Project Title: "Addressing Water, Health and Poverty Nexus through WASH initiatives for COVID-19 and Climate Change responses in Eswatini".

Project Number: Award ID: 00134367

Implementing Partner: National Disaster Management Agency (NDMA)

Start Date: June 2021 **End Date:** June 2023 **PAC Meeting date:** 17 May 2021

Brief Description

Eswatini is a landlocked lower middle-income country with 58.9% (in 2016) of the population living below the national poverty line (World Bank, 2020). Food security remains a challenge with over 200,000 (20 % of the rural population) people experiencing severe acute food insecurity, according to the vulnerability assessment of 2019 (Government of Eswatini, 2019). Access to water remains a challenge for the country, with only 69% of the population having access to basic water services. According to UNICEF (2021), "Only 58% have access to sanitary services (11 percent open defecation) and hygiene access using hand washing as a proxy indicator only 24 per cent of Eswatini households practice handwashing".

This project has the overall goal of contributing to improving health and well-being as well as contributing towards poverty reduction in Eswatini through enhancing Water, Sanitation and Hygiene (WASH) practises in both urban and rural areas. The Water, Health and Poverty Nexus is manifested in the form of interdependencies which affect human well-being. Without access to water, WASH practices are affected. Without WASH, human health is affected. Disease burden will affect income generation capability thereby spiralling vulnerable communities into poverty. This project recognizes these interdependencies and therefore takes a nexus approach to addressing solution. It will also contribute towards COVID-19 and climate change responses, both of which includes responses such as improving access to water and enhancing human health.
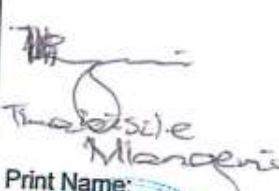
Expected Results:

Output 1: Increased proportions of the population have access to adequate, equitable and sustainable water, basic sanitation and hygiene services in households in target rural and urban areas

Output 2: Increased proportion of farmers with improved food security by adopting rain water harvesting for irrigation of backyard gardens, innovative climate smart agriculture technologies and practices in rural areas

Output 3: Strengthened capacity and technologies transferred on WASH, agriculture, permeable concrete, climate change adaptation (CCA) measures and disaster risk reduction (DRR).

Contributing Outcome (UNDAF/CPD, RPD or GPD): Outcome 1: By 2025, women, men, youth and marginalized persons access to decent employment, equitable social economic opportunities, sustainable enterprise opportunities, and productive resources improved	Total resources required:		$1,129,350.00
	Total resources allocated:	UNDP TRAC:	
		Donor IBSA:	$999,350.00
Indicative Output(s) with gender marker2: Output 1.2: Capacities of small-scale food producers (in agriculture) strengthened to adopt inclusive value-chain approaches in agriculture and allied sectors to address marketing bottlenecks and losses in post-harvest. Gender Marker: GEN 2.		Government:	
		Co-Finance:	$75,000 (WaterAid) $ 55,000 (NDMA)
	Unfunded:		

Agreed by (signatures)1:

Government	UNDP	Implementing Partner
Print Name: Tsabetsile Mlangeni Date:	Rose K. Ssebatindira Date:	Russell Dlamini Date:

Contents

I. DEVELOPMENT CHALLENGE

The development challenges the project seeks to address are:

1. Inadequate access to water and sanitation

In Eswatini, only 69% of population have access to basic water services, only 58% have access to sanitary service, with 11% practicing open defecation and only 24% of households practicing handwashing (UNICEF,2021[1]). Access to water in the country is affected by climate change induced droughts, which cause water shortages due to inadequate water storage infrastructure. During the 2015/2016 El Nino induced drought, severe water shortages led to water rationing in urban areas of Mbabane. Although Eswatini has a revised Water Policy (2018) (Government of Eswatini, 2021[2]) and a National Sanitation and Hygiene Strategy for 2019-2023 (Government of Eswatini, 2019[3]), there are structural issues that contributed to the water shortages and inadequate sanitation and hygiene. These include inadequate planning and availability of adequate storage facilities for water and sanitation in both rural and urban areas.

There is likely to be less water available in all catchments due to climate change induced decreased annual precipitation and increased evaporation as a result of rising temperatures (Government of Eswatini, 2016). Water scarcity in rivers has a gender dimension as it disproportionately affects women and girls, who have to travel long distances in search of water for domestic consumption, thus leaving them with less or no time for education and/or work outside the household (Myeni and Wentink,2019[4]). Women and girls are exposed to gender- based violence, girl's education outcomes are affected by the heavy domestic chores.

2. Food insecurity

Agriculture is the mainstay of Eswatini's economy. According to World Food Programme (WFP) (2021), the country is highly dependent on imports to feed its people, "as national production is constrained by frequent droughts, erratic rainfall, prolonged dry spells, inadequate farming technologies, low investment in seeds, fertilizers and equipment, and structural barriers preventing access to formal markets. Food insecurity affected 14 percent of the population in 2018, due to high poverty levels, low farming productivity and high prices". Over 70% of Eswatini's population relies on subsistence farming. "Post-harvest losses are estimated at 30 percent of all food produced, and inefficient supply chains contribute to high costs that discourage smallholder production. As a result, while farming is an important source of food for poor rural families, production is not enough to meet households food needs" (WFP, 2021).

Drought and cyclones affect food security for family members. Scarcity of food has a disproportionately negative impact on the health of women and girls (FAO, IFAD, UNICEF, WFP and WHO, 2021[5]), particularly as cultural norms dictate that they are expected to be the last in the family to consume a meal.

---

[1] UNICEF. 2021. Water, sanitation and hygiene (WASH): Improving water, sanitation and hygiene in Eswatini. Online publication available at https://www.unicef.org/eswatini/water-sanitation-and-hygiene-wash Accessed on 18 Sept 2021.

[2] Government of Eswatini. 2021. Speech by Hon. Minister of Natural Resources and Energy at launch of National Water Policy. Online publication available at http://www.gov.sz/index.php/component/content/article/129-natural-resources-a-energy/2354-water-policy Accessed on 18 September 2021.

[3] Government of Eswatini. 2019. National Sanitation and Hygiene Strategy. Ministry of Health, Mbabane.

[4] Myeni, S and Wentink, G. 2019. A gendered approach to drought-coping mechanisms: A case of the Lubombo region, Eswatini. The Journal for Transdisciplinary Research in southern Africa, 17(1), 12 pages.

[5] FAO, IFAD, UNICEF, WFP and WHO. 2021. The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO.

3. Vulnerability to climate change

According to the Rapid Situational Assessment (2020[6]) undertaken under Eswatini's Nationally Determined Contributions, "Eswatini is at risk of hydrometeorological hazards and natural disasters, which primarily affect the agricultural sector, through periods of drought and occasional floods. The country experiences natural hazards such as violent storms, epidemic diseases, floods, storms and forest fires. Persistent drought is further exacerbating the country's existing challenges of food insecurity and ability to attain development goals". The Third National Communication of Eswatini to the United Nations Framework Convention to Climate Change (UNFCCC) indicates that temperatures have been increasing over the years and rainfall variability has increased with dry spells and changes in rainfall intensity. According to projections in the document, mean temperature is expected to increase, and rainfall will be uncertain and difficult to predict (Government of Eswatini, 2016).

Vulnerability to climate change depends on the roles, responsibilities and entitlements of women and men. Socio-economic impact of climate change includes water and food insecurity. Climate variability, particularly drought and cyclones result in food insecurity and increase in food supplies which affects the poor. Climate change makes almost all sectors in the country vulnerable, but particularly, the water and agriculture sectors.

4. Vulnerability to COVID-19

As of 26 March 2021, Eswatini had recorded 17,306 cases with 666 deaths (https://www.worldometers.info/coronavirus/country/swaziland/). Emerging evidence shows that non-pharmaceutical responses such as hand washing has high potential for slowing down COVID-19 pandemic. Proper hygiene is very important, not only on toilets and other surfaces, but also by washing hands regularly. Because the lack of hygiene could be an important element of spreading viruses, access to "clean" drinking water is now even more essential. Therefore, limiting the spread of COVID-19 requires that communities have access to sustainable sources of water for sanitation and hygiene.

The **underlying issues** to the development challenges that this project aims to address are:

1. Institutional capacity gaps. The capacity gaps identified are as follows:

Table 1 Capacity gaps identified

#	Capacity gap identified	Impact of capacity gap	Institution affected
1	With rapidly changing circumstances with regard to COVID-19 crisis and climate crisis, there is need for continuous capacity building to address these changes and link them to disaster risk reduction	If the national institutions addressing these rapidly changing challenges are not capacitated and agile, vulnerability of people to these changes will increase and cost of impacts of risks, hazards and disasters will increase leading to socio-economic losses	NDMA
2	Local authorities are less able to address issues of localised flooding and runoff losses, as evidenced by recent flash floods	If local authorities are not capacitated to address challenges related to heavy rainfall and high runoff episodes, it could cause damages to infrastructure and businesses	Municipalities

---

[6] NDC Partnership. 2020. Rapid Situational Assessment Eswatini. Unpublished document.

3	Department of Fisheries has indicated that there is capacity gap and need for developing demonstration fish pond for raising fingerlings, which can be used for trainings.	If this capacity gap is not filled, the fish farmers will have less capacity in the country to produce fish, affecting their livelihoods.	Department of Fisheries
4	Communities need capacity for enhancing food security through backyard gardens and health through access to WASH infrastructure	If this capacity is not addressed, there will be risk of food insecurity and negative health impacts	Community members

1. Inadequate integration

The country has predominantly been taking sectoral approaches to address development challenges. Complex challenges of COVID-19 and climate change calls for addressing multiple development needs together. Therefore, a holistic approach is needed, and this project uses a "nexus" approach of health (through WASH and food security interventions), water and poverty reduction. There are very few institutions in Eswatini that have the mandate or capacity to undertake nexus projects. NDMA is rightly positioned as they work with various partners to build resilience in the country, as mandated by the Disaster Management Act. They previously worked with partners on vulnerability assessments, providing food aid, reducing land degradation and promoting WASH, all activities that build resilience in communities.

