Daw Project, Jordan

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Is the project a case of…:

☐ State-initiated co-creation

☐ Entrepreneur-driven co-creation

☒ Grassroots-based co-creation (collective collaboration, initiated by a private sector (YDE), partnered with a charitable foundation, NGO and government)

**For an elaboration of the typology, please consult the GOGREEN theoretical framework p. 25.*

Integrated case analysis

Before proceeding to the scoring of the GFs, please provide a *3–5 page case analysis* in which you describe the background, history, and national, regional, and local contexts of the case, the problems and goals addressed by the local collaboration, the participating actors and their relationships, the unfolding of the co-creation process, the most important governance factors (this may include factors other than those in focus in this project), and the generated outputs and outcomes. The conclusion may specify a few lessons learned from the case study.

1) Background, history, and national, regional, and local contexts of the case

On a global level, the need for green paths towards development was first discussed in The United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. The discussion translated into the Kyoto protocol of 1997, introduced the Clean Development Mechanism (CDM), which allowed developed countries to invest in renewable energy and emissions reduction projects in developing nations. Furthermore, in 2009, the inter-governmental organization IRENA (International Renewable Energy Agency) was funded with the aim of promoting cross-country collaboration on renewable energy policy and technology.

Under the 2015 Paris Agreement, the Middle East and North Africa (MENA) region identified Nationally Determined Contributions (NDCs) and focused on introducing renewable energy targets. Jordan nationally determines to reduce its greenhouse gas emissions by a bulk of 14 % until 2030. The Mitigation include national level actions and sectoral actions. At sectoral level, the below table clarify the some of the proposed actions, among many others:

sectoral level	Actions
Energy Sector	a) Promote the use of both traditional and renewable energy sources, with a focus on expanding renewable energy projects. b) Encourage the adoption of solar energy for water heating by offering short-term support for purchasing solar water heaters. c) Implement measures to reduce energy consumption across all sectors and enhance efficiency, while raising awareness about the financial advantages of long-term energy efficiency. d) Attract private sector investments into the energy industry. e) Expand the variety of energy sources, including natural gas imports, to enhance energy security and resilience
Transport Sector	a) Introduced in 2014, the Ministry of Transport (MoT) launched a comprehensive national transport strategy, emphasizing sustainability. b) Increase public transport usage to 25% of total commuters by 2025. c) lower the percentage of fuel consumption through the strategy's implementation, measured in tons per day. d) Roll out a national Bus Rapid Transit (BRT) system. e) Establish a railway network as a core component of a planned multimodal transportation network, facilitating efficient goods transport domestically and regionally, leading to emissions reductions. f) Enhance transport sector efficiency and emissions reduction by adopting policies related to fleet characteristics. g) Ensure energy efficiency considerations are integrated into transport modal procurement processes
Waste Management Sector	a) Establishing a comprehensive waste management system focused on sorting, reusing, and recycling (set Key Performance Indicators (KPIs) with targets to decrease the proportion of solid waste sent to landfills from 80% to 60% by 2025, and increase the proportion of treated and reused solid waste from 20% to 40% by 2025.
Industries Sector	a) Promote investment in solar and wind energy projects located near industrial clusters. b) Provide alternative energy options to local industries and incentivize their adoption. c) Implement holistic renewable energy programs through the Joint Renewable Energy and Energy Efficiency Fund (JREEEF) to include the provision of technical and financial assistance across different sectors, through initiatives like the Revolving Fund, Equity Finance, Guarantees, and Grants across. Along with coordinating extensive awareness campaigns regarding renewable energy and energy efficiency measures.
Water Sector	a) Enhance energy efficiency within water utilities and initiate projects utilizing renewable energy sources such as hydropower, solar, wind, biogas, and sludge energy production.

	b) Develop the Ministry of Water and Irrigation's (MWI) Energy Efficiency and Renewable Energy Policy for the Jordanian Water Sector (2015), through utilizing sludge and other biosolids for energy generation. Seeking to 15% reduction in energy consumption of billed water by 2025. c) Integrate renewable energy into water supply systems to diversify energy sources
Agriculture and Food Security Sector	a) Reforesting 25% of desolate forest regions within rainfall zones where precipitation levels surpass 300 mm.

Table 1:Intended Nationally Determined Contribution (INDC),2015.

The most recent of these commitment were made in the June 2021 submission of the Second amended Nationally Determined Contributions declaration, which represents a national efforts to increase GHG reduction objectives from 14% to 31% by 2030.

As the Middle East and North Africa (MENA) region is one of the world's most vulnerable areas impacted by the climate change hazard, enduring higher temperatures, rising seas, floods, extreme water scarcity and polluted air. The inclusion of the SDGs in the politics of countries in the Middle East and North Africa (MENA) region has increased significantly and attention to issues related to sustainability has motivated a structured prioritization and negotiation of sustainability development in the MENA geopolitical arena. In 2005, the League of Arab States adopted the Arab Initiative for Sustainable Development, which outlines the framework for sustainable development in the Arab world, and engineers the WEF Nexus approach in national and regional governance structures. In 2009, MESIA, a non-profit organization, was founded with the aim of promoting solar energy in the MENA region. Since 2013, Abu Dhabi Sustainability Week has been held annually to address sustainability issues and promote renewable energy in the region.

The World Bank's Climate Change Roadmap for MENA, 2021-2025, focuses on four key areas of change: food systems, water security and resilient environmental capital; focusing on clean energy transition and low-carbon mobility; smart zero carbon cities and green economies; and sustainable finance.

Jordan's path to a nationwide green transition began about 10 years ago. The cornerstone of Jordan's sustainable energy policy is the Energy Efficiency and Reform Law No. 13 of 2012 and its amendments. The creation of the Directorate of Climate Change at the Ministry of Environment in 2014, along with specialized divisions for mitigation and adaptation, serves as a testament to Jordan's commitment to climate action. Furthermore, the Hashemite Kingdom of Jordan 2022–2050 National Climate Change Policy was introduced ahead of the United Nations Climate Conference (COP 27). This strategy , which in turn will be used to inform updates to the Nationally Determined Contributions (NDCs), is in line with sectoral plans and national policies of Jordan, particularly the recently released Economic Modernization Vision. The document outline cross-sectoral policies and actions for adaptation and mitigation; along with suggestions for how to respond to any short-, medium-, and long-term effects. For example, the mitigation policies and actions to "maintain the momentum towards carbon neutrality" is to "support the use of renewable energy and low-carbon fuels". According to the strategy, some of the mentioned actions are:

a) Reinforcing the institutional and policy frameworks for renewable energy through the identifcation and implementation of policy derisking instruments.
b) Stimulating renewable energy usage, taking into consideration vulnerable community groups
c) Strengthen RE market development, including regulatory support, incentives for renewable energy in household, institutional and commercial settings (i.e. appropriate tarifs on rooftop solar PV)[1]

The Jordanian government announced its National Green Growth Plan in 2017, targeting unemployment through sustainable projects in water, energy, agriculture, waste management, transport and tourism. The plan also makes the green transition a priority for the kingdom.

Jordan signed the Paris Agreement 22 April 2016. In accordance with the Paris Agreement and the National Plan for Green Growth, the Ministry of Environment approved the National Action Plan for Green Growth for 2021-2025, focusing on the energy sector. The action plan is the result of the cooperation of the ministries of various economic sectors participating and promoting 86 political measures and projects to ratify green economic growth. The action plan emphasizes the importance of private investment and the availability of international financial aid and support to implement the green transition and aims to strengthen industrial cooperation and coordination between multiple stakeholders. The plan also sets ambitious goals such as increasing economic growth to 7.5 percent and reducing poverty and unemployment to 8 and 9.17 percent by 2025.

An additional reference is the National Energy Strategy 2020-2030, which tackles sustainability from the perspective of energy efficiency. The strategy aims to diversify the national energy mix and increase its RE's share. It also sets the goal of decreasing dependence on imported oil-based fuels for electricity production. In particular, by 2030: a) 48.5 percent of the country's energy supply aims to be sourced from local energy provider, b) 50 percent of electricity needs will be covered by green sources. According to Enerdata,a research institute that specialises in the analysis and forecasting of energy and climate issues, such a goal calls for 2.4 GW of installed capacity by 2025, compared to the 1,890 MW of renewable capacity reported at the end of 2020.

Compared to neighboring countries, Jordan is poor in oil and natural gas, the country imports 95% of its non-sustainable energy sources. The high cost of importing energy sources is draining an economy that is already fragile due to many demographic, topographical and political factors. However, Jordan has significant long-term potential to expand its renewable energy capacity. In fact, there are an average of 316 sunny days a year, wind speeds between 7 and 8.5 m/s, and vast, sparsely populated desert areas such as the Mafraq Governorate where the project will be implemented. Therefore, the green path to energy independence seems to be the most suitable solution to promote the development of a sustainable and prosperous economy.

[1] For more deatiles see "National climate change policy of the Hashemite Kingdom of Jordan 2022-2050", available at: https://www.preventionweb.net/publication/national-climate-change-policy-hashemite-kingdom-jordan-2022-2050.

2) The aims of the project and the sustainability problems that it seeks to address

The project "Daw" is a technical capacity-building programme, directed at the marginalized demographic of young adults in Jordan. It aims to provid young adults between the ages of 18 – 24 years with tailored intensive training package for three months. The Project will equip them with practical skills in solar photovoltaic ("PV") installation and operation. Additionally, the project will provide the avenue for practical application of acquired expertise by giving the trainees the opportunity to participate in the installation and operation of a 20 kWp solar plant at a local community centre that lacks access to electricity or/and relies upon power derived from fossil fuel sources. Once this phase is finished, the project will help young people find job opportunities in the field of installing and maintaining photovoltaic cells by connecting the trainees with specialized and experienced mentors from the company.

The project addresses a number of crucial national priorities, aligned with the policies and approaches set in the aforementioned strategies. In fact, the Daw project combines sustainable goals and capacity building training programme that tackle issues of unemployment and lack of specialised skilled training programme. While revitalising the supply of green energy to a health community center, it promotes access to health services, which is an urgent need for the local community in the south area of the country.

Over the past decade, Jordan has largely adopted clean energy technologies as a result of a) significant economic incentives, b) tax exemptions, c) customs exemptions, and d) foreign aid, and technical and financial assistance from international organizations. However, renewable energy sources still account for only 5-10% of Jordan's total energy supply, meaning that the potential to realize capabilities is underutilized. The project aims to advance capacity deployment and the government's goal of achieving 50% renewable energy by 2030 by installing a 20 kWp solar power system- solar PV array.

