

# NEXUS-NESS

## NEXUS NATURE ECOSYSTEM SOCIETY SOLUTION

Fair and sustainable resource allocation demonstrator of the multiple WEF E Nexus economic, social and environmental benefits for Mediterranean regions

**GRANT AGREEMENT NUMBER 2042**

### Deliverable D2.3

## Gender dimension for Nexus Ecosystem Lab Innovation Ecosystem V1.1 30 November 2022

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WP2 Leader: XPRO, Xenia Schneider and Task 2.3 Leader: UNIFI, Enrica Caporali





**NEXUS-NESS - NEXUS NATURE ECOSYSTEM SOCIETY SOLUTION:  
FAIR AND SUSTAINABLE RESOURCE ALLOCATION  
DEMONSTRATOR OF THE MULTIPLE WEFE NEXUS ECONOMIC,  
SOCIAL AND ENVIRONMENTAL BENEFITS FOR MEDITERRANEAN  
REGIONS**

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30 November 2022

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WP2 Leader: XPRO, Xenia Schneider and Task 2.3 Leader: UNIFI, Enrica Caporali

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## Deliverable Identification

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<b>Task No and Title</b>	Task 2.3 – Integrating gender dimension into NEL Innovation Ecosystem		
<b>Task Leader</b>	Università degli Studi di Firenze (UNIFI)		
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<b>Abstract</b>	Gender equality and gender issues constitute an important dimension of the Responsible Research and Innovation and a cross-cutting issue in the use and management of natural resources. Gender equality is central in the achievement of Sustainable Development Goals. This report explains the strategy and actions taken by the NEXUS-NESS project and the importance of adopting a gender lens in the WEFE Nexus approach.		
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## Abbreviations

D2.1	D2.1 Nexus Ecosystem Lab: Innovation Ecosystem Methodology Deliverable
IEM	Innovation Ecosystem Methodology
NEL	Nexus Innovation Ecosystem Lab
NELs	Nexus Innovation Ecosystem Labs
NEL Leader	The responsible person from the NEXUS-NESS partner responsible on location for the NEL.
NEL Team	The responsible persons helping the NEL Leader. These persons belong to the same organisation as the NEL Leader.
RRI	Responsible Research and Innovation
SDGs	Sustainable Development Goals
UNIFI	University of Florence
WEFE-Nexus	Water, Energy, Food, Ecosystem Nexus
WP	Work Package of the Project consisting of tasks and subtasks
WP Leader	The NEXUS-NESS project beneficiary leading the WP

## 1. Purpose of the Deliverable

The NEXUS-NESS Work Package 2 “*WEFE Nexus transition through Innovation Ecosystem Approach*” provides for a direct involvement of stakeholders to co-define Water, Energy, Food and Ecosystem (WEFE) Nexus vision and action plan. Applying Responsible Research and Innovation (RRI)<sup>1</sup> (Schneider X., 2019) and Innovation Ecosystem Methodology - IEM principles<sup>2</sup> (Granstrand O., Holgersson M., 2020), stakeholders will be actively engaged in activities for sustainable WEFE Nexus practices.

Deliverable D2.3 refers to the Task 2.3 “*Integrating gender dimension into NEL Innovation Ecosystem*”. It is the first of the two documents aimed to report the strategy undertaken and the activities done in order to handle the gender dimension paying attention to how gender-power disparities impact meaningful participation, decision-making and gains from NEL Ecosystem Innovations. It is important to highlight that the gender dimension used in the NEXUS-NESS project consists of gender equality and gender issues. This is done not only for the sake of completeness but to also highlight the difference between the two terms and their interconnection. Whereas *gender equality* examines the gender equality as the equal enjoyment by women and men of socially-valued goods, opportunities, resources and rewards, the *gender issues* (EIGE 2014)<sup>3</sup> include all aspects and concerns related to women's and men's lives and situations in society, to the way they interrelate, their differences in access to and use of resources, their activities, and how they react to changes, interventions and policies. With respect to WEFE-Nexus, *gender issues* have great importance in the acceptance and implementation of the required changes for WEFE-Nexus.

In the context of the NEXUS-NESS project, the analysis, the strategy and the activities are focused on 4 Nexus Ecosystem Labs (NELs), developed in the framework of the project and they take into account intersectional and scalar complexities of inequality in different local contexts. In fact, as specified in Deliverable 2.1, the NELs take place in 1) Egypt, 2) Italy, 3) Spain and 4) Tunisia., in different environmental, socio-economic, cultural and climatic WEFE nexus situations, within which the project NELs Teams are working with local stakeholders to co-create a WEFE-Nexus transition that will result into Innovation Ecosystems.

The introduction of the gender dimension inevitably involves a thorough knowledge of gender dynamics in each context. It is also related to a strong commitment to investigate gender issues and to achieve gender equality awareness for all NEL stakeholders involved. The path undertaken to raise awareness on gender issues and gender equality among the NELs is described in this Deliverable 2.3.

## 2. Task 2.3 Strategy and Deliverable 2.3 Overview

Task 2.3 of the project NEXUS-NESS aims to integrate the gender dimension into the NEL Innovation Ecosystem. To achieve this goal, several actions have been undertaken since the beginning of the NEXUS-NESS Project activities.

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<sup>1</sup> Schneider Xenia, March 2019, [The Responsible Research and Innovation RRI Roadmap](#)

<sup>2</sup> Granstrand Ove, Holgersson Marcus, 2020, [Innovation ecosystems: A conceptual review and a new definition](#)

<sup>3</sup> European Institute for Gender Equality – EIGE (2014), [Effectiveness of Institutional Mechanisms for the Advancement of Gender Equality: Review of the Implementation of the Beijing Platform for Action in the EU Member States.](#)



As a first step, a literature review of existing material on WEFE Nexus and Gender was conducted. It showed that there are no general rules and concepts to apply the integration of the gender dimension in the WEFE Nexus.

However, significant studies about how gender can impact the use and management of Water, Energy, Food and Ecosystems separately, have been conducted at different levels. Many of these studies aim to analyse in depth the different degrees of gender inequality when it comes into contact with other relevant issues related to human development (such as the lack of resources) and to suggest actions to reduce these inequalities (Tayyib et al., 2012)<sup>4</sup> (UN Environment, 2016)<sup>5</sup>.

Toolkits providing specific guidance on gender mainstreaming or the collection of sex-disaggregated data were analysed in order to identify common elements. In some cases, attempts to assess how the link between different resources impacts differently women and men had already been made and therefore gender-specific indicators on issues such as water for agricultural use or rural electrification were developed (Pangare et al., 2019)<sup>6</sup> (Asian Development Bank, 2012)<sup>7</sup>.

The study of existing material led firstly to the analysis and the collection of the existing gender-sensitive indicators related to WEFE sectors (for more details see Chapter 3), then to the understanding of the link between WEFE and gender in the framework of the Sustainable Development Goals (SDGs). Indeed, due to the fact that the project aims to have an impact on SDGs 2 (Zero hunger), 3 (Good health and well-being), 5 (Gender equality), 6 (Clean water and sanitation), 7 (Affordable and clean energy), 8 (Decent work and economic growth), 12 (Responsible consumption and production), 13 (Climate action) and 15 (Life on land), the link between SDG 5 and all the other WEFE Nexus-related SDGs was highlighted. The results of this analysis are reported in Chapter 2.

Then, the common points to carry on gender dimension activities in projects with a focus on natural resources and decided to plan a gender analysis aiming to understand the gender issues related to WEFE management in the NELs were identified. As a starting point of the planning phase of the gender analysis, the NEXUS-NESS Project Partners' knowledge and skills was evaluated. To do it, the Team of the University of Florence (UNIFI) prepared a *Gender preliminary questionnaire* to be administrated among the NEXUS-NESS Project Partners to assess their knowledge of gender dimension. The questionnaire is based on the *Gender Equality Capacity Assessment Tool* created by the UN Women Training Centre (UN WOMEN Training Centre, 2014)<sup>8</sup>, with integrations from the survey created in the framework of the project "*Promoting Sustainable Management of Natural resources in Southeastern Europe*" (2016-2022) supported by the Austrian Development Agency and implemented by the Global Water Partnership in partnership with the United Nations Economic Commission for Europe<sup>9</sup>. More details on the questionnaire development, implementation and results analysis will be presented in Chapter 4.

The analysis of the questionnaire results shows a clear necessity for training the NEXUS-NESS Project Consortium on gender issues, gender equality and women's empowerment. The achievement of gender equality, in fact, necessarily passes through women empowerment. The process of capacity building on gender

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<sup>4</sup> Tayyib, S., Rocca, V., & Bossanyi, Z. 2012. Core Gender Indicators for Assessing the Socio-Economic Status of the Agricultural and Rural Population. FAO REU.

<sup>5</sup> UN Environment, 2016, [Global Gender and Environment Outlook](#)

<sup>6</sup> Pangare, V., Miletto, M., Thuy, L., 2019, [UNESCO WWAP Toolkit on Sex-Disaggregated Water Data](#).

