



General Information	
Agency Name	The Food and Agriculture Organization of United Nations (FAO)
Project Title	RESTORE: restoring the riverine eco-systems for climate adaptation
Consortium and downstream partners	United Nations Environment Programme (UNEP) International Organization for Migration (IOM) CSO partner to be confirmed
Project Location	Middle and Lower Shabelle
Target population	1,500,000 individual beneficiaries
Project Start & End Date	December 2023 – 31 March 2028 (5 years)
Project budget (GBP)	35,000,000
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Project background

Somalia has considerable productive resources which offer huge potential for delivering rapid economic growth of critical importance to people’s livelihoods. These resources include 8.9 million hectares of arable land (with 25 percent of crop production grown through irrigation systems), more than 50 million livestock and about 1.8 million tons of fish annually for export¹. Despite emitting just 0.003 percent of all global green house gas emissions, Somalia finds itself on the frontline of climate change as a result of its social, economic and political conditions, as well as its geophysical characteristics. Climate change will continue to be a “risk multiplier”, causing displacement, conflict, exacerbation of water and food insecurity, and fragility unless adaptation is effectively embedded into the country’s overall management of risk reduction and resilience-building effort. The National Development Plans (2017–2019 and 2020–2024) consider climate action as essential for economic and social development, as well as to ensure peace and security in the country. In addition, the provisional Constitution of Somalia contains a number of environmental provisions.

Somalia’s recent history is marked by increasingly frequent and alternating climate shocks with the country experiencing either drought or flood, or both, in 19 of the last 20 years; with the last 10 years showing a marked rise in the frequency of such events.

Somalia Multi Year Hazard Trend:

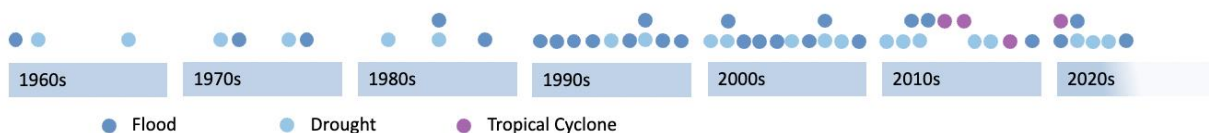


Figure 1. SWALIM Multi-Year Trend Analysis, 2023

In recent years, Somalia has experienced multiple drought events, with the 2011 drought resulting in a famine that cost the lives of 260,000 people, the 2016–2017 drought resulted in losses and damages

¹ Somalia COMPACT, 2023



estimated at US\$ 3.25 billion (IFRC 2011) and the recent 2020-2022 drought was the worst in recent history costing more than 40,000 lives and leading the country once again to the brink of famine².

As of early 2023, some 6.5million people were still facing acute food insecurity³ with the first decent rains during Gu season allowing some respite in parts of the country. However, these rains were sporadic in terms of temporal and spatial distribution leading to flash floods in some areas. In fact, in May 2023 the Shabelle River experienced one of the largest floods on record due to above normal rainfall, causing farmers to lose the first decent harvest in three years. Heavy rains in Ethiopian highlands caused severe river flooding in parts of South and Central Somalia, while other parts have received flash floods leading to destruction of property, farmlands, livelihood assets and displacement of people in the worst-affected areas such as in Belet Weyne town. Close to one million people were displaced by floods⁴.

Now as of mid 2023, as the country faces a long path towards drought recovery, it is already facing its next challenge: an almost certain (>90%) likelihood of El Niño, combined with a positive Indian Ocean Dipole. Similar to the events of 1997 and 2006, this combination of meteorological phenomena is known as a 'Super El Niño' and in Somalia is usually associated with well above average rainfall resulting in severe flooding. Based on this analysis as well as the latest flood model data and river breakage analysis produced by FAO SWALIM, FAO anticipates a 100-year return period flood scenario along the two main rivers of Somalia, which is expected to cause significant damage to livelihoods and property and lead to displacement. Together with its resource partners, including the UK government, in the short-term FAO is advocating for a no regrets approach and has launched an El Niño Preparedness, Mitigation and Response plan outlining immediate actions that can mitigate the impact of flooding in riverine areas. However, flood and drought prevention require longer term investment in infrastructure that can divert excess water away from human settlements (such as Jowhar town) in times of above average rainfall (flood), as well as storing and re-directing it to enable its release in times of below average rainfall (drought).

In addition to the increased frequency of water extremes, rainfall has also intensified in the recent past, with more intense rainfall events of short duration. This is a major hindrance for crop production that has evolved to receive the needed amount of water over the whole rainy season. What seems to emerge from the last decades of data is that the total amount of rainfall has not reduced but it is distributed across time and space in a way that is not beneficial for agriculture practices. This is also true for the natural ecosystems that especially in these morpho-climatic settings have evolved over millennia under stable rain regimes. The natural ecosystems are the other pillar of the economy of Somalia providing natural fodder for the livestock. The shift in rainfall regimes risks altering both agricultural and pastoral practices if not managed, with the extreme risk of leading to their collapse. This recorded shift in rainfall regimes needs to be counterbalanced by a shift in the way the waters are managed. Failing to do so will result in the failure of the agro-pastoralist system with the result of the creation of an untenable load of new urban dwellers at the margin of society in most cases.

Climate volatility is the new normal for Somalia and water is not only essential to human survival but also an integral part of climate resilience. Reliance on regular rainfall seasons is no longer viable for agricultural production, huge swathes of the country face water scarcity, while other parts have huge excesses of water that is not harnessed and causes extensive damage. Only through effective and sustainable water management and governance it is possible to reduce the impact of climate hazards in Somalia.

Somalia has two main rivers, Juba and Shabelle with a total length of 2,300 kilometers (km), and has the longest coastline in mainland Africa of 3,333 km. These natural features present a myriad of opportunities for growth across all sectors, and especially in the management of water, building climate resilience for economic growth and helping communities to adapt to the cyclical climate shocks. These opportunities, coupled with the entrepreneurial spirit of Somali people give a projection of growth and

² From Insight to Action: Examining mortality in Somalia, 2023, FGS, FSNAU, WHO, UNICEF, LSHTM

³ FSNAU post-deyr technical release available here: <https://fsnau.org>

⁴ Danish Refugee Council, Flood update for Somalia, May 2023



adaptation if resources are injected to support advancements in management of the key water resources. The Juba and Shabelle perennial rivers in southern Somalia are crucial sources of water for daily use such as irrigation, food production and sustaining livestock herds during periods of serious drought. The absence of dependable water resource management institutions due to ongoing conflict, combined with the changed water cycles in the watersheds of both rivers due to climate change, has led to severe limitation of availability and access of water resources when they are needed. In addition to clashes between clans over access to water, there have been instances where Al Shabaab has exercised relevance as clan relations and the role of grieving marginalised groups and clans were, and remain, linked to conflict dynamics among dominant groups on a national scale. Political and clan elites may also capitalise on grievances to gain support for their political agenda, fuelling stronger resentment among groups as well as against the FGS and its allies.

Early anticipatory preventive responses to emerging climate-related security risks can disrupt attempts by local and national elites to manipulate climate-change impacts. Importantly, such environmental peacebuilding efforts can enhance local and national capacities to resolve disputes peacefully.

The WHO-UNICEF Joint Monitoring Programme (JMP) 2019 – SDG report estimates that 40% of existing water sources are non-functional resulting in shortages across the country. Weak water supply management models and the high costs of operating and maintaining water systems are some of the reasons behind the lack of functional water sources. Access to and use of safe water for human consumption is low in Somalia, with 69.4 per cent of Somalis using safely managed drinking water services. Just over half of Somalis have access to basic water services. In rural areas, only 28 per cent of the population have access to basic water services; about half of this population has limited access. About 23 per cent are drinking unimproved/unprotected water, and 5 per cent are drinking purely surface water.⁶ The 2022 drought in Somalia only served to heighten the existing water crisis in Somalia. A water assessment published in 2019 with the support of UNICEF highlighted that 2.7 million people required humanitarian aid in the form of water, sanitation and hygiene (WASH) support. Specifically, one-third of households reported a lack of “sufficient drinking water” and about half reported a lack of access to improved latrines, improved water sources and soap.

Productive sector development (livestock, agriculture, fisheries) in Somalia is hindered by lack of transformative investment, limited policy and regulatory frameworks, and non-existent or dilapidated infrastructure (irrigation and flood control, energy, roads and transport systems as well as seaports, cold-chain storage, post-harvest storage etc.). The continued civil unrest and humanitarian crises put further strain on an already strained system. The ongoing conflict has led to the internal displacement of over 3 million people in Somalia. This has led to the overuse of groundwater pumps and increased strain on infrastructure, leaving those in search of water found wanting. The hefty water costs of more than a dollar per cubic meter and the long distances individuals must travel to obtain water, along with the potential contamination of water, continue to be the greatest challenges for the poorest.

Agriculture is an important economic activity in Somalia both in terms of meeting the food security needs of the population and generating income, with estimates putting the agriculture sector’s contribution to the economy above 75 percent.⁵ The major cereal crops cultivated in Somalia are sorghum and maize. These crops are grown under both rainfed (sorghum) and under irrigated conditions (maize). Livelihoods based around rain-fed and riverine agriculture provide a significant proportion of food across the country but are extremely susceptible to increasingly unreliable rainfall and ever more frequent climate extremes (drought and flood) as well as conflict. Irrigated riverine agriculture is centred along the two rivers (Juba and Shabelle), which have provided water for irrigation for many decades, leading to the development of a settled population and well-established agricultural economy.

In a good year, the country produces enough food to meet 40-50% of its cereal needs, relying heavily on imported food to fill the gap leaving it highly vulnerable to global market shocks, such as that seen

⁵ World Bank Report CEM available here: <https://documents1.worldbank.org/curated/en/781281522164647812/pdf/124651-REVISED-Somalia-CEM-Agriculture-Report-Main-Report-Revised-July-2018.pdf>



as a result of COVID-19, which saw prices skyrocket by more than 50 percent in some regions. Reliance on imported food comes at a high cost, out of the reach of many, leaving large portions of the population dependent on humanitarian assistance. Up until the fall of the Siad Barre regime in the early nineties, Somalia had food sovereignty and good water governance, producing enough food and water security for domestic consumption as well as exporting some agricultural products to as far as Europe. This production was partially the result of significant investment by the Government in large-scale irrigation infrastructure, particularly in the high-potential riverine areas in the south. This infrastructure was built to harness and store excess water when available (flood or heavy rains) and enable it to be utilized in times of scarcity (drought); these systems have since fallen into disrepair. An example of this is the Jowhar Offstream Storage Project (JOSP) works in conjunction with the upstream irrigation and flood relief canals, combined with a riverine embankment system that was able to manage flood risk in the Middle Shabelle and drought risk in Middle and Lower Shabelle supporting improved food security outcomes within the regions and beyond (impacting national production levels).

Investment in infrastructure rehabilitation, must be accompanied by investment in water storage/management and production assets and in the capacity of smallholder farmers and pastoralists who are the majority of communities in the Shabelle area. At the same time, sustainable exploitation of resources must be ensured. There needs to be a balance between natural resource exploitation and environmental conservation through an understanding of context specific dynamics- soil fertility, sustainable water sources, land utilization and access, all underpinned by a context-specific understanding of the intersectionality in the social environment to inform strong inclusion and do-no-harm approaches in the project design. Natural Resource Management is a critical component to enhance local community leadership in the joint use and management of resources, including developing the capacity of first responders in conflict mitigation/ prevention, and sharpening their skills in Disaster Risk Management. Hence, the proposed project seeks to harmonize these elements of sustainability through collaborative approaches, employment of complementary financial resources, provision of technical expertise from various UN agencies, and partnership with local communities and authorities to collectively realize sustainable food security, generate peace dividends, and to identify and scale up best practices in the development of sustainable food systems in Somalia.

While conflict in Somalia is largely the result of the presence of armed non-state actors, a recent FAO study⁶ found conflict and insecurity in origin areas of displacement were caused by multiple factors with 79.3 percent attributed to conflict over the natural resources of land, water and/or pasture. Other causes of conflicts include forceful conscription of children by Al-Shabaab (AS), taxes levied by AS on households, insecurity in areas of origin and political differences. Primary displacement drivers from rural areas are lack of water, food security and conflict. Expanding resource availability and ensuring equitable access to these resources therefore has powerful implications on security and stability in the Somali context.

Thus, large scale infrastructure investments and the resulting resources need to be managed by effective national, state and local level governance structures in an inclusive, conflict-sensitive manner. In addition to resource scarcity, equitable access to resources remains a significant issue in Somalia with resources, opportunities, and assets distributed along clan lines, with the major clans assuming leadership roles and assets. Consequently, minority clans have often been discriminated against; have less access to opportunities, leadership roles and resources. This has created unequal power relations that fuel discrimination, exclusion of minorities, and consequently lead to frequent flare-ups in the struggle for power, manifesting as violent conflict. This becomes more pronounced during periods of resource scarcity, as is often the case among conflicting pastoral and agro-pastoral communities.

The JOSP command area (Jowhar district and northern Balad district) is inhabited by a majority Jareer population that, by all accounts, is marginalized. Abgaal sub-clans constitute a very powerful minority,

⁶ Research on Rural Mobility, Displacement, Food Security and Livelihoods in Somalia, FAO 2022



with a near monopoly over political and security organs, and significant dominance of the economy. Marginalized communities harbor long-standing grievances, many stemming from episodes of land grabbing and coercive property dispossession. According to a recent study commissioned by IOM, nearly all displaced populations in the command area belong to the marginalized majority Jareer communities.

Under these circumstances, the propensity for **elite capture** creates significant risks for large-scale investment in water and irrigation infrastructure at every stage of the project cycle: geographical targeting and beneficiary selection in the design/inception phase, procurement and contracting in the early implementation phase, and the diversion of profits from increases in land value or public revenue generation in the late implementation and completion phases. These risks demand that every stage of programming be accompanied by analysis that can be triangulated (ie. led by a third-party) and a plan that not only disincentivizes capture but replaces avenues for capture by incentivizing collaboration and creating meaningful, healthy interdependencies.

Likewise, women face systemic discrimination in Somalia with limited access to resources and voice in decision-making, and limited representation in key fora. For this reason, transformational projects such as this looking to unlock substantial water resources particularly in southern Somalia, must consider and actively seek to address the complex dynamics of land ownership and use, inclusive and equitable access, and management of resources, as well as durable solutions for displaced populations and social cohesion between groups. These aspects are also being actively addressed through complementary programming with specialized UN Agencies within the broader JOSP Programme, starting with interventions by IOM under the RESTORE project.

With increasingly frequent and widespread crises leading to rising needs, and humanitarian budgets reducing year on year due to competing crises, global economic shocks and changing political landscapes, there is a growing imperative to identify and implement transformative solutions in Somalia; solutions which can reduce the growing humanitarian caseload and support a sustainable return to own production and self-sufficiency while promoting sustainable management of natural resources, contributing to peace, stability and social cohesion in conflict-affected parts of the country. The proposed intervention comes at a pivotal moment. As the Somali Government launches its latest offensive against Al Shabaab focusing on southern Somalia, swathes of territory - including the targeted command area - are under Government control for the first time in many years. This creates an opportunity for the Government to provide access to critical resources - such as water – decreasing the leverage of Al Shabaab over local populations in terms of resource control, as well as creating viable livelihood opportunities, thereby decreasing the incentive of youth to join the militia group. Finally, the emergence of a stronger, more capable Government who is prioritizing longer term solutions to mitigate the impact of humanitarian crises, provides further incentive to restore productive capacity under national leadership and management. The project proposes a 'build back better' approach ensuring that, as systems are restored, they are also improved, applying holistic and ecosystem-based approaches to natural resource and watershed management that take into account current-day community and conflict dynamics and localized governance needs and opportunities.

Project Targeting

The project will directly target Jowhar and Balcad districts in Middle Shabelle region, Hirshabelle State initially, with direct benefits in terms of water availability and irrigation also for Afgoye, Merka and, Qoryoley districts in Lower Shabelle region of South West State once the system is fully restored (see map in Annex 1). This is an area that is highly susceptible to floods in times of high-water discharges and bursting, poorly maintained irrigation channels and lack of rainwater management.⁷ The river overflow is worsened by the poor condition of the irrigation infrastructure, which causes flooding in areas of high urban and IDP density. While the town itself is not located on the most flood prone area, torrential rains and floods turn Jowhar into an island accessible only by boat

⁷ European Environment Agency, Flood risks and environmental vulnerability, 2016



from Balcad⁸. This means flooding affects many of the main roads (limiting food supply chains) and critical infrastructure such as the livestock market, cutting off access to outside resources such as specialized health facilities. Urban and rural flooding has also led to loss of crops and other livelihood assets for agro pastoralists. In fact, the flooding that affected Jowhar in May of 2021 as a result of Shabelle river breakage, destroyed 5,403 hectares of farmland leaving 1,880 households displaced.⁹ Small businesses and agripreneurs were unable to transport produce to markets. Poorly managed floodwater also leads to increasing rates of water-borne disease and malaria in both urban and rural areas. IDP camps are identified as one of the most vulnerable structures, given their lack of physical sturdiness. They are also, generally, very exposed to floods as their location tends to be near the river, which makes them highly vulnerable to river breakages. The latest Camp Coordination and Camp Management (CCCM) IDP site verification report (conducted in October 2022) indicates that 12 IDP sites (52%) have been classified as extreme risk (always floods) and 6 IDP sites (29%) as high risk (floods frequently).¹⁰

The alluvial plains along the Juba and Shabelle rivers have historically been Somalia's breadbasket, producing food for local consumption and for export for several decades through irrigated agriculture. The development of water resources in Jowhar began in the 1920s with the Jowhar Sugar Estate, which brought in a reliable supply of water, flood protection for irrigable land, and coordinated operation and maintenance of the water management system across Jowhar and Balcad districts. Prior to 1990, over 220,000 hectares of land along the flood plain were farmed through irrigation or recession farming, supplying crops to local and foreign markets.¹¹

The large piece of infrastructure known as the 'FAO Canal' (the canal was built by FAO in the 1980s, thereafter the local communities informally referred to it as FAO Canal), that starts in the barrage located at the village of Sabuun, feeds a large reservoir called the Jowhar Offstream Storage Project (JOSP). Until JOSP became operational, local communities were subject to the seasonal and annual vagaries of the Shabelle river, both in terms of water shortages (between January and April) and flooding (between May-June and October-December) every year. The implementation of the JOSP in 1980, provided a degree of regulation and control of the Shabelle water resources downstream of the Sabuun Barrage. During floods, water could be diverted into the 200 million m³ reservoir to reduce flood risk in Jowhar and further downstream. Release of the stored water in the dry season provided much needed water for Gu season cropping. The JOSP works in conjunction with the upstream irrigation and flood relief canals, combined with a riverine embankment system that was able to manage flood risk in the Middle Shabelle and drought risk in Middle and Lower Shabelle.

Evidence suggests that the combination of FAO Canal and JOSP worked very well between 1980 and 1990 contributing to the rapid development of Jowhar as an agricultural hub. During the war, the JOSP suffered extreme damage and vandalism with many components removed, effectively bringing its operation to a full stop. With JOSP in disrepair, the FAO Canal eventually completely dried out and was occupied by large numbers of IDPs who make use of the natural wetlands the reservoir was constructed on, to grow what they can. The rehabilitation of both the JOSP and the FAO Canal would be transformative to restart large-scale farming activities in the Jowhar area, to protect Jowhar town and irrigation schemes from floods, and to secure irrigation water during droughts. The JOSP also worked in tandem with the Double Flood Relief Channel (DFRC) in the Balcad natural reservoir approximately 25 km from Jowhar, and a system of riverine bunds to manage flood risk successfully in Middle Shabelle until the civil war in 1991. Following multiple consultations with local government in Jowhar and Ministry of Agriculture and Irrigation (MoAI), the rehabilitation of both the JOSP and the FAO canal has been identified as a key government priority for revitalizing agriculture and therefore boosting farmers' incomes in and around Jowhar district.

⁸ Puntland Post, November 2020 <https://puntlandpost.net/2020/11/17/jowhar-cut-off-by-floodwater/>

⁹ Rapid assessment for the floods affected communities in Jowhar. Danish Refugee Council, 2021.

¹⁰ CCCM Cluster Somalia Dashboard as of October 2023; <https://reliefweb.int/report/somalia/cccm-cluster-somalia-dashboard-october-2022>

¹¹ FAO; The Juba and Shabelle rivers and their importance to Somalia; June 2016



The analysis carried out under the 2015 Mott MacDonald study confirms that, when operable, the JOSP improved water and food security, and resilience to both flooding and drought in Middle Shabelle, with potential positive impact on food security also in Lower Shabelle and beyond. Secondary benefits include potential to link production into humanitarian supply chains and reduce import dependence. Full rehabilitation of both the JOSP and river embankments in Jowhar is expected to substantially reduce the impact of major flood events, such as that seen in May in Belet Weyne, thanks to the rehabilitation of river embankments using technically sound, innovative and sustainable solutions. The rehabilitated JOSP would provide, a maximum of 200 million m³ of additional irrigation water per year¹². The 2015 study identifies that the JOSP system is in a completely non-operable state; notwithstanding this, the basic infrastructure remains substantially intact. Therefore, it is expected that the JOSP can be rehabilitated at reasonable and economically viable cost. The JOSP rehabilitation works identified in the program include:

- Rehabilitation of the Sabuun barrage wall
- Replacement of the hydraulic gates and operating gear for the main water control structures
- Desilting of the supply canal and the outlet canal
- Repair, strengthening river embankments on the river and off stream reservoir.

Several interventions have rehabilitated elements of the water management infrastructure in and around the Middle Shabelle region (approximately between 2022 until 2015), including parts of the JOSP and DFRC, and opened up additional cropping area for smallholder farmers, however these measures have been insufficient to address the flooding in and around Jowhar.

Area-specific natural hazards:

As mentioned above, Jowhar is located in the Hirshabelle river floodplain, an area that is highly susceptible to **floods**. The existing ecosystem and presence of (albeit degraded) irrigation infrastructure in Jowhar provides an opportunity to protect and enhance the resilience of the most vulnerable people in the area. The Shabelle river is the main source of water for daily use such as irrigation, food production and sustaining the livestock herds. The absence of dependable water resource governance mechanisms has led to severe **degradation of water resources**. The wetlands to the north and east of the district act as a buffer preventing devastating flooding in the city, indicating that the wetlands and the riparian vegetation are key preventative, natural measures to flood reduction and building environmental resilience. In addition to flood control, wetlands around Jowhar provide water filtration. Riparian vegetation extends laterally from rivers or irrigation channels including floodplains, controlling sediment, reducing opportunity for flood damage, helps filtrate stagnant water reducing water-borne disease, and support riverbank stabilization. Forests in the riparian zone filter water, stabilize eroding banks, provide shade, shelter and food for fish and aquatic organisms, and provide wildlife habitat and corridors for terrestrial organisms and protecting cropland and downstream communities from flood damage.