In addition, the project addresses the problem of unemployment by providing training and guidance to enable 20 young people to enter the labor market. Jordan is affected by high unemployment, which particularly affects rural areas, youth and women. The OECD notes that the main causes of unemployment in the country are the mismatch between educational results and the skills required by the market and the lack of effective vocational training. The unemployment rate in the country is generally high, and according to the Jordanian Ministry of Statistics, it will be 23.1 percent in 2022. Despite this, the unemployment rate in Mafraq Governorate was 29.2 percent, the highest in the country. At the national level, youth unemployment rates are concerning, reaching 52.1%, due to the lack of effective national programs to facilitate school-to-work transition. Unemployment among women is particularly high due to a combination of social and economic factors, which is why the country has the third lowest female labor force participation rate in the world.

Finally, the project is established in an important area, the northeastern governorate of Mafraq, which is the second largest governorate of Jordan, covering 29.6% of the total area of the kingdom. The administrative area of Mafraq consists mostly of the Badia region, characterized by a hot and dry climate and clear sunny days, making it the most suitable area in Jordan for exploitation of solar and wind energy. The city is a crossroads connecting the kingdom from the south borders with Syria, Iraq and Saudi Arabia. The population is just over half a million inhabitants, and its density is the lowest in the provinces due to the desert nature of the area (20.7 inhabitants per square kilometer). By 2016, more than 60 percent of the population lived in rural areas and agriculture was the main source of livelihood. Due to its proximity to Syria, the Governorate of Mafraq has

been particularly affected by the high influx of Syrian refugees since 2011. Until April 2023, there were indeed almost 170,000registered Syrian refugees, half of whom live in the Zaatari camp. The largest refugee camp in the Middle East, a home to almost 81,000 Syrian. As the Jordanian Times reported, cities like Mafraq and Ramtha doubled in population in a few years and struggled with unemployment, water shortages and a lack of basic services such as health, education and housing.

Poverty in Jordan has been a problem since the economic crisis of the 1980s. In 2022, 24.1 percent of the Jordanian population will live below the poverty line. The governorate of Mafraq is one of the most affected by poverty: in 2008, the poverty rate in Mafraq exceeded 25 percent. Imad Fakhoury, Minister of Planning and International Cooperation, said in 2015 that the county's poverty rate is about 19.2 percent, which means a crisis that must be urgently addressed.

Considering the above, the project impact is multi-tiered and concerns a plurality of SDGs crucial to the Jordanian social, environmental and economical context. First, the green goals met by the project are: n. 7 (Affordable and Clean Energy); n. 11 (Sustainable Cities and Communities); and n. 13 (Climate Action). Second, by training youth and introducing them to the job market, the project addresses SDGs n. 8 (decent work and economic growth); n. 4 (Quality Education); n. 1 (Poverty Reduction); and n. 10 (Inequality Reduction). Furthermore, the project targets gender mixed group, enhancing SDG n. 5 (gender equality). It produces valuable infrastructure to a local healthcare facility, meeting SDGs n. 9 (Industry, Innovation and Infrastructure), and n. 3 (Good Health and Well-being). Finally, the cooperation among different stakeholders complies with SDG n. 17 (Partnership for the Goals).

3) The participants and their interaction and communication in and between meetings

The core actors involved in “Daw” project are:

a) Actis Acts: is Actis’ charitable foundation, launched in 2018, as a UK Charitable Incorporated Organisation, to support charitable activities linked to Actis’ investee companies, local charities and humanitarian crises affecting regions where Actis operates. Its contribution is steered toward sustainable infrastructure, investing globally in the following sectors: energy infrastructure, long life infrastructure digital infrastructure, real estate, private equity. Actis Acts, which is a majority shareholder of Yellow Door Energy (YDE), contribute to the project by providing a grant funding of US$50k and other support as necessary. Overall, Actis Acts act as the donor for project “Daw”.

b) Yellow Door Energy: A Dubai-based distributed Commercial & Industrial (“C&I”) solar platform in the Middle East and Africa (“MEA”) region. YDE operates nine facilities totaling c. 60 MWp in the Jordan through various partnership and projects with the government entities such as Jordan Ministry of Energy and Mineral Resources), businesses and community-based projects. Yellow Door Energy invested in, designed, commissioned and operates the “Daw” project. Yellow Door Energy contributed $5,000 to the initiative, bringing the total to $55,000 ($50,000 from Actis Acts and $5,000 from YDE). YDE also coordinates and manages the project delivery, monitors the installation of solar PV equipment at the community health center, offers O&M service for the PV system for one year, provide all required Personal Protective Equipment that the trainees need, provides mentorship for trainees, and supports marketing. Overall, Yellow Door Energy act as a co- donor for project “Daw” and facilitator of the project activities.

c) The Jordanian German Centre of Excellence for Solar Energy: the center is established by the the National Company for Operation and Training, with the support of Al-Mafraq Development Company, which contributed to the provision of land and buildings, as well as Orange Telecom, which provided financial support for the rehabilitation of buildings and workshops provided by the King Hussein Bin Talal Development Area. It is affiliated with the Jordanian government, established as part of the government's plan to address poverty and unemployment by focusing on developing areas of vocational and technical training. The Jordanian-German Center of Excellence is a specialized vocational training center that provides training courses for young men and women to work as professionals in the installation and maintenance of solar energy systems at various professional levels, and focuses on the practical side in classrooms and training workshops equipped with the latest equipment and training aids to meet current and future needs in Solar energy sector, as well as on-job training in cooperation with private companies. The center's main contributions to the project are as follow: facilitate the capacity building training program, administers the training of the 20 participants, and utilizes their capital goods, including buildings, machinery, and equipment. Overall, The Jordanian German Centre of Excellence for Solar Energy acts as implementing partner (administer the training component).

d) EDAMA Association for Energy, Water & Environmen (which in Arabic means "sustainability": is a Jordanian NGO established in 2009 with the mission to promote the creation of a green economy and maximize the business viability and potential of the country's energy, water and environmental sectors. It contributes to this project by hosting events and training workshops with partners, lease the collaboration between the project management, Solar PV training provider, and community participants (trainees), and oversees the selection of the beneficiary community health center and the trainees. Overall, EDAMA acts as a manager partner (under the lead of YDE).

e) Individual youth- Community Members (20 young adults aged 18 – 24 years old): attend training activities on solar PV installation and operation training. The Project will support placement of trainees into quality solar PV jobs after certification has been awarded. Followed by engaging them in constructing a new, small-scale, solar PV plant to a community center. Overall, Individual youth-Community Members are considered both recipients in the initial phase (training phase), once they are equipped with the required skills they will be able to take an active role in the Jordanian PV-related firms.

f) Indirect beneficiaries: One community (health) centre, and its users, which will receive a rooftop 20 kWp solar array, at no cost.

YDE launched the first round of the Daw project, applying for an open grand fund managed by Actis Acts. On March 5, 2023, YDE, represented by the director of Jordan office, Eng. Tariq Murad, and EDAMA, represented by the chairman of the board of directors, signed a collaboration agreement to launch the "Daw" project. In parallel, EDAMA and YDE partnered with the National Employment and Training Company, which assigned the Jordanian German Centre of Excellence for Solar Energy as an implementing partner (Training Provider). Within the first month of the partnership, the core committee (led by YDE, and consisted of EDAMA, Jordanian German Centre of Excellence for Solar Energy) developed detailed schedule of activities. Within the following 5 months, the core committee (led by YDE) agreed on the detailed criteria for selection of trainees , perform necessary marketing, solicit interest from, and select, 20 trainees for the programme, and deliver three months of intensive and comprehensive training for the trainees (marginalized, disadvantaged youth who will receive

the training in the installment of solar PV sector and later will participate in the construction of a new, small-scale, solar PV plant).

The actors in "Daw" project (led by YDE, and consisted of EDAMA, Jordanian German Centre of Excellence for Solar Energy) participate equally in meetings. While some of the meeting conducted collaboratively among the three, other meeting and workshops are carried bilateral related to the task on hand (YDE and EDAMA), (EDAMA and Jordanian German Centre of Excellence for Solar Energy), (YDE and Jordanian German Centre of Excellence for Solar Energy), (YDE and Actis Acts). Individual youth-community members, in addition to attending the scheduled training and other relevant workshops and seminars, also attend meetings with the members of the core committee to review the course of activities and provide regular feedback).

4) How often do they meet, and do they communicate between meetings?

The core committee holds formal and informal meetings regularly (two weeks or as needed). Many meetings are held to proactively monitor trainee development, address difficulties and issues raised by any member of the core committee and establish consensus on solutions. For example, during the interview, EDAMA, Jordanian German Centre of Excellence for Solar Energy, encountered some difficulties in recruiting youth within the initial criteria established by YDE; as a result, a meeting was organized among the core steering committee, and solutions were provided (changing the proposed criteria).

Along with conducting meetings, the steering committee maintains an extensive and open line of communication via phone calls, SMS, official emails, and site visit to monitor the progress and development of the training activates. Overall, participant participation and regular communication are high, and participants are confident in each of the partners ability to carry out their contractual responsibilities.

5) The role and forms of knowledge sharing, coordination and joint problem-solving

The activities of "Daw" project can be divided into 3 stages of policy design and 3 stages of implementation activities:

a) Policy-design activities:

1. Financing: securing fund through applying to open grant application, budgeting different level of activities, establishing memorandum of understanding (MOU) with partners involved, reflecting multilevel governance.
2. Evaluation and mitigations measurements: systematic and objective assessment of the ongoing activities, evaluate the initial round of project outcomes and plan future community-based projects, design and carry risks associated with the project, with legitimate preventions and mitigations measurements,
3. Reporting and feedback.

b) Implementation activities

1. Execution of training component of Project: design and develop a detailed schedule of activities, develop criteria for selection of trainees, carry necessary marketing assessment and general information campaigns, recruit marginalized and disadvantaged 20 young adults (18 – 24-year-old).