<sup>7</sup> Asian Development Bank, 2012, [Gender Tool Kit: Energy Going Beyond the Meter](#)

<sup>8</sup> UN WOMEN training Center, 2014, Gender Equality Capacity Assessment Tool, [Capacity\\_AssessmentTool\\_En.pdf \(unwomen.org\)](#)

<sup>9</sup> [Promoting the Sustainable Management of Natural Resources in Southeastern Europe, through the use of the Nexus approach](#), financed by the Austrian Development Agency (ADA) and implemented by Global Water Partnership-Mediterranean (GWP-Med) in partnership with the United Nations Economic Commission for Europe (UNECE).



and WEFE according to the needs of the Project has developed in 3 phases: i) a thorough understanding of how men and women are influenced by and influence resource use and management differently; ii) a growing awareness of the importance of achieving gender equality and iii) a discussion of the tools needed to strengthen the role of women in the implementation of empowerment processes.

The capacity building on gender is part of the strategy undertaken by the UNIFI Team to strengthen the knowledge and skills of the stakeholders in all the aspects related to the WEFE Nexus. More details on the capacity building strategy are reported in the Deliverable 3.5 "Pathways to impact and capacity building: NEL training and capacity building material".

The challenge of developing such a capacity building process and the willingness to include it in the deliverable, led the UNIFI Team, in agreement with WP leader and Project NEXUS-NESS Coordinator, to postpone the deliverable of this report, foreseen in M16, to M19. Contents and details of the training course are reported in Chapter 5.

The 1<sup>st</sup> NEL participatory workshop in each NEL, where local stakeholders have been involved to map the NEL current WEFE Nexus situation, have been carried out while it was still unclear how to handle the gender dimension in the NEL workshops. In fact, the literature review was still ongoing and the NELs leaders (institutions responsible for implementing the project activities in the 4 NELs) haven't been trained on gender issues, gender equality and women's empowerment. Still, the UNIFI Team decided to take advantage of the opportunity to collect the perceptions of stakeholders regarding gender equality in their sector. To do it, it was decided to borrow the questionnaire created in the framework of the project "Promoting Sustainable Management of Natural resources in Southeastern Europe" (2016-2022)<sup>9</sup>, which was administrated to the stakeholders in each NEL. The questionnaire was introduced by the NEL Leaders in Tunisia, Egypt and Spain and by the UNIFI Team in Italy. The questionnaire results of each NEL are presented in Chapter 6.

The next steps of Task 2.3 working strategy, already identified, are:

- Analysis of existing WEFE-related gender data at NEL country level;
- Organization of a workshop dedicated to women in the Italian and Spanish NELs within the International Women's Day of March 8, 2023;
- Awareness raising activities during the next participatory workshops in the NELs.

### **3. Introduction to the Gender Dimension**

#### **Why is the gender dimension so important in the WEFE Nexus?**

Water, energy, food and ecosystems are four elements of fundamental importance for the achievement of global human well-being leading to poverty reduction and sustainable social and economic development (Barchiesi et al., 2018)<sup>10</sup>. The close connection between these elements needs to be analysed and defined to help achieve the 2030 Agenda, which stressed the importance of considering all aspects of sustainable development indivisible and interconnected.

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<sup>10</sup> Proceedings of the Workshop on Water-Energy-Food-Ecosystems (WEFE) and Sustainable Development Goals (SDGs), 25-26 January 2018. Editors: S. Barchiesi, C. Carmona-Moreno, C. Dondeynaz, M. Biedler. Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-99562- 0, doi 10.2760/867467, JRC109346





### D2.3: Gender dimension for Nexus Ecosystem Lab Innovation Ecosystem

The new global challenges brought about by growing resource scarcity, climate change and environmental degradation are leading to an ever-increasing tightening of the living conditions of men and women.

For instance, in the Mediterranean countries, where the 7% of the entire worldwide population live, there are the 60% of so-called water poor people. In southern Europe and North Africa, the increasing temperatures and the decreasing precipitations, are enhancing the stress on natural forests, with a consequence on the availability of water<sup>11</sup>. According to UN Environment Programme and Mediterranean Action Plan, around 28 million people in the Mediterranean do not have access to sanitation, while 18 million do not have access to drinking water<sup>12</sup>.

These difficulties exacerbate conflicts, damaging economic development and leading to the death and forced displacement of millions of people yearly (UN WOMEN, 2018)<sup>13</sup>.

These challenges cannot be addressed without a gendered lens. In fact, all these dramatic situations exacerbate gender inequalities and reinforce gender gaps. First of all, women are more vulnerable during conflicts because became easier for them to be victims of violence ([S/2021/312](#))<sup>14</sup>. It is also a fact that women are more likely to die during floods or storms because of their role in the household or for lack of or inability to shelter facilities (WEDO, 2016)<sup>15</sup>. Moreover, the effects of resources scarcity and extreme wheatear events on the agricultural productivity are stronger on female farmers. In the Middle East and North Africa (MENA), for example, 60% of women work in the agriculture sector, but they have less access to facilities and finance because of cultural norms and because they are mostly employed informally. In MENA countries, women are farmers, house workers and wage workers but lack control over most resources and other opportunities. Their contribution to agricultural development and the broader economic and social development, therefore, remains limited. This means that in case of difficulties caused by droughts, floods or plant disease, women have fewer tools to carry on their activities (Chieham, 2022)<sup>16</sup>.

Adopting a gender lens will allow the implementation of activities tailored to the specific needs of women and men, considering social and cultural norms that in each context affect the use and management of the resources. Gender roles and the division of labour based on gender norms need to be taken into account to understand decision-making processes and the different impacts that the lack of resources may have on women and men. In the rural areas of European Union countries women are still less represented than men in formal economic activities, having less access to social rights and benefits. As a result, they are less involved in the decision-making processes (Chieham, 2022)<sup>16</sup>.

To have a gender perspective it is necessary to achieve full knowledge and analysis of the factors contributing to a situation of gender inequality, which would mean a situation where men and women don't have the same rights, responsibilities and opportunities. In Egypt, for example, formally women and men have the same land property rights. In the reality, however, because of the existing cultural norms in the country only 5.2% of the total agricultural land is owned by women (FAO, 2015)<sup>17</sup>.

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<sup>11</sup> García-Ruiz, José M., López-Moreno, J.I., Vicente-Serrano, Sergio, Lasanta, Teodoro, Beguería, Santiago, 2011, Mediterranean Water Resources in a Global Change Scenario

<sup>12</sup> Plan Blue, 2020, [Facing water stress and shortage in the Mediterranean](#).

<sup>13</sup> UN WOMEN, 2018, [TURNING PROMISES INTO ACTION: sdg report gender equality in the 2030 agenda for sustainable development](#).

<sup>14</sup> United Nations Security Council, 30 March 2021, Conflict-related sexual violence, Report of the Secretary-General

<sup>15</sup> WEDO, 2016, [Gender and Climate Change: A closer look at existing evidence](#).

<sup>16</sup> Chieham, 2022, Gender Equality in the Mediterranean Region, General overview and focus on the agricultural sector and rural areas [Brochure General-Overview-Gender-Equality.pdf \(ciheam.org\)](#)

<sup>17</sup> FAO, 2015, [Country Gender Assessment of the agriculture and rural sector, Egypt](#)



The WEF Nexus approach, aiming to go out to a sectoral approach, has to consider the gender issues as important elements of the socio-economic environment, necessary to take into account to avoid errors and lead to the identification of new opportunities, ensuring the quality and societal relevance of the research (European Commission, 2020)<sup>18</sup>.

Men and women are affected differently by the lack of resources and have different roles in using and managing them. For example, it is widely recognized that women are the first users, providers and managers of water at the household level. This is related to the role that societies have always attributed to women, especially in some areas such as the Mediterranean. While women are responsible for about 70% of domestic activities involving water in the great majority of developing countries, they are lowly represented in policy and management processes regarding this resource (e.g. 33% of women participated in integrated water resources management, in 2018-2019 in Northern Africa) (UN WOMEN, 2021)<sup>19</sup>.

This situation, similar in all the WEF sectors, creates an important gap because women's perspectives and ideas are not sufficiently taken into account. The lack of consideration of women's points of view also depends on the unavailability of sex-disaggregated data, as highlighted by Dr Mohamed Wageih and other speakers in the PRIMA Webinar "From Data to Action: Propelling Gender Equality and Women's Empowerment Actions Across the Mediterranean"<sup>20</sup>. Without this kind of data, policymakers are not completely informed of the existing situation and, consequentially they can't design gender-mainstreamed policies and strategies.

#### **4. WEF Nexus and Sustainable Development Goals: a focus on Gender**

The WEF Nexus approach can lead to ensure secure and sustainable use and management of Water, Energy and Food while ensuring the protection of ecosystems. For this reason, it promotes the achievement of the Agenda 2030 goals and the Nexus is, directly and indirectly, connected with all the SDGs (Liu et al., 2018)<sup>21</sup>.

The 2030 Agenda, the action programme approved by the UN General Assembly to achieve the sustainable development of the planet by 2030, is based on a transformative vision, based on the consciousness that we are in a world in continuous change and with increasingly complex challenges, which need measures that can guarantee all the fundamental resources to live. Water, Energy, Food and Ecosystems are strongly interconnected and are the basis of human survival and needs. The Nexus approach may increase the efficient use of these resources and improving the governance of the different sectors (water, energy, agriculture, food production and processing, ecosystem services) involved and consequently contributing directly to different objectives of the 2030 Agenda.