2. Addressing Human Rights

Climate change and COVID-19 responses are cross cutting, and hence a sectoral approach is not effective. Climate change will affect the availability, quality, and quantity of water needed for basic human needs. This project supports **the "Human right to water and sanitation".** Water access is also a climate change adaptation response, particularly when it comes to subsistence communities who need water for irrigating their home vegetable gardens, or for livelihood activities such as aquaculture in fishponds. Increasing access to water using sustainable environment-friendly methods such as rainwater harvesting (with filtration/treatment) is a viable solution for a country such as Eswatini, which receives adequate rainfall during its wet months.

3. Inadequate funds and capacity

According to UNICEF (2019[7]), the country remains behind its established goal of achieving 100 per cent coverage by 2022 and one of the challenges is inadequate finances. The report states, "In recent years on-budget capital investments in the WASH sector have averaged around US$7 million per year, of which 78 per cent has come from government finance. While exact figures are difficult to obtain, based on the expenditure of other main development partners in the sector, off-budget donor investments could be in the range of US$5 million per year, which would equate to about a third of capital investment. However, currently future funding is not so positive with a dramatic reduction in budget allocation. If the current levels of investment continue in the coming years it appears Eswatini will have insufficient financial resources in the sector to achieve the SDGs. In addition, targeting and use of these resources will need to improve to ensure sufficient returns on investment" (UNICEF, 2019). Eswatini requires external funding for this project because Government's budget is limited and over stretched due to COVID-19 pandemic demands. The funds from IBSA are therefore meeting Eswatini's development needs.

---

[7] UNICEF. 2019. The state of WASH financing in eastern and southern Africa: Eswatini Country Level Assessment. Online publication available at https://www.unicef.org/esa/sites/unicef.org.esa/files/2019-10/UNICEF-Eswatini-2019-WASH-Financing-Assessment.pdf Accessed on 18 September 2021.

II. STRATEGY

The vision of UNDP, NDMA and partners in this project is to enhance resilience of the country, achieve human rights[8] through access to water, sanitation and hygiene, enhance food security and build adaptive capacity. The project contributes towards achievement of Outcome 1 of the United Nations Sustainable Development Framework and UNDP Eswatini Country Programme Document (CPD), which is "By 2025, women, men, youth and marginalized persons access to decent employment, equitable social economic opportunities, sustainable enterprise opportunities, and productive resources improved". In particular, it will support Output 1.2 of the CPD: "Capacities of small-scale food producers (in agriculture) strengthened to adopt inclusive value-chain approaches in agriculture and allied sectors to address marketing bottlenecks and losses in post-harvest". The project is also aligned with SDG 6: Ensure availability and sustainable management of water and sanitation for all. This project will be an important step towards achieving safely managed water and sanitation services, as envisioned under the SDG 6, and climate change adaptation under SDG 13 by 2030.

The project is inspired from the following national documents:

1. National Development Strategy: The National Development Strategy, commonly referred to as Vision 2022, supports efficient water resource management and WASH. Its Section 4.3.10 specifically supports access to water, sanitation and reusing water.

2. Technology Needs Assessment: Rainwater harvesting was prioritised by Eswatini in its Technology Needs Assessment project (conducted in 2015-2018).

3. National Climate Change Strategy and Action Plan (2014-2019): It is an implementation tool on climate action with clear strategies and actions to be undertaken in addressing climate change adaptation and mitigation as well as means of implementation in the country. In the strategic actions, it includes "Promote rainwater harvesting for crop and livestock production to increase the buffer and adaptive capacity of smallholder farmers to deal with climate change". It recognized that Eswatini faces water stresses and included as actions "Promote groundwater recharge and rainwater harvesting". A new strategy on climate change will be developed soon.

4. Water Act of 2003: The water act promotes efficient and sustainable use of water resources. Rainwater harvesting is a sustainable technology that is part of this project.

5. Nationally Determined Contributions 2015: This document submitted to UNFCCC recognizes that climate change will impact access to water. It has prioritised rainwater harvesting as a technology. The current NDC is under revision and includes aspects of water access and WASH.

6. The Coronavirus (COVID-19) Regulations, 2020: This recognizes the need for WASH and access to water and promotes handwashing as a response to the pandemic.

7. The Fisheries and Aquaculture Act 2019 provides for the sustainable regulation and utilization of national fish resources and for the development of aquaculture by giving effect to the Southern African Development Community (SADC) Fisheries Protocol, 2006. It promotes aquaculture/fish farming, which is included as an activity for income generation in this project.

---

[8] Right to adequate food and water

Theory of Change The interventions of improving access to WASH, food security and enhance south-south knowledge exchange, will contribute towards better human health, incomes and nutrition, thereby enhancing adaptive capacity. The assumptions are that the interventions can be effectively done through support from partners, government and non-government agencies and that gender equality and community participation will be a strong component. The outcomes of the interventions will lead to a resilient, climate smart and COVID-19 free Eswatini, through increased access to water and hygiene for 3000 people, improved food security for 600 farm households and enhanced capacity of key institutions working on COVID-19 response, climate change adaptation and disaster risk reduction.

The Theory of Change is underpinned by the Water, Health, Poverty nexus that
If
- Access to water and sanitation is improved through provision of water harvesting, boreholes, handwashing facilities and construction of toilets;
- Food security is improved through drip irrigation for backyard gardens, farm inputs, linkages to markets and aquaculture;
- Capacity of local institutions is built on WASH, climate smart agriculture technologies, and knowledge exchanged on disaster risk reduction and climate change adaptation;

Then;
- Communities will have improved health and hygiene;
- Farmers will have enhanced income, access to markets and food security;
- Institutions will have greater knowledge to implement climate change adaptation and disaster risk reduction.

The Theory of Change (ToC) diagram below explains how the activities of this project will contribute to a chain of outputs and results that lead to the intended or observed outcome of a resilient and climate smart and COVID-19 free Eswatini.
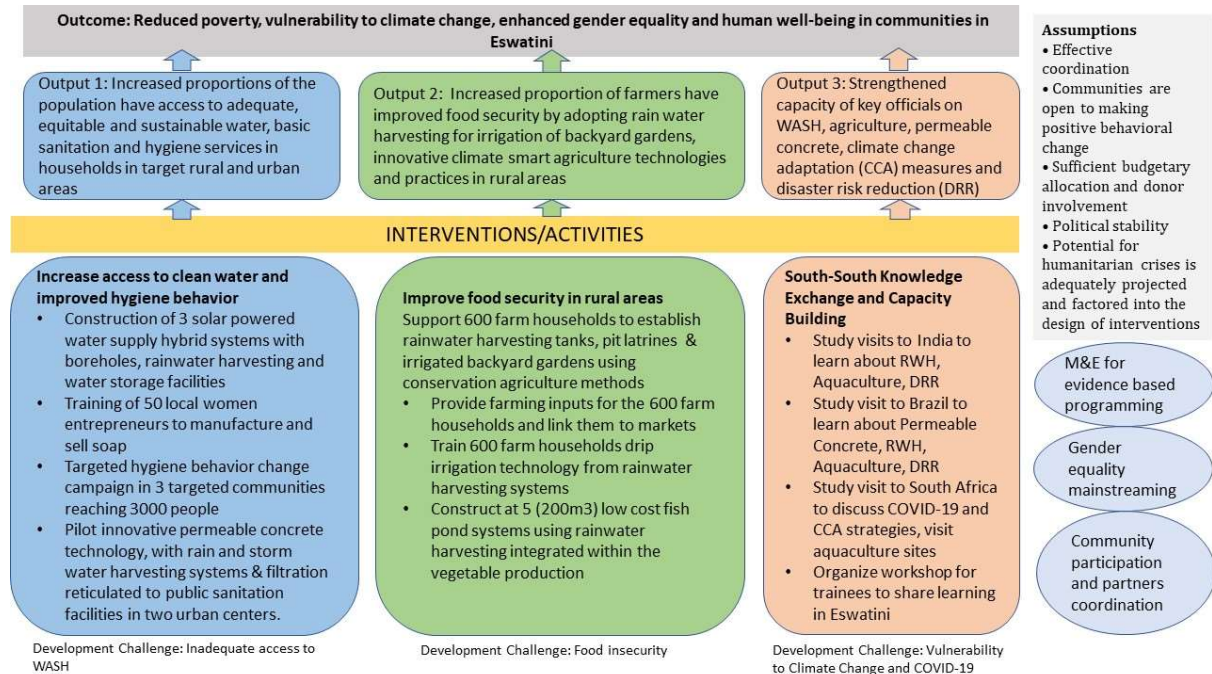

Figure 1 The diagrammatical representation of the Theory of Change of the project

The project will enhance access to water, build handwashing facilities, promote hygiene through behaviour change, sanitation facilities, support food security through backyard gardens and fishponds, support south-south knowledge exchange. These interventions will promote adaptive capacity in the wake of climate change and promote hygiene which is critical for COVID-19 response and future pandemics.

The project will support women groups for soap-making and women farmers will be target beneficiaries. Soap-making promotes good hygiene, which improves overall health, thereby enhancing adaptive capacity of communities. Of the 3000 households that will benefit from the project at least 50% will be women headed households and of the 600 farmers that will benefit, 50% will be female farmers. Care will be taken to ensure women farmers are supported through community engagement and selection of beneficiaries by project partners where a minimum of 50% of beneficiaries chosen will be women.

The project proposes to address water scarcity in urban centers through introduction of permeable concrete technology for storm water reuse. Storm water which usually runs off will be diverted and stored for handwashing and sanitation facilities in two urban centres of Mbabane and Matsapha, using this innovative technology.