2. Design and install 20 kWp Solar PV array: Selection of one community centre benefiting from Solar PV array, install and oversee the installation of solar PV equipment with volunteer support from the 20 trainees; provide first year of O&M service for the Solar PV equipment at no cost.
3. Growing green jobs in the Solar industry: Support the trainees' job search and placement in industry. Provide mentorship opportunities for trainees (Pairing of all interested trainees who have received the certification, with YDE mentors)

The "Daw" project operates at three levels: at the meso-level of networking it aims to integrated marginalized and disadvantaged youth in green job market (installation and operation of PV technology array) through arming them with the required skills (3 months of intensive trainings). At micro-level it aims to build a community-based collaboration steered towards elevating the sustainable energy industry in Jordan and enhance access to essential services via the electrification of a community center. At the macro- level it aims to assist the state's (Jordan) target of 50% renewable energy by 2030 which require 2.4 GW of installed capacity by 2025, contribute to reverse the negative impact of youth high unemployment, as well as feed knowledge and creative ideas to future sustainable community-based projects.

6) The relation between consensus and conflict and the handling of the latter

Both project partners (operations team) and trainees expressed positive views about this multi-level collaboration. They have emphasized the inclusive leadership which includes the willingness of carrying dialogue with various groups and individuals, using formal and informal consultative processes that build trust. As previously stated, the establishment of an open communication network played a crucial role in fostering trust during the initial phase.Furthermore, having previously partnered on various initiatives; YDE, EDAMA and The Jordanian German Centre of Excellence for Solar Energy, has helped in leveraging the knowledge, experience, and skills of partners involved to achieve the common goal and deliverables. That is to say, the participants are confident in each other's ability to fulfill their contractual obligations, and any disagreements are handled by cooperative negotiations.

7) The role and form of leadership: lead actor, steering group and/or collective leadership

Daw Project is lead and managed by a lead actor. Its deliverables were initiated and set by YDE, who also coordinate project delivery; oversee installation of solar PV equipment at community (health) center and provide first year of O&M service for the Solar PV equipment. The day to day activates were facilitated by a core group of actors: EDAMA managing and supervising the project development, Jordanian German Centre of Excellence for Solar Energy develop a detailed schedule of the vocational and technical training activities. While the project is clearly leaning toward a lead actor model, the strong formed partnership and collaboration is also aligned with core group leadership and collective leadership. Several informants from the Community Members(youth) agree that all the involving partners are equally playing a leading role as convener and facilitator.

8) The temporal unfolding of the co-creation process: major shifts and ups and downs

The project articulates in 4 axis[2]:

[2] At the time of carrying the study, the project is at the first phase(articulated in Axis one and two).

First axis: i) Obtaining funds, ii) selection of a team of 20 underserved young Jordanians to be trained, following gender sensitive criteria.

Second axis: i) Three-months intensive vocational training offered by the Jordanian German Institute of Excellence to the 20 young participants, ii) attribution of professional certificate testifying the obtained skills and the eligibility for working in the job market.

Third axis: i) Installment of 20 kilowatts capacity solar assets by selected trainees in the health community center located in Mafraq, ii) technical supervision and free maintenance for 12 months following the installation provided by Yellow Door Energy.

Fourth axis: i) Mentoring program to the trainees by YDE to guide them towards obtaining secure and decent jobs within the photovoltaic installation and maintenance industry.

The axes will be implemented consecutively within the expected timeframe of one year.

9) The most important governance factors (may include factors other than those in focus in this project)
All are of relevance to the project. However, we believe that the following GFs are the most important:

a) GF11 "**Inclusion and empowerment of relevant and affected actors"** is highly important to the co-created GOGREEN initiative.
b) GF13 "Trust-building, conflict mediation". Please see below section 11 in Scoring and analysis of governance factors.
c) GF5: Mechanism for ensuring top-down government and bottom-up social accountability

Please see below section in Scoring and analysis of further details on the governance factors.

10) The generated outputs and outcomes:
In the interviews, many informants stated that the collaboration generated creativity and innovation. In particular, encouraging sustainable practices, contributing to national and global sustainability objectives (as 88 percent stated that the project is expected to produce a green transition solution aiming to avoid a worsening in the status quo), and reframing disadvantage youth as a window of opportunity).

This demonstrates the favorable influence of collaborative efforts on both creative aspects and the achievement of sustainability goals.

11) Lessons learned about the conditions for co-creating green solutions.
The following metrics reflects the project co-creating green solutions:
Short-Term outcome:

a) (20 marginalized youth) trained –
b) of the 20, 50% are women, emphasizing the integration of gender equality as a key aspect of promoting a prosperous and sustainable world. The inclusion of women in the photovoltaic installation and maintenance sector opens doors for them to engage in various solar-related activities, such as installing and maintaining solar panels. Equipping women with essential skills and mentorship not only provides them with valuable opportunities but also challenges discriminatory social norms and traditions that hinder women from pursuing education and training in fields offering green job opportunities. Consequently, this project has emerged as a viable collaborative initiative for driving

a change in the domain of equitable sustainable development (women as agent of change in area of sustainability and resource scarcity).

In the Medium-term:

a) The successful installation of the Photovoltaic (PV) project in a community center, equipped with a 20 kWp Solar PV array, signifies a paradigm shift in energy access for remote areas. This achievement also serves as an incentive for collaboration and community cohesion. The steering committee actively collaborate to ensure the project aligns with specific local priorities and needs.
b) All trainees who have successfully obtained certification are strategically paired with mentors from Yellow Door Energy (YDE). This mentorship program not only provides crucial guidance and support for the professional development of trainees but also enables Jordanian youth to engage in the eco-friendly transformation of economies through financial inclusion. This initiative particularly benefits young adults who might lack the financial means to cover the cost (including the transfer of knowledge, skills, and experience from the mentor and attending workshops). The mentor-mentee relationship facilitates the transfer of knowledge, skills, and experience from mentors to trainees, supplemented by participation in workshops to enhance their expertise.

Long-term:

a) aiming toward reintegrating 50% of the trainees, three months after course completion. Tackling young adult unemployment, in particular in green industry. This also should have a Long-term impact on trainees' families, Jordanian renewable energy sector, local communities.
b) Incident-free operation and maintenance of the solar PV array which should contribute to the sustainable and clean energy sector, meeting energy needs, and supporting employment markets for sufficient development.

As outlined in the project description and proposal, upon the successful completion of this pilot project (referencing the indicators mentioned above), the partners intend to expand the project further, with key objectives including:

a) By 2025, training several hundred (TBD) underprivileged young adults.
b) By 2025, facilitating the placement of X/2,000 underprivileged teenagers into the workforce.
c) Maintaining the enrollment of Y-hundred (TBD) trainees in YDE's mentorship program.
d) Expanding the training program through collaboration with the National Employment and Training Company's Jordanian German Centre of Excellence for Solar Energy.
e) Exploring and expanding into additional segments of the Solar PV value chain, such as sales and finance.

Scoring and analysis of governance factors

1. Perceived importance of biosphere conditions

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☐ 0.66	☒ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

On both a global and national level there is a high level of awareness of the specific biosphere conditions of Jordan. In particular, the extreme water scarcity and the limited natural resources, as well as the extreme potential represented by solar and wind energy. The steering committee frame the biosphere conditions both in terms of the challenges as well as opportunities for green growth. The various published documents around project Daw show a high awareness of link between the green solutions and economic development.

The project descriptions along with other documents shared by the YDE while do not frame in detail the biosphere conditions but they take them as an assumption from which to act in collaboration to achieve problem solving.

Recognizing the pivotal role of biosphere conditions in driving this collaboration to achive a green transition, the project prioritizes several key areas. Firstly, there's a focus on developing tailored training programs to engage youth in green jobs, aligning with national and global sustainability objectives. Secondly, gender equality is integrated throughout the project's design, implementation, and monitoring, fostering a more prosperous and sustainable world. Additionally, the Jordan renewable energy sector stands to benefit significantly from a larger pool of skilled employees entering the workforce(especially up on the expantion of the project target by 2025). Moreover, the Jordanian Government stands to gain from the social investment project, leading to enhanced employability, purchasing power, and GDP growth.

Looking ahead to 2025, the project aims for significant expansion. The steering committee aims to scale up the training program, targeting several hundred individuals for participation. This effort is geared towards facilitating the placement of X/2,000 individuals into green jobs, underscoring the project's commitment to driving meaningful change in both local and global contexts.

Many informants mentioned the driver for establishing the Daw project was to promote young adult unemployment (Training underserved adolescents in Jordan and providing them skills related to the installation and operation of PV technology, to enable them to gain employment in the industry). Linking the main priority for the project to generate new green jobs.

2. Legislation, programs, and formal goals

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☐ 0.66	☒ High confidence	☐ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

Several informants link project implementation to the decrease the unemployment among Jordanian youth, access to information and knowledge in the solar PV sector, electricity generated from renewables, reduce Inequalities and create jobs in renewables. All of which according to many informants will contribute to a more sustainable and greener Jordanian economy.

The initiative outlines numerous national objectives and sustainable strategies, featured in various documents, including the project description, proposal, partner's websites, and several newspaper articles that announce the collobration and lunching of th project. This project ensures alignment with key frameworks such as the Sustainable Development Goals (SDGs), Jordan's SDG Roadmap, and specific sectoral plans like the Jordan Energy Strategy (2030-2020). The initiative main aim and objectives align notably with the Jordan Energy Strategy. The Strategy ,as dicussed earlier, sets ambitious targets, including reaching 50% renewable electricity by 2030, enhancing energy efficiency, diversifying power generation sources, and significantly increasing the contribution of renewable energy projects to meet the Kingdom's electricity needs, aiming for 2400 MW by 2020 and expanding to 3200 MW by 2030.

Moreover, according to the project proposal, the initiative aims to address other pressing needs in Jordan. First, it targets young adult unemployment, with a particular focus on gender equality, by providing training to underserved adolescents in Jordan. This training equips them with skills related to the installation and operation of PV technology, enabling them to secure employment in the industry. The project foresees trainees entering the workforce and contributing to the growth of the renewable energy sector. Also, these trainees are expected to share their knowledge by coaching and mentoring others in their communities. Indeed, the aim of prioritizing education, particularly those related to gender equality, energy, and the environment, aligns directly with the Jordan roadmap to achieving sustainable development (SDGs), in particular, "Jordan 2025", which emphasizes the involvement of youth as key active partners in sustainable development and in safe-guarding the environment. In complement, the Kingdom has developed a National Youth Strategy for 2019-2025 , whereby Youth and women represent the priority targets under the SDGs and the most critical cross-cutting themes to achieve the 2030 Agenda.By investing in capacity development targeted toward youth in the energy sector,including women, in underserved communities and marginalized groups, the project empower individuals to contribute positively to Jordan's way to sustainable development.