Widespread deforestation and **soil degradation** from poor agricultural practices, overgrazing of rangelands combined with climate change impacts threaten the economic growth prospects but also the viability of Somalia's traditional nomadic pastoralism and rain-fed crop cultivation.

According to IOM and UNEP's study on climate-adaptive solutions to displacement,¹³ 84% of climate-induced IDPs **burn their trash** directly or indirectly. Such poor environmental practices can eventually lead to disastrous impact on soil, water and air as indicated by a similar study carried out in the Dadaab refugee camp in Kenya.¹⁴ Poor water management combined with the burning of solid waste and dust particles from eroded land cause air quality issues/air pollution in Jowhar. Water pollution caused by waste in the Shabelle River worsens the accumulation of silt, causing more flooding and damaging farmland. Infiltration of polluted water also leads to soil pollution that results in poor soil filtration properties and poor production, especially if not managed with good agricultural practices.

¹² Mott MacDonald Feasibility Study, 2015

¹³ Identifying Climate Adaptive Solutions to Displacement in Somalia, IOM-UNEP, 2021

¹⁴ Identifying Climate Adaptive Solutions to Displacement in Somalia, IOM, UNEP; February 2023



If these hazards are not mitigated it may bring high impacts to vulnerable zones such as systematic crop loss, forced internal displacement due to lack of resources and livelihood options, and a destabilization of the basic means of survival. The project will therefore conduct more detailed analysis of the ecosystem services provided by the wetlands and riparian vegetation in the area, in order to further understand their role in flood and drought mitigation and how to enhance it.

Livelihood systems:

Livelihoods systems in Jowhar district and adjacent villages are largely group specific. The majority of communities are engaged in farming (maize, sorghum, rice, sesame and some vegetables), with a few branching into agro-pastoralism on a small scale in order to sell dairy products (ghee, milk and cheese). Many of the villages are located between 5 km and 20 km from Jowhar town. Livelihoods are not as gendered as, for example, some of the communities in Burao or Galkayo. Both women and men work on their family's farms and/or as casual labourers on the farms of others. If there is a surplus of produce, the communities sell it at the Jowhar markets. However, men have more job opportunities than women do. While few women can work as teachers or henna artists in addition to working on the family farms; men can engage in various income generating activities from operating a shop or a stall in the market to taking on jobs as construction labourers. Pastoral communities move from one area to another during the dry season, returning to their villages during the wet season, very few communities practice transhumance (moving livestock between customary grazing areas).¹⁵

The dominant long-running challenge was identified as the lack of capital or financial resources to improve farms as well as access to agricultural extension services. There is no farm machinery to assist with ploughing and harvesting, limiting agricultural productivity and making farmers heavily dependent on casual labour. Another key challenge is the high risk of flash flooding from the river, which destroys crops and causes waterlogging.

Conflict analysis

The growth in Jowhar has always been determined by the Shabelle river, following three distinct spatial zones: to the west of the river, the largest area of urban villages of Hantiwadag and Kulmis, and two different areas to the east of the river: Horseed and Buulo Sheikh. The two areas to the east have grown in an informal pattern without substantially increasing in density, leaving an area along the river without formal infrastructure. Jowhar is surrounded in all directions by cropland, and with the increase in flooding events in and around the city, and the substantial increase of IDPs in recent years with no regulating action to manage new growth, Jowhar is likely to struggle with land disputes over access to agricultural land. The district may also see a continued trend of urban fragmentation, illegal occupation, and difficulty in provision and access of basic services and infrastructure.¹⁶

IDPs have moved to the north, east and south of Jowhar in close proximity to the river and already degraded irrigation canal infrastructure to ensure water access for crops and livestock. As CCCM most recent assessment indicates there are almost 77,000 recorded IDPs living in 21 settlements in and around Jowhar, mostly living along the river which puts them right at the epicenter of flood risk, causing loss of livelihoods, worsening food insecurity, water-borne diseases, and further displacement. Disputes between clans, IDPs and host communities over natural resources (land, water, pasture) and productive assets remain a potential challenge. While in some villages, water management committees play an important role in managing the irrigation infrastructure and equitable access to water for each farm, some villages have no such structure. The lack of adequate local governance mechanisms of scarce resources leads to frequent conflicts between clans, host communities and IDPs as well as between user groups. The proximity of villages to the Shabelle River determines the scale of disputes. Large-scale disputes and even armed conflicts arise during the droughts and dry seasons, when pastoralist and agro-pastoralist groups seek water for their farms and pasture for animals.

Some anecdotal evidence suggests¹⁹ that Al-Shabaab is partially active in some remote areas of Jowhar district and that some flash flooding incidents were natural, but some incidents were caused

¹⁵ Livelihoods, conflict and mediation: Somalia. SPARC knowledge. September 2022.

¹⁶ Jowhar Urban Profile; FGS, IOM, UN-Habitat; November 2020



by actors linked with Al-Shabaab breaching the riverbanks. Al-Shabaab has a long history of operating around Jowhar. The town was captured by Al-Shabaab during 2009 to 2012, before its liberation by forces of the Somali National Army and the African Union Mission in Somalia (AMISOM). The approximate territorial control of Al-Shabaab near the villages was believed to have extended from Jowhar to Mogadishu as of December 2021.²⁰ Evidence from IOM and FAO programming in the area suggests important linkages between resource access and Al-Shabaab control. Where government and local authorities can provide sustainable access to (water) resources to support production and stability, Al-Shabaab loses its foothold amongst local populations and there is reduced support for extremism or likelihood of recruitment as a livelihood strategy. In-depth understanding of social and conflict dynamics in the project area is inherent to the success of the project and overall programme. Recognising this, a dedicated assessment has been launched in the context of the programme-level preliminaries and will be used to inform adaptive programme design and implementation.

Elite Capture

As described above, the demographics and political economy of Jowhar and Balad districts generate a significant risk of elite capture. The risk is heightened by an imbalance that already exists between the powerful elite and the more vulnerable marginalized populations – a cleavage that runs along clan lines, adding a layer of potential volatility. IOM, FAO, UNEP and World Vision have developed and tested implementation modalities that are designed to incentivize collaboration over competition. The ‘environmental peacebuilding’ model, which is described in detail in Output 1, below, broadens the inclusivity of existing natural resource management mechanisms and frameworks by identifying a set of mutual benefits and building in a reward structure for collaboration and cooperation. In the context of the JOSP command area, the objective for each phase of investment is to enhance the political, economic, and property rights of the marginalized communities residing in the area, which constitute the vast majority of IDPs and the inhabitants of most rural villages. In addition to the environmental peacebuilding interventions, the program will incorporate Durable Solutions methodologies and leverage complimentary Durable Solutions programs to address the needs of the most vulnerable IDPs (see below).

Displaced Populations

Displaced populations in or around the Jowhar reservoir using the natural wetlands for agricultural production, is an aspect that has been considered in the project and broader programme design (and risk management strategy). IOM and FAO are still carrying out assessments to establish the extent of the inhabited area around the reservoir. This was flagged in the 2015 Mott MacDonald feasibility study as a potential issue, however current data from IOM does not show populations living close to or inside of the reservoir. However, anticipating this as a potential concern with implications on programming, partners have established working relationships within the broader JOSP programme (see Annex 5) clear synergies with other projects implementing durable solutions in the area are foreseen. The Danish Government has announced a new project implemented by IOM and UNEP called “Forging a Greener Peace in the Hirshabelle State of Somalia” that will be specifically focused on finding solutions for displaced populations in and around the reservoir.

Following the OECD DAC Recommendations on the Humanitarian-Development-Peace Nexus (HDPN), the Danish government aims to operationalize the interconnections between pillars by supporting coherent and complementary coordination, programming, and financing of humanitarian, development, and peace interventions that are based on shared analyses of contexts and conflicts.

Target population:

Overall, it is estimated that approximately **1,650,000 beneficiaries** living in peri-urban and rural areas across five districts will directly benefit from the JOSP once full functionality is restored with anticipated far-reaching spin-off effects benefitting the population across the two target regions in terms of increasing water access, decreasing flood and drought vulnerability while also increasing local food availability, decreasing food insecurity and import dependence, and generating income that is expected to support local economic development (see also Value-for-Money section below).



This project together with others within the JOSP programme will substantially contribute to achieving this with an estimated 828,119¹⁷ persons supported through the project (see Annex 4 for additional details). Direct project beneficiaries are based on project-specific outcomes as reflected below.

The project roughly groups beneficiaries into several categories. Flood risk reduction, drought mitigation beneficiaries are estimated based on geographical locations and livelihood groups (see detail in Annex 4). Likewise, estimated number of people accessing improved irrigation is based on riverine livelihood groups expected to access the restored infrastructure. These numbers are estimates based on current available data specifically FSNAU population and livelihood group data and SWALIM flood model and land cover data. They are subject to change once detailed baseline data has been collected.

Access to early warning and climate change forecasting will target a larger group consisting of all communities that are presently living or who have previously settled in and around the command-areas and are using the natural and water resources of Middle and Lower Shabelle. Within this larger groups are the small groups of beneficiaries that receive the benefits of risk reduction, water access, nature-based solutions, agro-ecology and Disaster Risk Reduction at community level. These are approximately 7,000 HHs in villages around the JOSP reservoir that are subject to flood risk. They will be involved in the determination of the priorities for assistance and eventually will have to actively participate in all future interventions in the natural and water resources activities. The expected number of people to benefit directly from the reservoir needs to be determined during the baselines based on actual population in the surrounds as well as the downstream reach of water flows once full capacity is restored. Rebuilding the eco-systems in the area will also contribute to rebuilding the long-term sustainability of the environment that will provide long term adaptation to the climate changes projected in the area. The institutional target group is the government stakeholders of the departments of MoECC, MoEWR and MoAI, whose knowledge in NWRM project planning and implementation will be upgraded, thus enabling them to continue irrigation scheme rehabilitation on their own once the project comes to an end after five years. Eventually, the establishment of Jowhar Off Stream Program Central Management Organization (JP CMO) and National Water Coordination Facility (NWCF) will benefit the whole country by ensuring sustainable and efficient use of the available natural and water resources and improved food security and climate resilient livelihoods. Such investments also contribute to economic growth, reduced dependence on imports and can also plug into the humanitarian supply chain to reduce the cost of response.

Although the project will be following area-based development approaches the local communities (including IDPs) living in the Jowhar district will benefit from project interventions, the ecosystem approaches to natural and water resources management applied here are the core of a country-wide strategy. Parallel and complementary to this project, the JOSP programme includes other specialized UN Agencies: FAO, UNEP, UN-Habitat, UNIDO and IOM with firm commitments obtained to date from USAID, and priority shortlisted projects with the Somalia Joint Fund and the Peacebuilding Fund (PBF) making a total of USD 81 million against the USD 105 million required. This funding will allow FAO to fully undertake all of the productive infrastructure works required as well as complementary actions integral to the programme's success. Current gaps are principally on scaling up Climate Smart Agriculture, which will come in a next phase, after infrastructure rehabilitation.

Project approach and intervention

The **overall objective** of the proposed project is the creation of a conducive environment for natural and water resources management in order to (i) reduce poverty, (ii) ensure household food security, (iii) make sustainable use of natural and water resources, (iv) increase resilience of at-risk communities to the impacts of climate change.

¹⁷ Project specific numbers are based on notional estimates as a proportion of the overall programme as reflected in Annex 4. Outcome specific beneficiaries represent the direct beneficiaries of project outcomes.



Theory of Change

The overall JOSP Theory of change can be expressed as follows:

IF critical productive and protective (flood and drought) infrastructure is restored **AND** ecosystem approaches are applied to protect and enhance the natural resource base **AND** communities are engaged in a conflict-sensitive manner that takes into account the needs and vulnerabilities of different user groups **AND** effective, accountable, financially and technically viable institutional and community governance mechanisms are established...

THEN flood and drought risk will be substantially reduced, sustainable natural resource management and intercommunal peace will support stability, security and better production; enhanced food security and income generation will render communities less susceptible to future shocks and stresses (decreasing humanitarian caseloads) enabling access to capital to re-invest into local economies supporting economic growth and enhanced wellbeing; and inclusive and representative Government and community led and operated management structures will ensure effective and equitable operation and management of the infrastructure and its dividends (water access)...

FOR climate resilient, safe and prosperous communities in Middle Shabelle and beyond.

Within this, the RESTORE investments concentrate specifically on infrastructure rehabilitation, natural resource management and environmental health, durable solutions and conflict risk reduction, and governance, complementing other projects within the JOSP architecture. Therefore, recognizing the complementarity with other JOSP actions, the RESTORE theory of change could be expressed as follows:

IF productive and protective (flood and drought) infrastructure is restored applying ecosystem and climate adaptive agro-ecology approaches; **AND** conflict-sensitive and inclusive infrastructure and natural resource governance mechanisms are co-developed with and adopted by communities and Government; **AND** community disaster risk profiles are analysed and risk reduction strategies developed and deployed;

THEN communities will benefit from equitable and reliable access to water for productive use, reduced flood and drought risk associated with enhanced storage capacity (reservoir), as well as information on specific risks and actionable preventive measures for more climate resilient livelihoods; better environmental health combined with environmental peacebuilding approaches will support more sustainable and inclusive access to and exploitation of natural resources over time; intentional intercommunal engagement in the design and implementation of mechanisms governing resource access and use (water and land) together with effective institutional (inter-ministerial) governance mechanisms involving relevant (Federal, State and local level) authorities and all end user groups will reduce the risk of conflict stemming from increased resource availability (water) and potential for competition over land and other resources as well as ensuring the sustainable operation and maintenance of infrastructure laying the foundations...

FOR improved local and regional food production, enhanced food security and income generation; enhanced resilience to climate shocks and more peaceful and prosperous communities.

This theory of change is underpinned by a critical intersectoral and multi-faceted baseline and monitoring & learning data that will inform the overall JOSP programme design, implementation and iterative adaptation as well as interventions by other actors in the same area base.

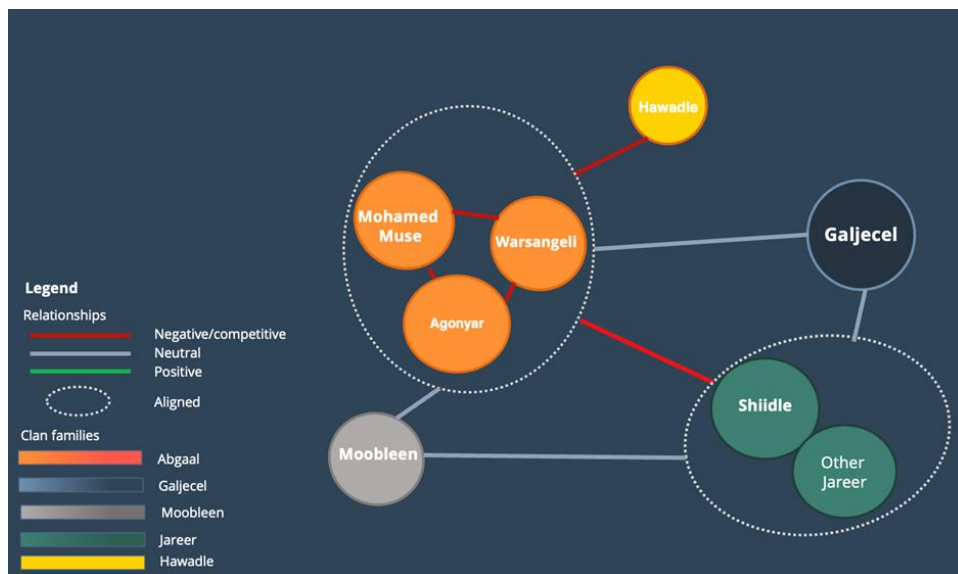
The project is designed to achieve four outcomes below, which are mutually reinforcing to deliver the proposed paradigm shift:



Outcome 1: Ecosystem and conflict-sensitive approaches to Natural Resource Management and Infrastructure rehabilitation and governance are assessed and applied

Under Outcome 1, the project will provide detailed baseline information on soil, water and environmental health for an enhanced understanding of the natural resource base as well as the intercommunal dynamics surrounding this as a foundation for the more effective and equitable management of the same and a reduced risk of resource-based conflict. Complementing the other programme level preliminary assessments¹⁸, the project will also conduct a gender analysis exploring localized challenges to women and youth’s active participation and representation within governance structures responsible for ensuring the equitable access to and sustainable exploitation of resources (water) made available by this project. The data collected by these studies will be incorporated into the Human Ecology Assessment Tool, a platform designed to enable the social and political-economic data to ‘engage’ with the physical data collected by FAO SWALIM and FSNAU. It will also restore the functionality of the large-scale offstream reservoir infrastructure providing communities in the target area access to improved and climate-resilient water management and eco-systems control, ensuring reliable and equitable access to water resources amongst different groups and communities and rendering them less susceptible to seasonal rainfall variability, as well as flood and drought events. The multi-indicator early warning system will monitor soil health, water health and soil moisture content to inform NRM NbS actions and Anticipatory Action. This will include responding to increased risks of salinity, water turbidity, high soil saturation and low soil moisture content. This analysis is then used to respond to increases in environmental risks and also serves as a proxy for conflict risk to be monitored and responded to.

Nature-Based Durable Solutions and Environmental Peacebuilding: A Model



The JOSP command area (Jowhar district and northern Balad district) is inhabited by a majority Jareer population that, by all accounts, is marginalized. Abgaal sub-clans constitute a very powerful minority, with a near monopoly over political and security organs, and significant dominance of the economy. Marginalized communities harbor long-standing grievances, many stemming from epi-

¹⁸ Funded by USAID TRANSFORM project under the broader JOSP Programme umbrella.



sodes of land grabbing and coercive property dispossession. According to a recent study commissioned by IOM, nearly all displaced populations in the command area belong to the marginalized majority Jareer communities.

Under these circumstances, the propensity for elite capture creates significant risks for large-scale investment in water and irrigation infrastructure at every stage of the project cycle: geographical targeting and beneficiary selection in the design/inception phase, procurement and contracting in the early implementation phase, and the diversion of profits from increases in land value or public revenue generation in the late implementation and completion phases. These risks demand that every stage of programming be accompanied by analysis that can be triangulated (ie. led by a third-party) and a plan that not only disincentivizes capture, but replaces avenues for capture by incentivizing collaboration and creating meaningful, healthy interdependencies.

To achieve this objective, UNEP, IOM, and FAO have developed and tested a model to incentivize collective action around equitable and sustainable natural resource management.

1. The first step is to frame and target the intervention by juxtaposing the physical and human geographies, analyzing where the most significant sociopolitical cleavages between populations are exacerbated by stressors imposed on a shared ecosystem, then look at how the same ecosystem creates mutual benefits for both communities, and what (formal/informal) institutions already exist for managing the ecosystem. (A prime example in riverine areas are the canal or irrigation committees). The methodology for investigating these dynamics involves the incorporation of IOM's established Community Stabilization Index (COSI) and Local Reintegration Assessment (LORA) into the Human Ecology Assessment Tool.
2. Bring the informal institutions and other stakeholders together (even if dialogue with the disputing parties has to occur separately) to understand what the most significant challenges are and to figure out the most pragmatic opportunities for engagement. We refer to this as *mobilizing Integrated Natural Resource Management (INRM) networks*. Once it is understood where priorities overlap between communities and INRM networks, we introduce the incentive structure of the Matching Grant Mechanism.
3. By highlighting the immediate mutual benefits that will accrue from jointly financing and fundraising a project (ie. the immediate cash injection by the project that doubles the pooled resources of the two hostile communities), it is much more likely that groups will come together to contribute. Even if done so grudgingly, the window is now open for deeper engagement.
4. The same incentive structure can be used to (a) enhance the inclusivity of the informal institutions, and (b) to link up the informal institutions with formal government structures by facilitating or channelling the distribution of government revenues. In contexts where there is no formal system of taxation (but where govt administrators collect revenue nonetheless), the matching grant mechanism can be used to harness more impactful public expenditure, based on consensus.
5. Collective investments in infrastructure or systems that support regenerative agricultural practices, water harvesting, or holistic rangeland techniques feed into the circular bioeconomy – emphasizing the use of renewable natural capital (see Outcome 2). These innovative practices are low-tech and self-reinforcing.

Outcome 2: Climate adaptive agro-ecology practices and infrastructure promote sustainably enhanced food production and environmental health

Under Outcome 2, the project will promote resilient, adaptive and transformative agroecological management, supporting farmers to apply good agricultural practices to reduce their vulnerability to extreme hazards and to enhance system function restoration relevant to climate-resilient agriculture. This will allow local communities to increase the productivity of their agroecosystems while also enabling them to diversify household incomes and assets, enhancing their resilience in the face of increasingly frequent climate shocks (drought and flood). Moreover, they will have a strengthened awareness of climate threats and risk-reduction processes and be equipped with the tools and knowledge to adapt to the anticipated worsening impacts of climate change.



Outcome 3: Enhanced institutional and community-level climate disaster risk profiling and management

Under Outcome 3, the project will improve risk awareness and monitoring through the installation and operation of Automatic Weather Stations (AWS) and water level sensors at strategic locations allowing for the detection, monitoring and analysis of rainfall and run-off, and supporting the development of more accurate flood models. It will also integrate the outcomes of the data-driven flood model with the local knowledge and Impact Based Forecasting (IBF) into an accurate and timely Early Warning System (EWS). The project will enhance the resilience of vulnerable communities and ecosystems through the implementation of community-led climate change adaptation and mitigation actions as well as developing capacity of vulnerable households, communities and local government to withstand natural disasters through the implementation of community-owned DRR measures. These plans will be linked to seasonal anticipatory actions by community. All this will ensure vulnerable communities better understand risks and are better prepared to anticipate and respond to associated shocks informing localized adaptation and mitigation. World Vision is well positioned to support rapid and evidence-based application of the crisis modifier to stabilize community resilience gains, protect livelihoods and lives based on community-identified resilience priorities. WVI will facilitate communities to undertake a participatory gender, conflict and vulnerability community assessment (GCVCA) process to establish a community adaption framework. Communities will be facilitated to identify and prioritize interventions to support adaptation to climate change and emergent opportunities. Community Action Plans co-created by communities and government bring local stakeholders together in an empowering learning process that builds adaptive capacity at community-level, while also resulting in tangible but flexible action plans for communities to reduce, over-time, their vulnerability to climate change.

