Simplified Environmental and Social Impact Assessment (ESIA)

For

Promotion of applicable smart approaches of eco- friendly, climate-smart green solutions and environmentally agro-practices for vulnerable site schools

The screening Assessment

To determines whether to conduct a simplified or a full environment and social impact assessment (ESIA).

1) Does the pilot intervention focus on at least one of the three activities: production, processing/value chain and construction? [×] Yes [ ] No	
2) Does the total annual budget ≥ 1 million SEK? [ ] Yes [×] No	

Based on the above screening assessment, simplified environment and social impact assessment (ESIA) will follow.

Impacts of the sub-programme on the area

1. What is the focus of the sub-programme / project (it can be multiple options)?

☐ Advocacy activities
☐ Farm-led / production activities
☑ Construction activities
☑ Capacity building activities
☐ Value chain activities / activities at factory level

2. Is ECCR the principle focus of the programme/project?

Yes

3. What is the problem that the sub-programme / project aims at solving?

Weak awareness of environmental issues and climate change among societies classified as most vulnerable and affected by climate change and the environment. Therefore, the idea of pilot came to raise awareness of environmental issues and climate change and to propose climate smart solutions that are applicable in these societies, where male and female school students were targeted to raise their awareness so that they would be able to adopt these ideas and climate-smart solutions and disseminate them in their communities.

4. How will the sub-programme / project solve the problem?

The pilot will be carried out in boys and girls schools so that the students will be the portion of society capable of spreading environmental and climate awareness, as the pilot will cover the theoretical and practical aspects of hydroponic gardening, composting and raised-box food growing.Since the most vulnerable communities affected by climate change and the environment suffer from a scarcity of water resources, and this is reflected in the nature of the agricultural pattern that depends on rain as a source for irrigating plants and limiting the crops cultivated to them to limited crops, a model was made to exploit gray water as a resource for water used in agriculture and to exploit organic materials produced from farms or homes in the manufacture of compost and to make use of solar energy as a clean source of energy.

5. Could the sub-programme / project have any negative effects on the environment, including the climate or increase vulnerability to disasters?

In general, the pilot with its models of hydroponics, solar energy, compost manufacturing, gray water treatment are environmentally friendly models and there are no negative effects

or damage to the environment resulting from the application and use of these models, except that irrigation of plants with treated gray water continuously may cause a problem with some properties of the soil in terms of raising the level of salinity, so this problem was overcome by irrigating plants with fresh water from time to time in order to wash the accumulated salts in the soil surface and get rid of their negative effects on the soil and plants. If proper attention is not given to the maintenance of the equipment supplied to the schools, it will deteriorate beyond usability and become trash. This would negate its potential to raise awareness of green technologies. The problem can be prevented through an ongoing relationship with project beneficiaries, and development of a maintenance plan.

6. Has the sub-programme / project been adjusted to avoid, or reduce, and manage the negative effects on the environment?

[×] No. This pilot is characterized by the absence of any negative effects on the environment in its four models, as the using solar panels, hydroponics and composting have no negative effects on the environment, provided supplied equipment receives adequate care. As for gray water recycling, the expected negative impact is the accumulation of salts in the soil. It is the result of permanent irrigation with treated gray water, so this problem can be alleviated by irrigation with fresh water from time to time to wash away the accumulated salts in the soil.

7. Could the sub-programme / project offer any positive contributions to an environmentally sustainable environment?

Pilot has good contribution to spreading sustainable environmental and maintaining local ecosystem ideas related to natural resources sustainability. As the use of solar energy to provide needs of hydroponics model and gray water treatment plant model of electrical energy is an example of the sustainability of providing basic inputs for the full operation of the system. In addition to the availability of plant organic materials resulting from

hydroponics agriculture In addition, the exploitation of a water resource such as gray water after treatment is another example of the exploitation of available water resources in a sustainable manner and reduces the pollution caused by this water in the event of disposal in cesspits.

In addition to the above, the cost of operation and maintenance for these models is consider low and it is easy to carry out maintenance operations for them through the existence of a plan to train students to operate and maintain the models so that they work with high efficiency. Some of them are designed and manufactured locally, with the exception of solar energy that is import from abroad, but sufficient expertise is available to install and maintain it in the local market.

Pilot provides solutions for the people in the most vulnerable communities affected by climate change. To exploit available resources to the maximum extent possible. Such as the exploitation of limited spaces on solar panels and hydroponics, which can be implemented on the roofs of houses or can be applied to families that do not own agricultural land and do not have a permanent source of water. So that it enables them to produce food and energy within limited resources and capabilities In addition, the four pilot models do not cause any health damage and do not produce any harmful residues for the environment or humans, so these features support sustainability.

