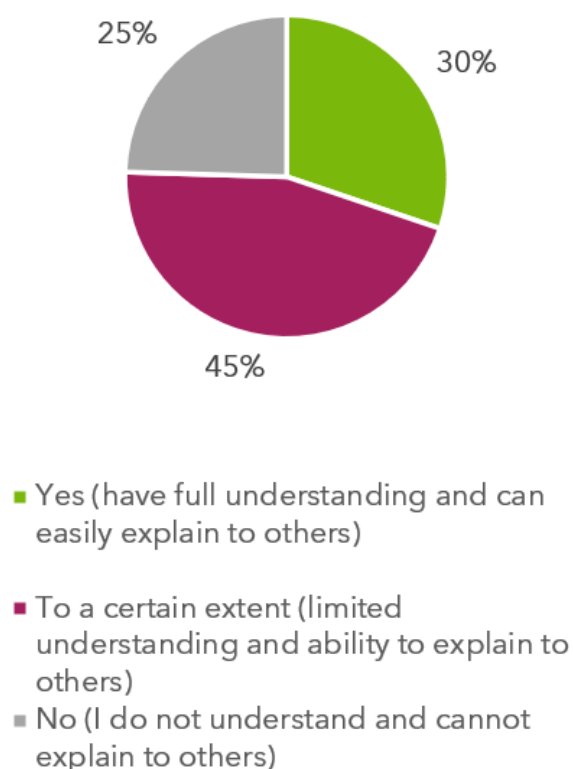


Figure 11. Results from survey question: "Do you have any understanding of the WEFE nexus (Water-Food-Energy-Ecosystems Interconnection) approach?" (n=53)

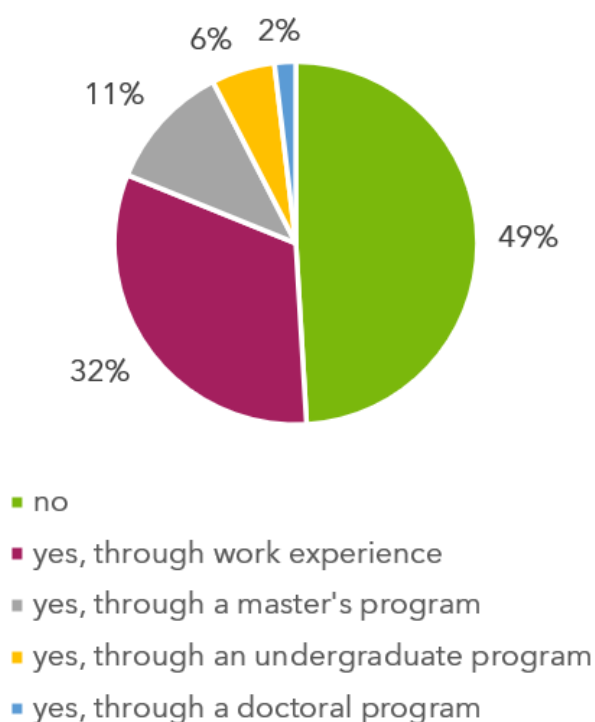


Figure 12. Results from survey question: "Do you have knowledge/competencies in alternative areas of WEFE (agriculture, water management, energy, ecosystems)?" (n=53)