Outcome 4: Enhanced institutional capacity for responsible Governance of Water and land resources and infrastructure

Under Outcome 4, the project will support the GoS National Water Resource strategy roadmap implementation at state and federal level, facilitating multi-stakeholder and multi-level coordination and governance mechanisms and strengthening the capacities of MoAI, MoECC and MOEWR on the governance of natural and water resources management. The project will equip key stakeholders with strategic analysis to inform decision-making thus supporting the enabling environment to implement and scale up climate-resilient agroecological management, climate-informed water resources management, and support access to climate finance mechanisms. Improved institutional support and capacity for climate adaptative approaches to natural resource management will be supported and governance structures will be created at the state level, to enable long-term planning and mainstreaming of this approach at the national level.

The food security and nutrition situation in Somalia remains in a precarious state. While there have been marginal improvements, the current and projected levels of acute food insecurity and malnutrition in Somalia continue to remain high. Although drought has ended, its extended impacts persist and are currently being compounded by El Nino-induced flooding in several parts of Somalia. Therefore, close monitoring of the food security and nutrition situation, as well as conducting timely assessments and analysis, remains vital. Unfortunately, the current institutional capacity of the Government of Somalia is limited in its ability to generate and provide essential data for informed decision-making.

To address this shortfall, the FAO-led Food Security and Nutrition Analysis Unit (FSNAU) plays a pivotal role by delivering critical and timely information and analyses concerning the food security and nutrition landscape in Somalia to a broad range of stakeholders. The information and analyses generated by FSNAU are instrumental in enabling effective, evidence-based decision-making to support humanitarian, recovery and development interventions. FSNAU works in close collaboration with Government and technical partners to identify food-insecure populations across Somalia. Furthermore, it identifies the specific challenges that confront vulnerable groups in their pursuit of food security and offers timely and quality reports to inform targeted interventions. In addition to its early



warning function, FSNAU carries out in-depth baseline livelihood assessments to offer an improved understanding of the underlying causes of food, nutrition and livelihood insecurity. Additionally, FSNAU provides food security and nutrition related technical and institutional capacity development support to Somali institutions.

Through sustained capacity development support, Somali institutions will be able to develop, in 3-5 years' time, technical capacity that will enable them to conduct food security and nutrition assessments and subsequent analyses, with limited external technical support. However, achieving this result will require additional substantial and sustained investment in institutional capacity development over the same period (3-5 years). In readiness for the gradual transfer of capacities, a capacity gap assessment of key FGS institutions was conducted in 2022 and the assessment results were validated in 2023 during a workshop involving the FGS institutions. The next steps in the process include: i) the development of a comprehensive (multi-year) institutional capacity development programme (with budget, work plan and results framework with milestones to be achieved) based on the results of the capacity assessment and identified priority gaps; ii) Once finalized, the programme document and budget will be presented to resource partners before the end of this year; The institutional capacity development programme, its full financing and implementation is the main mechanism for effective transfer of FSNAU functions to government (exit plan). iii) To complement this endeavor, FSNAU plans to provide targeted capacity development support to key Somali institutions including training in IPC Acute Food Insecurity (IPC AFI), IPC Acute Malnutrition (IPC AMN), training on SMART nutrition survey methodology, training on food security and nutrition outcome indicators, participation in seasonal food security and nutrition assessments and subsequent IPC analyses. FSNAU will also provide technical and administrative support for the implementation and mainstreaming of the recommendations from the recently concluded Independent IPC Review.

Outcome 1. Ecosystem and conflict-sensitive approaches to Natural Resource Management and Infrastructure rehabilitation and governance are assessed and applied

Output 1.1 Natural resource and baseline data generation, analysis and monitoring

- 1.1.1 Detailed baseline for JOSP command area (land cover) including Landscape analysis planning and management for water storage;
- 1.1.2 JOSP Gender Analysis;¹⁹
- 1.1.3 Environmental Analysis of eco-systems and Soil Health
- 1.1.4 JOSP Water resource monitoring
- 1.1.5 Crop and ecosystem monitoring (objective data collected along sample transects, for example using LIDAR)
- 1.1.6 Establish Ecosystem, soil health and vegetation loss monitoring system.
- 1.1.7 Establish Ecosystems Early Warning Systems from the monitoring system.

Output 1.2 Restoration and sustainable management of reservoir for flood and drought resilience

- 1.2.1 Hawadley reservoir rehabilitation using Nature Based Solutions (NbS) to enhance availability of water resources, enhanced climate resilience of infrastructure and reduce flood risk supporting risk reduction and sustainable production.
- 1.2.2 Community based NbS for water and soil management (applying the NbS from the previous FCDO project catalogue²⁰ linked farmers groups.
- 1.2.3 Nature based durable solutions/climate security
- 1.2.4 Support the return of native biodiversity by restoring native flora species
- 1.2.5 Implementation and management of the Ramsar protected site, followed by accreditation and protection planning (linked to Outcome 4)

Output 1.3: NRM Governance for equitable access and conflict mitigation.

¹⁹ This is one of eight preliminary assessments foreseen under JOSP that will be critical to informing the overall programme as well as RESTORE project activities under outcomes 2 and 3.

²⁰ <https://unepdhi.org/our-services/special-focus-nature-based-solutions/>



- 1.3.1 Conflict dynamics analysis over natural resources to inform land use, land tenure and conflict mitigation activities.
- 1.3.2 NRM governance at government and community levels to ensure equitable access for all stakeholders.
- 1.3.3 Conflict dynamics analysis over natural resources to inform land use, land tenure and conflict mitigation activities.
- 1.3.4 Community NRM works informed by collective planning between host, IDPs and competing clans on natural resource of common interest.
- 1.3.5 Conflict mitigation over water and land access at govt and community levels.
- 1.3.6 Linkage to stabilization and durable solution programming where NRM is linked to conflict and marginalization.

Outcome 2: Climate adaptive agro-ecology practices and infrastructure promote sustainably enhanced food production and environmental health

Output 2.1: Agro-ecology food systems are supported with extension services and promoted with communities to increase HH production and nutrition.

- 2.1.1 Farm planning services are provided through government extension center to small holders.
- 2.1.2 Agro-ecology demonstration farms and farmer field schools for agro-ecology, agroforestry, forest gardening GAP and FMNR
- 2.1.3 Promotion of diverse, locally suited input varieties and tools for support small holder uptake of Agro-ecology, forest gardening, agroforestry, GAP and FMNR.
- 2.1.4 Extension services and in field technical support for agro-ecology, GAP and FMNR via government and partner to small holder farmers
- 2.1.5 Development of bio-fertilizer and integrated pest management services and products to support small holder farmers to move away from chemical inputs.
- 2.1.6 Support to recycling all farm products and waste into fertilizer and animal feed products.
- 2.1.7 Development of flood tolerant agriculture options for high-risk years (e.g., flood recession farming)

Output 2.2: Development of agroecology practice that supports sustainable agriculture and livestock production at village and household level

- 2.2.1 Assessment and community agreement of infrastructure needs for sustainable agriculture;
- 2.2.2 Design of infrastructure options with community consultation, ESS and NbS (see outcome 1);
- 2.2.3 Implementation of irrigations systems, water harvesting structures, drainage of flood prone land;
- 2.2.4 Community implemented works of productive infrastructure (see outcome 3 CAPs) where possible for community production infrastructure and NbS (linked to Outcome 1); and,
- 2.2.5 Monitoring of soil and water health in infrastructure sites over seasons.

Outcome 3: Enhanced institutional and community-level climate disaster risk profiling and management

Output 3.1: Improved risk knowledge for climate hazard prediction and planning to inform climate change adaptation and resilience building.

- 3.1.1 Detection, monitoring and analysis of hydro-climatic parameters (rainfall, temperature, solar radiation, humidity, river levels, river sediment) and non-climatic catchment parameters within the Shabelle River and Middle Shabelle region (Jowhar and Balcad) from the existing network;
- 3.1.2 Set up additional river and rainfall monitoring stations at strategic locations along the river and main water outlet points such as primary canals to address current gaps, continuous data collection (including discharge measurements) and analysis;
- 3.1.3 Modeling of flood and drought exposure and impact over Middle Shabelle region (Jowhar and Balcad) (using results from activities 1 & 2 above). These can only be achieved through



refinement of catchment specific river gauging station flood risk levels/thresholds in turn relying on analysis of rainfall-runoff-discharge, analysis of rainfall-runoff lag periods and refinement of river rating curves;

- 3.1.4 Future climate scenario modeling i.e., future (2025 to 2055) projections of climate (rainfall and temperature) over Shabelle River Catchment. Non-climatic catchment parameters e.g., population etc. are implied in the adopted Representative Concentration Pathways (RCPs).
- 3.1.5 Set up and apply recent advances in remote sensing, flood forecasting for the Ethiopian part of the Shabelle river basin to forecast flow over the international border. Most floods along the Shabelle River originate in the Ethiopian Highlands.
- 3.1.6 Developing the flash flood, drainage and topsoil erosion modeling systems for implementation (linked to Outcome 1)
- 3.1.7 Establishing dialogue between the communities, the local government structures, and the humanitarian and development actors
- 3.1.8 Understanding the early warning mechanisms used at present by the local communities and how they can be best adapted/integrated to SWALIM Digniin Early Warning mobile-platform. The outcome of the participatory mapping will form the basis from which the scientific knowledge will be integrated into, resulting in a capacity development package, tailor made for the local communities. This will also enhance the ownership of the solution proposed.
- 3.1.9 Risk informed food security and livelihood recommendations for cooperatives, producer groups and small-scale producers to create sustainable ecosystems
- 3.1.10 Regularly updated information and analysis on seasonal rainfall forecast and performance, including on river levels, provided to facilitate decision making – in collaboration with SWALIM and FEWS NET/USGS

Output 3.2: Operationalized Early Warning System and capacity building to inform preparedness through Anticipatory Action

- 3.2.1 Assessment reports on impacts of future climate on floods and drought over Somalia, Hirshabelle and community level
- 3.2.2 Seasonal Impact Based Forecast system for floods and drought (design and implementation at federal and state level)
- 3.2.3 Co-design and implementation of Early Warning Systems with local community leaders, State (MoHADM) and local government officials and the guidance of the technical working groups.

The Early Warning System will integrate the outcomes of the data-driven flood model with the local knowledge. This will lead, among others, to the establishment of thresholds of river flow and rainfall that will trigger alarms, to the identification of safe locations that the communities will be able to use in case of floods, to the identification of procedures that should be adopted by the communities in case of emergency. This step includes capacity building for local communities. The system should also include feedback mechanism from the local communities on the effectiveness/impacts of the EW system for regular (annual) enhancements

Output 3.3: Community Action Plans for DRR and Anticipatory Action developed and implemented linked to climate change adaptation analysis and Early warning triggers.

- 3.3.1 Analysis of climate change scenarios lead to village level identification and planning of disaster risk reduction with NbS (linked to Outcome 1);
- 3.3.2 Analysis of environmental hazards and climate scenarios leads to village level scalable anticipatory action plans by community;
- 3.3.3 Community Actions Plan co-created by communities and government using DRR plan and AA plan linked to early warning triggers;
- 3.3.4 Community implementation of risk management NbS on water and natural resources (linked to Outcome 1) (WV to discuss how to link CAPs to NbS with UNEP);
- 3.3.5 Seasonal early warning monitoring by community linked to FSNAU and SWALIM projections and weekly monitoring for flood, drought and pest risk;
- 3.3.6 Scalable Anticipatory Action fund established with annual budget for DRR and AA activity with disbursement based on early warning triggers; and,



3.3.7 Community Action Plans consolidated within Hirshabelle Ministry of Disaster Management for district level management of flood and drought risk in Jowhar and Balcad.

See Annex 6 on Description of Crisis Modifier for Anticipatory Action.

Outcome 4: Enhanced institutional capacity for responsible Governance of Water and land resources and infrastructure

Output 4.1: Capacity building of the federal and state level MoEWR, MoAI and MoECC to establish the Jowhar Off Stream Program Central Management Organization (JOSP CMO) to manage water harvesting, storage and seasonal release for flood risk reduction and irrigation users.

- 4.1.1 Water resource and irrigation management consultancy engaged.
- 4.1.2 Establishing Federal and State levels and line Ministries consultative (steering) group to define the scope and role of the JOSP CMO.
- 4.1.3 At risk flood communities and irrigation user groups consultation to define scope
- 4.1.4 JOSP CMO design document developed for stakeholder review and feedback.
- 4.1.5 Review meetings for refinement of JOSP CMO design by stakeholders
- 4.1.6 Legal establishment of JOSP CMO with government of Somalia and Hirshabelle State
- 4.1.7 Capacity building of JOSP CMO team

Output 4.2: Alignment and Support to the Government NWRM strategy, international environmental policies and frameworks and relevant Water Sector Coordination Facility Working Groups (National Water Coordination Facility)

- 4.2.1 JOSP management of water resources provides flood and drought risk reduction and drought solutions for Middle and lower Shabelle aligned to the NWCF priorities under MoEWR.
- 4.2.2 MoEWR to have membership on the JOSP CMO and the NWRM PSC
- 4.2.3 Reporting of NWRM progress to MoEWR annually as a contribution to NWCF activities
- 4.2.4 Technical guidance notes developed through consultative process with Flood Irrigation WG (MoEWR/MoAI and other key stakeholders) on minimum quality standards for flood risk reduction infrastructure including integration of NBS

Output 4.3: NWRM project and investment support FGS to mobilize climate finance.

- 4.3.1 Alignment of NWRM design elements to the programming frameworks of GEF, GCF and Adaptation Fund
- 4.3.2 Identification of relevant climate finance opportunities to support the expansion of NWRM scope and/or complimentary to NWRM scope to leverage impact at regional and national scale.
- 4.3.3 Climate finance consultant engaged to support the development of proposals with MoECC to be complimentary to NWRM project.
- 4.3.4 Provision of a technical expert to address some of barriers to accessing climate finance through the development of specific proposals of climate financing from Adaptation (GCF & GEF). This will support the improved access for climate finance for complimentary projects for JOSP on NEW, NBA water management, flora and fauna etc. n.

Output 4.4. The food security and nutrition-related technical and organizational capacity of key Somali institutions are strengthened at Federal and State levels to enable them to conduct food security, nutrition and livelihood assessment, analysis and reporting for policy and programme decision-making

- 4.4.1 Provide IPC AFI and IPC AMN Level 1 training and SMART methodology for government technical staff at FGS and FMS levels
- 4.4.2 Provide technical and non-technical support to government technical staff at FGS and FMS levels for their participation in seasonal food security and nutrition assessments and subsequent IPC analyses



- 4.4.3 Provide technical support for the hosting and regularly updating of Early Warning-Early Action dashboard on government server
- 4.4.4 Provide additional capacity development support to SNBS and other Somali institutions based on jointly identified priority gaps
- 4.4.5 Provide support for the implementation and mainstreaming of recommendations from the Independent IPC Review

Output 4.5. Timely food security and nutrition information and analysis is developed for early warning and early action and emergency response situation across Somalia.

- 4.5.1. Regularly updated information and analysis is provided through the early warning-early Action dashboard to facilitate decision making
- 4.5.2. Regularly updated information and analysis on risk factors related to food security and nutrition provided to facilitate decision making
- 4.5.3. Seasonal food security and nutrition assessments are conducted to support decision making

Partnership arrangements:

FAO in collaboration with two UN agencies, UNEP, IOM and an International NGO, World Vision International Somalia have partnered to design and implement a sustainable and effective intervention to create a conducive environment for natural and water resources management. The partnership model is based on respective agency mandates, operational presence, experience and capacity to effectively deliver on the key objectives of the project. The partnership approach further builds upon relationships the partners already have with local communities, leaders, and government representatives, and is complemented by other sectoral projects each partner is implementing in the area and around the broader JOSP.

FAO as the lead agency will be responsible for the rehabilitation of the Jowhar Off Stream productive infrastructure system and climate resilient agriculture for improved production, while UNEP will design and deliver ESS solutions as well as to support Nature Based Solutions in and around the infrastructure with an emphasis on greening the infrastructure where possible; IOM will roll-out its sub-district Community Stabilization Index (COSI) to inform integrated programming designed to rebuild the social contract between communities and local authorities at village level to inform interventions for displaced populations in the area that take into account localized conflict dynamics; and explore nature based durable solutions with regards to land acquisition/tenure issues in relation to canal and reservoir rehabilitation for the RESTORE project. World Vision International Somalia (WVS) will leverage on its existing capacity and presence as a long-time actor in Hirshabelle to ensure timely and strategic investments aimed at strengthening community action and voice, particularly through community-led risk awareness raising and contingency planning (Community Action and Adaptation Planning (CAAP) to support recovery and resilience efforts for vulnerable groups. World Vision is well positioned to support rapid and evidence-based application of the crisis modifier to stabilize community resilience gains, protect livelihoods and lives based on community-identified resilience priorities. FAO and UNEP shall work closely with government institutions for enhanced institutional capacity and governance for sustainable NRM and climate-resilient infrastructure.

Outcome	Implementing Partner/s
Outcome 1. Ecosystem and conflict-sensitive approaches to Natural Resource Management and Infrastructure rehabilitation and governance are assessed and applied	FAO, UNEP, IOM
Outcome 2: Climate adaptive agro-ecology practices and infrastructure promote sustainably enhanced food production and environmental health	FAO



Outcome 3: Enhanced institutional and community-level climate disaster risk profiling and management	FAO, WVI-S
Outcome 4: Enhanced institutional capacity for responsible Governance of Water and land resources and infrastructure	FAO, UNEP

Inception phase: The project will have a 6-month inception period to allow completion of all preliminaries and critical deliverables to be in place to improve the project design and provide room for adaptive programming based on the recommendations from the studies as required. The inception phase is also crucial for the establishment of a proper monitoring and evaluation framework, including baseline surveys to inform indicator baseline figures and target values required for monitoring and measuring programme impact and outcomes. FAO and IOM will also design a dashboard to serve as a central data repository and visual platform or interactive interface to show the relationship between human activity, the environment and associated risks, for the area covered by planned activities in Jowhar and Balcad. The tool will identify, process, analyse and visualise a wide spectrum of quantitative, qualitative and GIS data in an interactive way (plugging into new and existing data sets) to provide development practitioners with contextual knowledge, support monitoring activities and inform programming. The main purpose of the dashboard and its design will be clearly defined at inception, but at this stage it is envisaged that the tool will: i) enable cross-agency collaboration and intersection of data sets in an automated manner; ii) provide actionable information for strategic planning, and iii) showcase the potential impact of water infrastructure investment by tracking outcome/impact measurement data; iv) as well as acting as a repository for all key project documents such as assessment reports. The detailed inception deliverables and whole of programme approach are outlined in detail in Annex 5 and in the workplan Annex 4).

Gender Equality and Social Inclusion

Marginalised individuals or groups are those who are discriminated against, face protection risks, or are otherwise excluded or marginalised, either by virtue of their gender, clan affiliation, race, or other characteristic. In Somalia, women, minority clans, children, youth, and internally displaced persons (IDPs) are considered the most vulnerable groups.

In that vein, assessments have found women in Somalia have nearly half of the opportunities present for men - the gender gap index in Somalia is 0.5614. In 2019, the International Labour Organization (ILO) estimated the labour force participation of men (for the age group 15-64) to be 73.6% while women's (for the same the age group 15-64) labour force participation rate was estimated to be 23.1% with the figures remaining relatively unchanged over the past 10 years. The main factor that fuels gender inequality in Somalia is socio-cultural traditions, norms and practices that inhibit meaningful participation of women in production, political forums and in economic opportunities. These barriers are deeply entrenched and upheld by traditional community structures, which fail to be challenged due to a lack of adequate policy regulatory environment to punish, or forbid certain harmful practices such as child marriages, Female Genital Mutilation, restriction on girls' education, etc. Agriculture remains the biggest employer for both men and women, with men and women representing 79.2% and 83.9% of the labour force, respectively. Although more recently women have increased economic opportunities, they still often forced to work in menial positions often making barely enough money to sustain themselves and their families. Gender Equality and women empowerment (GEWE) is intrinsic to the work of UN and FAO. Participating partners shall seek to systematically integrate gender in this project by conducting a gender analysis that seeks to understand the challenges and opportunities to ensuring active participation of women in the project. Gender will be integrated across all activities and reported on at the outcome level. A three-pronged strategy will guide gender integration into the project as follows:



- i. Direct interventions to enhance representation and active participation of women in all project activities;
- ii. Integration of gender equality concerns in all capacity building activities.
- iii. Collection of sex-disaggregated data for both qualitative and quantitative assessments, incorporating the use of thematic analysis to inform gender-sensitive interventions/ adaptive programming.

In this project, using a rights-based approach to supporting gender equality, project shall work closely with all stakeholders to support the following gender-specific objectives:

- Women and men have equal voice and decision-making power in rural institutions and organizations to shape relevant legal frameworks, policies and programmes;
- Women and men have equal rights, access to, and control over natural and productive resources, to contribute to and benefit from sustainable agriculture and rural development;
- Women and men have equal rights and access to services, markets and decent work and equal control over the resulting income and benefits;
- Women's work burden is reduced by enhancing their access to technologies, practises and infrastructure and by promoting an equitable distribution of responsibilities, including at household level.

FAO as lead agency and partners recognize that gender inequality is a root cause of many factors that limit the full potential of the sustainable development of agri-food systems, and as such will identify pathways to promote equal participation of women and men in the project. Affirmative action will be taken to address inequality and to support women to fully participate in the project and gain maximum gains from resources provided. In that case, a gender action plan for the project will be developed once the gender analysis report is available.

Conflict Sensitivity

Complex inter- and intra-clan violence in the district is deeply rooted in resource scarcity (e.g., agricultural land usage, water and grazing rights) and sometimes results in violent clashes among the clans and subclans over both political and territorial control. The presence of the Shabelle river creates a highly sought after resource in both Jowhar and Balcad by both pastoralists and farmers²¹. The Shiidle (sub clan for Somali Bantu) are considered the *Guuri* (original settlers) while the other Hawiye sub clans such as Abgaal, Hawadle and Gaaljecel are considered *Galti* (new settlers) in Jowhar District. The conflict between farmers and pastoralists is one of the oldest and recurrent conflicts in Jowhar district. Pastoralists who are mainly from the dominant Hawiye sub-clans of Abgal and Gaaljecel regard the Shabelle River and pasture along the river as a natural resource that no one should claim ownership over. Jowhar District is also home to inter-clan conflict over power sharing. The perceived marginalization of Shidle, a sub-clan of Somali Bantu, and implementation of the 4.5 power sharing system has also reignited old residual conflicts. The overall security situation in Jowhar district is fragile with government and state authority limited to only urban areas. AS continues to control large swaths of village settlements on the outskirts of Jowhar and the main roads connecting the state to Mogadishu.

