

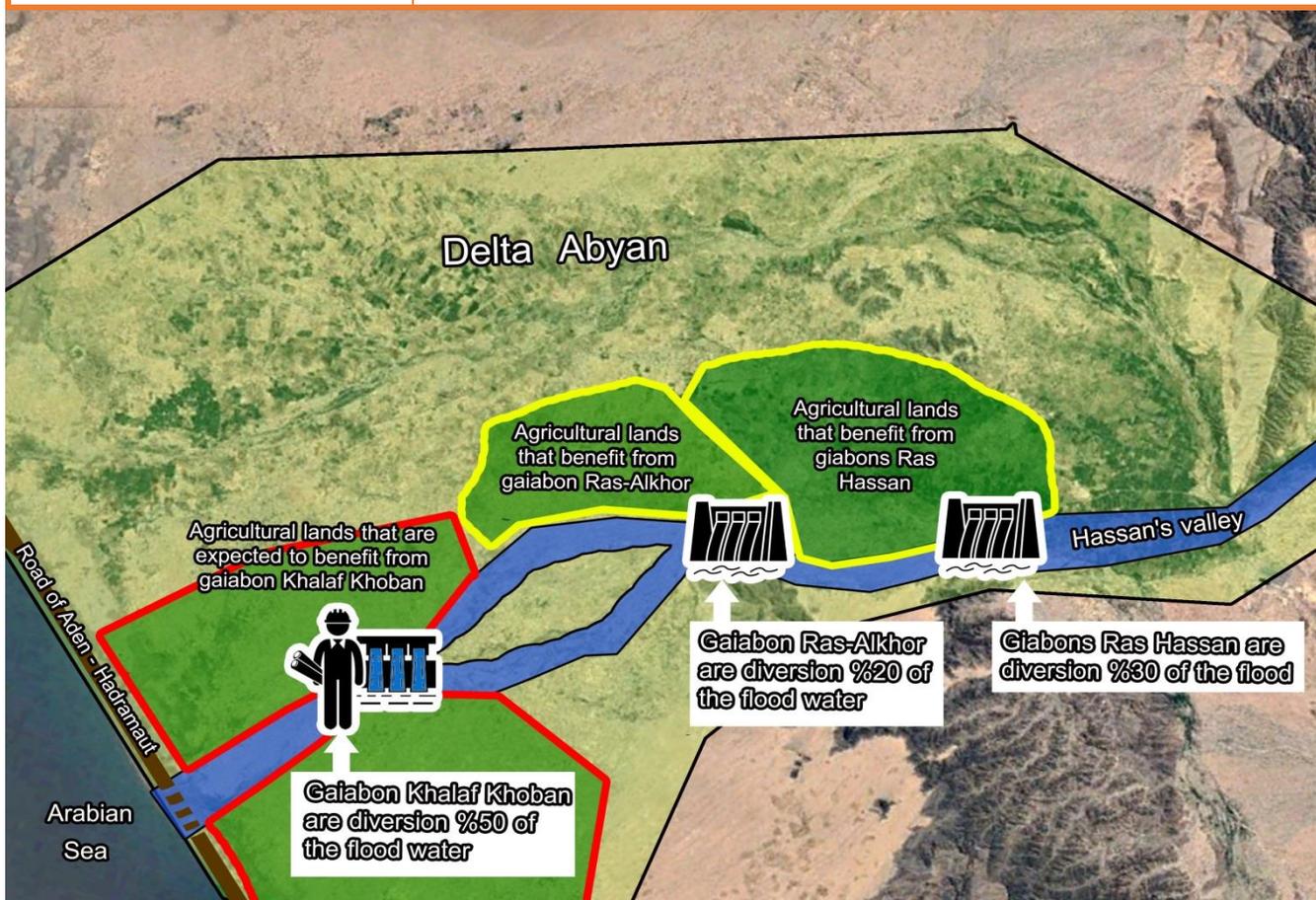
# CARE YEMEN

## Program Quality Unit



Lesson Learned from the construction of a 1800m<sup>3</sup> capacity gabion in Wadi Hassan Valley, Khanfer district, Aden governorate under Food for Assets (FFA) Project

Project Name:	Food for Assets (FFA)	
Project Duration:	Start Date: 1 June 2020	End Date: 31 Aug 2021
Program:	Strengthening access of vulnerable households to equitable social safety nets and basic services in Yemen	
Donor:	WFP	
Province:	Abyan Governorate	
District:	Khanfer	
Community/Village:	Villages (Al-Dergag, Al-Komblyah, Maykalan, Kadmat Al-Saeed Qasem and Obar Othman)	
Sector/type of activities:	Construction of 1600 m <sup>3</sup> capacity Gabions in Wadi Hassan valley	
Date Lessons learned are recorded:	Aug 2021	