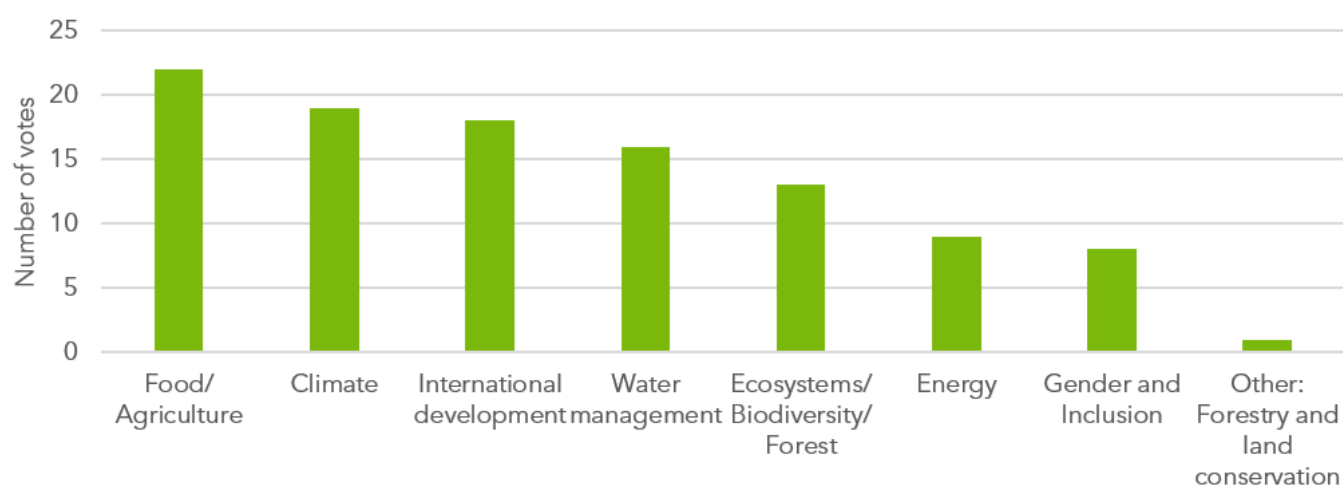
Only 35% of respondents considered that there are sufficient opportunities to improve their skills/technical knowledge of WEFE approaches in their organization (Table 8). Yet, most respondents (39 or 74%) expressed interest in capacity building on WEFE nexus concepts and approaches, whereas 11 respondents were unsure and two were not interested. Among those interested in learning about nexus approaches, most were interested in learning more about food/agriculture, then energy, international development, water management, and climate (Figure 13). In total, respondents gave 102 answers to this question. The topics of gender and inclusive development, as well as ecosystems/biodiversity/forests, were not priorities for respondents.

In terms of format, respondents favored face-to-face training/seminars/master classes, followed by study trips and conferences (Figure 14). Most respondents prefer 3-5 day training periods, or even shorter training courses of up to 2 days in length (Figure 15). Spring and autumn are considered the most suitable periods for conducting training (Figure 16). Most respondents (56% of 119 responses) favored training in Uzbek, followed by Russian (30% of responses), and English (14%).

Table 8. Application and opportunities for using WEFE approaches in respondents' professional settings (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
I use WEFE approaches in my work (for example, integrated resource management, etc.)	11%	24%	25%	15%	25%
In my work, I often interact with other ministries/organizations/offices/departments working in other areas of WEFE	13%	26%	25%	13%	23%
There are enough opportunities in my job to improve my skills/technical knowledge of WEFE approach	11%	24%	19%	25%	21%

Note: Green zone — responses affirming applications and opportunities for applying WEFE approaches. Orange zone — responses not confirming this practice. Grey zone — neutral responses.

**Figure 13. Results from survey question: "If you are interested in capacity building on WEFE nexus concepts and approaches, which of the following would you like to learn more about?" (53 respondents, 102 responses)**