8. Has the sub-programme / project been adjusted to enhance the positive contributions on the environment?

☑ Yes.

Optional questions: Please note 9, 10 and 11 are optional although you are strongly encouraged to answer the questions.

9. We Effect defines a conflict sensitive approach as: (1) analysing and understanding the context and the impact of conflict or risk of conflict, (2) ensuring that our intervention or programme at a bare minimum does no harm, but also that the programme is adapted to minimise negative and maximise positive impacts on conflict and peace. We Effect considers conflict-affected countries to range from countries with civil wars to contexts in

which conflict amongst communities is less obvious, but communities face threats and insecurity, which might escalate into conflict and violence. We Effect recognises gender inequality as a driver of conflict and therefore, in adopting a CSA, the organisation works to shift harmful social norms that perpetuate gender inequality. This is particularly important in all We Effect projects in recognition of the multiple stigma and exclusion that women can experience. We Effect also tries to ensure that sexual gender-based violence (SGBV) is addressed in programming. **Based on this definition could the subprogramme/ project worsen the impact of conflict or increased the vulnerability or risk to any population or group?**

The proposed pilot interventions and activities acts in a way that reduces conflict within the targeted community and gender dynamics within the community by both boys and girls participation.

10. What has been proposed to ensure a conflict sensitive approach in this sub-programme/project?

There is no impact of pilot activities on conflict in this pilot models, except during pilot design gender inequality have been taken into account as a driver of conflict by sharing boys and girls in all activities.

11. To what extent will this project recognize and affirm the linkages between the triple nexus of conflict, environment and human rights?

Climate change and environmental degradation impacts on the area

12. What are the current and projected impacts of climate change and environmental degradation in the programme / project area(s) (environmental aspects)?

In As Samou' area Spring begin in late March and early April, , annual average temperature is about 32 C^{o}, and annual average humidity is about 16%. In general, annual rainfall have fallen below 300 mm, and during the previous years, a rise in temperature was observed for some summer days. Also, temperature is lower in winter season for some winter days. One of the most prominent manifestations of the decline in average rainfall is the lack of

flow for As Samou' valleys streams since 2004, in addition to the decline in rain-fed cultivation areas.

Impacts on the rights-holders

13. What are the current and projected social impacts as a result of the identified climate change impacts and the environmental degradation issues?

the current impact of climate change and environmental degradation in As Samou' area - that mentioned in Q12 - was reflect on social situation, since climate change led to the emergence of problems in the water sector, whether for domestic or agricultural use, which increased the purchase expenditures to fill the water deficit. The priorities became to secure water for domestic consumption at the expense of the agricultural sector, which is one of the most important sources of income for the family in the town of As-Samou', especially that the population depends on agriculture. The rain-fed supply of fodder to the livestock sector, and with the decrease in rain rates, the agricultural and grazing areas declined, which increased the demand for high-priced manufactured feed, which increased the emergence of problems of competition for water at the expense of low-income people.

As Samou' town also suffers from the lack of a sewage network. As the geographical nature of the town's location and the solid rocky belt, and the residents' dependence on dull pits with a limited shelf life and limited absorptive capacity, led to the emergence of a new health problem in the town, such as the leakage of wastewater and the emergence of swamps with foul smells and torrents on public roads. It led to the emergence of problems in social relations due to the grumbling of the neighbors about the smells resulting from the cesspits.

In addition, changes in temperature, bad in the summer or winter, increase the pressure on the electricity sector, which suffers from deterioration in the public network and the lack of maintenance, which exacerbates social problems. Due to power outages in some

locations in the town due to the increased electrical loads and the inability of the network to Consumable capacity.

The limited awareness and lack of efficient management capacities to adopt with climate change impacts will negatively affect the availability of sufficient natural resources and will increase vulnerability to land and natural resources degradation. Malpractice of land and natural resources use and management will lead to underdevelopment and social injustice. The community no longer practices good soil management including manufacturing compost from biodegradable household waste. The pilot hopes to help restore such good practices.

14. To what extent will the identified climate change impacts and environment degradation exacerbate or worsen existing conflict?

The continuation of climate change impacts and the failure to take steps of adaptation and mitigation, leads to an increase negative impact that reflect on the community. Water scarcity in As Samou' area, that suffers from increasing demand of water, especially with a severe shortage in the public water network and the scarcity of water resources, which is mainly reflected on the output of agricultural lands and Pastoral lands and the livestock sector, which is one of the most important economic resources in the town. On the other hand, the lack of sanitation services and scientific environmental methods for the wastewater disposal process, and the consequent social problems and complaints in As Samou' community. That would lead to the weakness and fragility of social relations. Apart from the weakness of the public electricity network and the failure to find projects and solutions to reduce electrical consumption, that all these problems are negatively and severely reflected on the lives of individuals and the lack of well-being and food security.