Second, the project aims to support sustainable energy efforts in Jordan through the construction of a new, small-scale renewable energy facility. The initiative seeks to improve access to health services by electrifying a community health center by 20 kWp Incident-free solar capacity, which in turn will provide crucial services to local residents. In the project description, the parnters signal how the project builds on

existing goals and key action areas around the country's uptake of renewables, focusing on the integration of higher shares of renewable power, renewable energy investment, and strengthen local industries and create jobs in renewables.

Furthermore, the project's success is expected to inspire other renewable energy providers, as well as organizations such as EDAMA and the National Employment and Training Company, to launch similar programs.

The broad-based collaboration in the project Daw has embarked on a national public-private partnership (PPP) program, with the overarching goal of creating a small-scale driving force for economic growth and employment through well-defined partnerships in infrastructure, utilities, and services. By leveraging the strengths and resources of both the public and private sectors, the project aims to address key challenges while unlocking opportunities for sustainable development. This approach reflects a commitment to mobilizing collective engagement towards environmentally and socially sustainable practices in Jordan. According to Jordan's Way to Sustainable Development: First National Voluntary Review on the Implementation of the 2030 Agenda (2015), Jordan has placed great attention on strengthening its PPP framework given the private sector's fundamental role in achieving economic, social and environmental development. This is evidenced in Jordan adopting a number of reforms aimed at strengthening Partnership between the public and private sectors (PPP). Such as providing a legal framework to govern private-public partnerships and providing an enabling environment for the private sector to invest in infrastructure partnership projects that cumulative effect rather than a duplication of efforts.

The Partnership between the public and private sectors (PPP), as an important component of sustainable development for Jordan, has also been emphasised in many other policies and strategies such as the 2025 National Vision and Strategy, and the National Action Plan for Green Growth for 2021-2025 (2020), that called for importance of private investment and the availability of international financial aid and support to implement the green transition and aims to strengthen industrial cooperation and coordination between multiple stakeholders.

While still in its piloting phase, the project has the potential to emerge as a significant driver of job creation, job upgrading, social justice, poverty eradication, and investment and employment in green economies.In particular, the project proposal address the question of sustainable benefits, in terms of long-term benefits, and the project foresees to scale the implementation. Following discussions with the steering committee the successful completion of the pilot phase presents significant opportunities for scaling up the project. By 2025, the project aims to train several hundred underprivileged young adults and place them into the workforce. It also seeks to expand the training program through collaboration with the National Employment and Training Company's Jordanian German Centre of Excellence for Solar Energy. Additionally, the project aims to explore and expand into additional segments of the Solar PV .

These ambitious goals underscore the project's commitment to making a meaningful impact on youth employment and sustainable energy initiatives.

3. Relative openness of public governance paradigms

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☒ 0.66	☒ High confidence	☐ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

In July 2021, the Jordanian government, in collaboration with the International Labour Organization (ILO), introduced a new national strategy to foster “cooperation, mutualism, self-help and solidarity”. The strategy, titled "The National Strategy for the Jordanian Cooperative Movement 2021–2025," embodies Jordan's commitment to open public governance using a participatory approach that involved a wide range of development partners and stakeholders, including ministries, research and education institutions, local communities, civil society organizations, and cooperatives. It aims to promote the economic, social and cultural level for local societies and cooperative entities and disseminate the cooperative culture, acknowledging the pivotal role of cooperatives in community development and sustainability, aligning with the goals of the National Climate Change Adaptation Plan of Jordan.

Despite these efforts, there is a notable absence of a comprehensive policy framework for collaboration among local communities, civil society organizations (CSOs) and between the government and local communities and (CSOs). While the Jordan Economic and Social Council, established in 2009, bears the responsibility of fostering dialogue between the government and various stakeholders. However, challenges persist in actualizing effective collaboration. Jordan, committed to providing resources for CSOs per international conventions like the ICCPR and UN Declaration on Human Rights Defenders, faces practical hindrances. The Societies Law and Companies Law impose restrictions on accessing resources, necessitating approval from the Council of Ministers for international funding and the Ministry of Social Development for domestic funds. Delays and evolving procedures are often attributed to a perceived lack of fiscal space.

To address these challenges, Jordan, under the patronage of His Majesty the King, has initiated various strategies to enhance domestic and foreign investments. The Investment Promotion Strategy 2023-2026, developed in close collaboration with the World Bank and in consultation with the local public and private sector stakeholders, and align with the 2033 economic modernization vision. The strategy aims to simplify procedures for registering and licensing investment projects, providing a comprehensive service at the ministry. These encompass structural reforms, implemented through Public-Private Partnerships (PPPs) approach, covering areas like human resources development, energy, water, employment, poverty and social protection, green economy, among others. (please see page 14).

In the context of the Daw project, many informants from the steering committee emphasized the government's commitment to fostering collaboration and facilitating project activities, aligning with Jordan's commitment to an open public governance paradigm. Various municipalities actively participated by offering services such as aiding in the recruitment of trainees and providing space for community-based campaigns. The government's support extended to allowing project partners to utilize multiple recruitment channels and endorsing advocacy initiatives that highlight the project's impact on youth

employment and green transition. Hence, reflecting the government's support for initiatives that have a positive impact on communities.

Additionally, the Jordanian-German Center of Excellence, a crucial component of the project, delivered intensive vocational training in the installation and maintenance of PVC, exemplifies the government's commitment to an open public governance paradigm. Established in collaboration with the Ministry of Labor and private sector institutions, it functions as a private, non-profit joint-stock company owned by the Jordan Armed Forces and officially registered with the Ministry of Industry and Trade.

4. Formalized institutional channels for citizen participation and community mobilization

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☒ 0.66	☒ High confidence	☐ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The long-term vision and strategy, "Jordan 2025," along with the inclusive Economic Development Plans (EDPs) at the sub-national level and national sectoral strategies, actively incorporates inclusive approach to Sustainable Development Goals (SDGs). This approach involves civil society organizations, the private sector, academia, women, youth, local communities, and councils, ensuring alignment between national plans and the diverse needs and aspirations of the population. Placing citizens at the heart of the development process, by explicitly aiming toward advancing Jordan's open government agenda, through decentralization of governance.

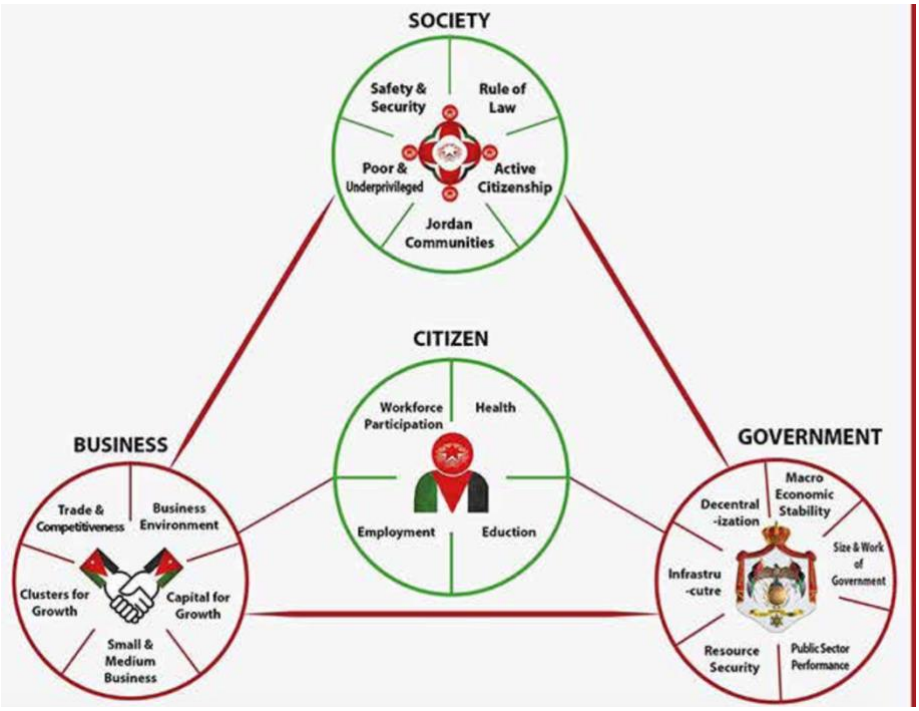

Figure 1: Key pillars of Jordan 2025, Jordan 2025 - A National Vision and Strategy,

As for the project “Daw”, many informants from the steering committee, confirm that from beginning the project is designed for and led by the society. Quoting one “while the project is financed from actis, a foreign entity, it is a community-based initiative led by the citizen themselves for the community”. This informant elaborates the partners involved are national partners (EDAMA as a non-governmental organization, and the Jordanian-German Center of Excellence as a governmental partner). Along with these partners, youth were also part of the collaboration process. According to an informant involved in the recruitment “many of the youth we did meet during the recruitment process has helped in implementation more than once as the team refines its ideas about some of the criteria for selection of trainees and explores new ways to carry the outreach”. For example , they volunteered their time to assist in carrying out outreach to attract potential trainees , spreading awareness among their peers and networks.

Other civil society organisation and locals helped in carrying necessary campaigns and advocating the importance of the project and the long-term outcomes “enter the workforce and support the growth of the renewable power sector”. An informant mentioned that the youth trainees from the "Mafraq governance" community will utilize their training to install a 20 kWp Solar PV array at a community center, highlighting the significant role of local communities in the project.. There is also an open exchange of experiences. Referencing the project description, answering ‘What sustainable benefits will the Project provide post direct engagement”, it anticipates that the engagement of youth trainees will grow. These trainees are expected to apply their acquired knowledge to tutor and mentor peers within their communities.

The steering committee organize regular meetings with youth trainees about progress, expectation and feedback. One of the youths we interviewed says that the Jordanian-German Center of Excellence feels like home. Along with offering the space, the training, the center has organized extracurricular activities, for example, a lecture on managing renewable energy and on solar energy and energy efficiency.