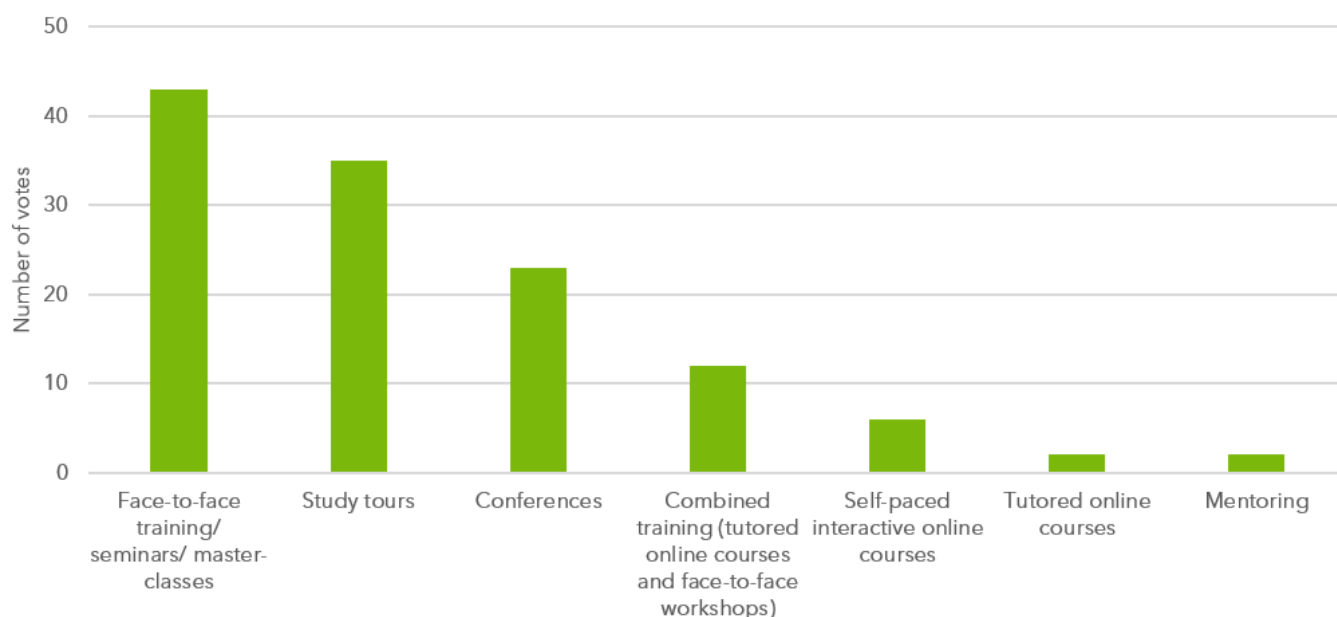


Figure 14. Results from survey question: “Which training format do you prefer? Please select the three most appropriate options” (53 respondents, 119 responses)

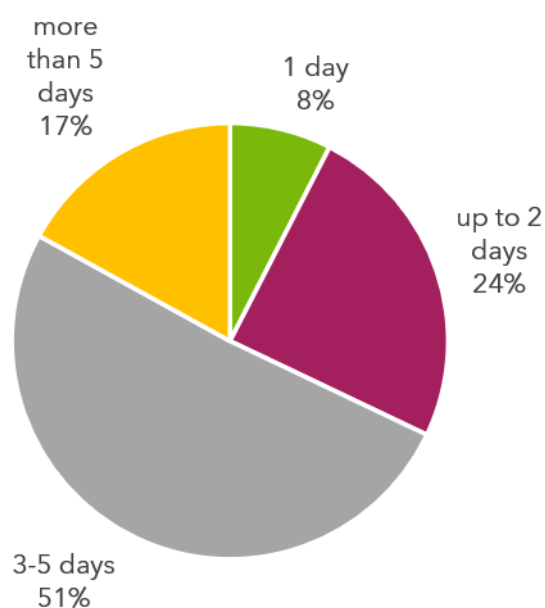


Figure 15. Results from survey question: “What is the best training duration for you?” (n=53)

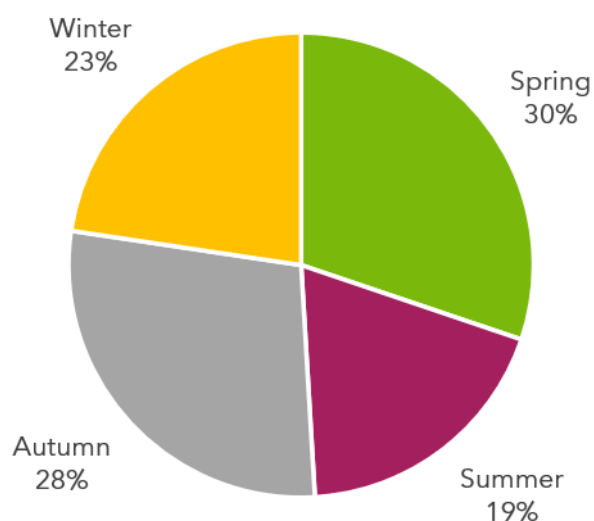


Figure 16. Results from survey question: “Do you have knowledge/competencies in alternative areas of WEFE (agriculture, water management, energy, ecosystems)?” (n=53)

Most respondents indicated that WEFE approaches are not actively promoted in their sectors, and that most organizations lack plans or strategies to implement cross-sectoral solutions, and do not adapt and respond to risks with cross-sectoral approaches (Table 9). Few respondents (37, or 23%) believe that their organization practices a WEFE nexus approach; most believe that their organization does not (44%) or are unsure (33%). Whereas 57% of respondents believe that their organization should contribute to increasing their employees' knowledge about the WEFE nexus, 24% of respondents do not see a need for this, and 19% are unsure (Table 10).