The Nexus acts through its cross-sector reconciliation role and in this way aims to respect environmental needs and human rights. Improving the efficiency and sustainability of WEF Nexus should promote a positive

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<sup>18</sup> European Commission, Directorate-General for Research and Innovation, 2020, [Gendered Innovations 2: How Inclusive Analysis Contributes to Research and Innovation](#).

<sup>19</sup> UN WOMEN, 2021, [Progress on the sustainable development goals: the gender snapshot 2021](#).

<sup>20</sup> [https://us02web.zoom.us/webinar/register/WN\\_12cJBkzsR8CnsHA44gE\\_Aw](https://us02web.zoom.us/webinar/register/WN_12cJBkzsR8CnsHA44gE_Aw)

<sup>21</sup> Liu, J., Hull, V., Godfray, H.C.J., Tilman, D., Gleick, P., Hoff, H., Pahl-Wostl, C., Xu, Z., Chung, M.G., Sun, J., Li, S., 2018. Nexus approaches to global sustainable development. *Nat. Sustain.* <https://doi.org/10.1038/s41893-018-0135-8>



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domino effect on all the goals of Agenda 2030. For this reason, one of the expected impacts of NEXUS-NESS project (EI13) is “Enable achievement of interlinked SDGs at the core of WEF Nexus at different levels of governance”, which will demonstrate in quantitative terms the benefits apported by the NEXUS-NESS Project on sustainable development. In particular the project aims to impact the achievement of SDG 2 (Zero hunger); SDG 5 (Gender Equality); SDG6 (Clean water and sanitation); SDG 7 (Affordable and clean energy); SDG 8 (Decent work and economic growth); SDG12 (Responsible consumption and production); SDG 13 (Climate action); SDG 15 (Life on land).

Gender Issues and thus gender equality are identified as a cross-cutting issue in the achievement of all the SDGs; the Agenda 2030 made clear that sustainable development is not achievable if its benefits are not equal for both women and men (UN WOMEN, 2018)<sup>13</sup>. It underlines also that is crucial to increase the availability of data which are “high-quality, accessible, timely, reliable and disaggregated by income, sex, age, race, ethnicity, migration status, disability and geographic location and other characteristics relevant in national contexts”. UN Women identified the necessity to track the progress of gender equality, and identify gaps and challenging implementation. The Report “Turning promises into action” highlighted the necessity to fill the gender-data gap to accelerate gender-responsive actions to achieve the SDGs.

A gender perspective is possible only with comprehensive knowledge and analysis of the issues that contribute to a situation of inequality between women and men. This is the reason why collecting the right data is strongly important: it is the first step in a transformative approach (Pangare et al., 2019)<sup>6</sup>.

Analyzing all SDGs with a gender lens can lead to understanding more levels of gender inequality and addressing actions to reduce them.

SDG 6 “Ensure availability and sustainable management of water and sanitation for all” is particularly relevant for women and girls because of their role in households. In many cases, women are the first users, providers and managers of water at the household level. Globally women and girls collectively spend over 200 million hours every day fetching water from far-off wells, rivers, and collection points<sup>22</sup>. This unpaid labour prevents them from participating in and contributing to the formal economy. This opportunity cost is often as major as an annual economic loss of up to 7 percent of the GDP<sup>23</sup>. Women are also the first to be affected when there is a water crisis, leading to cascading effects on their health and socio-economic security which go untended (Vishwanath, 2022)<sup>24</sup>.

In areas without running water at home, women and girls are responsible for collecting water sometimes along long distances, impacting their health and choosing how to spend their time.

Having access to safe drinking water and adequate sanitation is a key element in making progress with SDG 3 “Ensuring health and well-being for all and all ages”, and in particular with target 3.1, which aims to reduce the maternal mortality rate by 2030. During and after childbirth, women are particularly susceptible to infections. In addition, where there is no running water in the home, there are several stress-related disorders of having to walk for a long time and having to carry water for long distances. This, in addition to psychological problems, also causes damage to the muscles and bones (UN WATER, 2006)<sup>25</sup>.

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<sup>22</sup> [Women And Water - A Woman's Crisis | Water.org](#)

<sup>23</sup> [Water Overview: Development news, research, data | World Bank](#)

<sup>24</sup> Vishwanath Ambika, 2022, The Women, Water, and Policy Nexus- Addressing Gender Inequality in Water Management <https://www.stimson.org/2022/the-women-water-and-policy-nexus/>

<sup>25</sup> UN WATER, 2006, Gender, Water and Sanitation: A Policy Brief. <https://www.unwater.org/publications/gender-water-and-sanitation-policy-brief>



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Moreover, the lack of sanitation has a significant impact on women's health and daily life, creating situations in which a woman is genetically more susceptible to disease or amplifying the possibility of sexual violence while trying to find a secluded place for their needs.

Women are also more affected than men by the lack of affordable and clean energy (SDG 7), especially in rural areas. About 3 billion people around the world use combustible fuels such as coal, kerosene and biomass to have energy at home. Because of the role that society gives to women, they spend a large amount of their time recollecting firewood, with relevant impacts on their bodies for traveling long distances with heavy loads. Another important issue is that combustible fuels are used without efficient technologies and this causes indoor air pollution that impacts more women, who spend more time at home. In fact, 6/10 of the people who die from air pollution-related diseases are women (World Health Organization, 2022)<sup>26</sup>. Moreover, the energy sector, in terms of management, skilled work and decision-making, is clearly dominated by men. Women, in fact, occupy only 22% of jobs within traditional energies where only 14% of managerial positions are held by women. This figure is even more impactful when one considers that these women are much more qualified than the men who occupy the same role, a symptom of the fact that they must work harder to achieve the same positions as men. In the renewable energy sector, 32 % of employees are women, but they are all concentrated in non-technical and less-paid roles (UN WOMEN, 2021)<sup>19</sup>.

The energy sector is a clear example of the situation of women in relation to SDG 8: “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. In fact, women face double occupational segregation: horizontal being largely excluded from the sector, and vertical occupying the lowest job position in the majority of the cases. As a consequence, there is a big Gender pay gap that doesn't allow women to have the same possibilities as men. On average, women earn 77% less than men (UN WOMEN, 2018)<sup>13</sup>. Apart from the energy sector, there is a big lack of women employed in STEM. For instance, as underlined during the PRIMA webinar “From data to action: Propelling Gender Equality and Women's Empowerment Actions Across the Mediterranean” in the MENA region, even though 57% of students in STEM are women, they are just 25% in the labour market.

Women also play a very important role in food production and thus in achieving SDG 2, “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”.

On average, about 43% of the agricultural workforce in developing countries is made up of women. Of these women, about 79% depend on agriculture as their primary source of life, as well as caring for the subsistence of their families. However, in many contexts, women receive less training than men in their work in the fields, as well as being poorly protected by laws and agricultural policies still with a strongly male-dominated plant (FAO, 2018 a)<sup>27</sup>.

Very often the role of caring for family members assigned to women, leads them to suffer from higher levels of food insecurity.

Access to productive resources (such as water, land, and money), to market, training and new technologies exacerbate gender inequalities and all too often women, while occupying 60-70% of their time in food production and processing, have no control over what they produce and do not take part in the decision-making processes on the agricultural issue. Particularly relevant is the fact that in 52 of 80 countries women are less likely than men to own a mobile phone (UN WOMEN, 2022)<sup>28</sup>, which means more isolation, less opportunity to use the phone as a tool to improve productivity.

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<sup>26</sup> World Health Organization, 2022, [Household air pollution attributable death rate \(per 100 000 population\)](#)

<sup>27</sup> FAO, 2018a, *The gender gap in land rights*. <https://www.fao.org/family-farming/detail/en/c/1119178/>

<sup>28</sup> UN WOMEN, 2022, [Progress on the Sustainable Development Goals: The gender snapshot 2022](#).



The lack of rights on land tenure for women also impacts SDG 15: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”. In fact, according to FAO, giving to women equal access to land rights could have positive impacts on the sustainable management of the ecosystems (FAO, 2018 b)<sup>29</sup>.

Moreover, it is widely recognised that climate change and its consequences on ecosystems are increasing the amount of gender-based violence (Harvey, 2020)<sup>30</sup>.

These situations are exacerbated by the effects that climate change is having on agriculture. About ¼ of economically active women in the world are employed in the agricultural sector and crop reduction is having a particularly negative impact on them.

“Take urgent action to combat climate change and its impacts” (SDG 13) is also important for women because the risk of death during extreme climatic events or natural disasters is 14 times higher for women than for men. SDG 13 is also strongly related to SDG 12: “Ensure sustainable consumption and production patterns”. Recent studies demonstrated that there is a strong relationship between gender and sustainable consumption. In fact, women demonstrated to be more sustainability-conscious consumers, choosing organic food and having recycling choices more likely than men (Ng et al., 2020)<sup>31</sup>.

Common elements in the relationship between SDG 5 and the other SDGs mentioned above are the inequalities between women and men in the decision-making processes. This means that women are quite always not involved in the creation of policies or innovative systems in the management of resources whose lack affects them more.