<p><b>Situation</b></p>	<p><b>What is the specific situation that the lesson learned relates to?</b>  It is about this asset that serves and protects more than 5,000 acres of agricultural land from drought and adds value in different aspects such as increasing underground water level of Abyan and Aden, as such, leading to diversified livelihood options e.g. livestock rearing and bee farming.</p> <p><b>How is this impacted by the local context/environment/culture?</b>  The agricultural sector is one of the most important economic sectors in Abyan governorate, and the main source of income for most of the people, as many of them are engaged in agriculture activities. Abyan governorate is famous for its agricultural valleys including Wadi Banna, Wadi Hassan, Wadi Delta Abyan, Delta Ahour.</p> <p>Because of previous conflicts and wars that occurred in Abyan, the irrigation system was destroyed and was subjected to destruction and neglect. The Abyan Delta agricultural area located in the districts of Zanzibar and Khanfar in Abyan governorate experienced high flow of water from seasonal rainfall, however, the flow of water irrigated a small part of agricultural areas in Khanfar and Zanzibar districts. The bulk of these flood water went into to the sea, as well as causing damages such as eroding farmers' lands, damaging roads, damaging irrigation channels, bridges, and even the destruction of homes that affected some villages and population centres.</p> <p>After the failure of the dam project in Wadi Hassan in year 1992, many irrigation channels, including Hussein Canal, were deprived of floodwater, which led to the drought of agricultural lands, in the process, depriving more than 2000 families of their main source of income. Hussein Canal covers more than 5000 Hectares of agricultural land that has been deprived for more than ten years of seasonal floods, which is its main source of irrigation by torrents.</p> <p>In this project, five villages (Al-Dergag, Al-Komblyah, Maykalan, Kadmat Al-Saeed qasem and Obar Otman) that are inter-connected as a sub-district were targeted and benefited from the floodwater that came through the Hussein Canal. Based on the community leaders and irrigation office's request, a 1800m<sup>3</sup> capacity Gabion (360 inter-connected sub-gabions each with size 5m length X 1m depth X 1m breadth) covering a distance of 105 meters was constructed in Wadi Hassan to bring water from the valley to Hussein main channel for irrigation for villager's lands by floods and torrents water.</p>
<p><b>Intervention /Action</b></p>	<p><b>Describe the action you took. Who took this action, what did you do, how and why?</b>  During the FFA project that started in Aug 2020, the need to address lack of water for agriculture activities was highly requested by the communities and local authority who encouraged CARE to intervene in western side of WADI Hassan as CARE has previously intervened and successfully constructed 210 Gabions in Abr Al-Khor in East Wadi Hassan in 2019.</p> <p>Under CARE's Aden field team coordination, 170 families were engaged on this project. Key tasks for these families were collecting and arranging rounded stones from Al-Wad, digging and removing waste from the site, bindings gabions by iron wires for 360 inter-connected gabions, installing gabions after filling the rounded stones. Each family sent out one family members as direct beneficiaries to participate through a "food for assets" payment modality. A total of 4,000 YER was paid each day per family to cater for food prices, and the work took 15 days. The location to install these gabions was selected based on various factors including the proximity to the hills that guaranteed high possibility of tapping rainfall runoff water before it spilled away.</p>

<p><b>Outcome</b></p>	<p>What happened as a result of your action? - Was the outcome positive or negative, intended or unintended? What evidence do you have that this outcome happened as a result of your action?</p> <p>It is worth noting that this asset serves and protects more than 5000 acres of agricultural land from drought and adds value in different aspects as follows:</p> <ol style="list-style-type: none"> <li>1) It protects the amount of water that could have otherwise go to waste into the sea and aids in irrigation while at the same time increases the level of underground water recharges that feeds 12 nearby wells that serves five villages in Aden and Abyan governorates. The minimum depth of these wells is 80m. The farmers highly depend on this water for agricultural purposes.</li> <li>2) Installation of these new 360 inter-connected gabions will encourage farmers in the vicinity of target area to reclaim the equivalent of 5,000 acres of agricultural lands. Previously, due to water shortages, most of the land became dry and most farmers abandoned their lands. It is expected that after the intervention, most of the landmass will become cultivable, and this will encourage farmers to return to work and restart crop production.</li> <li>3) The constructed gabions will help to reclaim the land as described above, leading to diversified livelihood options for at least 2000 families e.g. livestock rearing and bee farming (since the land will be green, the bees can easily find a good environment for honey making).</li> </ol>
<p><b>Lessons learnt</b></p>	<p>What would you do again and why?</p> <p><i>Establishing a third gabion in the Khalaf Khoban area located in the Delta Abyan works to block the flood and redirect them to agricultural lands instead of flowing to the sea.</i></p> <p>According to information from the Office of Agriculture and Irrigation in Abyan Governorate approximately 50% of the floodwater is diverted currently through the Gibbons Ras Hassan and Ras-Alkhor canals/villages to the agricultural lands, while 50% of the floodwater goes directly into the sea. However, in an event a third gabion is established in the Khalaf Khoban area, the floodwaters will be completely impounded and the flood water will be distributed through the canals and end up in the area southeast of Delta Abyan and support approximately 15,000 acres of decertified agricultural area. This will help to irrigate agricultural lands that have not been irrigated for 40 years, will prevent soil erosion and desertification, maintain the groundwater level and prevent salinization. In addition, this will help in the reclamation of agricultural lands estimated at 1500 acres, improve the standard of living of the population and increase agricultural and animal wealth in the area.</p> <p>If the desired gabion in the Khalaf Khoban area is completed this will led to the prevention of flood water from cutting off the international road between Aden and Hadramawt during the flood season, in addition to agriculture benefits mentioned above. This international line receives the passage of goods from the port of Aden to the rest of the Yemeni governorates.</p> <p>What would you do differently and why?</p> <p>If given an opportunity, we will plan and implement similar projects using the same approach since the outcome has proved to have significant direct impact in the form of improved livelihoods for target population. There were also some indirect/unintended positive benefits such as the increase of water levels in nearby water wells, GVB-related outcomes such as the reduction of conflicts among families and reduction of engagement in gun groups).</p> <p>Perhaps an increased scope to target more potential sites could have been ideal. This includes intervention such as the construction of a Gabion with a length of approximately 150 meters (500 inter-connected gabions each with 5m<sup>3</sup> capacity) in the Khalaf Khoban area. This project will</p>