15. How will the identified negative effects of the intervention on the environment impact the targeted women and men?

The environmental and climate-smart agricultural pilot components are designed to be without any negative impact, but it is expected that some problems will appear during the installation and implementation of the pilot components such as the noise of work, where the operation of machines at inappropriate times leads to the annoyance of the neighboring population of women and men or when the pilot is transferred and circulated and some of them begin to be established in Residential homes, such as the gray water treatment unit, will be difficult for women to carry out maintenance work because of the high effort required to build them.

As for the establishment of a hydroponics unit, it may result in doubling the effort and creating a new job for women at the expense of the recreational time that should be allocated within the daily program for women and the economic and social conditions that require men to work for long hours outside the home to secure an economic source of income require women to do all Housework, in addition to managing and following up on the hydroponics unit, which needs constant monitoring and follow-up, at the expense of women's time. The solar cell unit also needs follow-up, but in a lesser way than the hydroponic unit, which may be stressful for women.

With regard to diseases, the models, if they are fully implement, including the solar cell unit, hydroponics, and gray water treatment unit, may cause psychological stress on women because it requires additional time and effort. In addition to the arthritis that most women suffer from because of daily housework and may require implementation, these units study the health status of the family, especially the women so that only one unit is established.

It is possible that random and irregular installation of solar cell units on the roofs of the houses will have a negative impact on the rural aesthetic landscape of the town. In addition to the decrease in the rates of rain water collection in the winter season, as most of the residents of the town of Samou' depend on water harvesting work on the roofs of the houses mainly. Which requires the participation of the local authority in the site (AS Samou' Municipality) to organize its installation in a way that does not affect the above.

16. The identified positive contributions to environmental sustainability of the intervention impact the targeted women and men? Remember – it is not because the intervention contributes to environmental sustainability, that the programmed / project necessarily contributes to gender equality and equity!

The environmental and climate-smart agricultural pilot units was design to work in an interconnected to optimize the use of available resources to the maximum extent possible. A series of theoretical and practical training activities will implement for students and the local community, which positively reflect in the transfer and expansion of the models' work, which contributes significantly in rationalizing energy and water consumption and managing wastewater for use in agriculture.

Therefore, spreading awareness about the use of renewable energy sources, gray water management methods, the use of simple hydroponics models, and the initiation of women and men to apply them, leads to a reduction in consumption from the electricity and water network. Consequently, a reduction in electricity and water bills. Those expenses reflect on the economic situation of the family (women and men) and have psychological and social effects within the family (women and men).

Recycling wastewater also leads to elimination of the phenomenon of torrents and swamps nearby the houses that depend mainly on limited capacity pits to absorb the amount of wastewater generated from the house and reduce the spread of unpleasant odors and spread of harmful insects and transmitters of infectious diseases that affect women and men.

The water output from the gray treatment unit will use to irrigate tree plants in the home garden, which reduces the level of water expenditure of the family.

There is no doubt that reducing the family's financial expenses for the electricity and water sector secures financial savings that the family can spend on other needs, including health, education and food provision, which enhances family stability, which is positively reflect on the integrity of community, especially women and men .

Addressing the environmental-social impacts on the area

17. Has the sub-programme / project been adjusted to avoid, or reduce, and manage the negative effects on the social and gender dynamics?

☒ Yes.

☐ No. Please explain why. No more than 100 words.

18. What has been proposed to reduce the negative impacts on social and gender dynamics within the community and promote positive contributions?

- The pilot promotes positive contributions on social and gender dynamics within the community since it is idea alignment with the social norms and contribute to improving social and economic conditions, and has a positive impact on the environment surrounding the residential area. In addition dissemination of knowledge and contribute to raise awareness with in the community related to Environmental and climate practices, Climate-smart agriculture interventions, Environmental Education.
- This pilot was designed to educate students in primary and secondary levels both in girls and boys' schools, which lead to enable girls (females) to have the same opportunity to learn, compared to boys (males) and assure girls participation in piloting of green technology. All boys (male) and girls (female) behave the same and received the benefit of this innovative and smart technology for best environmental practices and agricultural ecosystems. So focusing on girls, while they will enjoy their rights in practiced pilot applications and support through training theoretical and practical procedures.
- The project contributes to increase women active participation and involvement in decision making promote gender equality and increase access to knowledge rights,

and improve their capacities in terms of good agricultural production practices and land management.