Conflict Sensitivity will be embedded at 3 levels within the JOSP:

JOSP level conflict dynamic analysis & scenario planning: Funded by USAID TRANSFORM, IOM will undertake Durable Solutions and conflict mitigation analysis and plan development with GIST consultancy firm. Part of this analysis will research the conflict dynamics in Jowhar and Balcad district in the communities around the JOSP infrastructure. This analysis will inform which stakeholder groups are in conflict, the level of this conflict and how this may affect JOSP programming. Scenarios for possible escalation and recommendations for mitigation of conflict will be developed in the study. The analysis will take place during inception phase, and recommendations be made to the PSC for program design refinement to be conflict sensitive and ideally use JOSP programming to promote conflict mitigation.

²¹ GIST, 2023. Task 44 - Inception and Preliminary Analysis.



Community level Conflict analysis and NRM planning: Each community located around the JOSP reservoir will be targeted by the RESTORE project for community level conflict analysis and Do No Harm planning. This will include application of a NRM lens to establish how access and use of water and land are a source of tension between stakeholder groups. Once this analysis is done, a Do No Harm approach will be used to inform Community Action Plan elements on NRM that promote increase availability and equitable access to water and land resources for all stakeholders. Included in this plan will be dispute resolution mechanisms at community level to reduce the likelihood of conflict, and the process to escalate to the local government for inter-community disputes. This approach will also be applied to the 90HHs from the 7 villages with Durable Solutions needs. The likelihood of conflict over access to and use of natural resources between IDPs and Host communities is a risk to be mitigated. Tensions over land tenure, land use and irrigation water access will likely to be present between IDPs and Hosts communities, especially if they are from different clan bases. The JOSP programming will identify the underlying tension and conflict risk around these resource use between stakeholders and co-create community action plans for joint use and management to reduce risk of conflict. These plans will be implemented as part of the RESTORE project, and possibly scaled up with other funding from donors such as the Peace Building Fund. Similar PBF funded community peace building approaches have been used by IOM & FAO in other conflict prone riverine contexts successfully and learning from these projects will be applied and scaled in the JOSP programming.

Context monitoring and program adaptation: Following on from the context analysis and scenario planning that will be undertaken in the inception phase, the JOSP program will monitor key conflict indicators in Jowhar and Balcad. This will provide early warning of increasing clan tensions that enable the program implementation use to proactively adjust activity implementation and modalities, as well as maintain higher level community dialogue to reduce the likelihood of disruption to JOSP programming. This approach has been used successfully by FAO in Beledweyne to mitigate different clan tensions in flood mitigation projects. In the event of significant deterioration in the security situation in the operational context, the conflict trend monitoring will be useful for the PSC to determine program redesign options for following phases.

IOM will lead in ensuring all actions are designed and implemented in a conflict-sensitive manner informing preventative actions where needed. The first activity will be to develop a conflict analysis and a dashboard that can be updated by all staff in the project. Having a clear picture of the situation and a point where every partner in this project can turn to monitor latest conflict incidents. The Programme team, Support team and the different partners will be sensitized on specific risk factors and vulnerabilities and to ensure conflict sensitivity approaches are mainstreamed with CS tools to be used by the programme management and monitoring teams in order to facilitate mainstreaming into the programme. Project teams will also be working with community dialogue processes and natural resource management coordination mechanisms that will potentially decrease communal-level conflict or negative perceptions.

Table 1. Conflict parties in Jowhar

Village/ Community	Rural/ Urban	Clans	Minority-clan
Hanti-Wadaag	Urban	Shiidle sub-clan of Somali Bantu Abgaal sub-clan of Hawiye Hawadle sub-clan of Hawiye	Shiidle (sub-clan of Somali Bantu)
Dheymasama	Rural	Abgaal sub-clan of Hawiye Gaaljecel sub-clan of Hawiye Hawadle sub-clan of Hawiye	
Mandhere	Rural	Abgaal sub-clan of Hawiye Gaaljecel sub-clan of Hawiye	



		Hawadle sub-clan of Hawiye	
Congo	Rural	Abgaal sub-clan of Hawiye Gaaljecel sub-clan of Hawiye Hawadle sub-clan of Hawiye Eyle sub-clan of Somali Bantu Reer Shabelle sub-clan of Somali Bantu	Eyle sub-clan of Somali Bantu Reer Shabelle sub-clan of Somali Bantu

Coordination and programme synergies

While the proposed FCDO-funded project is stand-alone - having its own outcomes that are independent from other projects - it is also part of a broader Programme of work developed in collaboration with the Government and other UN Partners. As previously mentioned, this Programme is known as JOSP or Jowhar Offstream Storage Project and refers to the entire infrastructure system rehabilitation (see map in Annex 1) consisting of 5 main components, as well as a series of complementary actions to be supported by other actors. The main infrastructure or hardware components include: 1) the Sabuun Barrage; 2) Middle Shabelle Flood Risk Reduction infrastructure; 3) the Supply Canal; 4) the Jowhar Reservoir; 5) the Outlet Canal. Additional activities under the JOSP Programme are split across five other main areas of work known as 'Streams', outlined below and further detailed in Annex 6.

Table 2 - JOSP Streams and their focus areas

Stream	Core Component/s	Partner/s	Focus Area
1	Productive Infrastructure Development	FAO	Rehabilitation of the Jowhar Offstream productive infrastructure system to mitigate flood, drought and provide sustainable access to water for an estimated 1.5million people as well as other related market infrastructure
2	Inclusive & Sustainable NRM	FAO, UNEP	Ensure all works apply ecosystem approaches for the sustainable and inclusive exploitation of the natural resource environment including the implementation of nature-based solutions & watershed management
3	Climate smart production, Private Public Partnerships & value chain development	FAO, UNIDO	Get people back into production in a sustainable manner that takes into account the increasing climate volatility and provide linkages to markets and business development opportunities
4	DSS, land tenure & Social inclusion	FAO, IOM, UN Habitat	Localized analysis of conflict dynamics and needs with the creation of solution pathways for displaced populations including land dispute resolution and promotion of social cohesion and stabilization in target communities
5	Effective & Accountable Governance	All Partners	Institutional capacity development at all levels (Federal, State, Local) and community support for enhanced sustainability and ownership and management of project outcomes & services

USAID and FCDO interventions will be relatively independent one from the other, especially in the phase of rehabilitation works. It is possible to rehabilitate, for example, the Sabuun barrage and the reservoir embankments in a fairly independent way. Also, once the Supply canal will be rehabilitated it doesn't mean that it has to be immediately connected with the reservoir if that is not ready to be



filled. Dedicated and temporary operational rule for the supply canal gates, at the intake of the canal, can be designed to avoid overflowing inside the reservoir. The outlet canal can also be rehabilitated, and the gates left open so that water flows directly back to Shabelle river and does not overflow the reservoir.

Table 3- The critical linkages between components USAID TRANSFORM & FCDO RESTORE

Component	Purpose	Dependencies	Year	Donor
Sabuun Bar- rage	Regulates Shabelle river level and divert flood water into JOSP system	Links to Supply Canal	One	USAID TRANSFORM
Supply Canal	Conveys flood water into JOSP Reservoir for use for irrigation in Middle and Lower Shabelle	Supplied by Sabuun Barrage, and links to JOSP Reservoir. Durable Solutions for 7 villages to be in place before rehabilitation is completed.	Two	USAID TRANSFORM
JOSP Reser- voir	Storage of flood water for irrigation use and eco-system services to Middle and Lower Shabelle	Supplied by Supply Canal and linked to Outlet Canal. Durable Solutions for 7 villages to be in place before rehabilitation is completed.	Two	FCDO RESTORE
Outlet Canal	Conveys irrigation water from JOSP Reservoir to Shabelle River for use downstream by irrigation schemes in Middle and Lower Shabelle.	Supplied by JOSP Reservoir and links to Shabelle River.	Two	USAID TRANSFORM
JOSP Govern- ance	Ensure governance capacity to delivery flood and irrigation management and the sustainable operations and maintenance of JOSP infrastructure	Supply canal, reservoir and outlet canal will not start rehabilitation until there is government agreement on JOSP CMO formation.	One	FCDO RESTORE

The FCDO contribution under RESTORE provides a substantial tranche of funding of USD 42 million to activities within Stream 1: Productive Infrastructure Rehabilitation, to support the rehabilitation of the Reservoir. As well as Stream 2: Inclusive and Sustainable NRM where it supports baseline information and monitoring on climate, soil, water, vegetation and land cover, NRM and NBS approaches to reservoir rehabilitation and enhancement and improved natural resource governance. It also supports activities under Stream 3: Climate Smart Production and Value Chain Development promoting agro-ecology approaches to production for enhanced, climate resilient agri-food systems. And Stream 5: Effective and Accountable Governance with FCDO contributing to the establishment of robust governance mechanisms to support infrastructure and resource governance within the project as well as setting up sustainable systems to endure beyond its lifespan. The JOSP programming will be managed in two groups of projects, being Core (FCDO RESTORE, USAID TRANSFORM and Somalia Joint Fund) and Complimentary (Peace Building Fund, Denmark Durable Solutions and EU Climate Security). The Core programming will be under the management of the JOSP Implementation Unit, whereas the Complimentary programming will be under individual agency management.



This keeps the implementation focus of JOSP on delivering the Core projects scope, which ensuring strong linkage to complimentary projects that leverage and contribute to the impact of JOSP programming. Programming integration of the complimentary projects plans and implementation is ensured by having the project managers and lead government ministries of these projects as members of the Technical Advisory Group (TAG). The donors and government line ministries for these complimentary projects will also be members of the JOSP Steering Committee to ensure strategic alignment of programming outcomes and proactively addressing future programming gaps. The total programme value of Core and Complimentary programming is estimated at USD 105 millions of this, FAO estimates the total cost of restoring functionality to the system (infrastructure only) is approximately USD 42 million with final costs to be confirmed following the update of the 2015 Mott MacDonald Study. **See also Programme Governance and Consortium Management Diagrams in Annexes.**

Monitoring, Evaluation and Learning

FAO, IOM, UNEP and WVIS Monitoring, Evaluation and Learning (MEL) Units will work closely with project implementation teams, and partners to conduct all monitoring and evaluation (M&E) activities for the project with an aim of measuring the achievements under each outcome. In carrying out the M&E activities, to measure the impact and outcomes on an annual basis, FAO, IOM, UNEP and WVS proposes to employ a three-pronged approach, that is, secondary data review, quantitative (household interviews) and qualitative methods (Focus Group Discussions-FGDs and Key Informant Interviews).

UNEP M&E proposes to use a soil monitoring and eco-systems evaluation approach which regularly monitors the health of the soil and the ecosystems and in doing so measure throughout the lifecycle of the project how we are meeting the targets set out at the beginning. Records of damage after an extreme event, before the intervention was implemented (i.e. the baseline) Data collection after an extreme event, when the intervention was implemented (ideally in areas with/ without intervention.

FAO M&E proposes the use of a lighter version of the Resilience Index Measurement and Analysis (RIMA) quantitative approach as the main MEL approach plus additional modules of the project's interest. This methodology systematically explores the relationship between a core set of context-specific variables of resilience to construct the resilience capacity index (RCI) based on the four pillars of resilience (assets, social safety nets, adaptive capacity and access to basic services). The approach will utilize the short RIMA tool and will incorporate other modules of interest to assess the impact of the intervention. The RIMA methodology will assist in assessing the impact of the project on household's resilience, testing the theory of change and assessing main outcome indicators of the project. Moreover, RCI provide useful reference information for supporting targeting decisions, identifying the specific weaknesses (or negative coping mechanisms) that increase vulnerability and the contribution of each pillar to household resilience capacity. In addition, key food security indicators including Food Insecurity Experience Scale (FIES), Food Consumption Score (FCS) and Reduced Coping Strategy Index (rCSI) will be measured. To complement the RIMA tool. FAO shall also use the Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP) tool designed specifically for climate resilience indicators such as ICF KPI 1. (<https://www.fao.org/in-action/sharp/sharp-tool>) .

MEL activities will include the following: i) A baseline study will be conducted during the inception phase of the project to determine baseline values for target indicators in the Results Framework; ii) Routine process monitoring, and post distribution monitoring will be conducted by the MEL unit to review the status and completeness of the infrastructures. Process monitoring will be important in analyzing progress towards achievement of project outcomes and will be a critical juncture at which adaptive programming will be done; ii) Soil health and Crop field yield assessments to estimate yields for selected crops and soil health; iv) midline assessment will be conducted halfway the project to track the achievements of the project and; v) An end line impact assessment will be conducted after the completion of the project activities. It will seek to measure progress and success against target outcome indicators set during the baseline, as well as draw lessons and recommendations from the



project. All the studies will include a gender lens that will be critical in informing on appropriateness of modalities employed.

A detailed project monitoring and evaluation framework will be prepared at the inception phase, including proxy indicators that will be useful in monitoring the effectiveness and efficiency of processes and implementation approaches used. Besides the monitoring activities mentioned above, the project team shall regularly monitor the delivery of the project using project management tools. These will enable them to collect real-time information, identify positive and negative unintended outcomes of the project, information that will be useful to inform the review of project delivery approaches for adaptive programming.

To ensure adaptive programming, learning on an annual basis will be embedded as an integral part of the programme approach, not only within each of the respective agencies but across the consortium. Adopting a Collaborate, Learning and Adaptation (CLA) approach, the project will identify learning needs, provide regular and varied opportunities to reflect, and create feedback loops into the project management process. During the inception phase a learning agenda will be refined through collaborative process working within and across organizations to identify learning questions and identify evidence gaps. Once established, the learning agenda will then be embedded into the M&E system and working practices, notably the baseline, midterm, and final evaluations. In parallel to the evaluations the project will undertake action research. This will entail collaborating with researchers or experts to conduct research studies, pilot interventions, or experimental approaches that contribute to the project's learning objectives. While, at the same time drawing from established M&E mechanisms for collecting feedback from stakeholders such as TPM, surveys, interviews, focus groups, and suggestion boxes there will be regular reflections points established.

Aligned with this, and supported by the FAO learning team, the project will identify and employ various opportunities for reflection and learning such as learning exchanges. These will be facilitated, allowing project staff, partners, and beneficiaries to visit and learn from other organizations or projects with similar initiatives. They will provide opportunities for knowledge sharing and the adoption of best practices. Also, sense-making and reflection workshops or learning circles will also be organized at regular intervals, creating dedicated spaces for stakeholders to reflect on experiences, share lessons learned, and identify areas for improvement. After-action reviews (AARs) or project retrospectives will be conducted at key milestones or at the conclusion of significant project activities. These structured discussions among project team members and stakeholders will identify successes, challenges, and areas for improvement. Dedicated resources will be allocated for organizing AARs, facilitating discussions, and documenting lessons learned. Knowledge sharing events, such as conferences, seminars, or webinars, will be organized to disseminate project findings, lessons learned, and best practices to a wider audience. To foster ongoing learning and collaboration, communities of practice (CoPs) will be established around specific thematic areas or sectors relevant to the project. Engaging external experts or consultants with specialized knowledge and experience will contribute to the learning process.

These activities will be integrated throughout the project cycle, fostering a continuous and iterative learning process. Closing the loop involves acknowledging, analyzing, and taking action based on the feedback received, promoting transparency and accountability.

Proposed learning questions:

Impact Level:

- 1. To what extent has the project contributed to reducing the vulnerability of the target population to climate hazards such as floods and droughts?*
- 2. How has the project supported and advanced the environmental peacebuilding agenda in Somalia?*

Outcome Level:



1. *How effective are the ecosystem and conflict-sensitive approaches to natural resource management and infrastructure rehabilitation and governance in promoting sustainable development?*
2. *To what extent have climate adaptive agro-ecology practices and infrastructure enhancements resulted in improved food production and environmental health?*

Output Level:

1. *What are the key lessons learned from the restoration and sustainable management of reservoirs for flood and drought resilience?*
2. *How have the community-level action plans for disaster risk reduction (DRR) and anticipatory action contributed to climate change adaptation and resilience building?*

The studies' data collection will employ a mixed approach where FAO and UNEP Field Analysts and third-party monitoring will be used. The use of the third-party monitors enables access to all project areas, especially where security challenges may restrict FAO/UNEP access.

In addition to the above-mentioned project specific monitoring and evaluation, under the JOSP Programme, FAO's SWALIM and UNEP DHI systems will support monitoring of impact and outcome level indicators with interventions such as: **i) The creation of a detailed baseline for the JOSP area of influence** (Middle and Lower Shabelle). This activity will be crucial to be able to measure the impact, in an objective way, of the improved water availability and water management in the food system. This baseline will include a detailed land cover mapping using very high-resolution images to ascertain number of plants per square unit and quantify the increased food production; **ii) Improved water resource monitoring**. As of now there is only one river gauge in Jowhar. In order to be able to measure the amount of water abstracted by the JOSP area, the amount of water flowing in the river upstream, and downstream of the JOSP must be measured. FAO proposes to install two new river gauges (one upstream in Mahadday Weyne, and one downstream in Balcad), and to have gauge readers in both locations. In addition, the volumes of water in the main canal and in the most important primary canals must be measured. The canal water monitoring will also serve to eventually inform the design of a fee structure for the water users. UNEP DHI will also be using its international systems to monitor flow rate transboundary as well its flash flood modelling it implemented under the previous project. Furthermore, SWALIM will monitor by means of automated remote sensing analysis, the amount of water in the reservoir and the status of vegetation in the command area; and **iii) Crop monitoring** for regular monitoring of crops and infrastructure stability and maintenance needs. Drones will be equipped with both a LiDAR sensor and a camera. The combination of the two sensors is optimal for monitoring crop growth (sensing the height of the plants and therefore their vegetative status) and for monitoring infrastructure by means of both elevation dataset (provided by LiDAR) and images (provided by the camera). This activity can only be implemented with a strong component of capacity building of the local authorities and local communities. Institutional capacity building will be attached to all these activities.

These programme level monitoring activities be complemented by additional resources from other resource partners.

Grievance Mechanism

FAO Somalia has established formal feedback systems for its beneficiary communities, in line with complaints under the Accountability to Affected Populations framework.

These feedback systems include:

- i. A Call Centre
- ii. A complaints Hotline (number communicated and displayed at project sites where security allows, on relevant distribution materials, and verbally communicated to beneficiaries, community groups and local authorities throughout the project.)
- iii. Systematic Communication and Sensitization of local communities through NGOs, radio campaigns, and ad-hoc Call Centre exercises
- iv. Third Party Monitoring
- v. FAO Field Monitors reports
- vi. FAO Field monitoring survey tools



- vii. Emails and letters from Elders, Council Members, district authorities, beneficiaries, tractor owners, pump owners and agro dealers
- viii. Common Feedback Project/Radio Ergo
- ix. Monitoring by donor institutions.

To enable effective and efficient management of feedback and complaints, FAO and partners will:

- (i) Communicate accountability commitments to the affected population, including their rights to complain as and when needed;
- (ii) Actively seeks beneficiary feedback, and reviews efficiency of its feedback systems;
- (iii) Assesses beneficiaries, trains Field Monitors, Call Centre and Hotline staff on handling beneficiary feedback and complaints;
- (iv) Systematically documents all feedback and identifies trends in beneficiary complaints;
- (v) Creates response mechanisms for complaints;
- (vi) Reports and takes action on feedback, complaints and allegations received through the Compliance Unit, technical teams and management, Office of Inspector General or Ethics Office.

All grievance and feedback tools used in FAO are accessible to a high number of beneficiaries including women and minority clans, but also elders, and council members across Somalia. While the Call Centre focuses on outgoing voice calls to communicate with and to survey beneficiary communities, the Hotline (a toll-free telephone service) receives inbound voice calls from the communities for specific inquiries and complaints. Through the toll-free Hotline, FAO receives inquiries, requests for new assistance and other feedback and complaints on its programmes directly from beneficiaries. FAO consults internally with the different sector leads (agriculture, fisheries, livestock, cash transfers, etc.) and always contacts the originator of the feedback so that the issue can be understood, and the callers are always kept up-to-date on progress on their issue or request. The Hotline number is communicated via live radio broadcasts, face-to-face information sessions, leaflets, Call Centre and FAO vouchers. Most of the calls received by the Hotline relate to queries or complaints on entitlements and requests Project (CFP) initiated by the Humanitarian Country Team of Somalia. Radio Ergo broadcasts daily information on humanitarian issues all across Somalia, and under the CFP it receives feedback and complaints from auditors, and reports these confidentially through OCHA to the sector Clusters. FAO is constantly improving its diverse channels of communication with beneficiaries to ensure that feedback is collected in a confidential manner, and responses provided to beneficiaries in a timely and satisfactory manner.

Stakeholder Engagement

The project has been developed in close consultation with representatives of the Government's technical and extension departments and, relevant partners to ensure that their views are taken into consideration. The project will develop a detailed stakeholder engagement plan during the inception phase including planned consultation with government primarily MoAI & MoEWR, irrigation farmer groups and potential private sector operators at federal and state level to define the scope of JOSP Central Management Organization (planned from year 1 of the project).

This will inform the creation of the Irrigation Committee, which will be the user group body to represent the interests of irrigation farmers using JOSP water, and act as the key entity in cost recovery for these services from irrigation farmers. The rehabilitation of key productive infrastructure of the supply canal, reservoir and outlet canal will not be completed until there is an agreement from federal and state governments to create the JOSP CMO, and a detailed plan for the legal establishment and implementation of CMO in Year 2.

More specifically, water governance support will focus on strengthening the capacity of water management committees and sub-committees to manage water access, regulate use and sustain canal maintenance. More in-depth stakeholder consultations will take place during the project inception phase to further inform and ground-truth the project's design, implementation modalities and other key parameters. The inception phase will also prioritize engagement with smallholder farmers to define the challenges they face in production, water access and market access. These meetings informed the operational detail of the project, in order to fine-tune the support farmer groups will



provide to individual smallholder farmers and how to ensure inclusive membership. These meetings sensitized local communities on the community-based grant modalities and production planning.

Budget, Finance (see Budget in excel Annex 2)

Value for money

Statement 1: JOSP is expected to create climate security around the access and provision for water and for land ecosystems in the command area. Building resilience to climate change and the shocks that are becoming cyclical in nature. Based on evidence of flash flood reduction and the previous FCDO nature-based solutions approach, it is estimated that we can reduce flooding impacts by at least 50% over the next 5 years. The project will analyze and implement the water modeling done under the previous FAO-UNEP FCDO-funded project.