Permeable concrete has been successfully trialled and used in Brazil, Japan, Europe and United States since mid-1970s (Tavares and Kazmierczak, 2016[9]; Antunes et al., 2018[10]; Alimohammadi et al., 2021[11]). Permeable concrete, like conventional concrete, is made from a mixture of cement, coarse aggregates, and water. However, it contains little or no sand, which results in a porous open-cell structure that water passes through readily. Thus, it can be constructed in open spaces such as footpaths, roads, parking spaces, sports grounds etc. so that rainwater can be collected below the concrete, filtered and piped for use in handwashing and/or toilet facilities (Concrete network, 2021[12]). In Brazil, permeable concrete is working well, is widely used by municipalities and has increased in use significantly in recent years, after being considered and encouraged in town Urban Drainage Masterplans and legislation (Marchioni et al. 2015[13]). In Eswatini, this technology can be used to harvest rainwater, as it is a simple inexpensive technology which can address the challenge of localised flooding in urban areas. As Brazil is an IBSA country, and IBSA encourages south-south knowledge exchange, study visits are included for technical officials from municipalities in Eswatini to visit Brazil to learn about this technology and thereafter develop guidelines and pilot it in Mbabane and Matsapha.

---

[9] Tavares, L. M. and Kazmiwerczak, S. 2016. The influence of recycled concrete aggregates in pervious concrete. Revista IBRACON Structures and Materials Journal, Vol 9 (1).

[10] Antunes, L.N., Ghisi, E. and Thives, L.P. 2018. Permeable Pavements Life Cycle Assessment: A Literature Review. Water, Vol 10, Page 1575.

[11] Alimohammadi, V.; Maghfouri, M.; Nourmohammadi, D.; Azarsa, P.; Gupta, R.; Saberian, M. 2021. Stormwater Runoff Treatment Using Pervious Concrete Modified with Various Nanomaterials: A Comprehensive Review. Sustainability, Vol 13, Page 8552.

[12] Concrete network. 2021. How pervious concrete works. Online publication available at https://www.concretenetwork.com/pervious/how_it_works.html Accessed on 18 September 2021

[13] Marchioni, M., Becciu, G. and Silva, C. 2015. Critical analysis of the Brazilian national standard for concrete permeable pavement. Ecosystems and Sustainable Development, Vol 192, Page 443-453.

III.   RESULTS AND PARTNERSHIPS

Expected Results

Reduction of Poverty and Hunger: This project has the overall goal of contributing to improving health and well-being as well as contributing towards poverty reduction in Eswatini through enhancing Water, Sanitation and Hygiene (WASH) practises in both urban and rural areas. The Water, Health and Poverty Nexus is manifested in the form of interdependencies which affect human well-being. Without access to water, WASH practices are affected. Without WASH, human health is affected. Disease burden will affect income generation capability thereby spiralling vulnerable communities into poverty. It will also contribute towards COVID-19 and climate change responses, both of which include measures of improving access to water and enhancing human health. It is also addressing food security and hunger through supporting farmers with backyard gardens and rainwater harvesting for irrigating their backyard gardens.

Identifiable Impact

The identifiable impacts are: 3000 people gaining access to water, 600 farmers capacitated through conservation agriculture, RWH, drip irrigation, fish ponds, 50 women trained soap making and two sites for permeable concrete piloted.

Output 1: Increased proportions of the population with access to adequate, equitable and sustainable water, basic sanitation and hygiene services in households in target rural and urban areas

Under this output, key activities includes i) construction of handwashing facilities, ii) setting up solar powered boreholes, iii) hygiene behavioural change campaigns, iv) support for soap making, iv) piloting of permeable concrete to harvest rainwater in urban areas and rainwater harvesting systems in rural households.

Solar powered boreholes are suitable technology because they offer a long-term solution to water scarcity, is environment friendly (using clean energy) and provide water to thousands of people. The water is pumped from the ground, using electricity generated from solar panels, making it a reliable clean, sustainable solution. Rainwater harvesting is a suitable technology because it is a simple and inexpensive solution that addressed water scarcity. It is a sustainable process that helps in preserving rainwater for different purposes and for future needs as well without extracting groundwater. It also helps by reducing runoff which could cause soil erosion. Construction of communal handwashing facility is much needed in these times, as COVID-19 response is effective through non-pharmaceutical measure of handwashing. In urban areas, a lot of storm and rainwater runoff can cause localised flooding. Piloting permeable concrete will help harvest this storm water and utilise it through filtration and reuse in public sanitation and handwashing facilities. This is a climate change adaptation technology because it saves water and is also a disaster risk reduction method as it could reduce runoff and localised flooding in urban areas which Eswatini has experienced in the recent past.

All these interventions lead to improved access to water and enhanced hygiene in rural and urban areas. This will lead to improved health, greater adaptive capacity and resilience to climate change and COVID-19.

Output 2: Increased proportion of farmers with improved food security by adopting rain water harvesting for irrigation of backyard gardens, innovative climate smart agriculture technologies and practices in rural areas

The food security enhancement component in this project includes; i) supporting farmers with drip irrigation, rainwater harvesting, backyard gardens, ii) linking to markets and iii) supporting fish farming. Supporting demonstration fish pond for raising fingerlings in Government training centre can help with future sustainability. These interventions lead to improved food and nutrition security and improved farm incomes. Backyard gardens are solutions to some of the issues surrounding poverty alleviation as they are important source of food and nutrition through growing crops and vegetables throughout the year for the farm household. The surplus can be sold and income generated for farm households enhances their adaptive capacity. Drip irrigation was a technology (just like rainwater harvesting) prioritised under Eswatini's Technology Needs Assessment and it helps to save water, use it efficiency and improve crop production. This technology promotes better plant health by the water dripping, as it penetrates slowly and deeply into the soil, nourishing the root zone and minimising evaporation. It is a climate change adaptation technology because it addresses water scarcity through efficient and minimal use of water for irrigation, thereby reducing waste of water (such as in sprinkler technology).

This project will construct fish ponds for increased income generation for farmers and help diversity incomes, which is an adaptive strategy. Farmers in Eswatini also have the challenge of linking to markets for selling their produce. Most farmers often struggle to sell their products, many are not linked to markets for a variety of reasons, such as remoteness, low production, low farm-gate prices, poorly organised markets and weak access to transportation, logistics and primary processing. This project will address this challenge through developing a mobile app to assist suppliers get their produce to market faster and cheaper while still maintaining high levels of quality. By leveraging the ubiquitous mobile phone technology, the app will ensure that market availability is at the farmer's fingertips. This will improve farm incomes and thereby food security, reduce poverty and enhance adaptive capacity. Due to the COVID-19 pandemic humans have realised the need for fresh and nutritious food to enhance immunity and thus farmers can contribute towards herd immunity by supplying their produce fresh to the consumers by utilising this app. This component contributes towards UNDP's Country program Output 1.2: "Capacities of small-scale food producers (in agriculture) strengthened to adopt inclusive value-chain approaches in agriculture and allied sectors to address marketing bottlenecks and losses in post-harvest".

Output 3: Strengthened capacity for adoption of climate change adaptation and disaster risk reduction measures

A major capacity building activity in this project is "collaborative planning". The project implementation will be planned collaboratively with traditional leaders, farmers' groups, women's groups, youth and other community members. As much as possible, youth and women will be involved in this project, including for construction of WASH facilities and piloting permeable concrete. This will allow for capacity building of these groups.. Peer to peer learning will be emphasised after the study visits so that those who participate in exchange visits can teach their peers about the technologies. Women who will be trained in soapmaking will be facilitated in turn to train other women in their community. In addition to the study visits to India and Brazil, webinars will be organized within Eswatini to share experiences related to the project and lessons learnt about the technologies implemented. Furthermore, webinars will be organized between countries supported through IBSA to share experiences. Furthermore, south-south knowledge exchange through study visits will build capacity of officials in Eswatini. More information on this is provided later in this pro-doc where south-south cooperation is discussed in detail.

Resources Required to Achieve the Expected Results

Achieving the three outputs requires financial resources as well as expertise and technical skills. Mobilising required resources will be a joint responsibility of UNDP and NDMA and partners UNDP Eswatini will leverage on its global network to facilitate south to south cooperation in India, Brazil and South Africa. The Project Management Unit (PMU) will be set up at NDMA to coordinate all partners to implement this project. The Project Management Unit will be comprising of three staff members: Grants Finance Manager, Project Manager and Project Officer (Monitoring and Evaluation). The total funding for this project is $ 1,129,350 with IBSA funds being $999,350.00 and the rest is co-finance from partners NDMA and WaterAid. The breakdown of funding per activity is provided in the multiyear workplan table.

Partnerships

The project will be implemented through UNDP by the main implementer NDMA and partners WaterAid, Africa Cooperative Action Trust (ACAT) and Mbabane Municipality and Matsapha Town Council. Selected communities will be beneficiaries and the work at community level will follow protocols through traditional leadership. Other stakeholder who are relevant to this project will be closely engaged and informed (e.g., diplomatic missions of India, Brazil and South Africa). To implement WASH related intervention, WaterAid will work closely with Department of Water Affairs and the Ministry of Natural Resources and Energy, while ACAT will undertake support to farmers through working closely with Department of Fisheries and the Ministry of Agriculture. The municipalities will pilot permeable concrete technology in urban centres with awareness and buy-in of urban dwellers and relevant stakeholders.

Selection of partners

NDMA and WaterAid were involved in the proposal development and had clear roles when designing the project. At the design stage, several work partners were considered, however, it was agreed that those with good track record will be chosen. After the funding was secured, ACAT, Mbabane Municipality and Matsapha Town Council were included as partners based of their good track record on work relevant to this project. ACAT's past work on backyard gardening in communities is to the advantage of this project because it will build on these. There are lessons learnt from past experiences that can help this project save time and ensure impact. UNDP has an advantage of working with these partners as they can bring their experience, skills, knowledge and past goodwill with communities, thereby aiding this project to be implemented efficiently and quicker.