Table 9. Practicing the WEFE nexus approach in organizations (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
In my sector, most public organizations are effectively promoting the integrated approach of WEFE	3	7	14	16	13
Water, Energy, Food and Environment (WEFE) organizations have plans or strategies to implement cross-sectoral solutions	3	8	21	10	11
WEFE system organizations adapt and respond to environmental risks (climate change, biodiversity loss, desertification, land degradation, natural and man-made disasters, etc.) with joint cross-sectoral methods and solutions	4	12	18	12	7

Note: Green zone — responses affirming the WEFE nexus practice. Orange zone — responses not confirming this practice. Grey zone — neutral responses.

Table 10. Demand for the WEFE nexus knowledge (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
My organization needs to do more to increase the knowledge of its employees in the field of WEFE nexus	16	14	10	7	6

Note: Green zone — responses affirming the WEFE nexus practice. Orange zone — responses not confirming this practice. Grey zone — neutral responses.

Approximately half (51%) of respondents recognize the importance of gender equality and youth inclusion in their field, whereas nearly as many do not see the relevance to their field (Table 11). There is a similar lack of consensus around the extent to which WEFE organizations consider gender equality and youth inclusion in their fields of activity (Table 12). Respondents had mostly negative perceptions of the leadership and career progression opportunities their organization offers to youth and to women compared with their older and male counterparts (Table 13). Most respondents believe that their organization should strengthen women's leadership roles and those of young people and support their capacities (Table 14).

Table 11. Perceptions of the importance of gender equality in participants' fields (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
I know how important gender and youth equality are in my field	12	15	8	12	11

Note: Green zone — responses affirming respondents' knowledge of the importance of gender equality. Orange zone — responses not confirming the consideration of gender roles. Grey zone — neutral responses

Table 12. Perceptions of whether WEFE organizations address gender and youth issues in participants' fields of activity (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
Organizations dealing with water, energy, food and environment (biodiversity (forest)) systems (WEFE) do not consider gender issues in their fields of activity	4	10	20	10	9
Organizations dealing with water, energy, food and environment (biodiversity (forest)) systems (WEFE) do not consider youth issues in their fields of activity	5	11	22	7	8

Note: Green zone — responses affirming the consideration of gender roles. Orange zone — responses not confirming the consideration of gender roles. Grey zone — neutral responses.

Table 13. Gender inequality status in the WEFE organizations (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
The tasks I perform at work are somewhat consistent with traditional gender roles	8	17	9	10	9
Women do not have leadership roles in WEFE organizations	6	14	14	10	9
Young people do not have leadership roles in WEFE organizations	6	11	14	11	11
Management in my organization does not take gender/age into account when making decisions (training, promotion)	10	16	13	8	6
In my organization, women and men have equal access to promotion and capacity-building opportunities	10	19	13	8	3

Note: Green zone — responses affirming the leadership role. Orange zone — responses not confirming the gender leadership. Grey zone — neutral responses.

Table 14. Demand for gender equality in WEFE organizations (n=53)

	Strongly Agree	Agree	Don't Know/ Unsure	Disagree	Strongly Disagree
My organization needs to do more to strengthen leadership roles among women in the workplace	11	14	15	6	7
My organization needs to do more to strengthen leadership roles among young people in the workplace	12	19	10	6	6
In my organization, women should be more involved in decision-making	8	16	12	12	5
My organization should create more capacity-building opportunities for young people	9	20	13	7	4

Note: Green zone — responses affirming demand for gender equality policies. Orange zone — lack of desire for gender equality policies. Grey zone — neutral responses.

PART 5.