Statement 2: JOSP is expected to substantially reduce acute food insecurity in the region/s saving an estimated USD36million per year in food/cash related assistance to IPC 3+ populations. This is based on a 5yr average of an IPC3+ caseload across the target districts of 165,253 people (27,542HHs) using a CBT cost of USD110/HH/mth with an estimated cost requirement for assistance of USD36million per year for the target districts.

Statement 3: Under JOSP, farmers with restored access to irrigation will produce enough food to feed their families for 12 months and generate surplus for sale. This surplus is expected to provide income for families to meet additional needs such as healthcare, education and re-investment into production. The additional food surplus will increase local food availability decreasing the need for importation of cereals and thus helping to ensure affordability. The additional income generated by producers is expected to have knock on effects for the local economy boosting local development. Below figures represent estimates based on current available data and are subject to change once detailed baseline data has been collected. In particular, the land cover baseline planned under the programme will be critical for informing impact measurement in terms of land under cultivation and yield, while household economy data will be critical for informing household income, use and benefits.

JOSP impact for Maize		
<i>Parameter</i>	<i>values</i>	<i>Units</i>
Total Ha cultivated (considering 92% of land only)	487,976	Ha
Total harvest considering yield of 2Mt/ha	975,953	Mt
30% post-harvest losses	292,786	Mt
Total harvest after post-harvest losses (2Mt-30%)	683,167	Mt
Value of total harvest for 1 season (300 usd/tonn)	204,950,038	USD
Actual value of production, per season	51,237,509	USD
Added \$ value of cereal production in % (JOSP), per season	300%	%
Added Mt of production thanks to JOSP, per season	512,375	Mt



Added Mt per capita (average, of pop in gravity irr), per season	1.39	Mt
Added value per capita, per season	417	USD

Statement 4: FAO's experience demonstrates that where water is restored, equitably managed and governed, the risk of resource-based conflict is reduced. FAO expects that as a result of government-managed reliable access to irrigation armed non-state actors will be less able to leverage resources such as water in order to gain control over local populations. Furthermore, the income and livelihood opportunities generated as a result of the programme are expected to intentionally engage youth at-risk of radicalization, reducing the likelihood of recruitment into armed groups as an income source.

FAO ensures the highest value for money in infrastructure rehabilitation by using tender evaluation process for technical capacity and commercial offer. Bidders on infrastructure works will be evaluated on their technical capacity, demonstrated works of similar type and value, and access to these locations. This will result in the contractors being ranked from highest to lowest in terms of technical evaluation scoring. Following this process, the contractor commercial offers are separately ranked from the highest to lowest, with scoring. These scores are then combined to select the contractors with the highest technical capacity with the most competitive offer in the evaluation process. This ensures value for money is inbuilt to the supply of infrastructure rehabilitation works.

Programme Risk

Below is a brief outline of key risks and mitigation measures (see Risk Matrix in Annex 3 for additional information).

Lack of political buy-in or stakeholder engagement at FGS/FMS level

During year one of the project, during a rigorous inception phase partners will work with MoEWR, MoAI and MoECC to define the detailed scope of work for each ministry and capacity building targets. These will be at federal and state levels. The line ministries will have clear roles in part of the implementation and governance of the project. These roles will be exercised in the Steering Committee and Technical working group levels. In addition, focal points from these ministries will join the technical unit to work with FAO, IOM & UNEP as part of the implementation of the project. These steps build the role of government into the design, planning, implementation of the project to ensure buy-in.

Inadequate local governance and resource management structures resulting in conflict or lack of access to resources for the most vulnerable

The JOSP central management organization (CMO) will be established following a rigorous stakeholder engagement process at federal and state level with government and user groups. This will be undertaken by experience water governance consultant with the MoEWR and MoAI over year one. This group will have clear constitution and bylaws established with government chairpersonship. The JOSP CMO will have capacity building from years 2 – 5 of the project to ensure it has the management and technical staff required to ensure ongoing operation and maintenance of the infrastructure. The JOSP CMO will engage a private sector operator to ensure the day-to-day operations and seasonal maintenance of the infrastructure. The project will provide capacity building to this service provider to ensure they can deliver services to quality standards. The service provider will be responsible for collecting fees for water access from irrigation users. This will be from the peak irrigation user group that represents the command areas serviced by the JOSP. This cost recovery for irrigation water access will be used by the JOSP CMO to ensure that ongoing maintenance of the infrastructure.



Inadequate provision for Durable Solutions for IDPs at risk of displacement

IOM has been engaged to undertake an assessment and develop durable solutions plan for IDP communities within and around the reservoir area, as part of the USAID funded TRANSFORM project. IOM has secured funding from government of Denmark to provide durable solutions for these communities in locations that will not be flooded by the reservoir restoration. Community engagement will focus on the inter and intra clan grievances (primarily Abgaal and Shiidle) and the host/IDP/returnee dynamics that are linked to property and land disputes. The EU-funded project, Climate-Adaptive Stabilization in Somalia will also be oriented towards the newly recovered zones of the JOSP command area, focusing on access to water and housing, land and property (HLP) priorities of communities. IOM's Durable Solutions Unit and CCCM will update data and satellite imagery on all settlements and develop relocation options accordingly. In addition, IOM and FAO are designing an initiative to facilitate participatory and inclusive cadastral mapping throughout the JOSP command area funded by the Peace Building Fund (PBF). A durable solution for the 7 villages that have been identified as being at high risk of flooding within reservoir area must be agreed and implementation should commence before the end of year two of the JOSP program if the years 3 – 5 programming is to continue as per the planned schedule.

Delays in construction timelines impact on integration and phasing of deliverables in the programming streams

The construction timelines for the key infrastructure and how these link to each other are outlined in annex 5 on JOSP deliverables and dependencies. The major water management infrastructure for flood and irrigation will be rehabilitated between year one and two. In year one, USAID TRANSFORM will rehabilitate the Sabuun barrage, while FCDO will address embankments that cause flooding on the south side of the reservoir. In year two, the rehabilitation of the supply canal, reservoir and outlet canal, will be dependent on agreement with government and communities on durable solutions for the 7 villages within the reservoir and JOSP governance plan including creation of the JOSP Central Management Organization. If these key milestones are not met by end of year one, then the rehabilitation of these major infrastructure components in year two will be delayed until these plans and agreement are in place. This is to ensure that government and communities have full buy-in in the durable solutions and JOSP governance before the programming continues in years two - five.

Deterioration of the security environment and/or change in access to project sites

Partners will monitor closely any developments in the security situation at the project locations as well as at national level that can impact project outcomes and/or access to sites for contractors and project staff. In the event of a substantial deterioration of the security and operating environment (including in the eventuality of an ATMIS draw down in the area), partners will work closely with FCDO as well as UNDSS/UNSOM and relevant fora at national level including government to identify solutions and assess the impact on project objectives. The project team will liaise also via UNSOM with key stakeholders such as the Somali National Army, local security forces, and local government. Should security and access result in extensive delays or extended inoperability the project team will consider reprogramming in consultation with FCDO.

Communication plan

The project will follow all relevant guidance of the FCDO for the implementation of visibility and communication activities. All assets and materials of the project will contain FCDO logos and the Accountability to Affected Populations strategy will ensure that all participants are fully aware of the funding source for the services and goods received. The project communication and visibility strategy will be developed in detail by FAO's Communication Unit and agreed with all participating partners. The plan shall include key messages, target audiences and a costed work plan with clear



indicators to monitor the achievement of communication objectives. This strategy will be informed by the FCDO's communication and visibility guidelines as well as UN communication policy guidelines. As noted by the response actors, there has been insufficient visibility and communication materials in the local languages, leading to limited knowledge of response activities amongst government and civil society partners. The communication strategy will specifically address this shortfall by incorporating specific messaging in Somali and Arabic languages and translations of all materials.

Capacity and management

In the initial period of the RESTORE project a Central Management Organization (CMO) is proposed for the JOSP, to ensure operation during floods and release of water during the subsequent irrigation season, and for maintenance of all canals and structures. It will also be responsible for maintenance of the river channel and banks and to maintain drainage. The CMO will coordinate with the existing canal committees who will agree abstraction rules for the JOSP management and service provision, coordinate canal operation with releases from the JOSP, inform users of timing of irrigation and to manage irrigation within individual command areas.

Governance capacity building for the JOSP CMO will begin in year 1 of the project and other complementary projects funded by other donors. The first year will focus on scoping the governance system for the JOSP CMO with irrigation and governance consultancy working closely with Federal and Hirshabelle and South West State governments. This will focus on MoAI, MoEWR & MoECC as key line ministries for water management for flood, irrigation and environmental resources. The outcome of this scoping process will be a JOSP governance design with clear roles, responsibility and systems for JOSP management and maintenance of the infrastructure to ensure flood water harvesting and storage, for later use for irrigation and environmental benefits for Middle and Lower Shabelle regions. In year 2 the focus of the governance capacity building will move to the establishment of the JOSP Central Management Organisation with the Federal and State governments. This will include the selection and capacity building of focal points for each stakeholder group, as well as the selection of private sector operator for the infrastructure management, maintenance and cost recovery for these services. In year three, once key infrastructure is operational, the governance emphasis will move to piloting the infrastructure operations, maintenance and cover recovery with irrigation users. This will result in multiple cycles of seasonal flood harvesting, storage and release to river and irrigation command areas for users. The detail of this multi-year governance building process will need to be co-created with government, irrigation users with the support of specialist technical consultants with strong background in water governance at this regional scale

In the longer term, an authority needs to be set up to allocate water and regulate abstraction, but the immediate priority is to manage the existing infrastructure. It is significant that much of the work recommended for the JOSP and the wider river infrastructure relates to maintenance that has been previously deferred. If investment into the infrastructure is to result in sustained benefits, then it is vital that future operation and maintenance is properly carried out and managed. Funding maintenance activities presents challenge, as the beneficiaries of the JOSP scheme are highly dispersed with a proportion of the stored irrigation water benefiting those in Middle and Lower Shabelle. The flood relief benefits offered by the scheme will be enjoyed by a large number of people but may not be directly associated with the operation of the scheme. Once JOSP governance has been strengthened, the CMO will move towards a more sustainable revenue model through a Private Public Partnership approach for cost recovery from irrigation users via a Irrigation User Committee. When it was constructed in 1980, the JOSP was a vital element in the long-term water management of the Shabelle river basin. Rehabilitation of the scheme has the potential to bring very significant flood and irrigation improvements to the region and to act as a focus for wider transformation in the regeneration of riverine agriculture. Building such an authority is a prerequisite for the long-term success of the program and is dependent on several factors, not least continued political stability and security in the program region.



FAO, IOM and UNEP have strong collaboration with both Federal and State level authorities to encourage and sustain active involvement of government institutions. FAO and UNEP will continue to build the capacity of government offices and institutions on policy strengthening and skill building to be able to manage water and food systems sustainably. In the context of the JOSP programme FAO will work hand-in-hand with the Ministry Water and Energy as lead ministry in a coordination role as well as supporting infrastructure development and technical expertise at Federal, State and local levels.

This investment in government capacity and leadership is fundamental to sustain and build on results beyond the life of this project. FAO and UNEP shall work closely with government institutions to increase the capacity of government to put in place regulations, and to produce, disseminate and share high- quality information as well as to deliver market-oriented extension services. FAO and UNEP will support the development of area-based plans and will lead seasonal climate security and market gap analysis.

Complementary to this project with other partner resources, FAO and UNEP will support the government at Federal level to develop a water monitoring system, a Somalia Ecosystem and Strategy and Irrigation Master plan and to chair the Project Steering Committee. It establishes key information platforms such as water management, community governance and flood monitoring systems that will serve as foundations to reduce disaster or food crisis risks in the future. The government at Federal and State level provide services to farmers and water management committees including training of water management committees. The government at State Level will monitor the progress and quality of works achieved by community, contractors and local partners; support water management committees in canal maintenance and planning water provision to farmers in the irrigation and reservoir command area. In summary the government at Federal and State level have an overarching coordination function, facilitating and coordinating project activities. Among other roles, the Government at state level will be involve in beneficiary selection and community mobilization, training.

Consortium Governance & Management

The RESTORE consortium will develop a Memorandum of Understanding (MoU) agreement which defines how the consortium will function, deliver outputs and its governance. This will include definition of the following consortium management processes as agreed by the membership:

- Decision-making
- Reporting and supervision
- Conflict and dispute resolution management
- Coordination and communication
- Project identity and visibility
- Uniformity of project quality assurance
- HQ and field relationship process

The following functional groups will be created by the RESTORE consortium to provide governance, management, technical quality and implementation:

Consortium Governance

The RESTORE consortium will report to JOSP Program Steering Committee (JPSC). This group is co-chaired by MoEWR and MoAI, with membership from MoECC, Durable Solutions Secretariate, FCDO, USAID, EU, PBF, Danish Government, FAO, IOM & UNEP. This is a strategic oversight group responsible for JOSP strategic planning, review and alignment to government programming. The JPSC will manage the TRANSFORM project (USAID), the RESTORE project (FCDO) and the SJF project (RCO multi-donor funded). The JPSC will meet firstly at the end of inception phase (6 months) and then every 12 months thereafter upon the completion of each program phase. These



meetings will be to review progress towards program milestones, approve recommendations for design change and provide decision-making function to proceed to the next phase of programming, or change design. In addition, the PSC may also decide to end the JOSP program and/or more to a Plan B option if the JOSP program is no longer viable as designed.

See also Annex 9 on Governance arrangements.

RESTORE Project Steering Committee (RPSC)

The RESTORE project will be under the oversight of RESTORE Project Steering Committee (RPSC). This group is co-chaired by MoEWR and MoAI with membership of MoECC, FCDO, FAO, IOM & WVIS. This is a strategic oversight group responsible for RESTORE project strategic planning, review and alignment to JOSP programming. The RPSC will meet firstly at the end of inception phase (6 months) and then every 12 months thereafter and prior to the JPSC. These meetings will be to review progress towards project milestones, approve recommendations for design change and provide decision-making function to proceed to the next phase of programming, or change design.

JOSP & RESTORE Joint Implementation Group (JIG) RESTORE is a major project within the JOSP Core programming and will be managed by a RESTORE Project Manager, who reports to the JOSP Chief of Party (FAO). The Chief of Party manages a JOSP Joint Implementation Group (JIG), of which there will be a dedicated RESTORE Project Manager. The RESTORE Project Management is technically supported by Deputy Chief of Party (UNEP) who manages the technical quality of JOSP activities with the membership of the Technical Advisory Group. The Project Manager will be responsible for RESTORE programming planning, sequencing and integration with the JOSP program. The Project Manager will manage a inter-agency team of technical staff from the RESTORE consortium membership seconded into the JIG. The RESTORE partners have responsibilities for planning and implementation specific outcomes as follows: FAO, UNEP & IOM - outcome 1, FAO – outcome 2, FAO & WVI – outcome 3, FAO & UNEP - outcome 4. The technical staff from the consortium partners are responsible for managing the technical quality of each RESTORE outcome planning and implementation. The RESTORE project manager will manage the administration of partner grants and implementation performance management. The Project Manager is also the primary interface with government line ministries of MoEWR, MoAI & MoECC. The majority of partner staff will be cost shared between RESTORE and other JOSP projects, as they are working on multiple projects within the JOSP program.

JOSP Program Technical Quality

A Technical Advisory Group (TAG) will be formed to support planning and technical guidance to the RESTORE consortium on alignment to sector specific strategies (water, irrigation, agriculture, environment, durable solutions), priorities and standards. This group will have representatives of the UN agencies and each line ministries overseeing JOSP Core and Complimentary projects. This group will support the Joint Implementation Group and RESTORE Project Manager in the development of annual plans for projects and ensuring integration of programming between these projects to promote synergies, leverage impact, manage sequencing and provide advice and lobbying support to address contextual challenges to program implementation and success. Within the TAG, thematic working group of line ministry and relevant UN agencies will be established to support the technical quality standard across projects within the thematic area, and integration between projects in the thematic area. TAG will also be a body for endorsement of annual project plans, project progress review and technical quality assurance on a 6 monthly basis for JOSP and RESTORE to support updates to RESTORE Project Steering Committee. Program learning processes will be embedded in the JIG, with technical expertise providing quality assurance oversight and the responsibility of identifying learning and implement project improvements in next project implementation phase. The



TAG is empowered with the authority to raise project quality assurance issue or Do No Harm issue to the JOSP management and RESTORE PSC in the event that significant risk of activity failure or doing harm is present. This provides an independent Quality Assurance function over JOSP projects.

JOSP & RESTORE Project Implementation & Monitoring

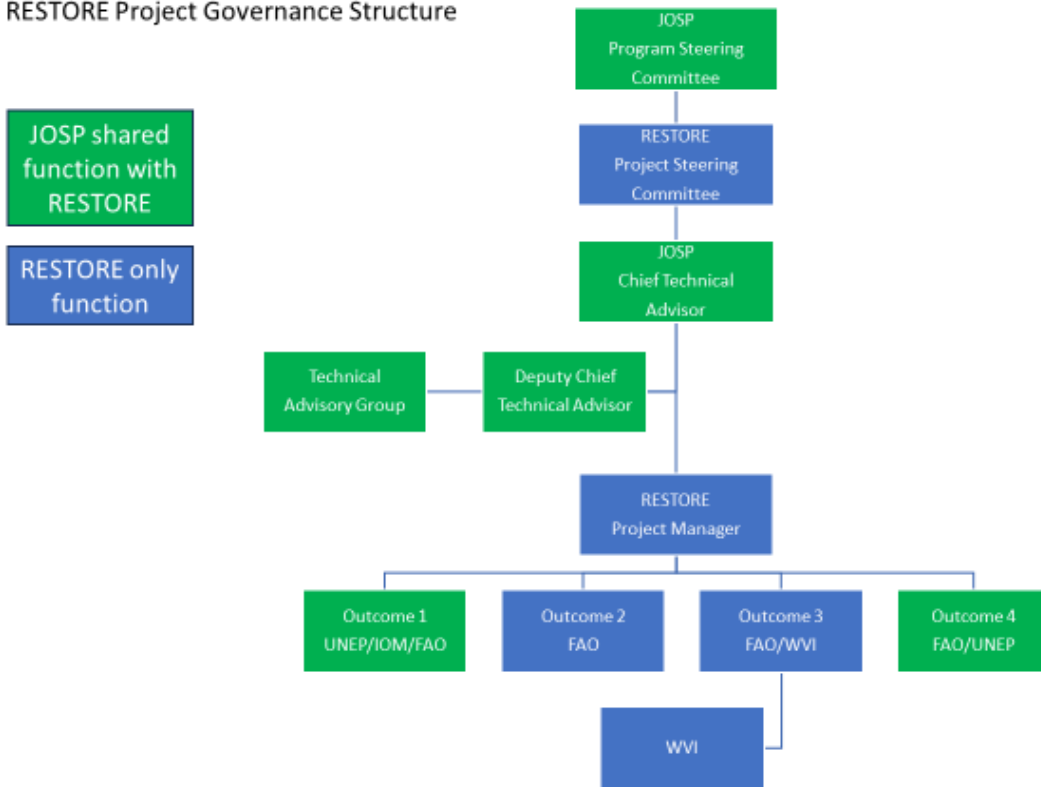
The JOSP Implementation Group (JIG) will be the key group for detailed planning of program and project implementation. This is day-to-day work of implementation management by technical experts with support from other administration units as required. The JIG will report to the JOSP Management. Each project, including RESTORE, in the JOSP core programming will have a Project Manager assigned. The project manager will be supported by the technical experts in the JIG to implement the project. The technical experts will be shared across the core programming projects. The technical experts of the JIG will be subject matter specialists in water engineering, water governance, environmental management, agriculture and disaster risk reduction. A focal point from each line ministry will be seconded to be part of the JIG to integrate government into implementation and planning. This will be a capacity building role also for the line Ministries (MoAI, MoEWR, MoECC) as they will be mentored by the relevant technical expert for the sectoral work they are engaged in.