Human Rights

The project supports human rights of:

- Right to food
- Right to access to water and sanitation

The right to food is recognized in the 1948 Universal Declaration of Human Rights as part of the right to an adequate standard of living, and is enshrined in the 1966 International Covenant on Economic, Social and Cultural Rights. On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realisation of all human rights.

Risks and Assumptions

Social and environmental screening has been undertaken as part of the design phase and mitigation measures proposed. Specific project and site level interventions will be subjected to detailed environmental assessment to identify and characterize potential impact and associated mitigation measures to integrate them into implementation activities. Frequent monitoring and tracking of risks and the identification of solutions collaboratively with Government, local partners, funders and other stakeholders will be key to mitigation and adapting to change. Some of the major risks are provided here, while the annex provides further details of all the risks identified.

Some of the interventions in the project, such as diversion of surface and creation of storage, may lead to environmental disturbance. This will be mitigated through ensuring that local construction standards and guidelines are adhered to, as stipulated by the Construction Industry Council of Eswatini.

Another risk for this project is the possibility of a third wave of COVID-19 affecting Eswatini. However, as the vaccination is being rolled out nationally, this risk is reduced, and it is expected that all Governmental established regulations and measures and guidelines will be observed.

The risk of drilling a borehole to find that the groundwater is of poor quality or worse, the borehole is dry, cannot be ruled out. To eliminate or reduce the risk, the project will consider upgrading and/or rehabilitating already existing boreholes in the project area. Where there are no existing boreholes, a hydrogeological survey will be conducted to ascertain the quality and quantity of groundwater in the proposed area. Moreover, a pre and post construction water quality analysis will be conducted for each proposed site.

Land clearing for project activities may affect habitats in the project area. Through NDMA, an application will be submitted to Eswatini Environment Authority (EEA) for certification of the project before its commencement or any construction is done. An Environmental and Social Mitigation Plan will be developed for the project which will highlight all the risks and their impacts and the measures that are necessary to avoid, or minimize, mitigate, and manage these risks.

The introduction of fish ponds may increase vector borne diseases such as malaria. The project will prioritise, as best as possible, the citing of fish ponds be away from households. Communities will also be sensitized on the importance of keeping the land around ponds cleared to ensure it is not ideal for breeding. Community awareness raising on malaria and mosquitoes breeding will be done, and rural health motivators involved throughout. Building fish ponds poses a risk of children drowning in fish ponds. To address this risk, in every community where fish ponds intervention is implemented, an awareness raising campaign will be undertaken, sensitizing those communities on the dangers associated with the dammed water especially on children. Children will further be sensitized through campaigns in schools and preschools. The ponds will further be fully fenced off and constructed with lockable gates, to control/limit access.

There could be risk of dispute within community(ies) in the project area due to competition towards project benefits. This will be mitigated through effective community mobilization, signing of consent letters to governance and proper usage of project resources. Traditional authorities for communities with conflicts and/or potential conflicts will be engaged to resolve these before the interventions are committed. WaterAid has already met with some of the beneficiary communities and the risk of such disputes is low. Furthermore, stakeholder engagements and continuous discussions will alleviate this risk at project inception stage.

There could be poor uptake of mobile app technology by farmers. Most households own a smart phone (Census 2017) and the Farmer's mobile application will be developed in close consultation with farmers and markets (e.g., supermarkets) for their buy-in and improvement of uptake. Some sensitization and awareness workshops will be conducted to orientate beneficiaries. In addition, training workshops on the use and functionality of the App will be conducted for farmers and markets.

The assumptions that are critical to the success of this project are:

- The community members will be cooperative and support the implementation of the project. This requires buy-in from the traditional authorities and communities and them being open to making positive behavioural change. In addition, it is assumed that relevant Government ministries will support this project. It is essential that relevant Government departments be involved from the beginning and guide the project to be aligned with country policies and strategies. WaterAid and ACAT will work with the Department of Water Affairs and Department of Fisheries respectively, ensuring government buy-in and guidance.
- Donor funding is not interrupted, there is continued support, sufficient budgetary allocation throughout the project and delays are avoided. UNDP will liaise with UNOSSC in this regard to ensure smooth flow of funds.
- There is political stability and potential for humanitarian crisis is adequately factored into the design of the project. This includes disruptions due to COVID-19 restrictions. Having gained experience working under lockdown conditions in 2020, the partners, particularly NDMA are skilled at working under restrictive conditions and following COVID-19 protocols in their work.

Stakeholder Engagement

The design of the project started with a consultative inception meeting held on 22 March 2021, where partners such as WaterAid and ACAT articulated the lessons learnt from doing similar projects around the country. Building on past lessons learnt from them, NDMA and UNDP, the design of the project was done. This included selection of sites, mode of intervention (it was agreed that the same farm households will be supported with rainwater harvesting and farm inputs for backyard gardens to maximise benefits and avoid diluting efforts). There were further engagements via virtual calls and emails to finalise the project design and further discussions were held at a validation meeting held on 15 April 2021. This helped refine the selected areas, discuss the risk and sustainability of the project and come up with enhanced project design. Using locally available materials for each site and integrating water harvesting with backyard gardening using conservation agriculture, supporting the same farmers with sanitation facilities and farm inputs was suggested to be "good practice" as it strengthens the farm households through this integrated WASH and food security intervention, thereby improving their health, access to water, food security, income and hygiene.

The stakeholders identified were classified into four categories: (i) implementing and responsible partners, (ii) project steering committee members, (iii) beneficiaries, (iv) strategic partners. The project steering committee will provide oversight and advice for the project. The secretariat for this committee will be the project management unit. The main implementors will work together to deliver the results of the project and seek permission from authorities such as Department of Water Affairs for water rights and Eswatini Environment Authority for ensuring no adverse environmental impacts occur. Some stakeholders need to be consulted before the activities begin.

Farmers unions will be consulted so that they can identify lead farmers who can take up new technologies such as fish farming and use their union membership to disseminate widely about the project. Where possible, unions can organize site visits for farmers from other areas to learn about the project. The diplomatic missions of India and South Africa which are resident in Eswatini will be invited for the launch of the project and all major milestones.

The embassy of Brazil which is present in South Africa and responsible for Eswatini will be invited to join meetings virtually. These three diplomatic missions will help identify sites for the study visits to be conducted in these countries. A preliminary list of sites has been prepared but further engagement closer to site visit dates will be possible through the networks provided by the diplomatic missions. The UN Resident Coordinator's office and other relevant UN agencies will be informed and consulted where needed for this project. Where possible synergies with other projects in Eswatini will be explored during the implementation stage. ACAT and WaterAid are already doing similar projects in Eswatini and can provide valuable information to implement the project in a robust manner building on their past work.

Table 2 Stakeholders identified for the project

Project Steering Committee (providing oversight)	Main implementors (Work together)	Stakeholders that have to be informed and consulted during implementation	Stakeholders that have to be informed of progress
1. Ministry of Tinkhundla Administration & Development 2. Coordinating Assembly of Non-Governmental Organizations (CANGO) 3. Gender and Family Issues Unit, Deputy Prime Minister's Office 4. Department of Fisheries, Ministry of Agriculture 5. Department of Water Affairs, Ministry of Natural Resources and Energy 6. Department of Environmental Health, Ministry of Health 7. UNDP 8. University of Eswatini The Secretariat for this committee will be NDMA's Project Management Unit.	1. UNDP 2. NDMA 3. WaterAid 4. Africa Cooperative Action Trust (ACAT) 5. Mbabane Municipality 6. Matsapha Town Council	1. Ministry of Tourism and Environmental Affairs 2. Food and Agricultural Organization 3. UNICEF 4. National Agricultural Marketing Board (NAMBOARD) 5. Eswatini Environment Authority 6. Farmers Union and Farmers Associations	1. Deputy Prime Minister's Office 2. Indian High Commission (in Eswatini) 3. South African High Commission (in Eswatini) 4. Brazil Embassy (in South Africa) 5. UN Resident Coordinator's office 6. Ministry of Economic Planning (Aid Coordination Management System)

Use of IBSA Country Capacities: The Indian High Commissioner to Eswatini was instrumental in submission of the proposal to IBSA. The High Commissioner was part of the Local Project Appraisal Committee and attended the meeting to appraise the project document before submission to IBSA. The High Commission has provided contacts of potential agencies who could assist with study visits and identify locations for such visits.

Target Group

The target groups were identified at a workshop with the main implementors held on 22 March 2021. Discussions were done in plenary and implementors selected criteria for site selection through a voting process. They identified 12 criteria and the top four were selected as below:

1. Water insecurity,
2. Lack of access to sanitation,
3. Food insecurity and
4. Willingness of communities.

Keeping the above criteria in mind, areas were selected as given in table below. For the water, WASH and agriculture support, the target group of beneficiaries come from three regions. A total of 600 farmers (spread over areas provided in Table 2) will be supported with agriculture support (rainwater harvesting, farm inputs, fish ponds, linking to markets, drip irrigation), while 50 women will be supported with soap making within these areas. Three thousand people will be provided with access to water through solar powered boreholes from the target areas. The selected beneficiaries are those who are left out of development efforts, who are vulnerable and specific groups such as women headed households, elderly, disabled and other vulnerable groups.