5. Mechanism for ensuring top-down government and bottom-up social accountability

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☒ 0.66	☒ High confidence	☐ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

According to the project discerption, and to many informants from the steering committee, Daw project has established procedures for top-down and bottom-up accountability. Reflected through the below table:

Top- down accountability	Actis → YDE	Financial reporting: YDE report back to ACTIS on how the fund of $55k (provided by Actis) is being managed and distributed over the project timeline. Implementation report: YDE report back to ACTIS on the project first phase of activities (youth training) and second phase of design and installation of 20kWp Solar PV array, and O&M services for one-year. And mentorship designed to help youth secure jobs in the industry (green jobs).
	YDE → EDAMA	Implementation report: EDAMA reporting back to YDE on solicitation and selection of trainees, to selection of the community health center to be electrified. Financial reporting: EDAMA reporting back to YDE on the expenditure of the above.
	EDAMA → Jordanian German Center of Excellence	Financial and training activities reporting: Jordanian German Center of Excellence report back regularly to EDAMA on the three-months vocational training (sustainably training youth in solar PV installations, with an emphasis on quality over quantity).
	National Employment and Training Company → Jordanian German Center of Excellence	Jordanian German Center of Excellence report back on Financial budgeting and implementation. The center's role reflects also top-down accountability as it is a center guided by the government's strategic vision for solar energy training.

Concerning bottom-up social accountability, transparency plays a key role in fostering effective governance mechanisms. Youth involvement is crucial in this sense because they are both a beneficiaries as well as an active players within the project. As for the later, and to uphold transparency standards, a structured feedback mechanism is established whereby youth participants are actively involved in reporting on the Daw project's training activities to the steering committee overseeing the implementation.(The feedback report includes inquiries about participants' satisfaction with the content and format of current training sessions, their preferences for future topics, and whether they have gained relevant skills or knowledge. It also delves into challenges faced during training, evaluates trainer effectiveness, evaluates the degree of support for active involvement, and assesses the accessibility of project resources.)

At the mid-term evaluation of the project, youth feedback is systematically gathered through the administration of a feedback form. This instrument serves as a tool for seeking the perspectives, experiences, and recommendations of youth participants regarding the ongoing training activities and

their perceived impact. The feedback obtained during this phase allows for timely adjustments to maximize project outcomes, pinpoints areas for improvement, and offers insightful information into the effectiveness of the implemented strategies.

Furthermore, the steering committee, integrates the feedback received from youth participants at the end of the project into its monitoring and evaluation processes. By acknowledging and incorporating the perspectives of youth, the steering committee ensures that the project remains responsive to the aspirations of its target demographic. This mechanism of feedback (midterm, and at the end of project) ensuers youth voices are not only heard but actively shape the trajectory and outcomes of the Daw project.

As for risks associated with the project, the accountability mechanism is clear, every partner in the steering committee is held responsible for their respective roles and contributions. The accountability structure is designed to foster transparency, mitigate potential risk, that may arise during the project's implementation.

In summary, the Actis Acts and YDE project employs a mix of top-down and bottom-up accountability. The involvement of government entities ensures a structured and strategic approach, while collaboration with a non-profit organization reflects a grassroots connection and community engagement. This combination allows for comprehensive oversight and successful implementation of the solar PV installations training for underprivileged youth.

While both top-down and bottom-up accounting mechanisms play a significant role, the interpretation suggests that the Daw project's accountability system is limited to utilizing feedback on activity, results, and finance accounts to improve the Daw project's functioning and operation, making the positive impact of the accountability system somewhat unclear.

To enhance its robustness and effectiveness of both both top-down and bottom-up accounting mechanisms, the feedback on impact and outcomes could involve measuring changes in beneficiaries' lives, community development indicators, or other relevant metrics to evaluate the project's success. Also, the accountability framework should include mechanisms for responding to feedback received. This could involve establishing clear procedures for addressing concerns raised by stakeholders and paticipants. Finally, Instead of viewing accountability as a one-two time exercise, the framework should emphasize continuous improvement. Regularly reviewing and adapting accountability mechanisms based on lessons learned and changing circumstances can help the project remain responsive to evolving needs.

6. Strategic agenda-setting by means of translation

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☒ 0.66	☒ High confidence	☒ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

In the context of the Daw project, there is a concerted effort to align with and promote Sustainable Development Goals (SDGs), particularly those related to economic prosperity, environmental sustainability, and gender equality. The project's steering committee, consisting of partners Actis Acts, Yellow Door Energy (YDE), EDAMA and the Jordanian-German Center of Excellence for Solar Energy, are well aware of Jordan roadmap toward the realization of the 2030 Agenda, and how the project Daw will contribute in achieving the country's national objectives and delivering on the 2030 Agenda. This has mentioned by all partners during the interviews as well as through the project description, campaigns and marketing strategies.

The comprehensive approach to training, mentorship, and community engagement reflects a commitment to translating global sustainability goals into tangible actions at the local level, showcasing a strong parallel with efforts seen by the government.

While the Daw project's partners emphesised the initiative contribution to Sustainable Development Goals (SDGs), it is notable that the youth participants express limited explicit knowledge about SDGs,as the primary focus for these marginalized youth revolves around gaining tangible skills, employment opportunities, and formal certifications. It is evident that their understanding of SDGs is more embedded in the economic aspects of the project.

However, while the explicit communication of SDGs may not be at the forefront for the youth, the Daw project becomes a vehicle for translating and embedding sustainable development principles into their experiences. The emphasis on gender equality, community collaboration, and access to renewable energy aligns with the broader SDG framework, even if the terminology and formal objectives might not be explicitly articulated.

Also, at the macro-level, the project contribution is somewhat limited to Jordan's target of achieving 50% renewable energy by 2030. However, as a pilot project , the partners explained that the project sets out to expand its impact in line with Jordan's renewable energy targets.

7. Construction of narratives about successful multi-actor collaboration

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☐ 0.66	☒ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The collaborative efforts in the Daw project are not isolated occurrences but rather a continuation and enhancement of the partnerships formed in previous endeavors. Whereby, the previous collaboration among the partners before the Daw project lays a solid foundation for the success of multi-actor collaboration. For instance, the successful coordination on previous projects showcases the partners' ability to work together effectively, leverage their collective resources, networks, and expertise to address challenges more comprehensively and effectively.

This familiarity and trust established through past collaborations are invaluable assets when embarking on complex initiatives like the Daw project, however, according to an informant from the steering committee, the implementation this collaboration, the Project Daw, has raised these collaborative efforts even higher.

According to informants from the steering committee, this collaboration demonstrates a harmonious blend of efforts that were catalyzed by the government's embrace of Public-Private Partnerships (PPPs). The Daw project serves as a testament to the belief that such approach to collaboration is not just necessary but a cornerstone for achieving sustainable and impactful outcomes.

8. Building or harnessing institutional platforms and arenas

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☐ 0.66	☒ High confidence	☐ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

Digital meeting platforms were employed for the Daw project. However, steering committee meetings were preferred to be carried in person especially among Yellow Door Energy (YDE), EDAMA, and the Jordanian-German Center of Excellence for Solar Energy. Many took place in Mafraq governance, at the Jordanian-German Center of Excellence for Solar Energy, along with training sessions. Smaller partner meetings were facilitated in Amman, in particular, among Yellow Door Energy (YDE) and EDAMA.

The diverse actors involved in the Daw project, including Actis Acts, EDAMA, Yellow Door Energy (YDE), and the Jordanian-German Center of Excellence for Solar Energy, utilize their own platforms for providing information about solar PV installation, energy production, and training initiatives. These platforms serve as both marketing resources, as well as knowledge informative resources. Specifically, YDE, as a major partner, actively engages in the coordination and management of project delivery, leveraging both digital and physical platforms. As an example, YDE in the anticipitated second phase, the phase of installing the 20 kWp solar PV system at the community centre, is planning to provide the trainees access to its online Safety training platform.

The Jordanian-German Center of Excellence for Solar Energy, responsible for administering the training component, emphasized that digital platforms were key to the exchange of information with the local community, recruiting participants, in particular through using Facebook. Also, other platforms like WhatsApp was used to communicate with the trainees and provide them with educational resources.

During COVID 19, delivering similar technical training, the Jordanian-German Center of Excellence for Solar Energy has developed an innovative online platform with the primary aim of enriching technical training experiences through the integration of digital simulations. For instance, in the context of providing PVC training, participants can access virtual simulations that replicate real practical scenarios in the installation and maintenance of PVC systems. Through these simulations, trainees can practice hands-on tasks and acquire practical skills in a risk-free and controlled digital environment. Although this digital platform has not used for the project Daw, there are plans to activate such platforms in the future, aligning with the evolving needs and dynamics of the project.

This structured approach to utilize institutional platforms and arenas underscores the Daw project's commitment to effective collaboration, combining both digital and physical platforms. By utilizing their diverse platforms, each partner can reach their respective audiences effectively. This allows for joint coordination as they can disseminate information, updates, and calls to action across multiple channels simultaneously. Additionally, it fosters a sense of unity among partners, as they collaborate closely to ensure consistent messaging and coordinated efforts towards the attainment of shared objectives.

9. Provision of access to blended financing

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☒ 0.33	☐ Medium confidence	☒ Documents
☐ 0.66	☒ High confidence	☐ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The main financial funds come from Actis Acts. The Charity Provide $55k grant funding. Yellow Door Energy contributed $5,000 to the initiative, bringing the total to $55,000 ($50,000 from Actis Acts and $5,000 from YDE). YDE, provide first year of O&M service for the Solar PV equipment at no cost, mentorship programme between trainees and YDE staff at no cost.

Also, Jordanian-German Center of Excellence for Solar Energy use their center and equipment to provide the intensive three-months vocational training(paid through the allocating part of the budget provided by Actis Acts and YDE) . EDAMA contribution is not financial, rather marketing and HR capabilities, and local networks.

10. The capacity to leverage support from authorities to enable local collaboration

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☒ 0.66	☒ High confidence	☐ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The informants generally agree that there haven't been many issues requiring the support from higher-level public authorities throughout the project. Nonetheless, several steering committee members highlighted the government's commitment to fostering collaboration and supporting project initiatives. This commitment was evident in the active involvement of numerous municipalities, providing services such as helping in the recruitment of trainees and allocating space for community-based campaigns. The government's support extended to allowing project partners to utilize diverse recruitment channels and endorsing advocacy initiatives that underscored the project's impact on youth employment and the transition to sustainability.