Within RESTORE \ implementation management, the Project Manager will work with each UN agency that is responsible to lead specific outcomes in the design. Each outcome also has government and non-government partners that play the role of implementing specific outputs and activities within the outcome. The UN agency will have focal point to work with these partners to plan and deliver activities to achieve RESTORE project outputs. These focal points will also work across RESTORE outcomes and with the consortium management and technical advisory Group to ensure integration of project implementation into the overall JOSP core programming framework. The implementation of RESTORE works will occur in quarterly cycles, followed by progress review with Technical Advisory Group level, with refinements made for coming seasonal forecast and seasonal early warnings. The Joint Implementation Group will be based in Jowhar in order to place the technical staff as close as possible to project implementation villages and to promote close integration and strong liaison with the Hirshabelle State

The consortium structure and roles of each partner are outlined in Annex 10. The integration of RESTORE project governance with JOSP program governance is outlined below



RESTORE Project Governance Structure



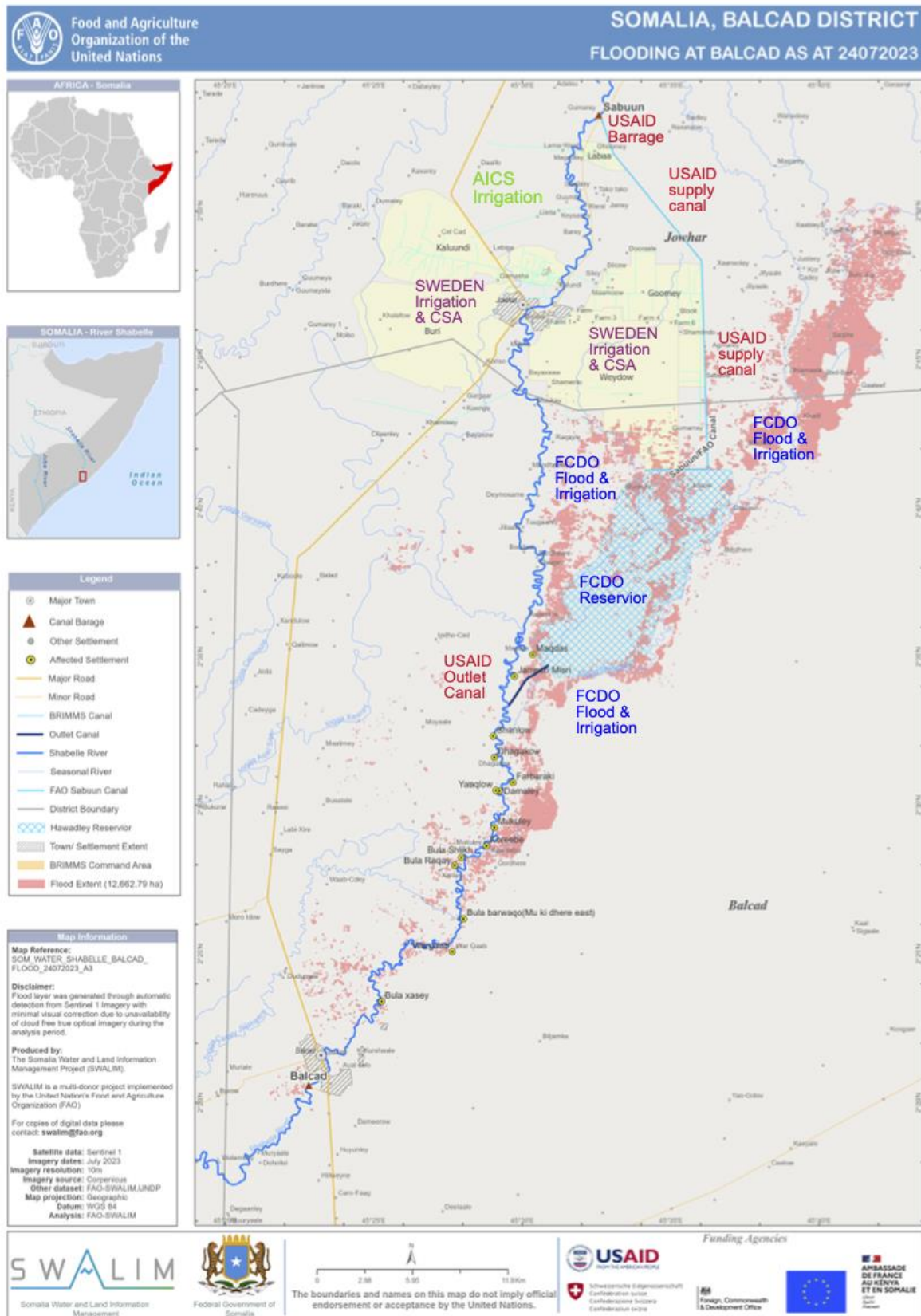


List of annexes:

- Annex 1 - Map of JOSP Command area showing resource partner investments.
- Annex 2 - Budget (see Excel attachment)
- Annex 2 - Log frame (see Excel attachment)
- Annex 3 - Risk Matrix (see Word attachment)
- Annex 4 – Workplan (see Excel attachment)
- Annex 5 - JOSP Masterplan (whole of programme) & dependencies related to delivery.
- Annex 6 – Description of Crisis Modifier mechanism
- Annex 7 - JOSP/RESTORE Beneficiary Breakdown
- Annex 8 - Snapshot of Jowhar Offstream Programme to which RESTORE contributes.
- Annex 9 – Proposed programme governance (MoAI/MoEWR)
- Annex 10 – Consortium and partnership management structures
- Annex 11 – JOSP Theory of Change (see JPEG attachment)

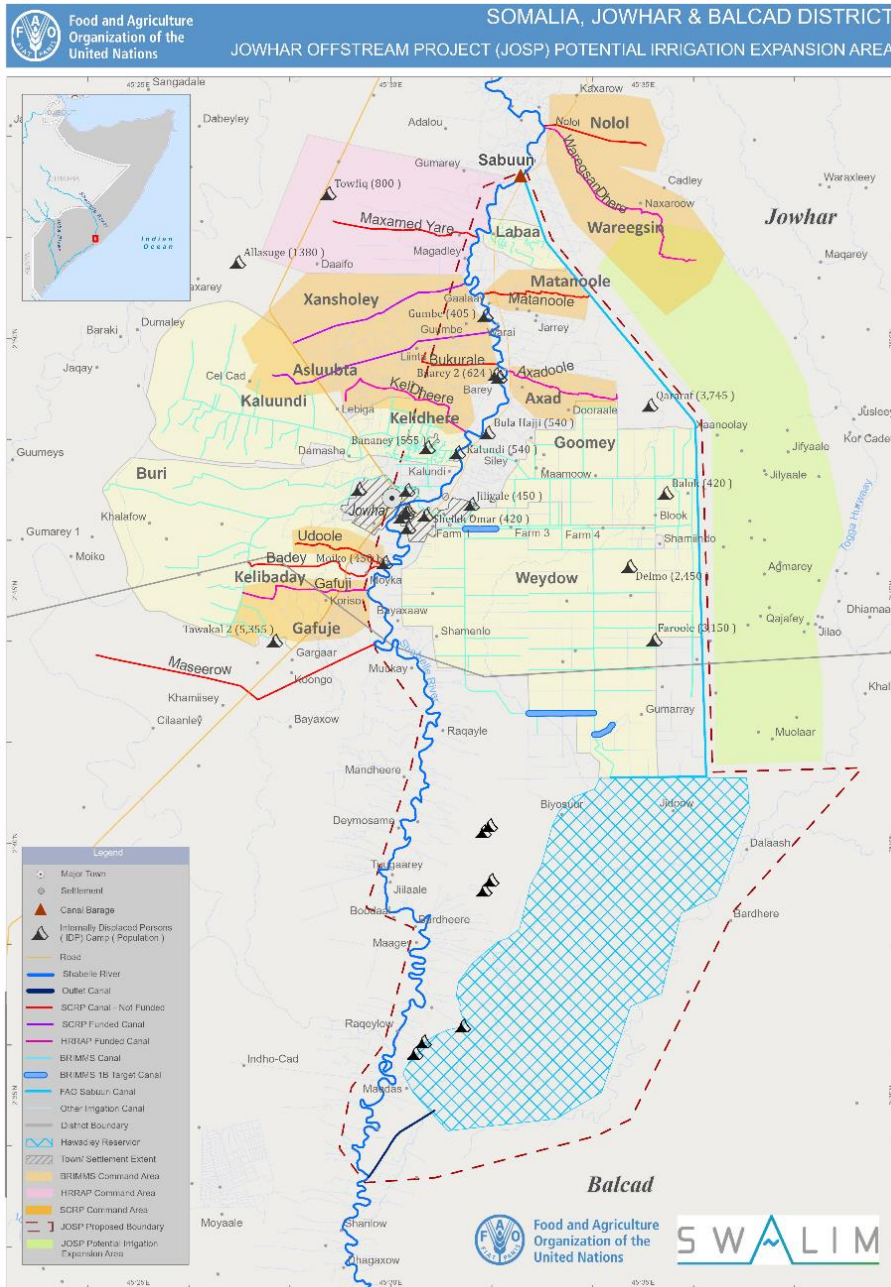


Annex 1. Map of JOSP Command area showing resource partner investments





Annex 2: Map of JOSP Potential Irrigation Expansion Area





Annex 5: JOSP Masterplan (whole of programme) & dependencies related to delivery

Inception Deliverables

The RESTORE and TRANSFORM inception phase will require critical deliverables to be in place in order for programming to proceed into the implementation. These deliverables will be the product of multiple processes by the UN partners with government and communities being implemented during the inception phase. The following 6 deliverables must be in place at the end inception phase period:

- 1. Mott Macdonald feasibility study, Environmental Social Safeguards Plan, Natural Resource Management Baseline confirms feasibility of JOSP infrastructure rehabilitation**

The viability of the JOSP infrastructure rehabilitation will be established by update of the 2015 Mott Macdonald feasibility study with verification on the ground by Mott Macdonald team, assisted by MoAI & MoEWR engineers. Parallel to this infrastructure focus, the RESTORE project will support Environmental Social Safeguards (ESS) screening to identify risk issues at specific sites. This will include the development of climate resilient infrastructure options for future climate scenarios. ESS and climate resilient infrastructure options will e then be developed into action plans to treat social, environment and future climate risks. These action plans will be integrated into the infrastructure designs or NRM, conflict mitigation and durable solutions activities of the RESTORE project for post inception implementation. Parallel to the ESS process, the project will also conduct a Natural Resource Management baseline to establish the status of environment assets within the project area to measure change and improvement over time because of project activities.

- 2. Preliminaries study and plan identify effective conflict mediation strategies over land and water management in JOSP command area**

Critical to the viability of the JOSP programming will be ensuring that inter clan competition and conflict over land and water resources is mitigated. RESTORE will support the assessment and analysis of inter clan conflict within the JOSP command area, and specifically the links of these conflicts to land tenure and water access. Once these dynamics are understood better, the project will work with conflicting communities and local government to identify and plan approaches to reduce conflict over natural resources. The plans will then be integrated into the post-inception implementation

- 3. Preliminaries study and plan identify adequate Durable Solutions options for community subject to JOSP-driven displacement because of increased flooding likelihood**

There are seven villages that have been identified as being at high risk of flooding that would occur from increased water storage in the off-stream reservoir. These informal settlements have an estimated population of up to 90 households who are displaced persons. These people have moved into the reservoir land to farm the area during dry season when water levels recede. The seven villages will need to relocate in order for the reservoir to return to its original full capacity. A number of assessments and analysis are required to create durable solutions for these seven communities. During inception phase, IOM will undertake an durable solutions assessment with these communities, local government and surrounding communities. This will identify the reasons for displacement, the reasons why communities have settled within the reservoir and possible options for resettlement of these households. The conflict dynamic



assessment over natural resources will also be used to determine possible conflict issues that need to be mitigated for viable durable solutions. Parallel to the durable solutions assessment and planning, an assessment and plan for land tenure solutions will be developed for these resettling households. Land tenure will also be critical for the JOSP command area as the irrigation farms were originally government owned sugar estate, rather than individual household farms as they currently operate. An assessment of livelihood options and livelihood plan needs to be created for these households. By the end of the inception phase, a clear government and community endorsed durable solutions plan will need to be established to support the households of these seven villages to have resettlement locations, with land tenure, with a conflict mitigation mechanism and viable livelihood options. This plan will be integrated into the post-inception implementation plan

4. Preliminaries study and plan confirm State & Local authority capacity for effective land administration for land where JOSP infrastructure is located

The JOSP command area was once a government owned and operated sugar cane farm during the 1970 – 1990 period. Following the collapse of the central government in the 1990s, the state-owned farm-land became privately cultivated by individual households and has remained this way until the present. The land tenure of these farmers is not clear, and not endorsed by the government. There is potential for increased land conflict to develop as irrigation infrastructure of the JOSP command area creates increased land value, and potential disputes between people cultivating that land and those that have claims on that land. An assessment and plan for land tenure for the farmers in the JOSP command area is required in order for land access to be formalized for these individual farmers, and a dispute mechanism established for land access disputes to be resolved. This plan will be developed with government and communities during the inception phase, and then integrated into post inception implementation.

5. Security environment allows government & partners have access to JOSP command area for JOSP implementation and monitoring

The JOSP command area until relatively recently was not fully assessable to government and international agencies. Progress in military offensives around Jowhar and Balcad districts have pushed Al Shabab forces back to the point where all the key infrastructure was accessible for government and international actors. This represents the first time in decades that the JOSP infrastructure is accessible for rehabilitation, allowing for the restoration of irrigation and flood mitigation for riverine communities in Middle and Lower Shabelle. Maintaining this increased access to JOSP infrastructure is required for rehabilitation and ongoing operation and maintenance of infrastructure.

6. JOSP Governance entity is scoped, endorsed and roadmap for implementation formulated for ongoing operations and management of infrastructure

The JOSP flood and irrigation system was originally developed and managed by central government prior to its collapse in the 1990s. Decades later, there is no institution responsible for managing the key infrastructure for flood water harvesting and water storage and water access, or the maintenance of this infrastructure. The Federal and State government ministries (MoAI & MoEWR) need to work with water governance experts to provide scope for a new institution that will be responsible for these services and maintenance of the JOSP infrastructure. The RESTORE project will work closely with MoEWR & MoAI with a water governance consultancy to assess and analyse the requirements of governance entity for JOSP operations and maintenance, and the stakeholder membership of such a group. This will include government, community users and options for private sector service providers. The results of this analysis will be used to develop a JOSP governance plan. This plan will include how the entity



will be established, its functions, the memberships, the services, the capacity requirements and options for cost recovery for these services. This plan will become the activities for post-inception activities under Outcome 4 of the RESTORE project.

The full list of preliminaries foreseen within the inception phase of the project (to run concurrently) include:

- Engineering feasibility study update (FAO)
- Environmental and Social Safeguards Analysis and Plan (UNEP)
- Durable Solutions and conflict mitigation analysis and plan (IOM)
- Land Tenure Mgt plan (UN Habitat)
- Public Private Partnership Plan (UNIDO)
- JOSP Governance Plan (FAO)
- Gender Analysis (FAO or outsourced)

In addition to this, technical baseline data will be gathered to ensure programme impact and outcomes can be monitored and measured (FAO/UNEP):

- HEA on JOSP beneficiaries
- Land Cover Baseline for JOSP command area
- Environmental analysis of ecosystems and soil health
- Water resource monitoring (JOSP)
- Crop Monitoring (Lidar)
- Ecosystem, soil and vegetation loss monitoring & EW system

Programmatic dependencies:

There are two major programmatic dependencies to be addressed for the productive infrastructure to be completed successfully: 1) Durable Solutions for 7 villages located on the edge of the JOSP Reservoir; 2) Governance of the infrastructure management and maintenance for sustainability. Programming to address these issues are outlined below (#4 Durable Solutions & # 5 Effective Governance).

1)Productive Infrastructure Development

The outcome of the rehabilitation of the JOSP productive infrastructure is to ensure flood risk reduction and irrigation water access in Middle and Lower Shabelle. This will be achieved through the rehabilitation of the following infrastructure to achieve specific outputs:

<i>Infrastructure</i>	<i>Purpose</i>	<i>Dependencies</i>	<i>Year</i>	<i>Donor</i>
Sabuun Bar- rage	Regulates Shabelle river level and divert flood water into JOSP system	Links to Supply Canal	One	USAID
Supply Canal	Conveys flood water into JOSP Reservoir for use for irrigation in Middle and Lower Shabelle	Supplied by Sabuun Barrage, and links to JOSP Reservoir. Durable Solutions for 7 villages to be in place before rehabilitation is completed.	Two	USAID
JOSP Reser- voir	Storage of flood water for irrigation use and eco-system services to Middle and Lower Shabelle	Supplied by Supply Canal and linked to Outlet Canal.	Two	FCDO



		Durable Solutions for 7 villages to be in place before rehabilitation is completed.		
Outlet Canal	Conveys irrigation water from JOSP Reservoir to Shabelle River for use downstream by irrigation schemes in Middle and Lower Shabelle.	Supplied by JOSP Reservoir and links to Shabelle River.	Two	USAID

2) Sustainable Natural Resource Management

The outcome of sustainable natural resource management is to increase the availability of natural resources and of the ecosystem services they provide to communities in the form of land and water. This will result from the comprehensive baseline, and regular subsequent monitoring, of environmental resources and land use within the land where the JOSP is located. This will identify critical land and water sources that need to be restored and enhanced for community use and resource use sustainability. This will also identify resources where the use of natural resources is disputed or unsustainable so that these can be addressed in the NRM programming. This approach will include Nature Based Solutions for rehabilitated reservoir embankments. In areas around the reservoir, community level natural resource management plans will be the result of co-analysis of community natural resource uses and needs. Reducing conflict over land use and natural resources will be included in these plans. These plans link to agricultural production activities and flood risk reduction activities at community level to inform sustainable farm planning and practices. These plans are also linked to environmental peace building and durable solutions. Of key importance is the land use planning and land tenure for the populations of IDP living in 7 settlements within the JOSP reservoir. Co-creating a sustainable land use approach for these communities and possible resettlement will be addressed in a complimentary project with IOM to support these durable solutions for these 7 villages (see below #4 Environmental Peacebuilding, HLP & Durable Solutions)

The key dependency for this outcome is the rehabilitation of the JOSP reservoir embankments to provide for flood protection, then land use planning and environmentally sustainable practices on the flood prone land around the reservoir. The rehabilitation of the reservoir over year one and two will enable the scale of sustainable natural resource management for the communities around the reservoir.

3) Agriculture Production

A key outcome of the JOSP program is the reduction of flood risk and increasing irrigation water access for small holder farmers in Middle and Lower Shabelle. The reservoir will hold up to 200 million cubic meters of water once the JOSP productive infrastructure is fully operational. The JOSP program will scale up support to agricultural production once the JOSP infrastructure is fully operational at the end of year two. This will target the small holder farmers cultivating land in the irrigation command areas of primary canals and direct intake canals downstream of JOSP in Middle Shabelle and Lower Shabelle. The small holder farmers will be provided with two seasons of agriculture inputs in order for them to make best use of increased irrigation water access. At the same time, climate smart and agro-ecological extension services will be available for these farmers to support sustainable production increases.

The key dependence for this outcome is the rehabilitation of the JOSP productive infrastructure. This will occur by the end of year two of the program.



4) Environmental Peacebuilding & Durable Solutions

This outcome seeks to provide durable solutions for IDPs who have settled around the JOSP productive infrastructure over the last decades. These settlements have resulted in due to the JOSP infrastructure and land becoming non-functional and uncultivated, leading to displaced households moving into the land for cultivation and settlement. The key settlements that may require significant planning and possible resettlement are 7 small villages located within or on the edge of the JOSP reservoir. When the rehabilitated reservoir is at full storage capacity it is possible these villages, or at least some of land used for farming around them will be likely to flood. A preliminary analysis of the satellite imagery shows the villages vary in size from 5 – 15 houses each settlement (approximately 30 – 90 people per village). This is estimated to be up to 90 HHs that may need some form of resettlement each of the land use around the reservoir it appears that farmland used by these 7 villages already floods during wet season. It is reasonable to assume that these farmers are using a form of flood recession agriculture during dry season on this land, rather than following the more common practice of cultivation during wet seasons as the land will be flooded during wet season.

IOM is currently assessing these village populations, their population size, clan base, conflict dynamics with surrounding communities, basic service access and food security and livelihood options. They will also be consulting with local government, clan leaders, IDP village leaders and neighboring communities who may accept to integrate these approximately 90 households over year one and two of the JOSP. If this is agreed, a livelihood solution for these HHs will be required. This may include the continuation of flood recession farming on the land within the reservoir during dry season, subject to project level water in dry season. Alternatively, the government and clan leaders may agree to allocation uncultivated plots of former government owned Sugar Estate. These farms will need the restoration of irrigation infrastructure and secure land tenure for these plots for the settling houses. If new settlements need to be created for these 7 villages, IOM & UN Habitat will work closely with local government on the identification of potential sites, consultation with surrounding communities and durable solutions plan with these stakeholders. IOM is currently funded by the Government of Denmark to assess, consult and design durable solutions for these IDP communities over the first year and implement the first phase of this plan to ensure these 90 HH are not living within the reservoir by the end of year two.

Durable Solutions Scenarios

A durable solution for up to 7 IDP villages within reservoir area must be agreed and implementation should commence before the end of year two of the JOSP program if the years 3 – 5 programming is to continue on the planned schedule. There are three scenarios to be explored for feasibility of durable solutions for these 7 villages:

Scenario 1: Up to 90 IDP HHs (from 7 villages) integrate with neighboring villages with IOM support and continue flood recession farming inside the land of reservoir during dry season with FAO support.

Scenario 2: Up to 90 IDPs HHs integrate with neighboring villages with IOM support and are allocated by government uncultivated Sugar Estate land for farming. FAO to support these HHs with rehabilitated irrigation canals, inputs and extension services and UN Habitat with land tenure services.

Scenario 3: Up to 90 IDPs HHs create new settlements on government allocated land with IOM support. These villages are allocated by the government uncultivated Sugar Estate land for farming. FAO to support these HHs with rehabilitated irrigation canals, inputs and extension services and UNHabitat with land tenure services.

It is possible that these three durable scenarios could take place simultaneously, with each of the 7 villages choosing different options with local government and host community agreement. IOM will work with stakeholders to co-create a durable solution plan based what stakeholder



agree on. FAO will implement irrigation infrastructure rehabilitation and UN-Habitat the new settlement planning, if required with Scenarios 1, 2 or 3.

Critical to the viability and sustainability of these durable solutions scenarios, will be conflict mitigation over access to and use of natural resources by IDPs and Host communities. Tensions over land tenure, land use and irrigation water access will likely to be present between IDPs and Hosts communities, especially if they are from different clan bases. The JOSP programming will identify the underlying tension and conflict risk around these resource use between stakeholders and co-create plans for joint use and management to reduce risk of conflict. Such approaches have been used by IOM & FAO in other conflict prone riverine contexts successfully. Learning from these projects will be applied and scaled in the JOSP.

5) Effective and Accountable Governance

Critical to the sustainability of the JOSP will be governance capacity to ensure that water infrastructure is operated and maintained for ongoing service provision for flood risk reduction and irrigation water access. This will require the creation of JOSP Central Management Organization for operation and maintenance and an Irrigation Committee to represent the interests of the irrigation user downstream. These institutions are yet to be created and will require the support of specialist water governance consultancy working closely with government, private sector and farmers to develop a bespoke governance approach to the JOSP management and service provision. This consultancy will be hired under the RESTORE project. The consultancy firm will work with stakeholders to provide the following sequenced deliverables over the 5 years of the JOSP program:

Year 1 – consultation with government (MoAI & MoEWR), irrigation farmer groups and potential private sector operators at federal and state level to define the scope of JOSP Central Management Organization. This will then be agreed upon and legalized as institution withing Somalia- federal legal framework. Parallel to this, with be a consultation with irrigation farming groups located in middle and lower Shabelle that are potential end users of increased irrigation water access that will result from the JOSP. This will inform the creation of the Irrigation Committee, which will be the peak user group body to represent the interests of irrigation farmers using JOSP water, and act as the key entity in cost recovery for these services from irrigation farmers. The rehabilitation of key productive infrastructure of the supply canal, reservoir and outlet canal will not be completed until there is an agreement from federal and state governments to create the JOSP CMO, and a detailed plan for the legal establishment and implementation of CMO in Year 2.

Year 2 - This will focus on the creation of the JOSP Central Management Organization (CMO) and the Irrigation committee. Following the in-depth consultations of year one and scope definition of these two entities, the institutions will be formed within the relevant legal and regulatory framework of the Somalia federal government. This is likely to be part of the National Water Sector Coordination Facility or have strong connection to the facility. Once formed and legally established, the CMO undertakes a process of capacity building with UN agencies to gradually assume the responsibility for the operations, maintenance and cost recovery for JOSP infrastructure and services.