Table 3 Target beneficiaries in the project

Inkhundla (Constituency)	Administrative Region	Physiographic Region	Communities/Areas
Ndzingeni	Hhohho	Highveld	Bulandzeni, Ludlawini
Siphofaneni	Lubombo	Western Lowveld	Hlutse
Dvokodweni	Lubombo	Western Lowveld	Gilgal
Mkhiweni	Manzini	Upper Middleveld	Mnjoli, Hlane
Mayiwane	Hhohho	Lower Middleveld	Mphofu, Ntab'inezimpisi, Magengeni, Mkhuzweni, Ndlalambi

This project's proposal was developed by NDMA and WaterAid and at the time of designing the project, needy communities were identified and this project is meant to address their vulnerabilities and needs. The constituencies where these needy communities are and where the interventions will fall within are shown in figure below. These communities were selected as they are left behind from developmental interventions, as perceived and evidenced by work of partners; NDMA, WaterAid and ACAT. Both WaterAid and ACAT work with various communities in Eswatini and have understood these communities to be left behind from access to water and food security enhancement interventions. WaterAid has already engaged with some of the beneficiaries and recognize the vulnerability and need of the communities. The Lubombo region is the poorest and most vulnerable region in Eswatini.
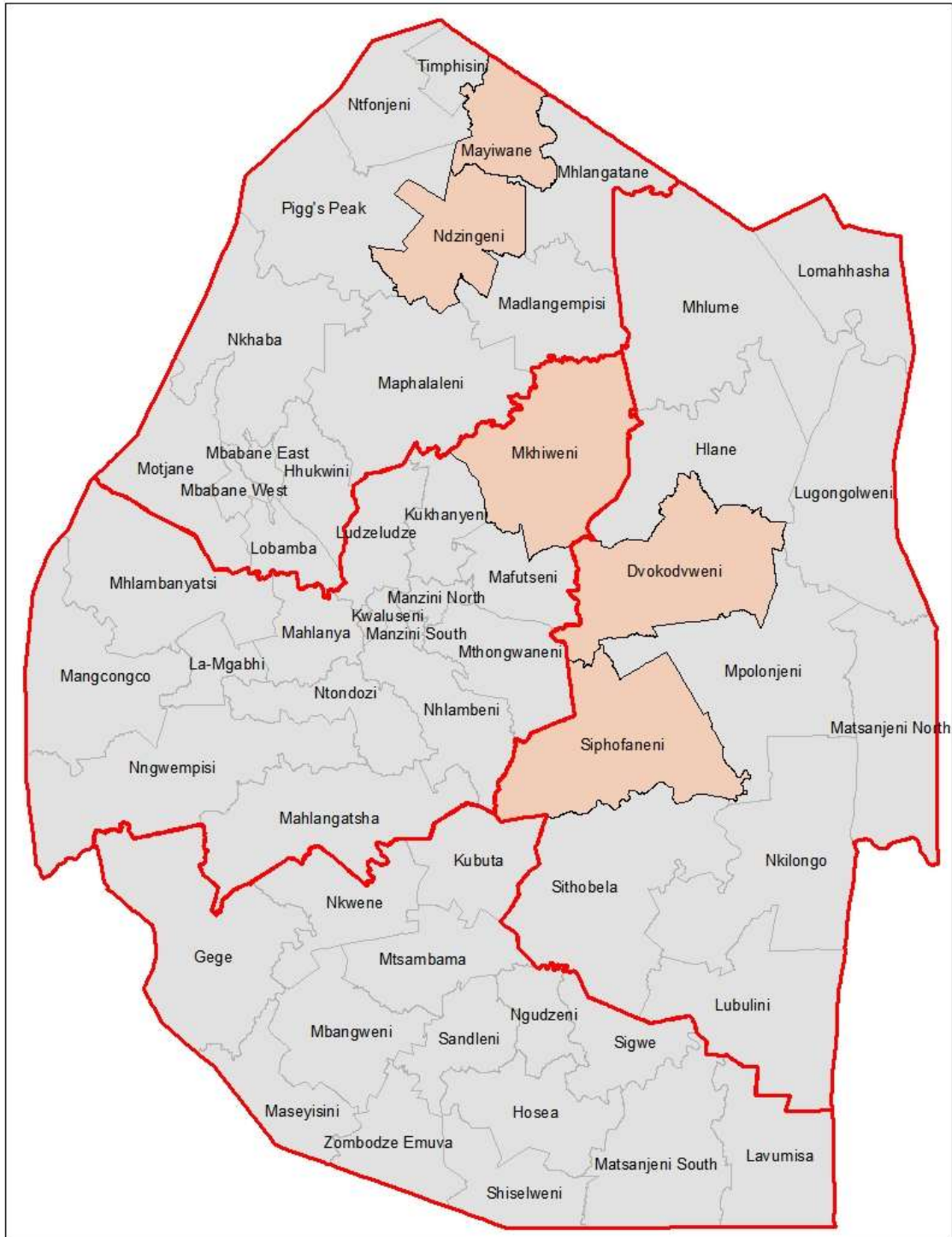
Figure 2 Constituencies where the interventions will be carried out

For the piloting of permeable concrete, the following sites have been identified:

1. Mbabane city's Coronation Park (in front of the basketball and tennis courts)
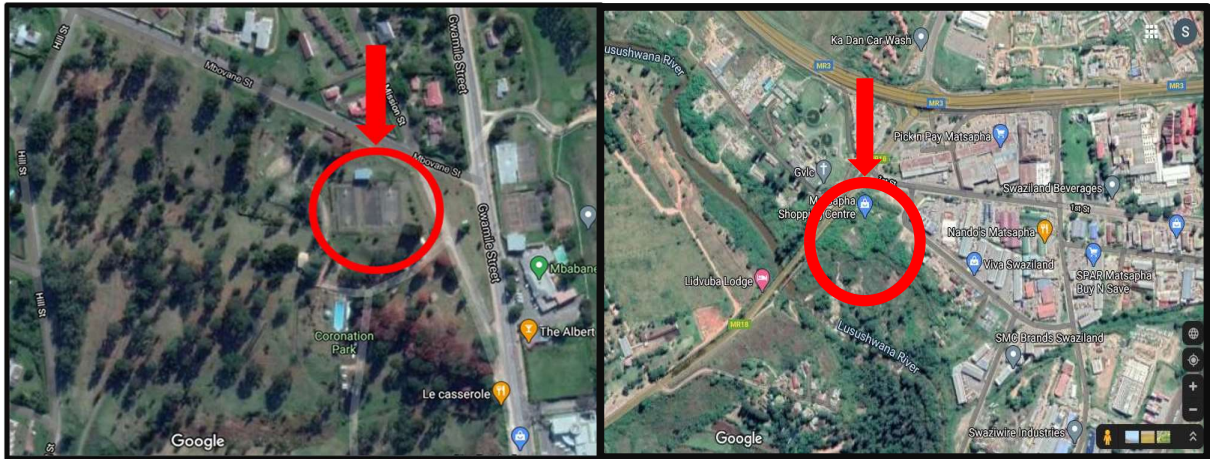2. Proposed Bus Rank in Matsapha

Figure 3 Sites for piloting permeable concrete. Left: Coronation Park at Mbabane, Right: Proposed bus rank site at Matsapha

Strategy for engaging beneficiaries

WaterAid and ACAT staff will first approach traditional leaders in the selected areas and explain about the project. Upon receiving their permission, WaterAid and ACAT staff can discuss with farmers, women groups and local community and identify households and sites for the planned interventions. These discussions can be at the village level with communities drawing their village on flipchart paper identifying areas where access to water is poor. Hydrological assessments will be done by professions from WaterAid who will then identify suitable areas within those identified by community to see where boreholes are viable.

With regards to identifying farmers to benefit from backyard gardens, rainwater harvesting for irrigation, drip irrigation, fish ponds, linking to markets, farm inputs, these will be done through discussions with exiting farmer groups. Where possible existing community level committees (such as farmers' groups, water users and women groups) will take part in actively implementing the project through provision of labour. Focus group discussions may be used to facilitate the process.

After final site and beneficiaries' selection, WaterAid and ACAT staff will go to the traditional leaders to inform of the selection. A community level launch of the project following cultural protocols will be done before activities begin. After implementation of the interventions, regular engagements can be done through the community level committees and groups to ensure the facilities are well maintained beyond project lifetime.

For permeable concrete piloting, the target beneficiaries are the urban dwellers (approximated at 8000 people) within Mbabane Municipality and Matsapha Town Council. The areas where the piloting will be done Coronation Park in Mbabane and Proposed Bus Rank in Matsapha and these were identified by staff of the urban councils looking at land availability and suitability for this technology. Beneficiaries who are urban dwellers will be engaged at every annual general meeting of the urban councils and their inputs and concerns noted.

Stakeholder Response Mechanism

Any aggrieved partner or community can raise their concerns with NDMA through the Project Officer. This officer will work with community level committees and try to resolve the issue within the community level within traditional structures. It is the expectation that most issues will be resolved by traditional structures at the community level. In the event this is not resolved at community level, the Project Officer can escalate it to the Project Manager. If this is still not resolved at the Project Manager's level, any further unresolved grievances can be escalated to UNDP. UNDP has a Stakeholder Response Mechanism (SRM) which is meant to help project-affected stakeholders, governments and other partners to jointly resolve concerns and disputes.

UNDP Country Office management leads in Stakeholder Response Mechanism (SRM) through the Social and Environmental Compliance Unit (SECU). The main aim of the SRM is to ensure that individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

Any person or community potentially affected by a UNDP-supported project may file a request for a response from the Stakeholder Response Mechanism, if they have raised their concerns with Implementing Partners and/or with UNDP through standard channels for stakeholder consultation and engagement and have not been satisfied with the response. The request must relate to a UNDP-supported project and a possible environmental or social impact, and identify how the Requestors have been, or may be, adversely affected by the UNDP project or programme.

If a person or community has a concern about the ability of the UNDP Country Office to respond fairly and effectively to the request, they have the option to file the request directly with the Stakeholder Response Mechanism at UNDP Headquarters in New York. Requests can be sent to the SRM through the Internet or through the mail. Submission can be made at this website: https://secure.ethicspoint.eu/domain/media/en/gui/104895/index.html

South-South and Triangular Cooperation (SSC/TrC)

In this project, South-South knowledge exchange is an important component. With the assistance of India, Brazil and South Africa diplomatic missions, relevant sites for study visits will be involved and kept informed of progress in the project. For the study visits to India, Brazil and South Africa, preliminary sites identified are as given below. The selection of sites was done through desk study, identification of sites by implementing partners from their knowledge and consultation with Indian High Commission in Eswatini. Sites will be confirmed during inception phase of the project.