Also, the Jordanian-German Center of Excellence for Solar Energy , as part of the Jordanian government, with its regulatory authority, has helped to seek the support from from higher-level government entities. The support include. This support extends to various aspects crucial for project success.

Firstly, the Center liaises with different municipalities in Mafraq to facilitate the involvement of community members in the project. This involves collaborating with municipalities to secure spaces for partners to conduct their campaigns, as well as leveraging their networks to announce the project to the wider community. By engaging municipalities, the Center ensures grassroots participation, fostering a sense of ownership over the project.

Additionally, the Center's connection with other government bodies is instrumental in obtaining necessary clearances for project implementation. This includes navigating regulatory frameworks and obtaining permits required to conduct the project activities. Therefore, reducing barriers to project execution.

Furthermore, the Center's outreach extends to community leaders and organizations, building connections and partnerships at the grassroots level. By engaging with community leaders and organizations, the Center fosters trust, and mobilizes community support for the project. This grassroots engagement ensures that the project aligns with local needs and priorities, enhancing its relevance and effectiveness.

11. Inclusion and empowerment of relevant and affected actors

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☐ 0.66	☒ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

Through intensive three-month training programs (the first phase of the project)[3], the project equips marginalized youth, those without access to university education, with the necessary skills for meaningful participation in the green job market. This becomes especially crucial for individuals who might not have had the opportunity to pursue traditional higher education, making the photovoltaic installation and maintenance training a gateway to inclusion and economic empowerment. Specifically, women are empowered to engage in solar-related activities, challenging societal norms and fostering equitable sustainable development.

The focus on sustainable energy aligns with Jordan's national roadmap toward achieving the Sustainable Development Goals (SDGs). At the macro-level, the project contribution is somewhat limited to Jordan's ambitious target of achieving 50% renewable energy by 2030. However, the pilot project sets out to expand its impact in line with Jordan's renewable energy targets. The project's ambitious aims for 2025 include training several hundred underprivileged young adults, facilitating the workforce placement of underprivileged teenagers, and maintaining a specific number of trainees in YDE's mentorship program. Furthermore, it seeks to expand the training program and explore new segments of the Solar PV value chain, such as sales and finance. While these objectives demonstrate a proactive approach to addressing youth unemployment and expanding expertise in the renewable energy sector, to truly make tangible contributions to Jordan's 2030 goals of renwable enregy, it's imperative for the project to expand further or serve as a replicable model for similar initiatives. This expansion or replication could attract both foreign and local donors, showcasing the project's effectiveness and encouraging investment in sustainable development efforts across Jordan.

And, by addressing youth unemployment and fostering knowledge transfer, the project becomes an instrumental component in advancing Jordan's commitment to the SDGs.Informants engaged in the "Daw" project consistently report on the tangible outcomes related to inclusion and empowerment, in particular, the newfound opportunities for participants. Women, in particular, express appreciation for the skills gained, highlighting how the project provides a platform for their active involvement in the green job market.

[3] [3] At the time of carrying the study, the project is at the first phase(articulated in Axis one and two).Please see page 10 on the axises.

In terms in benefiting the community, locals from Mafraq City, the initiative electrification of a community center not only enhances access to essential services but also fosters community-based collaboration. This, in turn, contributes to elevating the sustainable energy industry in Jordan at a grassroots level.

12. Clarification of interdependence vis-à-vis common problem and joint vision

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☐ 0.66	☒ High confidence	☐ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

In the context of the Daw project, it is widely acknowledged among the informants that each partner brings unique strengths and specific contributions essential for achieving the shared objectives of promoting sustainability and advancing responsible solar PV initiatives. When exploring the interdependence among the participants, a clear recognition emerges regarding the diverse capabilities each partner brings to the table.

For instance, the Jordanian-German Center of Excellence for Solar Energy (part of the Jordanian government) plays a crucial role with its visionary outlook and regulatory authority, setting the framework for sustainable energy practices. The center also acts as a knowledge hub, contributing technical proficiency to the collaboration.

Yellow Door Energy, as a leading private solar energy company, through their collaboration with Actis Acts, contribute financial resources that are vital for project implementation. EDAMA, non- government organization, bring valuable skills and expertise necessary for effective planning and execution. In particular their local networks.

This awareness of each other's skills and resources within the Daw project participants show a level of understanding that goes beyond individual roles, emphasizing the importance of interdependence for successful collaboration. Therefore, this collaborative dynamic is integral to the Daw project's approach, ensuring that diverse strengths are harnessed for the achievement of common sustainability and renewable energy goals.

13. Trust-building and conflict mediation

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☐ 0.66	☒ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

Partners have a history of collaboration on various projects, fostering a foundation of trust among them. This pre-established trust reduces the necessity for extensive monitoring.Informants from the steering committee emphasize the significance of trust in collaboration, highlighting the following:

a) EDAMA has successfully promoted a greener Jordanian economy, establishing a strong reputation.
b) YDE, as a leading distributed solar developer in the region, has a track record of developing projects in Jordan with the government and private investors. Their impact extends beyond financial considerations, aligning with the government's national strategy for sustainability.
c) The Jordanian-German Center of Excellence for Solar Energy, a division of the National Employment and Training Company, has hands-on technical expertise in delivering vocational training and holds authority as a division of the Jordanian government.

Trust is also emphasized in the relationships between project partners and community members. In particular between the Jordanian-German Center of Excellence for Solar Energy , EDAMA and the community (having worked closely with local community for years). Also, a deep level of trust among the formentioned partners with governmental bodies such as Mafraq municipalities as they have collaborated in implementing energy project . Moreover, YDE, as a private company, has established trust with Mafraq municipalities' by collbrating previously on the LED project. The project, facilitated by the collobration of YDE and Jordan Ministry of Energy and Mineral Resources, entails the replacement of municipalities' traditional street lighting units with energy-saving light-emitting diode (LED) units in Mafraq, Ajloun and Jerash governorates.

Efforts to build trust are reinforced through various activities, including information dissemination. The Collaborative efforts between the project and local government entities, through dialogue and mutual understanding, serve as evidence of trust-building and effective partnership(see GF**10 "The capacity to leverage support from authorities to enable local collaboration",** page 24) .

Furthermore , trust is viewed as a direct consequnces of effective risk management, with transparent rules and governance mechanisms laid out in the project description and agreement and proposal, play a key role in fostering trust among project stakeholders, aligning with the project's focus on establishing specific, measurable, and relevant criteria for performance evaluation. The project proposal specify the risks associated with the project with

Legitimate preventions and mitigations framwork, , along with assigning accountability measures.
For example:

a) Risk: Unsafe installation or operation of the 20 kWp Solar PV array at a community health center, leading to injury or property damage.

1. Prevention Method: Oversight by professionals at YDE, clear allocation of legal liability, training, and provision of personal protective equipment (PPE).
2. Accountability: YDE

b) Risk: Inability to attract an adequate number of both male and female trainees.

3. Prevention Method: Effective marketing, deliberate planning for a diverse mix of trainees
4. Accountability: EDAMA, YDE

c) Risk: Lower-than-expected pass rates through the training curriculum, either voluntary or involuntary.

5. Prevention Method: Proactive monitoring of trainee progress, thorough trainee selection process
6. Accountability: Jordanian German Center of Excellence for Solar Energy (training partner), EDAMA.

d) Risk: Lower-than-expected industry placement for trainees upon completion of the course.

7. Prevention Method: Enhanced marketing and local networks.
8. Accountability: EDAMA, YDE

e) Risk: Pilferage of Solar PV equipment from the community health center once installed.

9. Prevention Method: Implementation of fit-for-purpose security measures.
10. Accountability: YDE

Informants from youth trainee express high level of trust in the project's leadership, with many agreeing that the steering committee was approachable, communicated effectively, and provided different level of support, including financial support, such as compensation for transportation and meals during the training. This assistance not only addresses immediate needs but also demonstrates a commitment to creating a supportive and inclusive environment for the youth. This high level of trust was also explained to the positive and enriching technical training.

14. Use of experimental tools for innovation

QCA score:	Scoring confidence:	Data sources:
☒ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☐ Documents
☐ 0.66	☒ High confidence	☒ Observations
☐ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The DAW project does not use any experimental tools for innovation that qualify as either user-centered designs or prototyping, for which reason it scores 0. It does engage in some other forms of innovative tools, however, such as various training components. For example, the Jordanian-German Center of Excellence for Solar Energy, responsible for administering the training component, has developed an innovative indoor training experience. For instance, in the context of providing PVC training, participants can replicate real practical scenarios in the installation and maintenance of PVC systems. Trainees can practice hands-on tasks and acquire practical skills in a risk-free and controlled environment. YDE and Actis Acts provide necessary equipment for practical indoor training.

Informant from the steering committee also pointed out the same. Emphasizing also that YDE in the anticipated second phase, the phase of installing the 20 kWp solar PV system at the community centre, is providing the trainees access to online tailored safety training platform, and ongoing mentorship programme at YDE (transfer of knowledge, skills, and experience from the mentor to the youth trainee).

The Implementation of a mentorship program and online training activities play a crucial role in fostering innovation in the Daw project by providing tangible examples and continuous learning opportunities. Youth can further drive innovation through ongoing education and skill development in online platforms.

15. Ongoing critical self-reflection and learning (i.e., process and/or developmental evaluation):

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☒ Medium confidence	☐ Documents
☐ 0.66	☐ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

Several informants from the steering committee have provided insights into their approach to addressing challenges and fostering continuous improvement. One informant highlights the regularity of meetings within the Daw project, where risks to successful collaboration have been analyzed and revised. Subsequent collective decisions are then made collaboratively to determine the most appropriate strategies for the identified challenges. This participatory approach is aligned with pre-planned risk assessments, accompanied by well-considered preventive and mitigative measures. These assessments are revisited at various project phases, ensuring a continuous monitoring and evaluation (M&E) framework.

Moreover, many informants from the youth trainee group, agreed that the steering committee (YDE, EDAMA, and the Jordanian-German Center of Excellence for Solar Energy) routinely assess the progress of the training. This evaluation occurs through direct observation, obtaining feedback directly from the youth, or employing structured questionnaires (questionnaire at the beginning, midterm, and at the end of the training). The outcomes of these assessments guide strategic adjustments as necessary. This self-reflection is integral to the Daw project's collaboration model, emphasizing active participation from partners regardless of their roles and hierarchical positions in the project. Consequently, the various forms of process and developmental evaluation has substantively helped the collaborative processes of the DAW project by providing organizational levers to tap into the feedback of all participants, which are continuously incorporated into the project.