Year 3 - The capacity building of JOSP CMO & Irrigation Committee will be the focus of year 3. For the JOSP CMO, the capacity building activities focus on the core management and technical staff to be hired and trained and supported to develop the systems and service delivery of JOSP operations and maintenance. Parallel to this will be the development of a service agreement framework for a private sector service provider to be employed by the CMO to run the day-to-day operations of the JOSP and seasonal maintenance. For the irrigation committee, the focus of capacity building activities will be development of institutional governance and management for each primary canal water committee to have representation in the irrigation



committee. This will lead to planning for water allocation on seasonal and annual basis from the JOSP storage capacity for each primary canal. The management system for water volumes telemetric monitoring will be established by the Irrigation Committee and implemented by each Primary canal committee under the Irrigation Committee management. This will establish a tracking of water volume and use in each primary canal for cost recovery purposes later.

Year 4 – The JOSP CMO will continue to be supported to provide the services of flood water harvesting, water storages and irrigation water release. Seasonal maintenance will also be implemented by the private sector contract engaged by the CMO. The funding for these services will come from the JOSP projects budgets in the sort terms. In year four, the development of a cost recovery approach will be designed with the Irrigation Committee and the CMO, with a price on water usage, established for each primary canal, that will enable the irrigation users to have a clear financial contribution to access water each season. Pre-existing water committees from each primary canal will be required to contribute these funds from the member farmers in order to access irrigation water. The funds will be collected by the Irrigation committee, which will contribute these to the JOSP CMO for cost of maintenance and management for each season. The cost recovery system will need to be designed and implemented by the water governance consultancy with the CMO and Irrigation Committee

Year 5 - The implementation of the Cost recovery mechanism is the focus of year five. This will enable the ongoing capacity of the JOSP CMO to continue providing services to the irrigation users. The seasonal services will include flood water harvesting, water storage and release, and the seasonal maintenance of the productive infrastructure by a private sector service provider under contract to the CMO. The outcome at year five is that JOSP CMO has the management and technical capacities to provide ongoing services to the irrigation users, and sufficient financial resources to cover the costs of service provision.

Key deliverables dependencies for effective governance of JOSP

The agreement in year one to create the JOSP CMO by federal and state governments will be a key milestone that will lead to rehabilitation of the productive infrastructure in JOSP program. This is a pre-condition to major infrastructure programming scale up in year 2. Once this agreement is in place, the formation of the legal entities will take place, leading to incremental capacity building that leads to the point of institutional sustainability and cost recovery for service provision.

JOSP Deliverables Sequencing

The integration and phasing deliverable in the JOSP programming streams is critical to success. The sequencing of JOSP major deliverables and their dependencies is outlined as follows:

STREAM	Year 1	Year 2	Year 3	Year 4	Year 5
1. Productive Infrastructure	Consult, assess & design Sabuun barrage rehab.	Supply canal & outlet canal rehab	Infrastructure operation & maintenance (O&M)	Infrastructure operation & maintenance	Infrastructure operation & maintenance
2. Sustainable Resource Management	Consult, assess & design	Reservoir rehab & NbS	NbS for flood risk reduction & irrigation	NbS for flood risk reduction & irrigation	NbS for flood risk reduction & irrigation



3. Agriculture Production	Consult & design	Capacity building of MoAI extension services	Inputs & extension	Inputs, extension & markets	Extension & markets
4. Environmental peace building & Durable Solutions	Consult, assess, design for settlement & land tenure	Land tenure, Settlement solution & conflict mitigation	Basic services & livelihoods. Conflict mitigation	Basic services & livelihoods. Conflict mitigation	Basic services & livelihoods. Conflict mitigation
5. Effective & Accountable Governance	Consult & design of JOSP CMO & Irrigation Committee. Agreement on formation	JOSP CMO & Irrigation Committee formalized. Capacity building for service provision	Capacity building for O&M. Flood & irrigation services provision to Irrigation committee	Capacity building for O&M. Flood & irrigation service provision. O&M Cost recovery mechanism established	Capacity building for O&M. Flood risk reduction and irrigation services provision. O&M Cost recovery mechanism implemented

A detailed master workplan of the activities in each JOSP programming Stream and budget is attached for reference.

Plan “B’s” and decision gates:

The JOSP program workplan will have decision gates at the end of each implementation phase. These decision gates will create the opportunity for the Program Steering Committee to consider next programming steps at a strategic level. This will result in decisions by the PSC to continue the program, redesign the program or end the program, based on the achievement or lack of achievement of program milestones, or a major change in program context, such as lack of secure access.

Gate 1. End of inception phase (6 months) milestones:

- Completion of all preliminary studies and plans
- Recommendations to PSC for design changes based on studies results
- PSC defines recommendations as viable resulting in year one plan implementation based on refined JOSP program design

Gate 2. End of year one (12 months) milestones:

- Completion of Sabuun Barrage
- Completion of reservoir southern embankment
- Agreement of FGS & Hirshabelle State on the creation of JOSP CMO
- Agreement of Hirshabelle State and Jowhar/Balcad clans on durable solutions for 7 villages in reservoir land
- Continued security access to the JOSP sites allows for ongoing project works
- PSC agrees to continue to year 2 plan implementation or redesign

Gate 3. End of year two (24 months) milestones:

- Relocation and/or integration of up to 360 IDPs from 7 villages into nearby villages population
- Farming land solution or other livelihood solution for the 360 IDPs from these 7 villages
- Completion of the Supply Canal to prevent flooding and supply irrigation.



- Completion of the Outlet Canal to prevent flooding and supply irrigation.
- JOSP CMO and Irrigation Committee created as legal institutions under federal law and core membership recruited
- Continued security access to the JOSP sites allows for ongoing project works.
- PSC agrees to continue to Year 3 plan implementation or redesign.

Gate 4. End of year three (36 months) milestones:

- Commencement of agricultural production scale up on newly irrigated land, including land of newly settled IDP farmers
- JOSP CMO has management and technical capacity to provide operations and maintenance of infrastructure
- JOSP CMO provides services of flood water harvesting, storage and water release to Irrigation Committee membership
- Continued security access to the JOSP sites allows for ongoing project works.
- PSC agrees to continue to Year 4 plan implementation or redesign.

Gate 5. End for year four (48 months):

- Scale up of agricultural production scale up on newly irrigated land in middle and lower Shabelle via irrigation canals managed by the Irrigation committee membership
- JOSP CMO continues to management and technical capacity to provide operations and maintenance of infrastructure and a private sector service provider in place.
- JOSP CMO provides services of flood water harvesting, storage and water release to Irrigation Committee membership
- Irrigation Committee and JOSP have agreed to a cost recovery mechanism for operations and maintenance cost of the JOSP.
- Continued security access to the JOSP sites allows for ongoing project works.
- PSC agrees to continue to Year 5 plan implementation or redesign.

In the event of the PSC deciding during any of these decision gates that the milestones for next phase implementation have not been met, this will lead to either a redesign of the program plan and modalities to ensure the milestones are met within the next phase. Alternatively, if the PSC decides that it is highly unlikely that milestones can be met, or that security context has changed to not allow access for work to continue, this may lead to a decision to end the JOSP program in its current form as it is no longer viable. In this event, Plan B's options can be considered as alternatives.

Plan B options.

1. Redesign of the JOSP program:

The lack of achievement of milestones from any of these gates will result in the Program Implementation Unit revisiting program modalities and timelines to ensure that these milestones are feasible and can be achieved in the following implementation phase through redesign. These redesign options will be presented to the PSC for decision-making on if they are acceptable and will be included in design changes for the following implementation phase. The implication of this approach is that some delay in implementation may occur as some milestones will delay the start of some part of the next phase of works. This is especially the case for year one and year two milestones. In the event of delays in year one or year two milestones achievement, all efforts will be made to consolidate milestones in years three, four and five to ensure full program achievement at the end of year five.

2. Reduce scope of the JOSP program:



A redesign of the JOSP program to reduce the scope of work to focus only on locations with access for agencies may occur. This scenario may be considered if the security access reduces following the ATMIS draw down at end of year 2. By this stage, the major infrastructure will be rehabilitated and the key will be ensuring that ongoing service provision by JOSP CMO. This may result in a move of target areas for further programming closer to the river where government control is more likely to continue, rather than in the newly recovered areas. The reduced geographic focus will concentrate on efforts on accessible areas for Government, agencies and their partners.

3. Retargeting of the JOSP funding to South West State

By the end of year two, the JOSP program will have succeeded in providing rehabilitation of the majority of flood and irrigation infrastructure in the JOSP system. At this point, flood water can be managed and irrigated water supplied downstream, assuming that governance capacity can be maintained. In the event that lack of security access around the JOSP infrastructure results the need to retarget funding to a different location with access. FAO is developing a programming option that targets the rehabilitation of mega water catchments around Baidoa district, that once formed the basis for agro-pastoralist resilience. The funding for JOSP rehabilitation could be retargeted to focus on these water sources, their governance and livelihoods surrounding them. This would reach a lower number of beneficiaries than the JOSP system. But it would ensure a major benefit for a highly drought vulnerable region of Somalia.



Annex 6 – Description of Crisis Modifier for Anticipatory Action under RESTORE

The RESTORE project will have a dedicated Crisis Modifier fund under Outcome 3. This will provide the capacity for Anticipatory Action to protect community resilience gains being implemented under Outcomes 1, 2 & 3. WVIS will be the partner responsible for design and delivery of the Crisis Modifier, with decision support services from SWALIM climate monitoring and early warning. The primary purpose of the Crisis Modifier is Anticipatory Action, within the framework of Community Action Plans (CAPs). The CAPs include Anticipatory Actions that are protective of community level resilience in response to Early Warning. Depending on the risk village context, anticipatory action may also contribute to Disaster Risk Reduction activities, which are also part of the CAP. The process of implementing the Crisis Modifier will include the following 8 step process:

1. Climate risk analysis

The analysis of climate risk occurs first as Middle Shabelle level using SWALIM data to inform programming of natural hazards and communities particularly at risk. Using satellite imagery, topographic modals and flood modelling scenarios, the locations most at risk to flood and drought will be identified for more detailed community level analysis of risk and community action planning

2. Community DRR analysis

At a community level, IOM and their partner, will work with communities to understand the history of climate shocks within the village and surrounding farming land. This will lead a deeper village understanding of specific natural hazards, the risk level they present and the frequency and magnitude of incidence. Based on this shared and co-created analysis of climate impact on natural resource risks, the community will be supported to identify options that can be implemented to reduce risks to people's lives and livelihood. These options are then used to co-create a Community Action Plan.

3. Community Action Plans (CAP)

The Community Action Plan (CAP) identifies the specific natural resource risk that impact the lives and livelihoods in the villages, and treatment actions to reduce the impact of these risks and recovery rapidly from a shock incident. The CAP provides indicators for early warning of shock, and specific Anticipatory Actions to be taken when these triggers are hit. The Anticipatory Action menu is scalable to match the magnitude of the forecast shock and activities change through each phase of the disaster from mitigation, preparedness, response and recovery. The CAP activities can be financial resourced by ongoing project activities (NbS as mitigation works) and also preparedness, response and recovery from the Anticipatory Action Fund within the RESTORE project budget.

4. Early Warning

SWALIM has comprehensive climate early warning system for flood and drought already in place. This provides high level analysis of flood and drought risks, with forecasting for shock and scalable warning system using SMS, web and radio channels once trigger for alert are reached. The triggers of this system have been established based on over 15 years of climate shock analysis. To add to this high-level analysis and warning, the RESTORE project will use the CAP process to identify community knowledge of early warning triggers based on local knowledge. The local knowledge will be used to co-create community-based triggers to further inform early warning. These triggers will be added to the CAP and the early warning system that SWALIM already has in place to trigger Anticipatory Actions



5. Anticipatory Action

The risk reduction, anticipatory response and proactive early recovery from a shock are the key to reducing the impact of climate shocks on lives and livelihoods. The Anticipation Action framework for RESTORE will provide a menu of actions that will correspond to the type and scale of the shock at community level. The actions will be funded by the Anticipatory Action Fund, within the project budget.

6. DRR

The CAP will define the specific natural resources that present a natural hazard to the community. This could be in the form of flood or drought. Using the NBS activities under Outcome 1, the project will work over the longer term to reduce the risk of this hazard presents to lives and livelihoods of villagers. In event of a shock, the impact of this event will be reduced as the community has taken proactive steps to manage the natural hazard. DRR activities can be also topped up with cash from diaspora and community contributions to increase the scope of activities.

6. Prepare/Mitigation

The seasonal forecasting from SWALIM and the early warning triggers in the CAP provide the warning and alert to prepare for a pending shock, such as flood or drought. Using the CAP planning process, the community will have defined the actions to take in response to that pending shock. The Anticipatory Action Fund will support the implementation of these activities and enable the community to proactively prepare ahead of the wet or dry season. The activities will be designed to protect villages and farms from loss and damage with short term intervention before the shock event.

7. Respond

A humanitarian response to the shock requires a significant increase in funding and specific emergency response capacity. The project will use the forecasting and early warning trigger to proactively work with the emergency response actors to pre-identify expected humanitarian needs and vulnerable caseloads that will likely need assistance. These activities will be funded from humanitarian funds outside the RESTORE project budget. These will be short term activities for the during of shock to save lives and protect livelihoods from damage and loss.

5. 8. Recovery

Following the end of shock, proactive actions will be taken to assist affected communities to rapidly recover their livelihoods. This will be to make the best use of the available natural resources and the seasonality to get livelihoods functional as soon as possible. These activities will be pre-identified in the CAP by communities and which households are most likely to require assistance due to the risk exposure and pre-existing vulnerabilities.

Application in 2024 El Nino – Anticipatory Action in practice:

The Deyr wet season in 2024 presents an opportunity for implementing the Anticipatory Action immediately following a climate shock of flood within the RESTORE project area. The major flood is forecast in the Jowhar area, which highly likely to lead to flood damage to villages and farms around the JOSP reservoir. Short term displacement and crop losses are expected to occur. Although a CAP process has not yet started in RESTORE for these villages, the SWALIM analysis of the flooding using satellite images will enable the project to identify the most flood affected locations in the project area. Using this analysis, WVIS will assess the extent of the flood damage in these villages. This will define which villages will receive recovery assistance. DRR preparation and mitigation of the flood affects has been already occurring in the preceding months with rehabilitation of river embankments in Jowhar, the pre-positioning of sandbags and training of community and government in sandbag wall construction. This is funded by the FCDO under the El Nino response and World Bank SCRIP program. The humanitarian cash response is in the process of being planned in response to this flood, with an



emphasis on providing cash transfer to flood affected households to support them following the loss of their crops. The RESTORE project will program GBP 500,000 for Cash for Work flood drainage to provide short term food security during the Jilaal season following the heavy crop losses from the El Nino flood. The cleaning of shallow wells within these flood affected villages will also occur. The target villages with a focus on flood affected farming around the JOSP reservoir and the JOSP supply canal. Parallel to this RESTORE funded El Nino action, FAO will focus on farming input packages for flood recession farming. This will include fast maturing seed varieties and irrigation pump hours for small holder farmers around the reservoir area that have lost their crops due to flooding. This agricultural activity will be funded by other donors, rather than FCDO.

Anticipatory Action in Jilaal (Cash for Work & Shallow Well Cleaning)

The project will provide targeted support to populations groups at different levels and vulnerability and ensure that their present situation is considered and responsive support provided to translate to highest impact. Due to different asset bases, shock exposure impact and severity, households (HH) in flood affected locations are not in similar situations and as such not all interventions will work for them. For this reason, the project will develop a menu of prioritized approaches that achieve the following; cash for work activities to provide both short term cash for beneficiaries and longer-term benefits through restoration of community assets. This targeted approach ensures that not only is the design of the program sensitive to contextual realities but invests resources where they are best suited to generate high impact.

The project will carry out location identification and community engagement prior to commencing activities. The community engagement exercise will include religious leaders and youth leaders representing the larger communities in the identification and prioritization of activity typology across all activity types including infrastructure to be rehabilitated via cash for work, and which wells need to be prioritized for cleaning to increase their functionality.

The project will rehabilitate or reconstruct water points and small-scale soil and rainwater management infrastructure through Cash for Work (CfW) in villages where communal assets have been damaged by floods, which may include but not limited to water pans, shallow wells, soil bunds and stone lines for range land rehabilitation and / or flood control infrastructure etc. and develop specifications for the work in line with build back better principles. Tailored to ensuring improved water ways downstream and reduced susceptibility to flooding, communities will be supported to adopt nature based approach to prioritization of recovery actions, this includes prioritizing indigenous vegetation, riparian buffers in the form of revetments and revegetation with local resilient crop varieties that act as slope stabilizers and collectively slow down run-off by absorbing excess water, reducing peak flow and helping to mitigate potential flood damage downstream.

The amount of cash will be based on the Minimum Expenditure Basket (MEB) that is prescribed by the Somalia Cash Working Group which is currently pegged at USD 84 per month for the region. The work norm will be USD6 per worker per day for 14-days a month. Money will be transferred through mobile phones through vetted service providers. The project's CfW component will focus on addressing flood damage and improving drainage with NbS approaches based on findings from a rapid assessment.

Prior to the commencement of any CfW work, there will be a detailed assessment to ensure that resources will be committed to rehabilitating/ reconstructing infrastructure that will bring maximum benefits for target communities in an effort to maximize VFM while doing no or minimum damage to the environment. This assessment will build on the outcome of the community prioritization meetings. The project will prioritize rehabilitation of shallow wells nearby the river banks for riverine communities, while also engaging CfW beneficiaries in the rehabilitation of water pans and rangelands.

Many infrastructure rehabilitating/ reconstructing activities will have an impact on the natural environment e.g. soil disturbance, cutting down of trees and vegetation clearance which may



lead to increased soil erosion due to increased runoff and reduce percolation, which in turn has negative impacts on the local water table and aquifer recharge. Environmental mitigation plans that minimize soil erosion, e.g., reforestation and erosion control structures, will be considered, as applicable, whilst planning rehabilitating/reconstructing activities.

The project will support 9 villages and 5,535 HHs through CfW interventions depending on the outcomes of the rapid assessment and CfW needs identified by the communities.

The project will cover approximately 360 HHs assuming there will be at least 2 wells per village that require cleaning.

Long term CM:

Throughout the 5-year project cycle, the JOSP command area will inevitably experience environmental shocks, such as severe flooding, which will demand immediate action. The RESTORE Crisis Modifier Instrument will comprise anticipatory action and contingency plans formulated in the context of an early warning system. Designed during the inception phase of the project, the early warning system is based on pre-agreed, data-based early-action thresholds, or triggers, tailored to the specific conditions of every target village. When early-action thresholds are breached, village-level anticipatory action plans are triggered, and the response will be delivered through existing IOM structures. A detailed analysis during the inception is required to develop the Menu of actions in collaboration with communities and allocate a percentage of the overall project funding that would protect the RESTORE investments throughout the project cycle.



Annex 7 – JOSP/RESTORE Beneficiary Breakdown

While up to date census data does not exist for Somalia, the below estimates are based on current available data from FSNAU and SWALIM and are expected to change once detailed baseline data has been collected during the inception phase of the programme. Furthermore, there is no solid baseline for the irrigated areas or an updated land cover and land use map of Somalia. However, based on available data, according to the below estimates Merka, Qooroley and parts of Afgoye would be considered downstream beneficiaries. Once the reservoir is restored to full capacity the water is expected to go even further downstream, but the project does not plan to measure this mainly due to access constraints.

FAO will update this critical data set during the inception phase to provide much more precise estimates on the expected population directly benefitting from the restored water supply, yield, production values etc. Project specific estimates (FCDO column below) are notional, based on geographical coverage of the FCDO-related infrastructure and interventions, FCDO's contribution should be considered as an integral part of the JOSP programme-level targets. The three tables below represent different coverage of the same population group and should not be considered cumulative. The total JOSP target population is 1.65million people across the five districts.