CONCLUSION

Results from the interviews suggest that there is a need to:

- ▶ Establish gender specialist positions in WEFE organizations;
- ▶ Support the development of a gender strategy in these institutions;
- ▶ Increase the level of awareness and knowledge on gender issues in these institutions;
- ▶ Conduct training on the basics of gender approaches in agriculture, the national legislation of Uzbekistan on gender issues, the role of women and girls in ensuring food security in Uzbekistan and in the development of agriculture, and other topics.

The survey results show that there is demand and potential for expanding learning and capacities on WEFE nexus approaches. They point to key content and formats that can support this learning among WEFE sector professionals. Gender equality and youth inclusion are still lacking in WEFE institutions and will need to be addressed as a thematic area in future WEFE approaches, and as an area of concern in WEFE institutions, to generate equal opportunities for professionals working within these sectors.

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Annex

Survey

Capacities and needs assessment of public institutions on the water, energy, food and environmental nexus

This study is being conducted as part of the [CGIAR NEXUS Gains Initiative](#). A Water Food Energy and Ecosystems (WEFE) nexus capacity and needs assessment is being conducted to indicate the current understanding and gaps associated with the implementation of WEFE nexus solutions. The purpose of this survey is to understand the opinion of stakeholders on the existing opportunities for developing capacities within WEFE nexus organizations, including the leadership of women and youth champions. The results of this survey will be used as a foundation of training modules and a leadership development program.

The collection and processing of personal data will not be used for purposes other than the identification and development of capacity-building knowledge products. The anonymity of personal data is guaranteed. We also guarantee that the results will be presented in aggregated form without identifying a specific institution.

SECTION 1. GENERAL INFORMATION

1. Please select your gender
 - a) Female
 - b) Male

2. Please select your age
 - a) Up to 25 years old
 - b) 25-29
 - c) 30-34
 - d) 35-39
 - e) 40-44
 - f) 45-49
 - g) 50-55
 - h) 56 and older

3. Which type of institution do you work for?
- a) Government
 - b) International project / organization
 - c) NGO / Public organization / association / academia
 - d) Other_____
4. Which of the following institutions do you work for?
- a) Ministry of Agriculture
 - b) Ministry of Water Resources
 - c) Ministry of Natural Resources
 - d) Ministry of Energy
 - e) Association of Farmers, Dekhkan Farms and Household Plots
 - f) State Forestry Committee
 - g) State Committee for Veterinary and Livestock Development
 - h) Other_____
5. Which of the following areas do you work in? (Select all that apply)
- a) Water / water management
 - b) Energy
 - c) Food/Agriculture
 - d) Climate
 - e) Gender and Inclusion
 - f) Development planning and research
 - g) Other_____
6. How long have you been working in this sector?
- a) Less than 2 years
 - b) 2-5 years
 - c) 6-10 years
 - d) 11-15 years
 - e) Over 15 years
7. What is your current position? (Level of management, decision-making and leadership)
- a) Head of Department
 - b) Deputy Head of Department
 - c) Head of Division
 - d) Deputy Head of Division
 - e) Senior Specialist
 - f) Leading Specialist
 - g) Junior Specialist
 - h) Intern
 - i) Other_____

8. Please select the level of your education:

- a) PhD
- b) Master's degree
- c) Bachelor degree
- d) Academic Lyceum/Vocational Education Colleges
- e) Other _____

SECTION 2. CAPACITY ASSESSMENT

WEFE nexus approaches recognize that water, land, energy, forests, and biodiversity are inextricably linked and critical to food, health and food security, poverty reduction, job creation, climate change adaptation and mitigation, and environmental health and biodiversity. This initiative promotes a systematic approach to avoid unintended consequences, enhance sustainable development, and realize multiple benefits in the water, energy, food and environment. WEFE institutions are any organizations that work in the water, energy, food, and ecosystem/environment sectors.

9. Do you have any understanding of the concept of WEFE nexus (Water-Food-Energy-Ecosystems Interconnection)?

- a) Yes (fully understand and can easily explain to others)
- b) To some extent (limited understanding and ability to explain to others)
- c) No (I don't understand and can't explain to others)

10. Have you participated in training/seminars related to the WEFE nexus concept? If yes, please select the number of trainings:

- a) More than twice
- b) Twice
- c) Once
- d) Never participated

11. If yes, please indicate the topics of this training.

12. Do you have competencies (education, knowledge) in alternative WEFE areas (agriculture, water management, energy, ecosystems)?