To track SDGs progress, a global indicator framework for Sustainable Development Goals was developed in 2017 by the Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs). The framework consists of 231 unique indicators and provides a common set to assess progress toward the SDGs ([A/RES/71/313](#))<sup>32</sup>. Only 54 out of 231 indicators are gender-specific and therefore directly relevant to monitoring achievements for women and girls. Of these 54, 6 indicators deal with WEFE-Nexus issues, which are:

- 2.3.2 Average income of small-scale food producers, by sex.
- 5.4.1 Unpaid domestic and care work, by sex.
- 8.3.1 Proportion of informal employment in total employment, by sector and sex.
- 8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities.
- 8.5.2 Unemployment rate, by sex, age and persons with disabilities.
- 13.b.1 LDCs and SIDS receiving support for climate change-related planning and management.

A gender-specific data set connected with WEFE-Nexus is important to understand which differences come from specific productive roles related to gender, the different perspectives of the resources and mechanisms for access and decision-making with respect to the management and use of resources.

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<sup>29</sup> FAO, 2018b. *Realizing women’s rights to land in the law: A guide for reporting on SDG indicator 5.a.2.* <http://www.fao.org/3/I8785EN/i8785en.pdf>

<sup>30</sup> Harvey, F. (2020). “Climate breakdown ‘is increasing violence against women’”. The Guardian. Available at: <https://www.theguardian.com/environment/2020/jan/29/climate-breakdown-is-increasing-violence-againstwomen>

<sup>31</sup> Sharon Ng, Mehak Bharti and Natalie Truong Faust, 2020, *The Impact of Gender and Culture in Consumer Behavior*, Cambridge University Press.

<sup>32</sup> United Nations General Assembly, 10 July 2017, Resolution adopted by the General Assembly on 6 July 2017



## 5. Gender-sensitive indicators

The planning of activities to empower women and girls in a given realm necessarily passes through the identification and raising of awareness of existing gender inequalities.

However, several obstacles have been identified to the collection of information about the situation of women and girls in the area of study.

First of all, women and girls are too often invisible in national statistics because of the lack of sex-disaggregated data. Without gender-specific statistics, women's and girls' vulnerabilities are not highlighted and consequently not taken into account by policymakers. Every country should provide data disaggregated by sex, age, educational level and municipality to encourage the planning of strategies designed on the specific necessities of women and men in different contexts.

The lack of these statistics is also related to the absence or inefficiency of gender-specific indicators globally recognized. Indicators should allow the assessment of the starting point of gender equality in a specific area and the measurement of changes produced by an action, a project, a policy etc.

These considerations lead us to the integration of the list of indicators presented in D5.1 with gender-specific indicators selected among the existing ones in the Water, Energy, Food and Ecosystem sectors.

A list of all the existing gender-specific indicators related to WEF is attached to this document (Annex 1).

## 6. Gender equality capacity assessment of NEXUS-NESS consortium members

The gender equality capacity assessment is a tool created by UN WOMEN to help other UN agencies and their partners. It is an easy-to-use means of assessing the knowledge and understanding of gender equality and women's empowerment of each person involved in the project.

The tool provides a simple and general questionnaire ready to be used by a gender specialist who needs to understand the level of individual staff capacity and strengths and weaknesses to enhance gender equality in project activities. The results of the questionnaire provided key information for planning the next actions needed and are taken as a baseline for future measurements (UN WOMEN Training Centre, 2014)<sup>8</sup>.

The Gender Equality Capacity Assessment Tool is divided into 4 Sections. In the first one, general information about the instrument, such as the goal, the recipients and the importance of its implementation are given. In the second part, the ready-to-use questionnaire is presented. The following part is dedicated to the methodology for the implementation of the tool. Here tips and guidelines to carry on the questionnaire are shown in order to avoid errors and to obtain the most useful information when analysing the data.

This tool has been chosen because it is easy to implement within the NEXUS-NESS Project Consortium, composed of 13 Institutions based in 7 different countries.

As already mentioned, the UN WOMEN questionnaire is general and ready to use, but it is possible to tailor it according to the needs of the project, which is what we have done to create the *Gender Preliminary questionnaire* for the NEXUS-NESS project's partners.

The purpose of the questionnaire was to assess the understanding, knowledge and skills that people directly involved in the project implementation have on gender equality and women's empowerment. Thanks to this tool the UNIFI Team was able to plan the following activities, in particular the Gender equality training course.



The questionnaire implemented among the NEXUS-NESS Project Consortium is divided into the following 5 sections:

1. Section 1: General information.
2. Section 2: Background.
3. Section 3: Knowledge on gender equality and women's empowerment.
4. Section 4: Gender dimension in the NEXUS.
5. Section 5: Final comments.

Sections 1, 2 and 3 contain the questions of the first 3 sections of the questionnaire proposed by the Gender equality capacity assessment tool (UN WOMEN Training Centre, 2014)<sup>8</sup>. That questions have been adapted according to the structure of the NEXUS-NESS partnership.

The questions of section 4 have been selected among the ones used in the gender survey created within the project "Promoting Sustainable Management of Natural resources in Southeastern Europe" which aimed to understand the gender dimension in the sustainable management of natural resources.

In section 5, participants were required to share comments useful for the integration of the gender dimension. The questionnaires were administrated via [Google Form](#) between the 30<sup>th</sup> of March and the 21<sup>st</sup> of April. A printable version of the questionnaire is attached to this report (Annex 2).

## 6.1 Analysis of the results

The *Gender Preliminary Questionnaire* has been answered by 23 persons involved in the NEXUS-NESS Project implementation. Information about and objective of the questionnaire were provided in the first part of the form.

The answers to Section 1 show general information about the NEXUS-NESS Project Team such as age, sex, country of origin and education. Regarding the gender composition of respondents, at the beginning of the project, the team was composed by 12 men and 11 women, 52.2% and 47.8% of the total respectively.

The last question of the "General information" part, was about the education level of the respondents and it showed that all of them have a post-graduated level.

The knowledge of NEXUS-NESS Project members', with reference also to the education and academic backgrounds was essential to structure the training materials using appropriate language for the auditors.

Section 2 of the questionnaire "Background" aimed to identify how many members of the NEXUS-NESS Project Consortium have had previous experiences in training for gender equality. Information gathered, show that 17,4% of respondents received introductory training or orientation on gender issues (Figure 1) and that only 8,7% have taken gender-related courses in the last two years or have been taking one at the moment of the answering (Figure 2). The question 6 asked to consider as "gender- related courses", all the training courses where gender was included, even if it was not the main topic of the training.

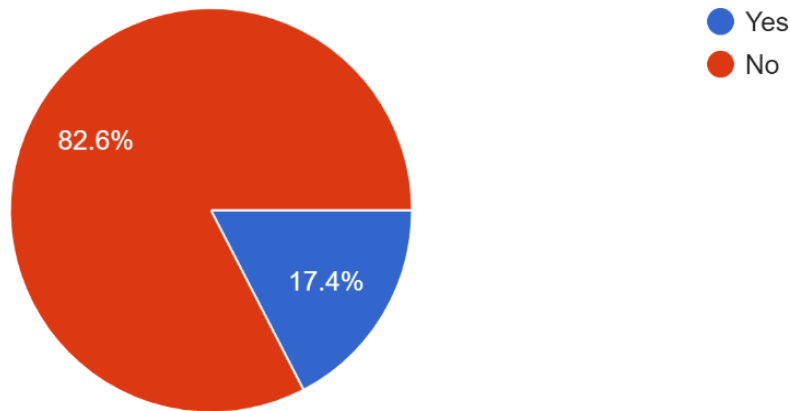


Figure 1. Gender Preliminary Questionnaire, **Question 5:** Have you received any introductory training or orientation on gender issues?

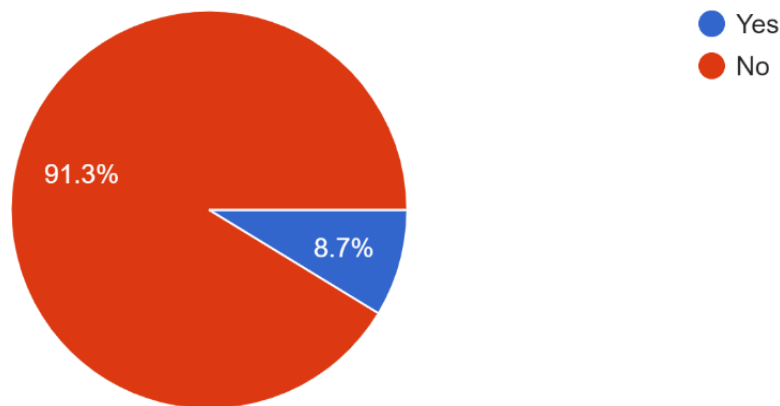


Figure 2. Gender Preliminary Questionnaire, **Question 6:** Have you taken gender-related training or courses in the last two years? Are you taking any courses on gender now? Please consider training where gender was included even if it was not the main topic of the training

In question 7, respondents who answered “yes” to the previous questions, were asked to provide information about the training taken. One female participant had classes about gender during her master’s degree. She also referred that gender was taken into consideration in all the projects of the course. Another female participant took the online training provided by UNESCO WWAP - “Accelerating gender equality in the water domain”.

This information made clear that the NEXUS-NESS Project Consortium needed a gender training course which also included the definition of gender basic concepts.

With the questions in section 3, NEXUS-NESS Project Staff’s skills and knowledge on gender equality and women’s empowerment were assessed and staff perceptions on their own capabilities were identified.

To the question “To what extent do gender concerns influence your everyday work?”, the majority of respondents (47.8%) answered “to a limited extent”. Results are presented in Figure 3.