A) Ecosystem in the reservoir:

Ecosystems	Total District Population (no. of pp)	Water storage (no. of pp)	% supported by JOSP	% FCDO
<i>Afgoye</i>	505,587	64,957	100%	32,479
<i>Jowhar</i>	391,961	97,281	100%	48,641
<i>Balcad</i>	358,453	50,691	100%	25,346
<i>Merka</i>	264,679	90,665	100%	45,333
<i>Qooroley</i>	135,558	65,293	100%	32,647
TOTAL	1,656,238	368,887		184,444

B) Irrigation:

Irrigation	Total District Population (no. of pp)	Riverine Gravity Irrigation (no. of pp)	% supported by JOSP	% FCDO
<i>Afgoye</i>	505,587	64,957	100%	32,479
<i>Jowhar</i>	391,961	97,281	100%	48,641
<i>Balcad</i>	358,453	50,691	100%	25,346
<i>Merka</i>	264,679	90,665	100%	45,333
<i>Qooroley</i>	135,558	65,293	100%	32,647
TOTAL	1,656,238	368,887		184,444

C) Flood Protection



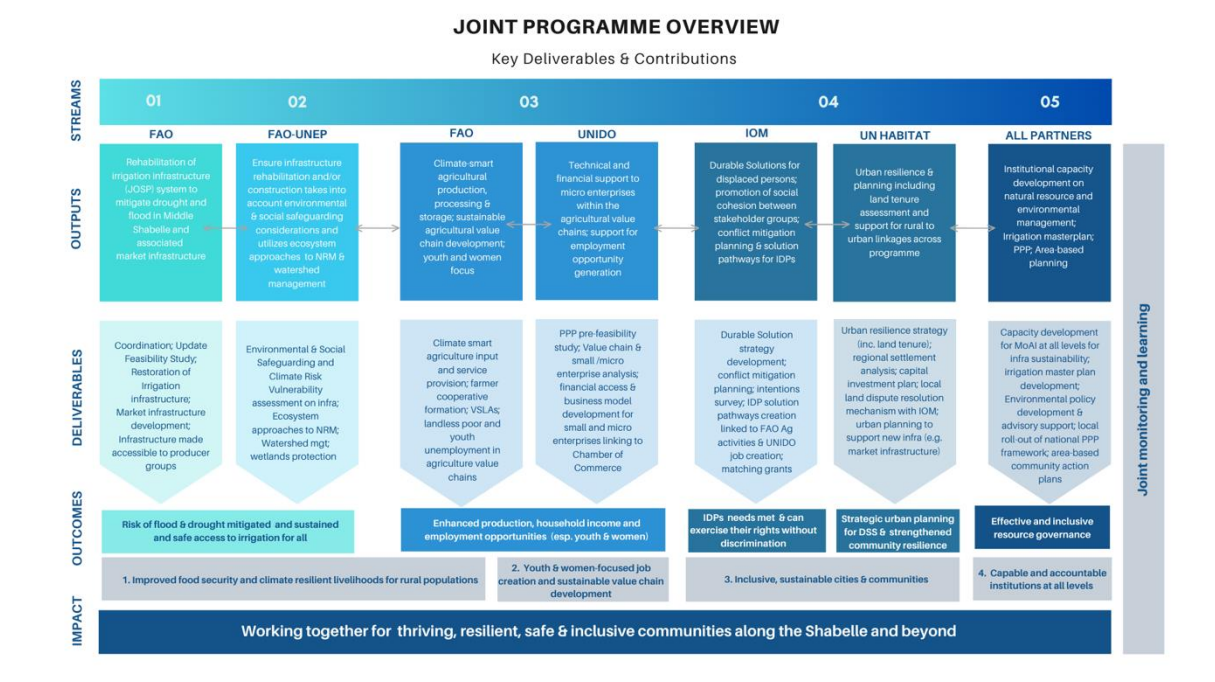
Flood relief	Total District Population (no. of pp)	Riverine (rural)	Agropastoral (rural)	Pastoral (rural)	Urban	IDP (rural & urban)	% JOSP	% FCDO
<i>Afgoye</i>	505,587	64,957	238,175	6,186	166,965	29,574	505,857	252,929
<i>Jowhar</i>	391,961	97,281	138,625	7,296	71,799	76,960	391,961	195,981
<i>Balcad</i>	358,453	50,691	152,072	50,691	83,999	21,000	358,453	179,227
<i>Merka</i>	264,679	90,665	16,838	2,589	117,633	36,954	110,092	55,046
<i>Qooroley</i>	135,558	65,293	13,978	9,479	46,808	0	135,558	67,779
TOTAL	1,656,238	368,887	559,688	76,241	487,204	164,488	1,501,921	750,961

D) Drought mitigation

Drought relief	Total District Population (no. of pp)	Riverine (rural)	Agropastoral (rural)	Pastoral (rural)	Urban	IDP (rural & urban)	% JOSP	% FCDO
<i>Afgoye</i>	505,587	64,957	238,175	6,186	166,965	29,574	100%	252,794
<i>Jowhar</i>	391,961	97,281	138,625	7,296	71,799	76,960	100%	195,981
<i>Balcad</i>	358,453	50,691	152,072	50,691	83,999	21,000	100%	179,227
<i>Merka</i>	264,679	90,665	16,838	2,589	117,633	36,954	100%	132,340
<i>Qooroley</i>	135,558	65,293	13,978	9,479	46,808	0	100%	67,779
TOTAL	1,656,238	303,930	321,513	70,055	320,239	134,914		823,119



Annex 8 - Snapshot of Jowhar Offstream Programme to which RESTORE contributes





Annex 9: DRAFT JOSP PROGRAMME GOVERNANCE STRUCTURE (as proposed by MoAI/MoEWR to be refined during inception phase)

1.0 BACKGROUND

The JOSP Project is pivotal in unlocking a developmental project that will significantly impact the regional economy and local livelihoods. The emphasis on improving irrigation water management, building on the inherent strengths of various stakeholders, focusing on the holistic development of water infrastructure, and addressing the region's unique challenges is essential. The project aims to promote food security, alleviate poverty, ensure environmental sustainability, and prepare for the impacts of climate change and flood management. This supports the drive to enhance the country's resilience to the impacts of floods and droughts, and as such, strengthening and improving how water and natural resources are governed and managed is as important as the interventions to address built and ecological infrastructure. Hence, the initiative's commitment to supporting leaders of change, sharing knowledge, and fostering a community of best practices is essential for triggering widespread positive change; offering capacity building and technical inputs on various water management and irrigation management methods is valuable. This project is poised to significantly contribute to agriculture water initiatives across different regional countries and basins. As such, the manner in which the project is governed and the lessons are leveraged will be important for future up-scaling of approaches.

The Initiative focuses on enhancing irrigation infrastructure, addressing regional challenges, and promoting innovative strategies in irrigation agriculture, empowering leaders and sharing knowledge; the Initiative aims to foster a broader movement of positive change. By offering capacity building and technical support on various water and irrigation techniques, the Initiative also supports communities in adopting best practices for agricultural water management, and this will be informative for other areas nationally and regionally.

The JOSP, chaired by MOAI and Co-Chaired MoEWR, will work with the other development Partners to strengthen and regularise the water sector governance frameworks, including policy, legislation, and institutional aspects. This will take place at the national scale, and interventions such as the JOSP can be importantly supportive in providing very local-level inputs to that process in a 'bottom-up' manner that supports the national 'top-down' approach.

2.0 ESTABLISHMENT OF RESTORE PROJECT STEERING COMMITTEE.

Noting that the JOSP has strategic importance to the Federal Government of Somalia and the Hirshabelle State Government, it will be critically important to establish a JOSP Programme Steering Committee (JOSP PSC) that supports and guides the implementation of the various interventions, as well as providing policy and strategic impact issues through to the Federal Government. The JOSP PSC will provide a conduit for guiding the JOSP on important shifts in policy and approach as guided by the high-level Strategic Oversight Committee and the Federal Government of Somalia. Under the JOSP Steering Committee, a RESTORE Project Steering Committee (RPSC) will play a pivotal role in ensuring that the RESTORE project runs efficiently, with its primary duties encompassing coordination, offering recommendations, and providing oversight during the project's implementation phase. Here are some potential benefits and roles of a RESTORE PSC.

- **Strategic Oversight:** - The RESTORE PSC provides high-level oversight on the project, ensuring it aligns with JOSP Program Objectives and Outcomes and ensure alignment with the strategic priorities of the FGS and the Hirshabelle State Government.



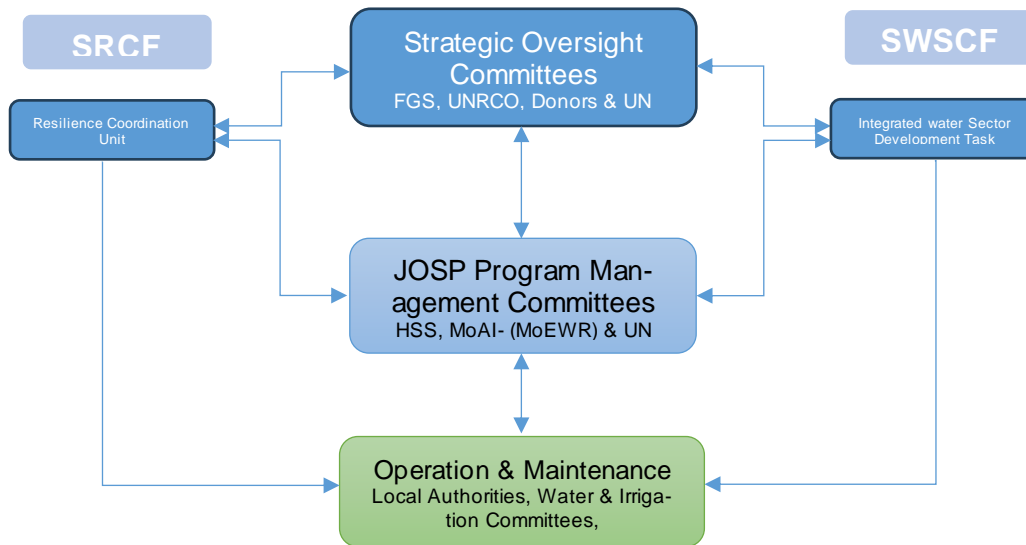
- **Coordination and Integration:** - The Committee ensures that Government line Ministries and Other Partners involved in the program RESTORE Project are well-coordinated in terms of project implementation and that there is a seamless flow of information regarding progress, process, and any problems.
- **Decision Making:** The manner in which the RESTORE PSC operates can be such that it can quickly address and resolve issues that may arise during the project, ensuring no unnecessary delays. Developing clear Standard Operating Procedures for this will be important.
- **Risk Management:** Using a risk management framework, the RESTORE PSC will regularly review the project's progress in mitigating these risks, identifying potential new risks early on, and devising strategies to manage these.
- **Stakeholder Communication:** Due to the strategic importance of communications to various national, state, and community-level stakeholders, the RESTORE PSC provides oversight and strategic guidance to ensure clear and consistent communications and that stakeholder concerns are heard and addressed.
- **Quality Assurance:** The range of interventions and complexity of the differing project dimensions will require technical oversight to ensure project delivery that meets quality requirements. The RESTORE PSC can set benchmarks and standards for the project, ensuring that the final deliverable meets or exceeds the set quality standards.
- **Resource Allocation:** The Committee can oversee and ensure that human and material resources are allocated efficiently and judiciously to various aspects of the project and advise, and guide adjustments required to support efficiency and effectiveness.
- **Reporting, Review, and Feedback:** Regular reviews by the RESTORE PSC can provide constructive feedback to the project team, helping them stay on track and make necessary adjustments. This needs to be underpinned by a regularized reporting protocol. This also supports the RESTORE PSC to keep the High-Level Committee and other key stakeholders and partners abreast of progress.

Establishing a RESTORE PSC is essential to ensure a holistic approach to project management and integration of the project within the JOSP program.

3.0 COORDINATION WITH OTHER MRC PROGRAMMES

The JOSP PSC, and the RESTORE PSC will coordinate with other relevant line Ministries, Donors, and UN Partners of the JOSP program to ensure more efficient and effective implementation. The JOSP PSC, in coordination Somali Resilience Coordination Forum (SRCF) under MoAI-FGS with the Somali Water Sector Coordination Facility (SWSCF) under MoEWR-FGS, noted that the Integrated Water Sector Development Task Force and the Flood Control and Water for Irrigation Working Group will also play a key role in guiding this project. The lessons learned through the JOSP will need to be directed through the SRCF and SWSCF to support knowledge exchange and the transference of these to other projects and geographies. The chart below shows the project Governance Structure.

Draft JOSP Governance Structure



During the Inception Phase of the JOSP, it will be essential to undertake a process to take all key stakeholders through the various elements of the JOSP and to outline the various strategic and operational aspects that will require oversight, management, and monitoring. Engagement with the various key stakeholders will ensure that the program management framework is appropriately structured, that the right stakeholders and actors are engaged, and that this program management framework is operationalized. To this end, the process will map out the core principles underpinning the management framework and guide the operational protocols. This not only ensures the development of a robust management approach but also ensures buy-in and ownership.

4.0 JOSP Program Governance

The JOSP program governance for agriculture and water services in Somalia can be understood as having three layers:

1. FGS Level

- The establishment of a high-level Strategic Oversight Committee provides for senior officials from the FGS, the Hirshabelle State Government, the UN Resident Coordinators Office, and identified vital donors to have oversight on the overall program and to provide strategic direction and guidance at a programmatic level. This committee makes links to strategic aspects of policy and strategy as well as matters that require political intervention.
- The Program Steering Committee (JOSP PSC) primarily coordinates and oversees the various elements of the program, engaging with multiple projects to ensure effective and efficient delivery.
- The Ministry of Agriculture and Irrigation leads the JOSP PSC at the Federal Governance level. The co-lead will be the Ministry of Energy and Water Resources of the Federal Government.
- JOSP PSC members within this layer include MoECC, DSS, Donors, and UN Agencies.
- Linkages to the SWSCF are critical through the Integrated Water Sector Development Task Force and the Flood Control and Water for Irrigation Working Group. The Ministry of Agriculture and Irrigation is leading this working group.

2. Federal Member States Level

- A Program Management Committee (PMC) will be established at the Federal Member State level, focusing on managing the implementation of projects and interventions under the various programmatic streams.



- At the state level, the Ministry of Agriculture and Irrigation, along with the co-lead Ministry of Energy and Water, is responsible for implementing and coordinating the various projects.
- Water and irrigation users from the upstream and downstream can be pivotal in leading and managing infrastructure irrigation and water governance within their respective states.

3. Local Government Level

- At the local level, establishing an Operational Implementation Unit will be primarily responsible for managing and facilitating the day-to-day water management activities. As the various programmatic actions are implemented, the different operational protocols, roles, and responsibilities will be developed. These will be progressively captured in Standard Operating Procedures.
- The governance at this level is a combined effort of the regional administration, local authorities, and communities of water management and irrigation committees.
- Many Local Governments (LGs) have significant challenges in ensuring their effectiveness in governance due to potential gaps in their financial and technical capacity to implement or manage water infrastructure and services. While the program will undertake a range of activities to build capacity, the support of the SWSCF Working Group, development partners, and local Non-Governmental Organisations will be important in giving guidance.

5.0 Infrastructure Operation and Maintenance Challenges

The infrastructure operation and maintenance challenges faced by Somalia in the context of water operations are multifaceted. Addressing these challenges requires a comprehensive and systemic approach.

- **Inadequate Public Funding:** - A common issue in many developing countries, including Somalia, is the need for adequate public or community funding for regular operations and maintenance (OMM) of water infrastructure; with traditional financing, it becomes easier to maintain and operate water facilities at their optimal levels
- **Low Tax Revenue:** - Local governments often rely on tax revenues to fund various public services; due to different socio-economic and political challenges in Somalia, there needs to be a tax revenue collection, which means local governments often need to allocate sufficient funds for water OMM in their annual budgets, this may require external assistance from the national government, international donors, and partners for the short-long term support for operation and maintenance.
- **Shortage of locally Trained Personnel:** - For any infrastructure to function effectively, trained personnel are crucial in the context of Somalia; there needs to be more locally trained personnel, making it challenging to carry out even minor routine maintenance on irrigation and water infrastructure, inadequate training programs, or migration of skilled workers to other countries.
- **Poor Infrastructure Design and Construction:** - Infrastructure that needs to be better designed or constructed can pose long-term challenges; poorly constructed dams might not only compromise the management of water sources but can also pose risks to nearby communities. It's essential to ensure that infrastructure projects adhere to quality standards and best practices.
- **Lack of affordable spare parts:** - The availability of spare parts is crucial for the smooth operation of any infrastructure in Somalia. State and federal governments will set committees responsible for the operational maintenance of dams or any other water infrastructure; it might take a long time to fix, further exacerbating the problem.
- **Lack of capacity building program:** Capacity building is essential for any sector of water management committee and irrigation management from downstream and con-



tinuous training programs for water source operators in Somalia. Additionally, government officials must have more proper supervision mechanisms, which might result in mismanagement or corruption.

- **Lack of Community Ownership:** - to be successful in the project in the short and long term, it's crucial that the local community feels a sense of ownership in the project's respective areas and needs a strong community sense of rights and developing water user guidelines of operation and maintenance irrigation and water infrastructures as well as societal participation is crucial to ensure the sustainability of these projects.

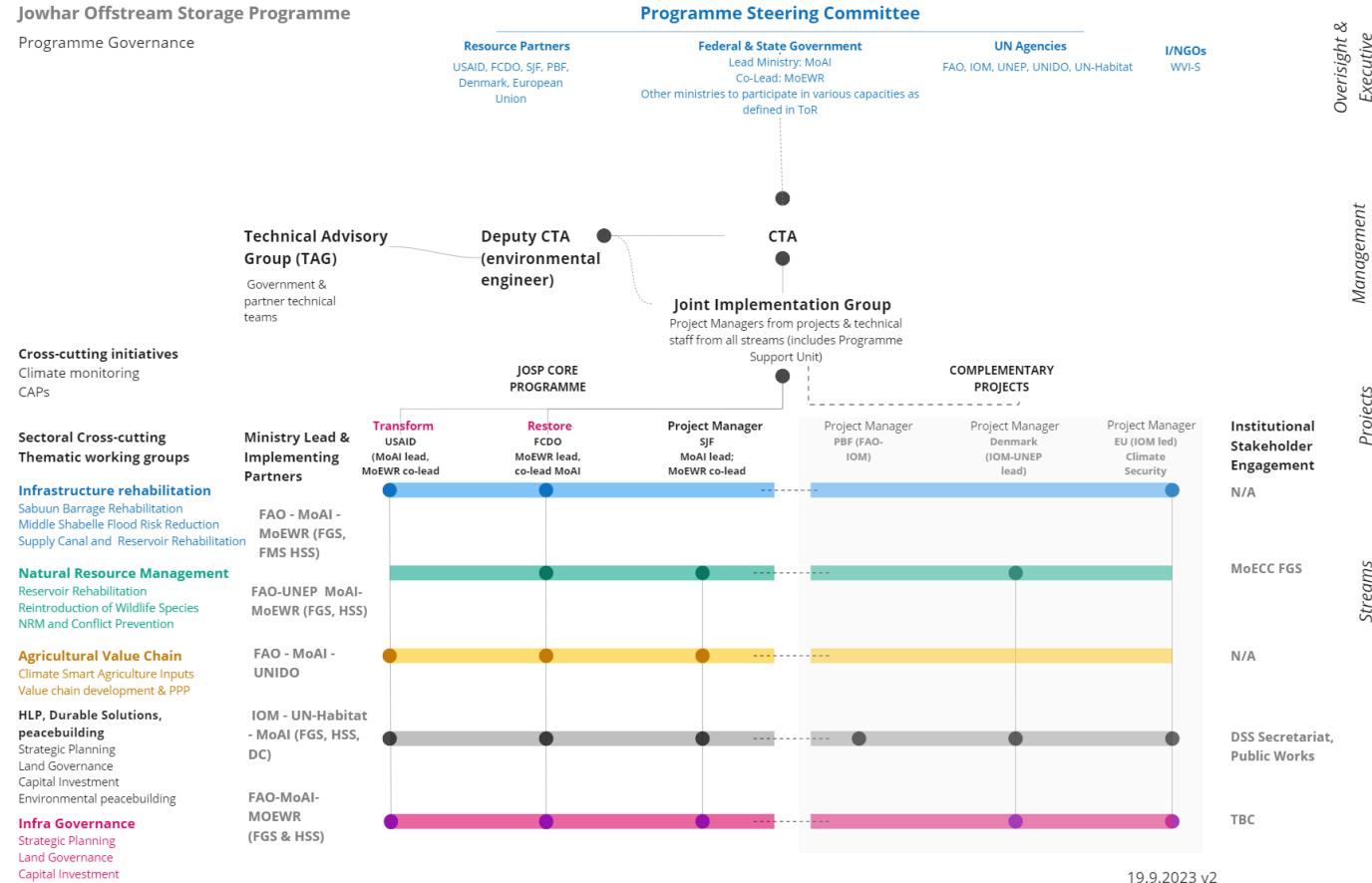
This structured approach ensures top-down governance where each layer has its responsibilities and roles, ensuring holistic management of irrigation and water governance in agriculture of the JOSP Program. The inception phase will identify design options for governance structure, cost recovery, capacity building for JOSP operation and maintenance costs. These will then be explored for feasibility with all stakeholders to determine which have greatest acceptance and potential. The government will then make a decision on which design will be developed and create detail plan to do this with expert water governance technical support over the course of the year one.



Annex 10 – Consortium and partnership management structures

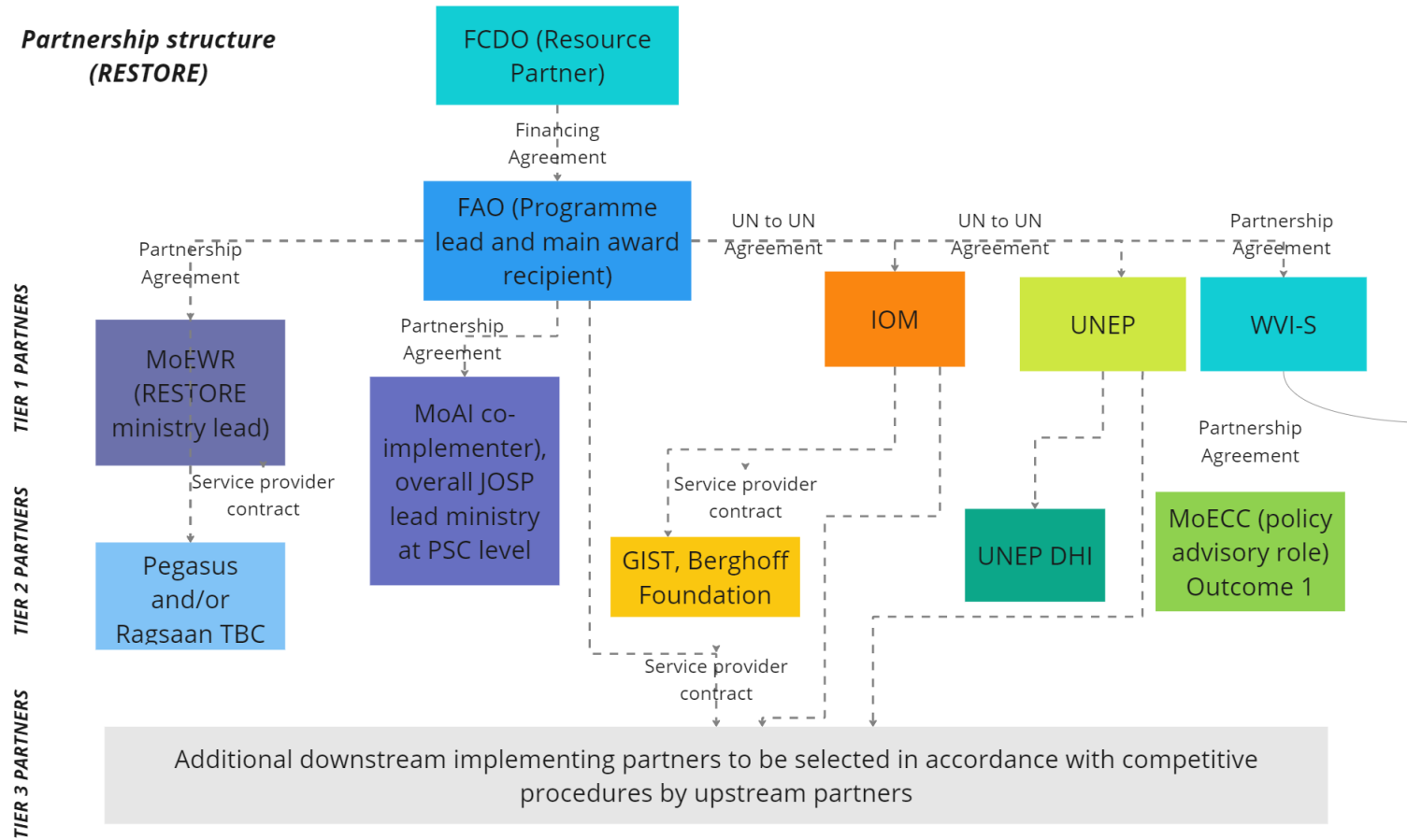
JOSP Maareynta (governance)

Jowhar Offstream Storage Programme
Programme Governance





**Partnership structure
(RESTORE)**





Annex 11 – JOSP Theory of Change (see attached JPEG file)