The proposed knowledge and technologies will be transferred to Eswatini, through officials from the key implementing partners making physical visits to the countries to learn about the technologies. Information and skills will be gathered on the technologies through field visits and discussions in the countries with technical personnel. Guidelines, manuals, design drawings, videos and photos and other technical information will be connected and brought back to Eswatini. The project will hold a workshop(s) after the study visits for sharing the knowledge and skills to a wider group of technical people in Eswatini. Webinars and peer to peer learning will also ensure capacity is built and knowledge is shared. The project will help to practice the intended transfer of knowledge and technologies in Eswatini through the construction of fish ponds, water harvesting structures and permeable concrete paving. Regular contact will be kept with the technical officers in the IBSA countries to share progress and seek advice to improve implementation.

Through this process, Eswatini will establish good networks in IBSA countries (with counterparts of NDMA, municipalities and NGOs) which can be sustainable relationships beyond the project lifetime. In the event that due to COVID-19 restrictions travel is not possible, the costs for travel can be reallocated to other project activities that will upscale the interventions in this project thereby benefitting more communities.

Table 4 Preliminary sites identified for study visits to IBSA countries

Study Visit themes	India	Brazil	South Africa
Fish farming	Matsyafed, Malappuram and Nyarakkal, Kerala http://matsyafed.in/?q=fish-farms	Animal Welfare Laboratory at Paraná State University (LABEA), Paranavaí - PR https://www.unespar.edu.br/	Zini Fish Farms, Mlalazi Estuary in coastal village of Mtunzini in northern Kwa Zulu Natal, between Durban and Richards Bay. https://www.zinifishfarms.co.za/
Rainwater harvesting	Mazhapolima, Thrissur, Kerala https://mazhapolima.org/	Ceara State rural water supply and management project.	
Permeable Concrete		Technical Services Departments in Municipalities such as Prefeitura Municipal de São Paulo. Porto Alegre City Council, Rio Grande do Sul, in southern Brazil	
Disaster Risk Reduction and COVID-19 response discussions	Indian Space Research Organization in Antariksh Bhavan in Bangalore. National Disaster Management Agency of India Headquarters in NDMA Bhavan, Safdarjung Enclave, New Delhi https://ndma.gov.in/	National Disaster Management Agency in Sao Paolo	Disaster Management Centre, Centurion, Gauteng. http://www.ndmc.gov.za/Pages/Home-Page.aspx

Officials from the implementing agencies in Eswatini will travel to IBSA countries and visit sites relevant to the mature technologies in these countries. Further discussions on DRR, COVID-19 response can be made with IBSA country national disaster management agencies. Upon return from these study visits, the officials will hold a workshop to share their learnings and thereby enhancing south-south knowledge exchange. In the event these study visits cannot occur due to travel restrictions, the knowledge exchange will happen through virtual means. Through the IBSA country diplomatic missions, connections will be made to the various institutions identified and engagements will be done virtually. Virtual trainings sessions can be done, skills and knowledge can be shared through virtual means and continuous sharing of progress to IBSA country institutions will continue throughout the project.

Knowledge products

The following knowledge products will be produced as part of this project

1. Guidelines on design and use of permeable concrete including mix designs for various concrete strengths, desired layer thicknesses for the different uses i.e., vehicular traffic, pedestrian usage, underlying layers preferred that support this type of surfacing;

2. Publication defining the flow-rate per square meter of the permeable concrete and different modes of failure of this type of concrete and limitations it may have;

3. Brochures and posters on water, WASH, health, agriculture and poverty nexus and why an integrated approach is used;

4. Media reports on the project including a report on "launch" of the project where the IBSA diplomatic missions will be present;

5. Exhibition of the project with photographs and banners for "World Water Day" commemoration;

6. Picture book of the project interventions;

7. Video documentary;

8. Social media posts and blogs on various components of the project;

9. Research reports by University of Eswatini (UNESWA) and

10. Banners for display during events.

Sustainability and Scaling Up

The project mainstreams both sustainability and resilience into all components. For the WASH component, sustainability will be enhanced through the application of a public private partnerships (PPPs) approach which will create employment opportunities for the local people, enhancing community ownership, while also reducing unemployment. The use of solar technology will reduce the cost that would have been incurred for pumping water using electricity will create resilience as saved money can be directed to maintenance of the system. In addition, the training of project beneficiaries including on solar boreholes has the potential to increase the understanding of the locals on the importance of sustainable use of natural resources, thus, enhancing sustainability and resilience. The project will also seek to implement the project activities in line with governmental plans and policies, and in partnership with government departments, which will ensure long-term project sustainability post the project implementation period.

For the agricultural activities, interventions shall be based on locally available resources (e.g., seedlings, compost and animal manure), which will improve affordability and thus enhance sustainability. An integrated farming approach will be applied through harvesting rainwater, using drip irrigation kits; reuse of grey water for the backyard garden; neutralization of soap through indigenous techniques, such as the use of ash and sand; fish farming and crop production. Financial sustenance will be enhanced by the motivation that any surplus produce can be sold, providing additional income. Resilience will be strengthened by the manageable size of backyard gardens, with farmers encouraged to produce drought resilient crops (e.g., sweet potato, cassava, sorghum, and fruit trees). The strengthening of access to markets also aims to mainstream sustainability, with farmers assisted to sustainably produce and sell their produce, so that the intervention will have lasting effects. In addition, the development of the farmers App for access to markets has a great potential to be scaled up nationally. The app will not be limited to value chains introduced by the project, but for any other value chain that can benefit the farmers. This application may also be used by other farmers which are not project beneficiaries.

Envisaged innovative technologies such as the piloting of permeable concrete in two urban areas of the country that have reported incidences relating to flooding will open opportunities and an appetite of involvement by the private sector, thereby improving sustainability and likely improving the possibility of scaling out of these useful technologies. The exposure of implementers to the technologies and interventions during the S-S knowledge transfer (E.g., permeable concrete interventions in Brazil) will enhance resilience and sustainability of the project. New guidelines/SOPs/Policies and bylaws, etc. may be developed as an outcome of the visit to IBSA success projects. Furthermore, peer to peer networks can be formed across the IBSA countries.

The following are other specific ways in which the project will scale-up and ensure sustainability beyond the lifetime of the project.

Food security component

1. NDMA has submitted a proposal for a proposed grain reserve project to India-UN Partnership fund for Commonwealth countries. This project and the existing Ministry of Education and Training's School Feeding Programme will provide a market to the beneficiary farmers to sell their produce thus enabling sustainability of the interventions. Therefore, the activities to support farmers can be sustained beyond project lifetime.

2. The Fish farmers will be linked with the Fisheries department of the Ministry of Agriculture to be part of a cooperative of fish farmers, assist with a viable market for fish, and also provide continuous technical support when the project has ended.

3. The use of model/ lead farmers in the community will not only help sustain the project interventions and their benefit to the communities but will also ensure adoption of new technologies by other farmers in neighbouring communities.

4. Women Farmer Foundation (WFF) will provide support to women beneficiaries and mentor them so that they become commercial farmers and secure a market for themselves. The women farmers will also participate in the Women Farmer of the year competition to incentivise the women's role in farming.

WASH component

5. The project will be presented to the national WASH forum so that other agencies working in the water and WASH sector can be aware and can scale up interventions;

6. The involvement of EEA will ensure that all interventions adhere to national environmental laws, are environmentally friendly and sustainable;

7. Community committees that are involved in the implementation of this project can ensure sustainability of the systems through promoting sustained behavioural change campaigns which were initiated during the project;

Knowledge sharing

1. The officials participating in study visits to IBSA countries can undertake a pre and post survey to identify capacity improvements through the visits. The trainees will train other officials in Eswatini upon their return from study visits;

2. The project will be showcased at national events and conferences through presentations, setting up pull-up banners in exhibition space and other means;

3. The project will be presented through NDMA and UNDP in their national events, thereby promoting awareness. NDMA and UNDP can use lessons learnt from this project and develop proposals for funding to up-scale the interventions;

4. National capacity is strengthened through study visits by officials from Eswatini to IBSA countries, peer to peer learning locally and in IBSA countries and a national workshop will be held to disseminate study visit learnings; and

5. The University of Eswatini (UNESWA) can bring their students to the project sites for research work and publish research reports. Site visits during "Science week" of

UNESWA can bring school children to these pilot sites. The municipalities can allow the pilot sites to be accessible to educational institutions.

Piloting of Permeable concrete technology
1. The Municipalities will be able to sustain the permeable concrete installations beyond the project funding through an allocated maintenance fund from this project, which was based on Engineer's Estimate;
2. Matsapha Municipality will look into charging minimal fees for services attached to the IBSAs project especially services requiring the usage of the harvested water. That revenue will also be used to maintain the infrastructure used in the water harvesting process;
3. The site will be properly barricaded to ensure that only the desired traffic has access to the permeable concrete. This will assist in preventing the concrete from being subjected to loads well beyond its bearing capacity and thereby will last longer;
4. A maintenance plan will be developed with clear key indicators to state what needs to be done and what are the signs to be seen when the need arises for servicing, and the project will develop a guidance manual (included under knowledge products), which will help the municipalities have guidance to continue to use the technology in future.

National Ownership and Leadership

This is a nationally owned project as the proposal was developed by NDMA and WaterAid from a felt need for this project. The implementers are all national agencies; NDMA, WaterAid, ACAT and Municipalities and the main implementer is NDMA, while the lead UN agency for managing the project is UNDP Eswatini. The project oversight will be through a National Steering Committee comprising of relevant stakeholders in the country.