16. Exercise of facilitative leadership:

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Interviews
☐ 0.33	☐ Medium confidence	☒ Documents
☐ 0.66	☒ High confidence	☒ Observations
☒ 1		

Please elaborate on the reasoning behind your scoring for this governance factor:

The Daw Project is under the leadership and management of a lead actor, with deliverables initiated and defined by Yellow Door Energy (YDE). YDE plays a pivotal role in coordinating project delivery, overseeing the installation of solar PV equipment at the community health center, and providing the first year of Operations and Maintenance (O&M) service for the Solar PV equipment. Although YDE assumes a leadership role, informants stress the collective importance of every partner in exercising effective project leadership. Commitment to deliverables is a shared responsibility, clearly outlined in the project description, which allocates specific responsibilities to each partner.

The core group of actors facilitates leadership in complementary ways. The Daw Project involves a multifaceted approach that utilize the expertise and collaboration of all partners. Yellow Door Energy (YDE) assumes a lead role in project coordination, ensuring that deliverables are initiated and defined. Their role involve overseeing the installation of solar PV equipment at the community center while supplying necessary first-year Operations and Maintenance (O&M) service for Solar PV equipment . Nevertheless, the project leadership integrates the skills and efforts of all stakeholders, beyond YDE's individual efforts.

The core group of actors, EDAMA and the Jordanian-German Center of Excellence for Solar Energy, with YDE in the leadership position, have roles in overseeing different aspects of project development and management. EDAMA, take the lead in the day-to-day management of training activities, trainee selection, and marketing,while the Jordanian-German Center of Excellence for Solar Energy focuses on providing customized vocational and technical training to guarantee the project participants' competency.

Regular communication among partners, including formal and informal meetings and site visits, is essential component for managing multifaceted leadership approach including conflict resolution and managing the alignment of each partner's contribution with project goals. For example, if there are disagreements among partners regarding project timelines or resource allocation, scheduled meetings and site visits were conducted to ensure open dialogue. Some informant mentioned a case where they faced challenges with trainees irregular attendance at training sessions, the project leadership implement several strategies among them are: Developing attendance policies that outline consequences for repeated absences along with implement systems to monitor and track trainee attendance consistently. Conducting discussions with absent trainees to understand reasons behind their irregular attendance, allowing for targeted support. Hence , incentive and transportation were provided, along side showcasing success stories and positive outcomes associated with consistent attendance . All these measures aim to motivate trainees to prfioritize their participation.

Such style of collectives Leadership, yet with a lead actor, encompass a commitment to utilising collective expertise and guarantee the project's successful execution, as one Informant has noted " it has proven to be helpful spesfically in reaching agreement to decisions". At the same time, having a project lead (YDE) acts as a reference for resolving disputes and providing a clear framework for managing potential risks has also helped in managing conflicts that may arise.

Outcome variable: Successfully co-created green transitions

The outcome variable 'co-created green transitions' will be scored in two parts. First, 'co-creation' will be scored based on an assessment of whether the participants in the initiative, project or process engaged in collaborative problem-solving that fostered creative ideas and innovative solutions (data will consist of survey data combined with interviews and documents). Next, 'green transitions' will be scored based on an assessment of whether the initiative, project or process has fulfilled or is expected to fulfill its green goals, ambitions and aspirations (data will consist of survey data combined with interviews and internal and/or external evaluation reports, including scientific publications).

The scoring of this variable is done in two parts:

1. *Is the developed solution based on collaborative problem-solving spurring creativity and innovative solutions?*
2. *Does the developed solution engender a green transition?*

This scoring should be conducted based on both the survey and complementary green outcome evaluations. Please consult Sections 4.4 and 6.10 in the Research Protocol for more details.

1. Is the developed solution co-created?

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Survey
☐ 0.33	☐ Medium confidence	☒ Interviews
☐ 0.66	☒ High confidence	☒ Documents
☒ 1		☐ Observations

Please elaborate on the reasoning behind your scoring for this part of the governance factor, including the data sources used for the scoring.

A series of survey questions focus on the presence of collaborative problem-solving (1), the fostering of creative and innovative solutions (2-6), the support for process, outcomes and the level of engagement (7-12), and the attainment of goals that are robust and serve to enhance sustainability (13-15). See below.

The survey shows that most respondents agreed or strongly agreed with all the questions, revealing a generally positive outlook on the collaborative problem-solving process and co-created solutions within the project. Here are key observations:

Problem-solving Approach: Statements 1, 2, and 3 indicate a high level of agreement that the collaborative problem-solving process effectively utilized diverse experiences and ideas to generate new perspectives and unconventional solutions.

The co-created solution: While there is agreement (Statements 4 to 6) that the co-created solution breaks established practices and disrupts conventional wisdom, there is also a level of disagreement. This might be explained by the fact that the vocational training has been administered before, though the second phase of the project Daw (the installation of solar PV equipment at the community health center, and the mentorship for trainees is new component hence the justification for the percentage of the agreement.

Overall Evaluation: Statements 7 to 10 receive overwhelmingly positive responses, suggesting strong support and contentment with the collaborative process and the anticipated impact of the co-created solution on the welfare and sustainability of the community. Statement 9 stands out with a significant 82% strongly agreeing that multi-actor collaboration was a prerequisite for project success.

Perceived Success Factors: Statement 9 stands out with a significant 82% strongly agreeing 12% agree that multi-actor collaboration was a prerequisite for project success. This underscores the perceived importance of collaborative efforts in achieving positive outcomes.

Innovative Impact: Statements 11 and 15 highlight a positive perception that collaborative interactions have led to innovative solutions and stimulated creative problem-solving. This indicates a recognized impact on innovation within the project.

In summary, the data suggests a generally favorable perception of the collaborative efforts, with acknowledgment of innovation and success factors.

Various documents, such as the the project proposal and annex pointed out the critical aspect of co-creation within the Daw Project. Firstly, the project proposal explicitly mentions that it's a collaborative effort where the lead leader acknowledges the indispensable contributions of all partners. Quaitng a statement at the proposal annex “we believe in this project’s intersectional potential, and strong partnerships”. Also in the project description, it is clearly mentioned that the project correspond to SDG 17 – “Partnerships for the Goals.” This acknowledgment sets the tone for a shared responsibility and collaborative approach to project execution. Further elaboration can be provided on how the roles assigned and specified to each partner were determined and how they align with their respective expertise for the project's success.

Based on the 14 interviews, there is an evidence that demonstrates the Daw Project embraces co-creation by recognizing the expertise of all partners, fostering effective communication, and actively addressing challenges through collaborative problem-solving (sheding the light on the project's adaptability and ability to overcome challenges collaboratively). Quoting informant from the leading committee “ the project ledership is a joint effort designed to harness the strength of each partner. Each takes the lead in delivering specific deliverables that, together, form the base of the project's success to achieve the defined goals”.

Respondents were asked to answer the questions based on a Likret scale from (3 = strongly agree) to (-3 = strongly disagree)

If possible, please insert your survey responses in the table below (in % for each response), including the mean/average % for each survey item.

N= 17	Strong. agree.	Agree.	Slight. agree.	Neither agr/dis	Slight. disagree	dis	Strong. disagree	Mean
1. Problem-solving mobilized different experiences, and/or ideas and/or forms of knowledge to develop new perspectives	56%	24%	6%	6%	0	0	0	2.22
2. Through the collaborative problem-solving process, different experiences and/or ideas and/or forms of knowledge have been mobilized to search for unconventional solutions	35%	47%	12%	6%	0	0	0	2.11
3. The collaborative problem-solving process mobilized different experiences, and/or ideas and/or forms of knowledge to search for solutions that go beyond standard/text-book solutions	53%	24%	24%	0	0	0	0	2.31
4. The co-created solution breaks with established practices	53%	29%	6%	0	6%	6%		2,05
5. The co-created solution disrupts conventional wisdom	50%	36%	7%	7%	0	0	0	2.79
6. The co-created solution offers new ideas to address the green transition problem	43%	50%	7%	0	0	0	0	2.36
7. I'm supportive of the co-created solution	59%	29%	6%	6%	0	0	0	2.41
8. I'm content with the overall collaborative process of the project	65%	24%	12%	0	0	0	0	2.55
9. I feel the multi-actor collaboration process was a prerequisite for the success of the project	82%	12%	6%	0	0	0	0	2.76
10. I'm satisfied by the results of the co-creation effort in terms of expected impact on the welfare of the community	65%	24%	12%	0	0	0	0	2.55
11. The collaborative interaction in the project has led to an innovative solution	71%	24%	0	6%	0	0	0	2.61

12. The actors involved in the project are engaged in collaborative interaction that stimulated creative problem-solving	47%	36%	12%	6%	0	0	0	2.25
13. The co-created solution meets the proposed goals of the project	65%	18%	18%	0	0	0	0	2.49
14. The co-created solution will be durable and robust in the long run	47%	47%	6%	0	0	0	0	2.41
15. The co-created solution is expected to significantly improve sustainability for the whole community	65%	24%	12%	0	0	0	0	2.55

2. Does the developed solution engender a green transition[4]?

QCA score:	Scoring confidence:	Data sources:
☐ 0	☐ Low confidence	☒ Survey
☐ 0.33	☐ Medium confidence	☒ Interviews
☒ 0.66	☒ High confidence	☒ Documents
☐ 1		☐ Observations

Please elaborate on the reasoning behind your scoring for this part of the governance factor, including the data sources used for the scoring:

A series of survey questions focus on whether the project has produced or is expected to produce a green transition aiming to avoid a worsening of the status quo, maintain the status quo or improve the status quo.

Considering if the project did produce any green transition solution: 18% said Yes, while 82% said No. A way to interpret this data is that the survey was administered at the end of the first phase, which is the intensive three months vocational training. In the second phase of the project Daw (the installation of solar PV equipment at the community health center, and the mentorship for trainees) will be core to the producing of a green transition solution. Answering if the Daw project project is expected to produce/have produced a green transition solution aiming to avoid a worsening in the status quo: the majority, 88% believe that the project is expected to produced green transition solutions with the specific goal of preventing a deterioration in the existing situation. This demonstrates a high level of optimism regarding the project's role in avoiding environmental impacts.