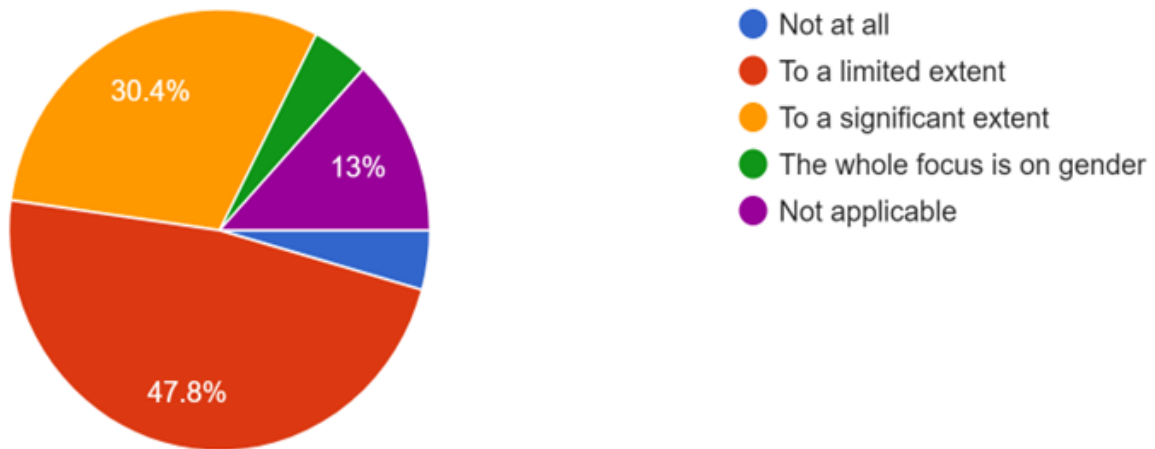


Figure 3. Gender Preliminary Questionnaire, **Question 8**: To what extent do gender concerns influence your everyday work?

The majority of respondents (52.2%) defined gender as very relevant for the mandate of their institution/organization; 39.1% answered that gender is relevant to a limited degree (Figure 4).

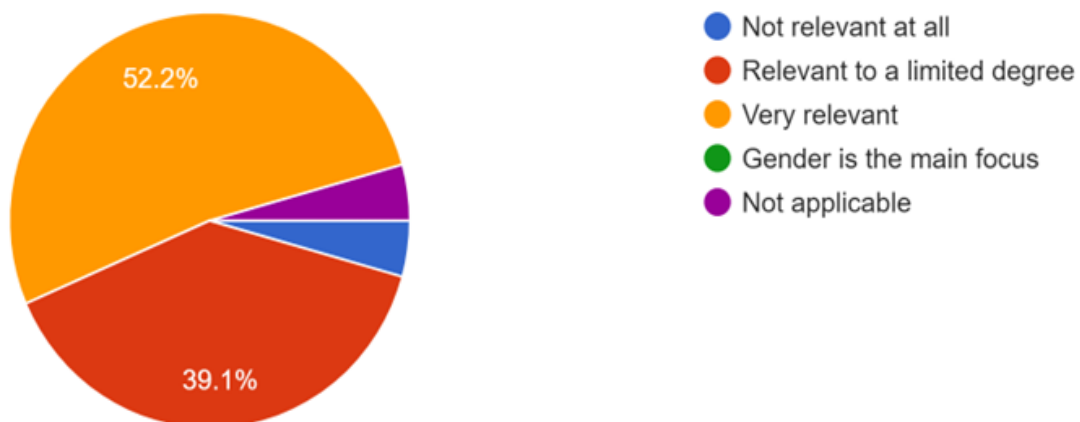


Figure 4. Gender Preliminary Questionnaire, **Question 9**: How relevant is gender to the mandate of your institution/organization?

The definition of the contents of the gender training has been also guided by the answers to the following questions:

11. How familiar are you with international conventions on Gender Equality and the Empowerment of Women?
12. Are you familiar with the distinction between gender mainstreaming and equal representation of women?
13. Level of knowledge and proficiency for skills and processes related to gender.
14. Are you aware of any gender policies, strategies, and/or gender focal points or networks in place in your territory?

Because of only 2 respondents (8.7%) were very familiar to international convention on Gender equality and the Empowerment of women and 30.4% were not familiar at all and because 65.2% of participants were not aware of gender policies, strategies in place in their territories we decided to add a section on the international framework on gender equality and women’s empowerment in the gender training and a section on the national framework on the topic.

Regarding Question 12, 47.8% of the NEXUS-NESS Project Team is not familiar with the distinction between gender mainstreaming and equal representation of women and 8.7% answered that the question is not applicable. The training has also clarified this point.

In Question 13 the Project Team was asked to indicate the level of knowledge and proficiency in gender skills and processes. Results are reported in the Annex 3. They show that few people are confident enough to use/lead work on the topic. Crossing these results with the goal of the project and the tasks respondents are involved in, some topics were identified as more urgent than others to address. In particular: gender analysis for strategic planning, collection and analysis of sex-disaggregated data and Integration of gender into strategic planning processes including results statements and indicators.

Questions of section 4 aim to identify gender issues in the WEF Nexus in the place of residence of participants and to investigate their perception of the topic. The same questions will be used to investigate the topic with the stakeholders.

As we can see in Figure 5, the most important aspect of sustainable development for the majority of respondents is SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

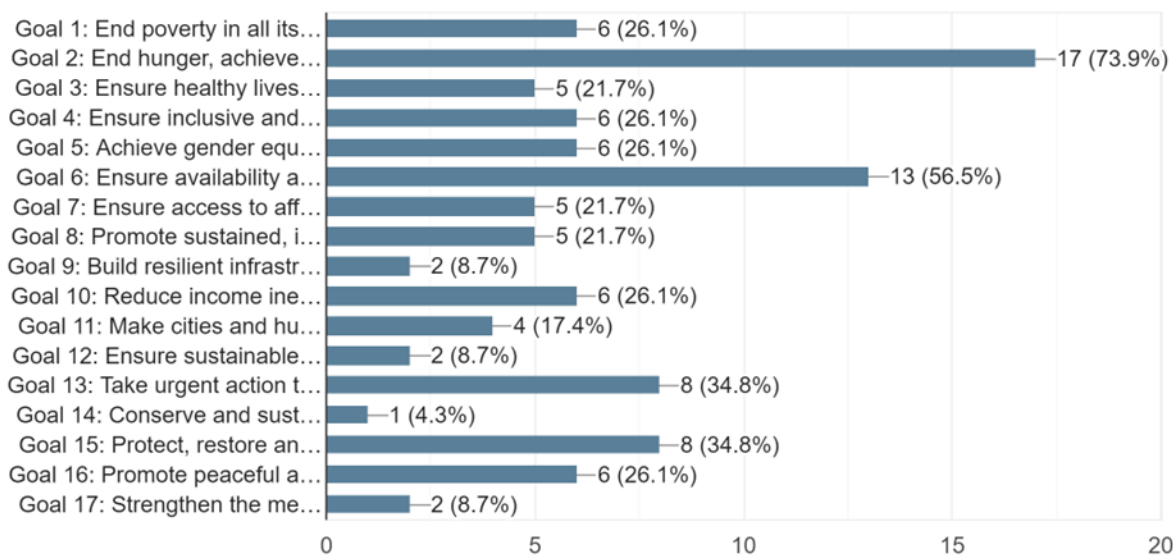


Figure 5. Gender Preliminary Questionnaire, **Question 15**: Which aspects of sustainable development are the most important for you? (Select the 3 most important).

In the question 16, participants were asked to identify the aspects of gender equality with focus in their country. Analysing all the answers, “prevention and elimination of violence against women in family and state” has been the more selected one. The situation is slightly different if we disaggregate data by country. Participants from Italy and Egypt responded that the two aspects more in focus are “Women economic empowerment and minimizing wage and pension gap” and “Prevention and elimination of violence against women in families and state”. Violence seems to be a big problem also for Tunisian and Spanish participants, who also identified “Participation in political decision-making at all levels” as an aspect in focus in their country.

The situation didn’t change a lot, asking participants to identify which aspects of gender equality are the most important for them. As we can see in Figure 6, “Prevention and elimination of violence against women in

families and state”, “Women economic empowerment and minimizing wage and pension gap” and “Participation in political decision-making at all levels” have been the most selected answers.

According to the answers to **Question 18**, in the majority of the places of residence where respondents are located, the major obstacle to a gender-equal and sustainable society is the perpetuation of traditional gender roles and stereotypes. The situation doesn’t change by disaggregating the data by country.

A large majority (91.3%) of respondents declared that in their country, city or municipality there aren’t official policies/initiatives that encourage the participation of women and/or the public in general in the process of bringing decisions about the projects/investment related to the WEFE Nexus.