- Increased knowledge and learning with special focus on youth (girls and boys) at the most vulnerable sites will lead to inclusive and successful management of natural resources and successful land governance.
- Activate Environmental School Clubs for boys and girls through conduct training and practical workshops and observe the climate friendly models.
- At community level, more attainment of equitable and social justice through more support and knowledge in Climate-smart agriculture interventions and Environmental and climate practices. Moreover, mainstreaming of the pilot idea among locals household and community levels through school students who attended the trainings and operated the pilot components.
- Put some condition requirements for implementation to reduce the negative impacts like performance bond guarantee ,obligating the contractor who will implement the project in terms of ensuring general cleanliness and order at the implementation sites for pilots at all times, and
- Disposal of solid waste in the surrounding areas should be prevented during the construction phase, and
- Taking the necessary precautions to reduce the negative effects of dust, dirt and noise resulting from construction operations on the surrounding environment, and
- First aid equipment and supplies at the work site, bandages ...etc. will providing by the contractor.
- Taking into account the public perception of aesthetic issues through consultation with the local community during planning and before project components implementation.
- Avoidance of areas touching sites with ancient history and heritage resources in the schools.
- Advice sought on planning/consenting/permitting from local regulatory authorities and any environmental assessments required (Ministry of education, Al Samou'

municipality, Palestinian Agricultural Disaster Risk Reduction and Insurance Fund). In addition to Community consultation undertaken.

- Contractor will provide a fully wrapped plant defects warranty for a period of at least 6 month following the date of provisional acceptance. This makes the contractor responsible for the rectification of any defects that may be identified during this period.

19. Could the sub-programme/project have any other positive impact on the social and gender dynamics within the community?

Increased awareness of the importance, benefits of smart agricultural and environmental practices application and its role in sustainable natural resources utilization and management and mitigating the risks of climate change, at individual (boys and girls of the schools), household (Families of boys and girls students), and community levels (expansion of the idea of smart agricultural and environmental practices application and educated in schools and vulnerable communities.

20. Has the sub-programme / project been adjusted to enhance the positive contributions on the social and gender dynamics?

☒ Yes.

☐ No.

21. What are the planned capacity building interventions to address (i) the identified negative and positive effects on the environment and community of the sub-programme / project, and (ii) the climate change impacts?

During pilot implementation 16 theoretical and practical training will conducting for two target schools on viewing with its four models, which include solar energy, hydroponics, composting, gray water treatment, (6 training* 2 school) ,and environmental clubs in other

four schools in As Samou' (1 training*4 schools). Take into consideration these models are climate friendly environmental, agricultural, and developmental models of natural resources utilization and sustainable management.

This training session's aim of increasing knowledge for students on these practices and interventions. As well as to comply with – in practical way- school curriculum to be reviewed and developed and raise environmental-awareness among students in the schools, and how to mitigate the impact of climate change and providing climate friendly solutions for local community problems that considering most vulnerable to climate change.

22.Is there capacity at organisational level to implement the mitigation measures that emanates from the ESIA analysis or will you have to consider bringing in (a) technical partner(s)? To what extent does the technical partner have gender expertise?

Yes, there are capacities at organizational level. LRC through its human resources and accumulative experiences in GAP, natural resources management, agriculture, human rights and environment issues will be able to implement the mitigation measures.

In addition, the project partners have long-term experiences in these issues and good relation with society components and community actors at the targeted areas at governmental and non-governmental levels.

23.Are the current and projected impacts of climate change and environmental degradation likely to impact the sustainability of the contribution?

☐ Yes. Please fill in the ESIA management matrix below (Question 14).

☒ No. Please explain why. No more than 200 words.

Related to climate change and environmental deterioration contribution to the sustainability of the project, any possible effects taken into account in the design and specifications of the small hydroponics greenhouse. As a specialized and professional institution will do the design "the Palestinian Fund for Agricultural Disaster Risk Reduction and Insurance", to be able to face any hazard from the risks of climate change due to storms, strong winds and rain.

24. Please fill in the ESIA management matrix and incorporate the mitigation measures into your activity plan. NB: Below are just examples in the table! Do not copy paste these.

Nr.	Climate change impact / Environmental issue/Women's rights /Conflict issue	Issues identified by the rights-holders	Identified impacts from the ESIA analysis (technical angle)	Level of importance: Critical; High; Medium*	Mitigation measures / points of action	Timeline	Frequency of monitoring	Budget / action	Source of finance / donor

* Level of importance: **Critical; High; or Medium**
  - **Critical:** Implemented < 6 months
  - **High:** 6-12 months
  - **Medium:** > 12-18 months