When asked if the project is expected to produce/have produced a green transition solution aiming to maintain the status quo: 77% anticipate or acknowledge that the project is expected to contribute to green transition solutions aimed at maintaining the current environmental status quo. This suggests a

[4] By ”green transitions”, we mean objectives and aspirations that correspond to at least one of the Green SDGs (SDG 6, 7, 11, 12, 13, 14, 15). The project does not have to refer explicitly to the green SDGs, but the project’s green objectives

recognition of the project's role in sustaining positive environmental conditions, however it also acknowledge this small, yet very important initiative, need to be expanded to seek a real effect on sustaining the environmental conditions.

As whether the project is expected to produce a green transition solution aiming to improve the status quo: Similar to the second statement “is expected to produce/have produced a green transition solution aiming to avoid a worsening in the status quo”, the majority 88% of respondents believe that the project aims to produce green transition solutions with the goal of improving the current environmental status quo.

The data reflects a belief that the project will produce green transition solutions, with a strong emphasis on both avoiding worsening and actively improving the existing environmental conditions. There is a noteworthy level of optimism regarding the project's potential to contribute positively to the status quo, either by maintaining or enhancing the environmental situation. This can be attributed to several factors: first, the project addresses specific need within the community, and participants can clearly see that regardless of it's a small scale, it has responeded to much needed area of intervention. Spesifcally, vocational training that can foster youth integration in jobs in renewables. Second, the project involves empowering youth to be part of the solution, agent of change, spesifcally underprivileged young adults who otherwise would not have access or financial means to cover the solar PV training, which evantully would help them find employment in green jobs. Finally , even though the project is small in scale, participants see it as a stepping forward towards larger initiatives that can produced a green transition.The absence of respondents expressing uncertainty ("Don't know") suggests a degree of confidence among the surveyed responded regarding the project's objectives and outcomes.

It is important to explain the number of participants who expressed skepticism or hesitation , could also be attributed to two reasons: first, the project being a piolt project . Participants who said no question the feasibility or effectiveness of the project objectives.Second, the limited sustainable benefits.While the project aims to address important issues in Jordan , in particular , reducing youth unemployment and promoting green transition, the specific obejctives may be perceived as modest to achieve meaningful impact (Targeting 20 trainees selected, 90% Pass rate, 50% Placement in industry, 20 kWp Incident-free solar capacity). Hence , the score of the GF. However, it is important to address these concerns by demonstrating the project's potential for success and its ability to achieve meaningful impact.

In addition to the survey data, the project proposal support our scoring of the outcome variable. It summarizes the goals of the Daw Project as well-aligned to Jordan agenda in achieving UN Sustainable Development Goals:

1. No Poverty
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation, and Infrastructure

10. Reduced Inequalities
11. Sustainable Cities and Communities
13. Climate Action
17. Partnerships for the Goals

Focusing on certain areas :

a) Gender: the programme will be designed to support gender equality and accept a diverse mix of trainees,hence, strengthing women participation in green job and acces to vocational traning in the area of study.
b) Skills Development: the Project aims to equip trainees with skills related to the installation and operation of solar PV technology, to the extent that they could gain professional employment in the area.
c) Young adult employment in green jobs:overcoming the barrier of mismatch between education outputs and the skills required by the green labour market,through fostering a vocational training that will equiping participants to join Jordanian PV-related firms (e.g. Nur Solar Systems, Philadelphia Solar, Green Environment for Renewable Energy GreenViro, Hanania Energy, Israr Engineering, etc).
d) Environment: The first year of the Project will culminate with the installation of a 20 kWp Solar array. This will reduce its carbon footprint. This correspond with key action areas (catalyzing renewable energy investment , strengthen local industries and create jobs in renewables)
e) Financial Inclusion: The Project will target young adults who otherwise would not have access or financial means to cover the solar PV training.

However, as it is clearly mentioned in the document, the project impact and successes should not be limited to direct outcomes, but rather to inspiring a replication or scaling up by the parties and different colloabrative entities. Focusing on the following area of expansion: the number of the trainees, expanding training curriculum, explore and develop other areas of the Solar PV value chain (i.e. Sales, Finance). Some informants expressed a desire to expand the the training sessions to include an educational component on sustainability (environmental conservation, Climate change, International development, global sustainability efforts).

Finally, **the interviews** showcase positive optimism in particular targeted towards building a skilled workforce for the renewable energy sector. Many informants pointed out that this project could be perceived as a potential base for directing efforts towards empowering young individuals within the sector. Some pointed out that the project not only benefits individual participants and could contributes to economic development and sustainability, but also it raised awareness among the community on the importance of gaining knowledge and skills in emerging industry. Two of participants have secured jobs in the industry before graduation , this indicate a positive potential impact of expanding and scaling up similar projects.

If possible, please insert your survey responses in the table below (in % for each response).

1. The project:	Yes	No	Don't know
…did not produce any green transition solution	18%	82%	0
…is expected to produce/have produced a green transition solution aiming to avoid a worsening in the status quo	88%	12%	0
…is expected to produce/have produced a green transition solution aiming to maintain the status quo	77%	23%	0
…is expected to produce/have produced a green transition solution aiming to improve the status quo	88%	12%	0

Please list all the informants you have interviewed for the case study (list project role + interview date):

The steering committee(total number of the interviewees 6):

a) Design engineer at Yellow Door Energy and the focal point for "Daw Project".
b) Management team at the Jordanian German Center of Excellence for Solar Energy.
c) Project Officer at EDAMA.
d) Training and Curriculum Development Management at the Jordanian German Center of Excellence for Solar Energy.
e) Electrical Engineer at the Jordanian German Center of Excellence for Solar Energy.
f) Trainer at the Jordanian German Center of Excellence for Solar Energy.

Youth participants:

We interviewed 4 males and 4 females.

Please list all the observations you have made (type of meeting/workshop/etc. + observation date):

a) We attended three sessions in Germany's solar energy center of excellence in Mafraq governate. The sessions were: one on capacity building for PVC installation (23 participant attended), another on practical technical installation of PVC (24 participants), and the third was a meeting between Yellow Door Energy, EDAMA, the German center of excellence for solar energy (7participant attended).
b) We went to the graduation day, celebrating young Jordanians who graduated with technical and educational diploma. The participated youth young people received a certified certificate, lunch and cakes were offered. We took lots of photos during the day.
c) We attended a lunching event and workshop organized by EDAMA on "From Waste to Wealth, the Composting Scene in Jordan". local, international, governmental and nongovernmental actors attended the event. The panel discussion was very informative, in particular to the result of this project "addressing challenges and opportunities in implementing composting initiatives in Jordan", and the co-creative collaboration among the experts and stakeholders from the government, private sector, and civil society.

Please list all the documents you have analyzed (document name + source + year):

A National Green Growth Plan for Jordan, 2017. Available at: https://www.greengrowthknowledge.org/sites/default/files/A%20National%20Green%20Growth%20Plan%20for%20Jordan.pdf.

ACTIS ACTS (website). Available at: https://www.act.is/people/actis-acts/

Al-Fawwaz, T.M. and Almasaeed, S.G.,2015. Trends of the citizens of Mafraq Governorate towards the causes of economic poverty. Available at https://iiste.org/Journals/index.php/RJFA/article/download/24571/25147

Department of Statics: 23.1% unemployment rate during the third quarter of 2022(2023). Available at: http://dos.gov.jo/dos_home_e/main/archive/Unemp/2022/Emp_Q32022.pdf

EDAMA,2023. DAW Project Agreement. Available at: https://edama.jo/edama-and-yellow-door-energy-sign-agreement-to-provide-solar-pv-training-for-underprivileged-youths-in-jordan/

Hashemite Kingdom of Jordan 2022–2050 National Climate Change Policy, 2022. Avaliabe at : https://www.preventionweb.net/publication/national-climate-change-policy-hashemite-kingdom-jordan-2022-2050.

International Trade Administration. Jordan renewable energy. Available at: https://www.trade.gov/country-commercial-guides/jordan-renewable-energy

Jordan 2025: A National Vision and Strategy, 2015. Available at: https://climate-laws.org/documents/jordan-2025-a-national-vision-and-strategy_a5f6?q=israel&id=jordan-2025-a-national-vision-and-strategy_46fc

Jordan's Way to Sustainable Development,2015. Avaliable at: https://sustainabledevelopment.un.org/content/documents/16289Jordan.pdf

Malkawi, k, 2015. 'Mafraq, Ramtha population doubled since start of Syrian crisis'. The Jordan Time. Available at: https://www.jordantimes.com/news/local/poverty-rate-241-requires-policy-change-%E2%80%94-experts https://jordantimes.com/news/local/mafraq-ramtha-population-doubled-start-syrian-crisis%E2%80%99

Ministry of Interior, Jordan Governorates and Sectors. Available at: https://moi.gov.jo/EN/ListDetails/Governorates_and_Sectors/57/7

National Action Plan for Green Growth for 2021-2025 (2020). Available at: https://www.moenv.gov.jo/ebv4.0/root_storage/ar/eb_list_page/20022_jordan_energy_v03_rc_web.pdf.

National Energy Strategy 2020-2030 avaliable at: https://www.memr.gov.jo/EBV4.0/Root_Storage/EN/EB_Info_Page/ActionPlanEN2020.pdf

The Investment Promotion Strategy 2023-2026. Avaliable at: https://www.moin.gov.jo/EBV4.0/Root_Storage/AR/Investment-Promotion-Startegy-MOIN.pdf

The National Strategy for the Jordanian Cooperative Movement 2021–2025, 2021. Available at: https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@emp_ent/@coop/documents/publication/wcms_836642.pdf.

UNHCR, 2024. Syria Regional Refugee Response, Jordan. Available at: https://data2.unhcr.org/en/situations/syria/location/36

Yallow Door (website). Available at: https://www.yellowdoorenergy.com/images/YDE%20Company%20Profile%20-%20English.pdf
http://reee.memr.gov.jo/Pages/viewpage?pageID=2065

Please note the response rate for the survey/measurement of outcome variable:

We conducted 12 interviews with Jordanian actors. Of these are: 1 from **Yellow Door Energy**, 1 **EDAMA**, 4 **The Jordanian German Centre of Excellence for Solar Energy**, 6 **Jordanian youth**. The survey was administered to 15 people and we got 15 replies, thus producing a high response rate of 100%.

The survey was administered in person, a paper questionnaire, by Walaa Al Husban.