The permeable concrete structures built will be in municipal land and owned and maintained by the municipality. The Water, WASH and agricultural (RWH, Drip irrigation, Fishponds) structures will be owned by the community and they will participate in the construction work. This will ensure ownership of the interventions from the project. Furthermore, beneficiary communities will participate in the planning of the project interventions.

Replicability

Replicability of rainwater harvesting systems and pit latrine construction is ensured through providing Training of Trainers sessions. Communal hand washing facility will be designed and built with community members and therefore can encourage replicability. Soap making, a simple technology can be replicated through training of trainer's sessions. "Field Days" when farmers can visit the fish ponds and learn from the practitioners themselves will be organized, which will promote upscaling and replicability.

Innovation

The Nexus approach is innovative and not common like siloed sectoral approach. In this project, the nexus approach is used. Furthermore, permeable concrete will be piloted for the first time in Eswatini, and this technology can be learnt from Brazil, where it is a mature technology.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

This project will deliver maximum results with available resources due to the strategy of careful selection of partners who have proven to deliver fast results following their good practices and lessons learnt from past projects. The Theory of Change diagram describes how the project is divided into work packages, with WaterAid undertaking the work related to WASH, ACAT working on agriculture related activities, municipalities working on the innovative permeable concrete piloting and NDMA managing the knowledge exchange component, supervising all partners and providing project management. This approach is cost-effective and efficient because it builds on strengths of each institution and promotes collaboration between partners.

WaterAid collaborates closely with local communities to introduce simple, low-cost technologies and solutions for WASH. This ensures that the poorest people can use and maintain water points and toilets themselves, and that their needs are met. They also work closely with the Department of Water Affairs, local partners and community-based organizations. Working closely with Government ensures that decision-makers recognize the importance of water, sanitation and hygiene and they are able to bring lasting change in the country. In this project WaterAid will deliver the WASH related activities working closely with Government and communities as well as partners such as ACAT who will work together with them to provide holistic benefits to communities.

The logistics needs for this project will take advantage of NDMA's existing facilities and vehicles, thereby bringing value for project funds. Meetings can be held at the conference hall at NDMA headquarters, which is available with zero venue costs. NDMA already has vehicles which can be utilised for this project. WaterAid and ACAT will synergise with their existing projects so that collaboration can be sought.

Shared operations support is anticipated for activities being undertaken by WaterAid and ACAT as this project will build on other projects that they are undertaking on WASH and agriculture. WaterAid and ACAT are also well equipped with existing staff, vehicles and office facilities to manage this project. There are dedicated staff working on similar projects in the Hhohho region and therefore this project will build on existing capacity. Municipalities are managing public spaces such as the sites selected for permeable concrete piloting. They have dedicated staff for maintenance of such public spaces as well as machinery and vehicles to manage projects within their jurisdiction. This will aid the IBSA project because it will build on existing capacities rather than start from scratch.

WaterAid and ACAT has been working with communities in Eswatini for many years and it is cost effective to have them as partners for the WASH and agriculture components. This is because the methodology of implementing the project components of rainwater harvesting, pit latrines, handwashing facilities, backyard gardens has been perfected by the partners. Thus, it will take them less time to mobilise and construct such structures, and be less costly, due to their experience in implementing similar projects. Moreover, the project can also benefit from the goodwill gained by both partners over the years working in Eswatini. Additionally, they can leverage other projects they are implementing to fast track and implement this project efficiently. The communities chosen will benefit through access to water, backyard gardens improving their food security and sanitation and hygiene interventions. Working together, WaterAid and ACAT can be more efficient through join operations, i.e., where backyard gardens are provided, toilets and rainwater harvesting is also provided, so that the farm households being targeted can build their resilience in a holistic manner.

NDMA is the national agency responsible for resilience building and risk reduction in the country and have in place all around the country volunteers and collaborative community partners. NDMA has been the forerunner and mandated national entity to manage COVID-19 response. The project will take advantage of such good relationships and "entry" to any community will be easier as the community will have a positive attitude towards the project based on the goodwill and good track record gained by NDMA over the years. NDMA will work closely with municipalities to pilot permeable concrete. NDMA already has good collaboration with municipalities as they have been jointly working on urban resilience and disaster risk reduction. Such good relationships will help this project to deliver results fast.

The sites chosen for piloting permeable concrete technologies belong to the municipalities and therefore there will be no time lost (e.g for seeking permissions etc.) in securing the sites. There is a strong capacity building component to this project as Municipalities will be able to visit Brazil to learn about the permeable concrete technology, which is widely used in Brazil by their municipalities. It is effective to involve the municipalities in this project because once the piloting of this technology is successful, they can upscale this to other areas. NDMA and municipalities jointly working on producing knowledge products (built on knowledge gained from study visits) such as guidelines/manual on permeable concrete will allow the technology transfer and absorption to ensue effectively.

To strengthen synergy, learning and cost efficiency of implementation, the project will be managed within the UNDP sustainable inclusive economic growth portfolio and aim to collaborate with ongoing initiatives in identifying beneficiaries across the intervention areas, as much as possible hold joint review, monitoring and oversight activities.

Project Management

The project will be implemented in accordance with UNDP Country Office support to national implementation modality policies and procedures. The Deputy Prime Minister's Office-National Disaster Management Agency will be the lead implementing partner in collaboration with Water Aid and ACAT as key responsible partners. The implementing partner is responsible for the day-to-day management of the project and accountable for project results.

A dedicated Project Management Unit will be established to provide day to day implementation support due to staffing gaps at NDMA and existing moratorium on recruitment of government personnel. The team will be specifically recruited to implement the project to ensure effective delivery of results.

UNDP Country Office in collaboration with its global and regional hubs will provide quality assurance and oversight of implementation to ensure that the resources allocated are utilised as per the donor and UNDP operational guidelines. Project assurance functions will be undertaken in line with UNDP project management guidelines. The Assurance role includes spot checks, annual audits, and monitoring as well as evaluations. UNDP staff will activate a risk log to continuously monitor evolving conditions and horizon scanning for informing programme management decisions. In addition to Country Office staff support, as required, staff missions from HQ and regional office will be undertaken to ensure quality support to the Implementing Partner in rolling out of activities.

For project activities carried out by implementing partners and responsible parties using funds transferred by UNDP, audits will be carried out as part of Harmonised Approach to Cash Transfer (HACT) assurance activities. They are governed by HACT guidelines and the Annual Audit Call Letter issued by the UNDP Office of Audit and Investigations.

V. RESULTS FRAMEWORK[14]

Intended Outcome as stated in the UNDAF/country programmes document: Outcome 1: By 2025, women, men, youth and marginalized persons access to decent employment, equitable social economic opportunities, sustainable enterprise opportunities, and productive resources improved
Outcome indicators as stated in the UNDAF/country programmes including baseline and targets: Indicator1.2.1: # of small holders' cooperatives and micro-, small and medium-size enterprises (MSMEs) supported with innovative technology and financing solutions to enhance value addition and reduction of post-harvest losses (IRRF: 1.4.1); Baseline: Smallholders' cooperatives – 0; MSMEs –0 (2020); Target: Smallholders' farmer cooperatives – 10 (5 led by women) and MSMEs – 10 (5 led by women)
Applicable Output(s) from the UNDP Strategic Plan: 1.1.2 Marginalised groups, particularly the poor, women, people with disabilities and displaced are empowered to gain universal access to basic services[15] and financial and non-financial assets to build productive capacities and benefit from sustainable livelihoods and jobs
Project title and Atlas Project Number: "Addressing Water, Health and Poverty Nexus through WASH initiatives for COVID-19 and Climate Change responses in Eswatini". Award ID: 00134367

EXPECTED OUTPUTS	OUTPUT INDICATORS[16]	DATA SOURCE	BASELINE		Targets (by frequency of data collection)			
			Value	Year	Year1	Year 2	FINAL	DATA COLLECTION METHODS & RISKS
Output 1: Increased access to adequate, equitable	1.1 Number of people (50% women and 20% youth) having access to clean water	*Preliminary survey by WaterAid*	305 people in target areas	2021	*1500*	1500	*3000*	*Field visits*

---

[14] UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

[15] Basic services include social services (e.g., health and nutrition, education, water and sanitation, social housing, vocational training), economic services (including finance), environmental and energy services (e.g., renewables, clean fuels and technology, use of natural resources), and other services (e.g., rule of law and justice). Please note that UNDP focuses primarily on policies and capacities that improve the enabling environment for provision of basic services.

[16] It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

and sustainable water, basic sanitation and hygiene services in households in target rural and urban areas	1.2 Number of people (50% women and 20% youth) with handwashing facilities	*Preliminary survey by WaterAid*	Zero	2021	*1500*	*1500*	*3000*	*Pre and post Surveys*	
Output 2 Increased proportion of farmers that have improved food security and incomes	*2.1* Number of farm households (with at least 30% women headed households) that have adopted climate smart agriculture technologies (rainwater harvesting and conservation agriculture	*ACAT*	*Zero households with rainwater harvesting, or backyard gardens*	2021	*600*	*0*	*600*	*Field visit reports*	
	2.2 Number of households (with at least 30% women headed households) improved incomes	*ACAT*	*Zero households with link to markets using mobile app, own fishpond.*	2021	*0*	*600*	*600*	*Field visits, app registration records*	
Output 3 Strengthened capacity for adoption of climate change adaptation and disaster risk reduction technologies and measures	3.1 Number of people (50% women and 20% youth) trained in the various technologies	*NDMA*	*Number of people trained is zero.*	2021	*1000*	*2000*	*3000*	*Training registry, Workshop report*	

VI.   MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans: *[Note: monitoring and evaluation plans should be adapted to project context, as needed]*

Monitoring and evaluation will be done by NDMA with support from partners on a monthly, quarterly and annual basis for all activities. UNDP will do mid-term and annual audits of the project and will employ an international and local consultant for the same. If there is need for course correction and adaptation of the project to required changes, this can be done upon approval of Project Board.