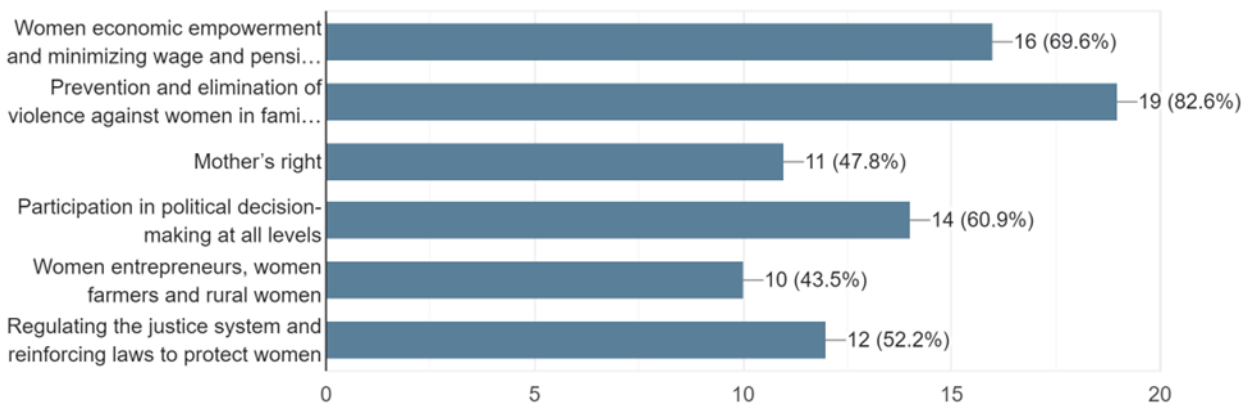


Figure 6. Gender Preliminary Questionnaire, **Question 17**: Which aspects of gender equality are the most important for you?

The last question of the questionnaire was “According to your opinion, who is more present in the process of public consultations?”. Answers from the NEXUS-NESS Project Team highlighted that in this process men are more present than women (Figure 7).

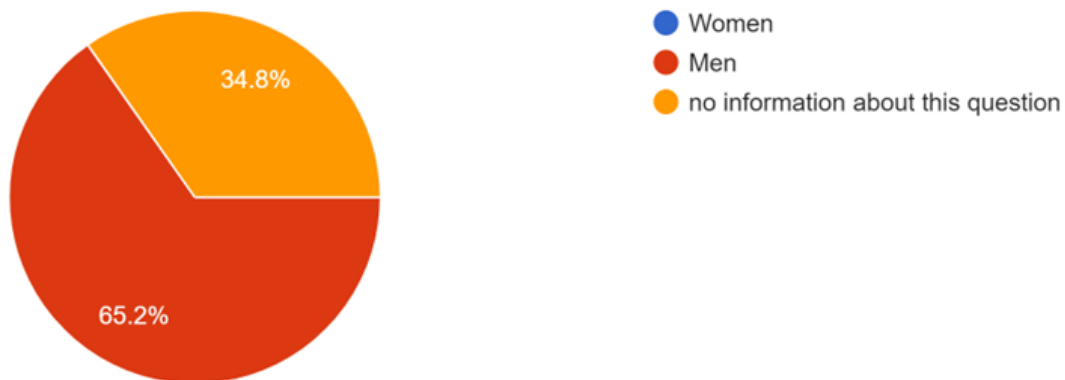


Figure 7. Gender Preliminary Questionnaire, **Question 21**: According to your opinion, who is more presented in the process of public consultations?

To summarize, the analysis of the *Gender Equality Capacity Assessment* of the NEXUS-NESS Project Consortium, showed the necessity of implement a gender equality training. Being this the first gender training course for almost 90% of respondents, it was decided to start from the definition of basic gender concepts.



The capacity assessment also showed that the majority of individuals of the Project Consortium didn't know sufficiently about the international frameworks on gender equality and women's empowerment and about the gender policies and strategies in their country, a section on these topics was included in the training process. Another relevant issue arising from the results of this questionnaire was the fact that no respondents was confident enough to work with gender analysis for strategic planning, which is an important tool for the strategy of the project.

## 7. Gender equality training

Following the needs that came out from the previous activities, a gender equality training has been developed by UNIFI in cooperation with XPRO. The training is divided in two modules, to be implemented via Microsoft Teams to the NEXUS-NESS Project Consortium. It has been considered mandatory for the NELs Leaders and their Teams.

The first module aims to define key terms associated with gender equality and women's empowerment, identify gender inequalities and gender gaps in the water and energy sectors and in food security, understand the value of international commitments on gender equality and women's rights and analyse how women's participation affects and is affected by the management of the resources.

Module 1 was implemented on the 27<sup>th</sup> of September 2022 from 4 to 6 PM for the Egyptian, Spanish and Tunisian NELs Leaders and Teams simultaneously and was attended also by participants from POLIMI, FEEM, UNIFI and UNISTRAPG. The Team of the Italian NEL was trained on the 14<sup>th</sup> of November 2022. The total number of attendants to the peace of training implemented was 23 on the 27<sup>th</sup> of September and 6 on November, 14<sup>th</sup>.

A PowerPoint presentation was shared and interactive activities were planned using [Slido.com](https://www.slido.com), which is an online quiz creator used to gather participants' views and test the effectiveness of the training.

Documentary material on the on line meeting and SLIDO quizzes are reported in Annex 4.

The Module is structured as follows:

- UNIT 1: GENDER CONCEPTS – sex, gender, gender roles, gender norms, gender division of labour, gender equality and gender equity, gender stereotypes, gender-based discrimination, gender mainstreaming, gender gap, women's empowerment and equal representation of women.
- UNIT 2: GENDER AND WEFEX NEXUS – Gender issues in water, energy and ecosystems management and food security.
- UNIT 3: INTERNATIONAL CONVENTIONS ON GENDER EQUALITY AND WOMEN EMPOWERMENT.

Participants showed a great interest in this module, especially in the unit dedicated to Gender and WEFEX Nexus. The results of the quizzes created on slido.com, aimed to evaluate the effectiveness of the training showed that:

- 100% of participants understood the difference between **sex** and **gender**.
- 68% have a clear idea of the difference between **gender equality** and **gender equity**.
- All the participants were able to identify examples of **gender inequality**.
- At the end of the first unit 88% could recognize the use of a **gender transformative approach**.
- 75% of participants were able to identify why **women's decision-making power is an important determinant in improving food security**.



The second module was implemented in four separate classrooms, one for each NEL, with a participatory approach. The first classroom was held on October 4th 2022 for the Spanish NEL (2 participants from UPM), October 5th 2022 for the Tunisian NEL (3 participants from IRA and CRDA), October 6th 2022 for the Egyptian NEL, (3 participants from AU) and November 14<sup>th</sup> 2022 for the Italian NEL (6 participants from SSSA).

The entire module was dedicated to how to conduct a gender analysis. Gender analysis is a very important action to integrate the gender dimension into a project. It aims to understand the environment in which the project will take place, identify the gender issues directly connected with the services intended to provide and analyse how to maximize gender benefits in the action planning.

Following the CARE<sup>33</sup> framework for gender analysis, one of the most used international frameworks for gender analysis, a rapid assessment at the country level was presented to participants during this module, in order to understand the general situation and to reflect with NELs leaders on how it differs from the local level. As the second phase of the gender analysis, the CARE framework proposes to investigate 8 core areas of investigation, which are:

1. Sexual/gendered division of labour;
2. Household decision-making;
3. Control over productive assets;
4. Access to public spaces and services;
5. Claiming rights and meaningful participation in public decision-making;
6. Control over one's body;
7. Violence and restorative justice;
8. Aspirations for oneself.

It was decided to focus on the first 5 areas, the most relevant to the overall goal of the NEXUS-NESS Project.

During this module of the training course, the 5 areas of investigation and a series of related questions were presented to the NELs Leaders and Teams. Then it was asked to them to adapt the questions to the social and cultural context of their NEL. The idea was to co-construct a questionnaire to be administrated by the NELs leaders to households of farmers in the NELs area. The sample proposed was 50 persons (25 women and 25 men) per NEL. This action, is intended to collect sex-disaggregated data on the impact of the WEF Nexus on food producers.

The Spanish, Tunisian and Egyptian NELs leader initially accepted the proposal while the Italian one did not accept it due to time availability issues.

It was then decided to address the topic during the NEXUS-NESS Project Meeting (PM) held on in Florence between November 16 and 18. On that occasion, all NELs leaders presented the same concerns as the Italian one, so it was decided not to pursue gender analysis and to plan gender activities to be implemented during the participatory workshops scheduled for 2023.

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<sup>33</sup> [http://gender.careinternationalwikis.org/gender\\_analysis\\_at\\_care](http://gender.careinternationalwikis.org/gender_analysis_at_care)



The Project Meeting was also the occasion to deepen the NEXUS-NESS Project Consortium’s knowledge and awareness of gender equality through the “Water, Energy, Food and Ecosystem Nexus and Gender” event, organized as side-event of the PM on November 17, 2022.

Within the event, two significant speakers were invited to share their experience in projects and actions to empower women: the first was Michela Miletto, from the UNESCO World Water Assessment Programme (WWAP) and the second was Amina Benfadhl from the Italian Onlus COSPE. Both of them participated via Webex due to the impossibility of reaching Florence. The flyer of the event is attached to this document (Annex 5). After greetings from University of Florence Rector Alessandra Petrucci, Enrica Caporali, who chaired the event gave the floor to Michela Miletto. She described the work done by the UNESCO WWAP to achieve gender equality in the water domain, first with the “Water and Gender Toolkit”, the most complete work done on sex-disaggregated indicators and then with the “Call for Action to accelerate the achievement of gender equality in the water domain”, an advocacy campaign to mobilize decision-makers to act for gender equality and women’s empowerment in the water sector (<https://en.unesco.org/wwap/water-gender>).