achieve the main goal of controlling flooding of Wadi Hassan and to regulate the distribution and irrigation of Agriculture from floodwaters.

**What is the key lesson that you have learned as a result of the outcome of your action?**

The most important lesson is the orientation towards projects that achieve sustainability and development in several sectors for the targeted areas and this comes through effective partnership between NGOs, the community and the local authority and cooperation in the implementation of these types of projects.

It also directs FFA activities to infrastructure projects that achieve a long-term impact for the beneficiaries and communities themselves.

**How does this lesson relate to strengths and weaknesses in the project's design and implementation?**

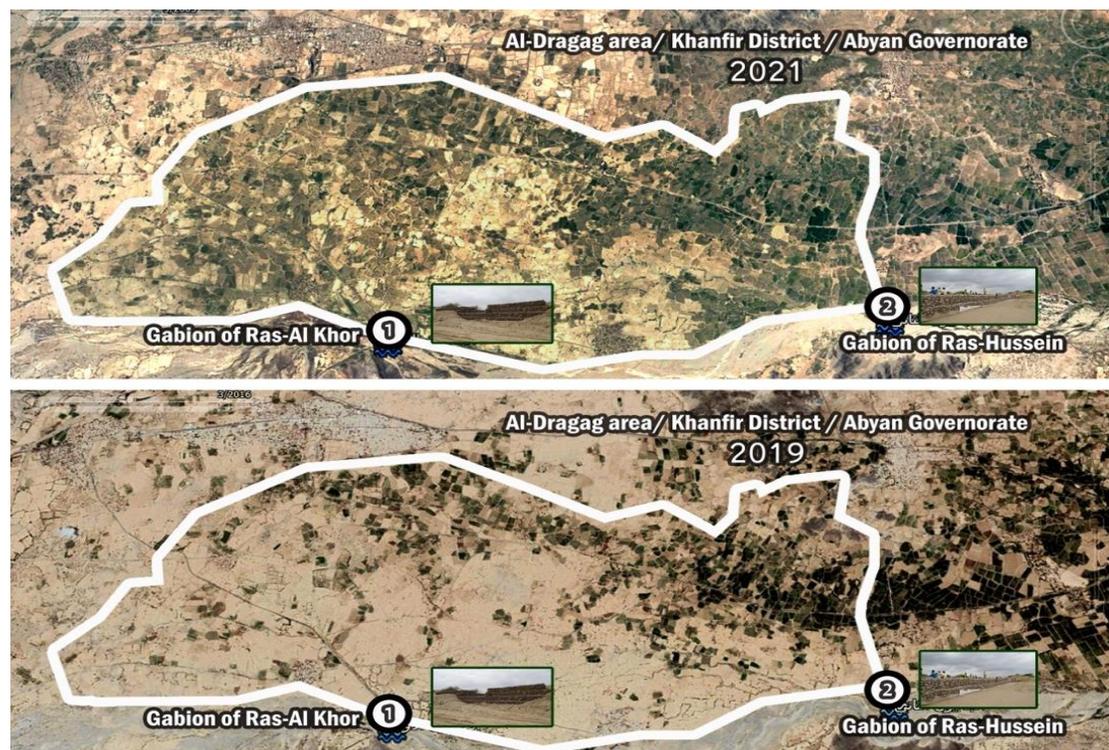
This project considers adding value to the program designing that uses a strategic approach that adapted the budget against the final output. The project goal was achieved in several periods to complete the final ultimately objective.

In addition, the program output (completion of gabions construction) met the agriculture calendar, enabled community to impound rainfall runoff water and benefited within the same year of project's activities implementation.

**How can this learning improve the project's performance, outcomes and impacts?**

From what we found through completed work in Ras Hassan and Ras-Alkhor areas, this type of project achieves more than expected results and has a significant impact in the long run. During the program field visits, astonishing results were observed. Targeted beneficiaries narrated of the significant impact of the project, including the rise of groundwater level rise from an average of 15 meters to 60 meters in surrounding water wells.

**Picture:** Illustrated map indicating the impact of Gabions construction in Ras Al-khor and Ras - Hussien areas



Photos: Before and after the intervention