- a) No
- b) Yes, through undergraduate
- c) Yes, through a master's program
- d) Yes, through a doctoral program
- e) Yes, through past work experience
- f) Other _____

13. If yes, in which specific areas?

14. Have you worked in other WEFE areas (agriculture, water, energy, ecosystems) other than the one currently working on?

a) Yes

b) No

15. If yes, in what areas?

16. Please rate your level of agreement or disagreement with the following statements on a scale of 1 to 5, where 1 – strongly disagree, 3 – not sure, 5 – strongly agree.

Please rate your answers to the following questions	1=Strongly disagree, 2=Disagree, 3=Don't know/Not sure, 4=Agree, and 5=Strongly agree	1	2	3	4	5
I use WEFE approaches in my work (integrated resource management, etc.)						
In my work, I often interact with other organizations/departments/units that work in other WEFE sectors						
I am aware of how gender equality matters in my area of responsibility						
I have enough opportunities in my job to learn and improve my skills / technical knowledge about the WEFE concept						

SECTION 3: FUTURE TRAINING INTERESTS

1. Are you interested in capacity building on the WEFE nexus concepts and approaches?

a) Yes

b) No

c) Difficult to answer

2. If yes, which of the following you would be interested in learning more about?

a) Water management

b) Energy

- c) Food/Agriculture
 - d) climate
 - e) Gender and Inclusion
 - f) Research on International Development
 - g) Other _____
3. What training format do you prefer? Please select three most suitable options:
- h) Face-to-face training/seminars / master classes
 - i) Self-Paced Online Courses
 - j) Moderated online courses with a tutor.
 - k) Combined training (online courses with a mentor and face-to-face seminars)
 - l) Mentoring
 - m) Study trips
 - n) Conferences
 - o) Other _____
4. What is the training duration that would be most suitable for you?
- a) 1 day
 - b) Up to 2 days
 - c) 3-5 days
 - d) More than 5 days
5. Which period of the year is more suitable for training?
- a) Spring
 - b) Summer
 - c) Autumn
 - d) Winter
6. What language of instruction/training do you prefer?
- a) Uzbek
 - b) Russian
 - c) English
 - d) Other _____

SECTION 4: INSTITUTIONAL LANDSCAPE

Please rate your answers to the following questions	1=Strongly disagree, 2=Disagree, 3=Don't know/Not sure, 4=Agree, and 5=Strongly agree				
	1	2	3	4	5
In my sector, most public institutions are effectively promoting the integrated approach of WEFE					
Water, Energy, Food and Environment (WEFE) organizations have plans or strategies to implement cross-sectoral solutions					
Organizations dealing with water, energy, food, and environmental systems (WEFE) do not consider gender issues in their area of work.					
Organizations dealing with water, energy, food, and environmental systems (WEFE) do not consider youth issues in their area of work.					
WEFE system institutions adapt and respond to environmental risks (climate change, natural and man-made disasters, etc.) with joint cross-sectoral methods and solutions					
My organization needs to do more to increase the knowledge of its employees in the field of WEFE nexus					

SECTION 5: GENDER, DIVERSITY AND INCLUSION IN THE WORKPLACE

Please rate your answers to the following questions	1=Strongly disagree, 2=Disagree, 3=Don't know/Not sure, 4=Agree, and 5=Strongly agree				
	1	2	3	4	5
The tasks I perform at work overlap to some extent with traditional gender roles.					
Women do not have leadership roles in WEFE institutions.					
Youth does not hold leadership roles in WEFE institutions.					
My organization needs to do more to strengthen leadership roles among women in the workplace					
My organization needs to do more to strengthen leadership roles among the youth in the workplace					
Management in my organization does not consider gender/age in decision-making (training, career advancement)					
My organization needs to engage the women in decision making more					
Women and men are given equal access to promotions and capacity building opportunities at my organization					
My organization needs to provide more capacity development opportunities to the youth					

Thank you for participating in this survey.



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