Her speech makes clear how important is to have sex-disaggregated data to inform policies and strategies.

Then, Amina Benfadhl presented the results of the project “FAIRE: Women's paths to support socio-economic initiatives to enhance the north-west of Tunisia” implemented by COSPE in Tunisia (<http://tunisia.cospe.org/#/menu>). The project is based on an Action-Research with Tunisian women involved in the production of food aimed at improving the quality of life and the work conditions of women in rural areas of the North of the country.

This event was an important step in the Gender capacity building of the NELs Leaders and Teams because it shows the importance of conducting a gender analysis to have a transformative approach. Both the speakers provided clear examples and gave guidelines on the collection of women’s points of view to address the action of a project.

## 8. Gender survey

The *Gender Survey* was administrated to stakeholders participating in the NEL first participatory workshop. This survey investigated the views of people directly involved in natural resources management in areas of concern for gender equality.

The survey wanted to explore the perception of gender equality in each NEL and to identify the different critical issues in each country according to the stakeholders.

The English version of the survey was created by UNIFI Team and sent to the NELs leaders, who translated it into the language of the country and were responsible for administrating it to stakeholders.

Surveys were printed and distributed among participants at the end of the first workshop carried out between April and July 2022. The survey is composed by 9 questions, which answers will be analysed to follow.

The number of respondents is reported in Table 1.

*Table 1 Number of respondents per NELs countries*

	MALE	FEMALE	TOTAL
EGYPT	11	1	12
ITALY	15	5	20
SPAIN	12	1	13
TUNISIA	18	4	22



### D2.3: Gender dimension for Nexus Ecosystem Lab Innovation Ecosystem

The first gender issue identified is the unequal gender distribution of participants in the workshops. In fact, in Egypt and Spain, just one woman participated. In Tunisia 4 of 22 were women and in Italy 5 of 20. Less than 30% in each NEL, but less than 10% in Spain and Egypt. Because of this, we weren't able to understand different perceptions of men and women, being the sample inappropriate to the goal.

Asking NELs leaders the reason for the small number of women, they presented different issues.

In Italy, Spain and Tunisia the reason was identified in the fact that key stakeholders in the WEF sectors are mainly men. In Egypt, a part of the domination by the men of the sectors, the small number of women could also be related to the fact that women are not as free as men to travel alone, even if for job-related reasons.

The first question directly related to the gender dimension in the survey is: "To what extent do gender concerns influence your everyday work?" In every NEL, the majority of respondents agree that gender doesn't influence their work or influences it to a limited extent (Table 2). For no one's work in Spain, Tunisia and Egypt gender is the main focus or is very relevant, while in Italy 4 people defined gender as very relevant and for one was the main topic. There is no relation between these answers and the employment sector or the gender of respondents (Table 3).

*Table 2 To what extent do gender concerns influence your everyday work?*

	Egypt	Italy	Spain	Tunisia
Not at all	4	8	4	6
To a limited extent	3	5	3	10
To a significant extent	3	-	4	6
Very relevant	-	4	-	-
Gender is the main focus	-	1	-	-
NA/no answer	2	2	1	-

According to the answers of the majority of the stakeholders, gender is not relevant at all in relation with salary. Also in this case there is no relation between this answer and the sector or gender of respondents. An interesting fact is that in Tunisia, people defining gender very relevant for the salary are both women (Table 3).

*Table 3 How relevant is gender in relation with salary in your sector?*

	Egypt	Italy	Spain	Tunisia
Not relevant at all	5	10	6	8
Relevant to a limited degree	3	3	2	8
Very relevant	2	3	4	2
Gender is the main focus	-	1	-	-
NA/no answer	2	3	-	5

In question 7 respondents were asked to indicate which aspects of gender equality are the most important for them. They have had to choose one or more options among 6 given ones. In Egypt the most important aspects are "Women entrepreneurs, women farmers and rural women" and "Prevention and elimination of violence against women in families and state"; in Italy and Spain "Women economic empowerment and minimizing wage and pension gap"; in Tunisia the "Mother's right".

Results are reported in Figures 8, 9, 10 and 11.

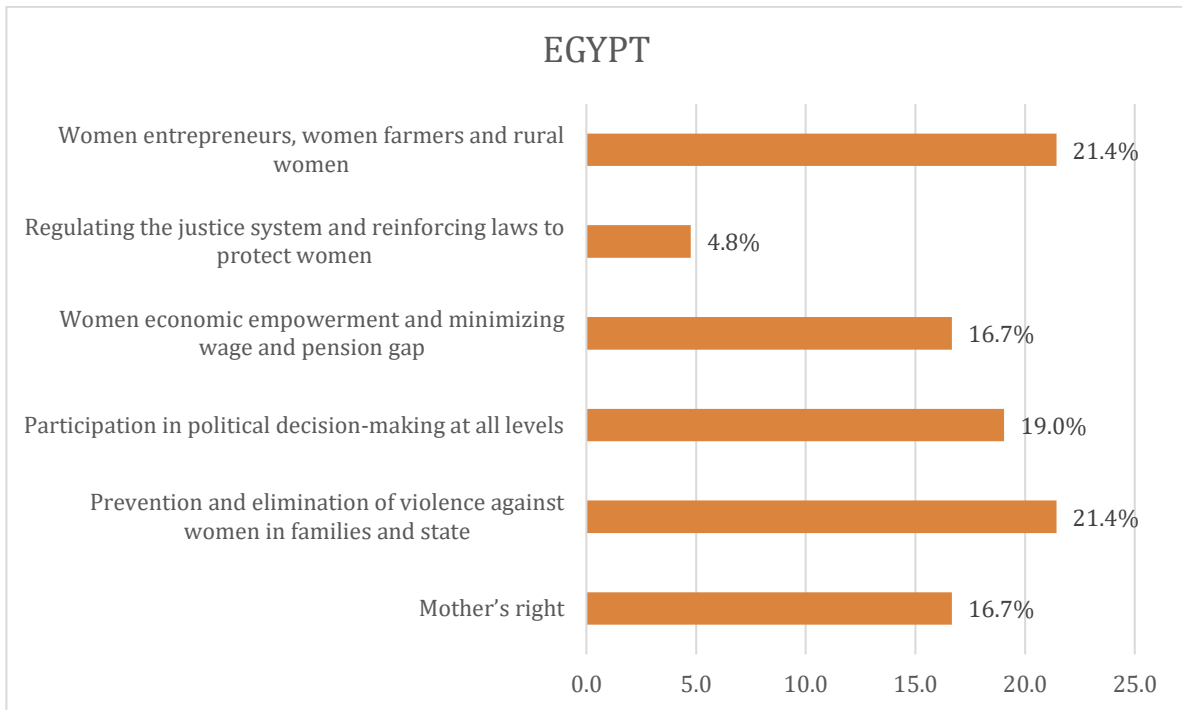


Figure 8. EGYPT - Which aspects of gender equality are the most important for you?

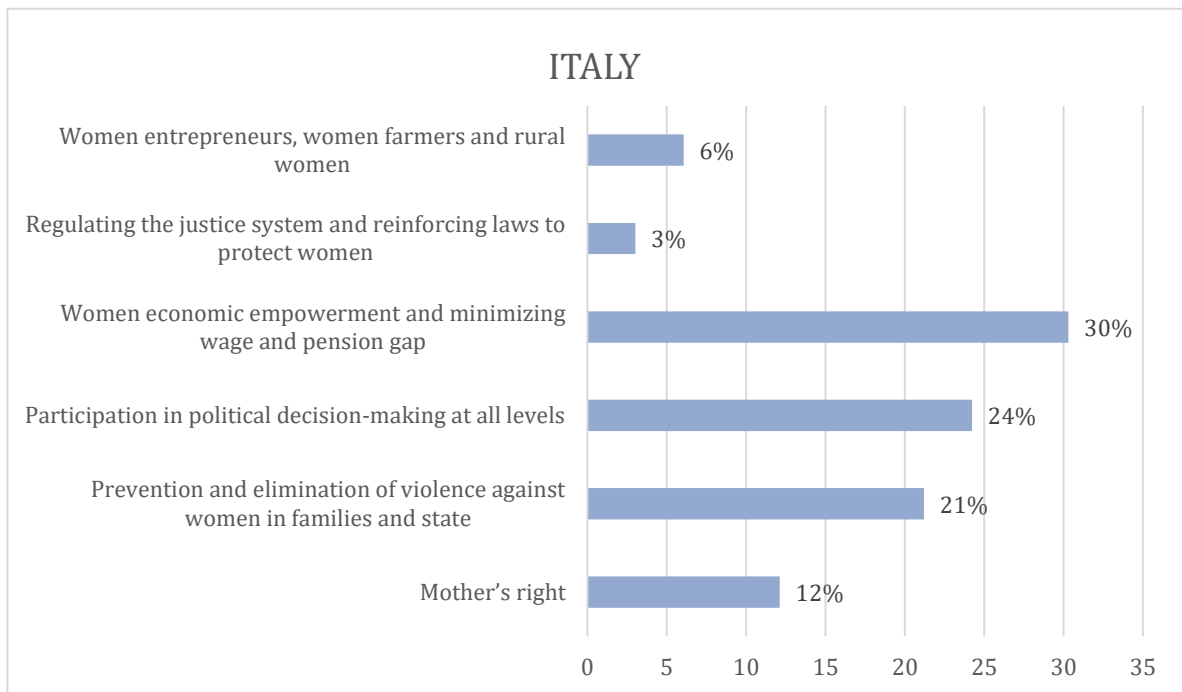


Figure 9. ITALY- Which aspects of gender equality are the most important for you?



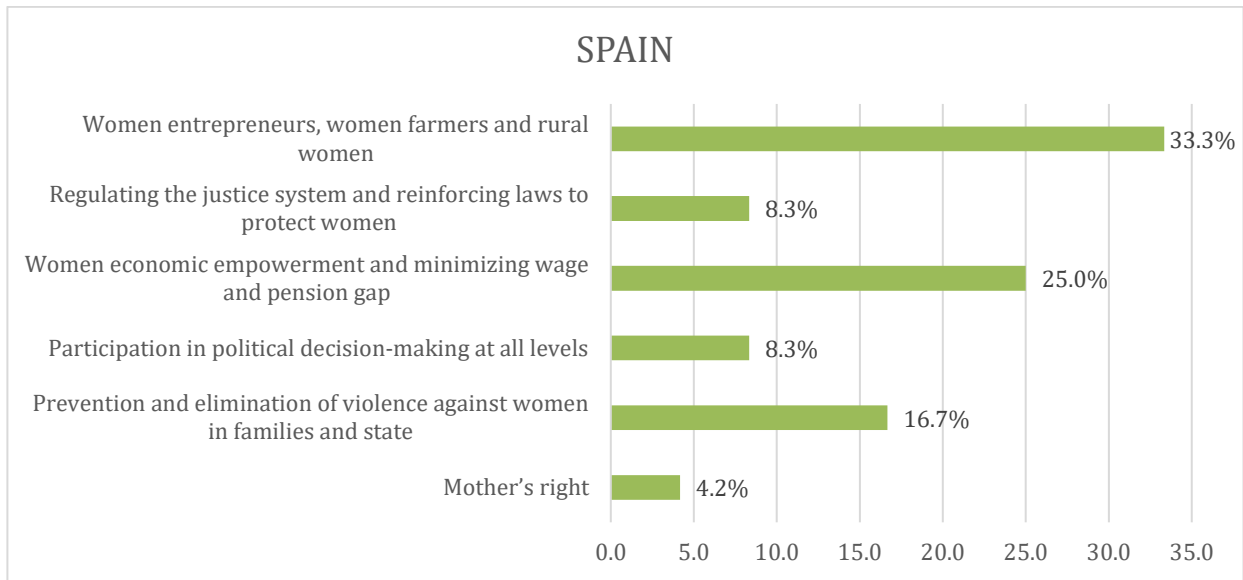


Figure 10. SPAIN- Which aspects of gender equality are the most important for you?

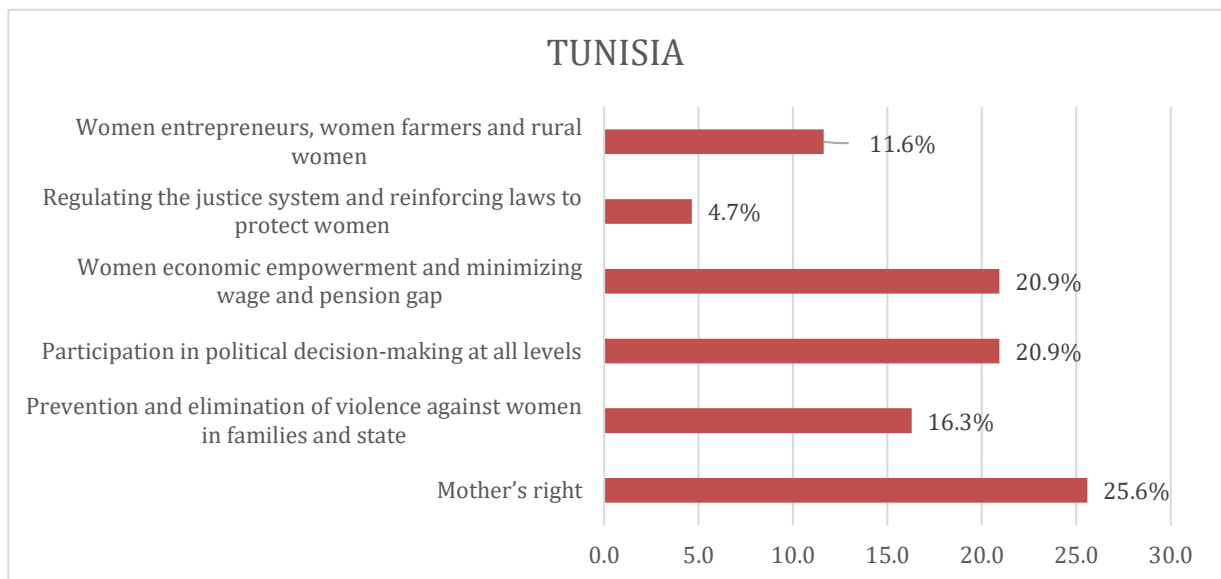


Figure 11. TUNISIA- Which aspects of gender equality are the most important for you?

The following question of the Survey was: “What are the major obstacles to a gender-equal and sustainable society in your place of residence?”

Respondents could select one or more options among the given ones. According to the answers, the major obstacles in Egypt are the lack of quality education and the perpetuation of traditional gender roles and stereotypes; in Italy are traditional gender roles and stereotypes; in Spain are poverty, lack of quality education, traditional gender roles and stereotypes and patriarchal mentality; in Tunisia poverty and lack of quality education.



### D2.3: Gender dimension for Nexus Ecosystem Lab Innovation Ecosystem

At the end of the Survey, it was asked to evaluate if there were Men prevalence, women prevalence or women-men equality in decision-making, office activities and manual labour in managing water, food and energy. Based on their experience in the sectors, stakeholders provided important data about the topic.

As we can see in Table 5, in Egypt, the same situation has emerged in all sectors: decisions are taken predominantly by men, office activities are carried out mostly by women, and there is equality between men and women in manual work.

In Tunisia, there is a men prevalence in decision-making for the majority of respondents and equity between women and men in office activities. In the water and energy sectors, has been detected “men prevalence” in manual labour, while in the food sector is recognised the women prevalence.

In Spain in the food and energy sectors, the majority agreed on women-men equality in the different roles, while in the water sector was reported the men prevalence in “manual labour”, the women prevalence in “office activities” and an equal share between men prevalence and women-men equity in decision-making roles.

In Italy, according to the stakeholders’ opinion, the men’s role is predominant in decision-making and manual labour in the water and energy sector. In all the other roles, there is a perception of equality between women and men.

In conclusion, we can say that the perception of stakeholders is that gender issues have no impact on their daily work activities nor does it affect their salary. At the same time, especially in Egypt and Tunisia, the lack of women in decision-making positions (which are the highest and the best paid) is very clear. In the comments to the answers to the last question, it has been repeatedly specified that there are no women in these sectors, which is also confirmed by the NELs leaders and by the fact that the presence of women in the workshop was significantly lower than that of men. This situation will certainly make it difficult to gather the views and perceptions of women in upcoming workshops.



Table 4. How do men’s and women’s day-to-day economic roles differ – especially in terms of agriculture, water and energy management?

NEL	WEF Components	DECISION -MAKING	OFFICE ACTIVITIES	MANUAL LABOUR
Egypt	Water, energy and food	Men prevalence	Women prevalence	Women-men equality
Italy	Water and energy	Men prevalence	Women-men equality	Men prevalence
	Food	Women-men equality	Women-men equality	Women-men equality
Spain	Water	Men prevalence/ Women-men equality	Women prevalence	Men prevalence
	Energy and Food	Women-men equality	Women-men equality	Women-men equality
Tunisia	Water and energy	Men prevalence	Women-men equality	Men prevalence
	Food	Men prevalence	Women-men equality	Women prevalence

## 9. Next steps

Gender analysis at NELs level will provide us with the information to identify general gender issues in the WEF Nexus and to plan the following activities. A deep knowledge of the gender dynamics in the NELs, in fact, is an important step to address the identified issues.

Due to the fact that it will not possible to collect new data within the NELs without the cooperation of the NELs leaders, existing data related to WEF and Gender at countries level will be analysed and reported in the next report of Deliverable 2.3.

The gender survey conducted during the first participatory workshop showed that stakeholders are not really aware of gender equality and women’s empowerment. For this reason, it was decided to plan additional activities to raise awareness of gender equality to be implemented during the next workshops.

The Italian and the Spanish NELs leaders proposed to organize a workshop dedicated to women on the occasion of the 8<sup>th</sup> of March in order to arise women’s interest in the WEF Nexus and to underline the importance of women’s participation in the creation of an Innovation Ecosystem. The results of these two workshops will feed the activities in these NELs as well as those of Egypt and Tunisia.

The Gender Issues will be pushed further in all subsequent workshops (5 in total per NEL) until the end of the NEXUS-NESS project and they will be embedded in the socio-economic analysis and modeling of WP5.

The second part of D2.3 will provide the results of the next 18 months of the NEXUS-NESS project.

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