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost $ (if any)
Track results progress	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Monthly, Quarterly, Annually	Slower than expected progress will be addressed by project management.	NDMA	Within output monitoring budget
Monitor and Manage Risk	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	NDMA	Within output monitoring budget
Learn	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.	NDMA	Within output monitoring budget

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost $ (if any)
Annual Project Quality Assurance	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	UNDP	Within output monitoring budget
Review and Make Course Corrections	Internal review of data and evidence from all monitoring actions to inform decision making.	Quarterly	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	NDMA	Within output monitoring budget
Project Report	A progress report will be presented to the Project Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)	Key outputs: final project report	NDMA	Within Project Management Unit budget of $90,850
Project Review (Steering Committee)	The project's governance mechanism will hold regular project reviews to assess the performance of the project and review the Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Board shall hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.	Every six months	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	NDMA	Within the M&E budget there is $4000 for meetings

Evaluation Plan[17]

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Mid-term review	UNDP/NDMA	Output 1.1.2*	Advance poverty eradication in all its forms and dimensions	September 2022	Community beneficiaries, WaterAid, ACAT, Municipalities	Within M&E budget of $8,000 IBSA
Terminal Project Evaluation	UNDP/NDMA, UNDP	Output 1.1.2*	Advance poverty eradication in all its forms and dimensions	September 2023	Community beneficiaries, WaterAid, ACAT, Municipalities	Within M&E budget of $14,000 IBSA

*UNDP Output 1.1.2 Marginalised groups, particularly the poor, women, people with disabilities and displaced are empowered to gain universal access to basic services[18] and financial and non-financial assets to build productive capacities and benefit from sustainable livelihoods and jobs

---

[17] Optional, if needed

[18] Basic services include social services (e.g., health and nutrition, education, water and sanitation, social housing, vocational training), economic services (including finance), environmental and energy services (e.g., renewables, clean fuels and technology, use of natural resources), and other services (e.g., rule of law and justice). Please note that UNDP focuses primarily on policies and capacities that improve the enabling environment for provision of basic services.

VII. MULTI-YEAR WORK PLAN [19][20]

All anticipated programmatic and operational costs to support the project, including development effectiveness and implementation support arrangements, need to be identified, estimated and fully costed in the project budget under the relevant output(s). This includes activities that directly support the project, such as communication, human resources, procurement, finance, audit, policy advisory, quality assurance, reporting, management, etc. All services which are directly related to the project need to be disclosed transparently in the project document.

Expected Outputs	Planned Activities	Planned budget by year $		Responsible Party	Funding Source	Amount ($)	Budget description	Budget notes
		Year 1	Year 2					
Output 1: Improved hygiene and well-being of rural and urban people affected by the impact of COVID 19	1.1 A. Activity: Construct 2 solar powered boreholes and rain water harvesting water supply systems	55000	55000	WaterAid	IBSA	110000	72100 (Contractual Services-Company)	1
	1.1 B. Construct 1 solar powered boreholes and rain water harvesting water supply systems	0	75000	WaterAid	WaterAid	75000	72100 (Contractual Services-Company)	1
Gender marker: GEN 2 Rationale for rating: The major objective of output 1 is to advance gender equality and the empowerment of women and girls through entrepreneurship and small business development; prevention of gender-based violence; improved education and health outcomes. The main	1.2 Activity: Train 600 rural households (at least 50% women headed) to construct handwashing facilities and toilets in their households	5000	0	WaterAid	IBSA	5000	75700 (Training, Workshops, and conferences)	2
		25000	0	WaterAid	IBSA	25000	72100 (Contractual Services-Company)	3

[19] Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

[20] Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

purpose of the WASH component is to alleviate women and girls burden of collecting household water supplies from rivers preventing them from being susceptible to gender-based violence; reduce the spread of diseases including the COVID -19 pandemic which has a bearing on reproductive chores.	1.3 Activity: Train 50 local women entrepreneurs to manufacture soap and provide start-up stock to women entrepreneurs	3000	3000	WaterAid	IBSA	6000	75700 (Training, Workshops, and conferences)	2
		750	750	WaterAid	IBSA	1500	72300 (Materials and goods)	4
Women will be empowered to start businesses in soap making. Women are responsible for sourcing water for their households. Improved hygiene and provision of water will reduce work burden and community work for women and girls particularly in the era of COVID-19.	1.4 Activity: Conduct hygiene behaviour change campaign	0	5000	WaterAid	IBSA	5000	71400 (Contractual services - individual)	5
		0	3000	WaterAid	IBSA	3000	75700 (Training, Workshops, and conferences)	2
		0	2000	WaterAid	IBSA	2000	74200 (Audio visual and printing production costs)	6
	1.5 Activity: Design and construct 2 rain and storm water harvesting systems using innovative permeable concrete technology	0	200000	Municipalities (Mbabane, Matsapha)	IBSA	200000	72100 (Contractual Services-Company)	7
		0	7500	Municipalities (Mbabane, Matsapha)	IBSA	7500	74200 (Audio visual and printing production costs)	8
Monitoring		3000	3000	NDMA	IBSA	6000	71400 (Contractual Services-Individual);	9
		1000	1000	NDMA	IBSA	2000	75700 (workshop and trainings)	2
SUB TOTAL FOR WASH COMPONENT		192750	255250			**448000**		

Expected Outputs	Planned Activities	Planned budget by year $		Responsible Party	Funding Source	Amount ($)	Budget description	Budget notes
		Year 1	Year 2					
Output 2: Increased food security and nutrition to rural household through sustainable food production interventions	2.1 Activity: Support 600 farm households (with at least 50% women headed) to establish rainwater harvesting with filtration system	10000	0	ACAT	IBSA	10000	75700 (Training, Workshops, and conferences)	2
		200000	0	ACAT	IBSA	200000	72100 (Contractual Services-Company)	10
	2.2 Activity: Provide farming inputs for 600 farm households (with at least 50% women headed) and link them to markets	0	80000	ACAT	IBSA	80000	72300 (Materials and goods)	11
Gender marker: GEN 2. Rationale for rating Gender equality is the secondary objective of Output 2. Gender equality will be advanced by ensuring that more than 50% of beneficiaries are women. The youth, women farmers' income, livelihood food security and nutrition will improve and make a significant contribution to the health and wellbeing of women and girls.		0	80000	NDMA	IBSA	80000	72100 (Contractual Services-Company)	12
	2.3 Activity: Train 600 farm households (with at least 50% women headed) on use of efficient irrigation methods such as drip irrigation technology from rainwater harvesting systems	0	18000	ACAT	IBSA	18000	72100 (Contractual Services-Company)	13
		0	2000	ACAT	IBSA	2000	75700 (Training, Workshops, and conferences)	2
	2.4 Activity: Construct at 5 (200m3) low-cost fish pond systems using rainwater harvesting integrated within the vegetable production small farms and provide start-up inputs.	0	5000	ACAT	IBSA	5000	75700 (Training, Workshops, and conferences)	2
		0	15000	ACAT	IBSA	15000	71400 (Contractual services - individual)	14
		0	5000	ACAT	IBSA	5000	72300 (Materials and goods)	15
Monitoring		3000	3000	NDMA	IBSA	6000	71400 (Contractual Services-Individual)	9
		1,000	1000	NDMA	IBSA	2,000	75700 (workshop and trainings)	2
SUB TOTAL FOR AGRICULTURE COMPONENT		214,000	209,000			**423,000**		

Expected Outputs	Planned Activities	Planned budget by year $		Responsible Party	Funding Source	Amount ($)	Budget description	Budget notes
		Year 1	Year 2					
Output 3: Knowledge enhanced to strengthen skills to implement effective climate change adaptation and disaster risk reduction interventions	3.1 Activity: organize gender inclusive study visit on RWH systems and RWH Fish ponds in India	0	20520	NDMA	IBSA	20520	71600 (Travel)	16
Gender Marker: GEN 3 Rationale for rating Output 3 will make a significant contribution to gender equality by harnessing the demographic dividend for youth and gender through investing in knowledge and skills in innovative technology, disaster risk reduction and climate change adaptation measures. Gender equality will be advanced by ensuring that at least 50% of workshop participants are women.	3.2 Activity: Organize gender inclusive study visit on permeable concrete use in public spaces in Brazil	0	22000	NDMA	IBSA	22000	71600 (Travel)	16
	3.3 Activity: Organize gender inclusive study visit on COVID -19 response, DRR, CCA in South Africa	5000	0	NDMA	IBSA	5000	71600 (Travel)	16
	3.4 Activity: Conduct two gender inclusive workshops to share knowledge by staff who attended the exchange visits on water harvesting and treatment technologies for effective DRR and CCA innovation in Eswatini	1500	1500	NDMA	IBSA	3000	75700 (Training, Workshops, and conferences)	2
		0	3000	NDMA	IBSA	3000	74200 (Audio visual and printing production costs)	17
SUBTOTAL FOR KNOWLEDGE (STUDY VISITS) COMPONENT		52020	4500			**53520**		
Total for Outputs 1-3						**924,520**		

35

Output 4. Effective Project Management	4.1 Pro-doc development	4774	0	UNDP	IBSA	4774	71300 (Contractual services - individual)	18
	4.2 Inception workshop, Validation workshop, Launch of project	2225.5	0	UNDP	IBSA	2225.5	75700 (Training, Workshops, and conferences)	19
	4.3 Project Management Unit	45425	45425	NDMA	IBSA	90850	61100 (Salary costs NP staff)	20
		5000	0	NDMA	NDMA	5000	74200-ICT equipment (computers)	21
		3600	3600	NDMA	NDMA	7200	71600 (Travel-Fuel)	16
		12000	12000	NDMA	NDMA	24000	71600 (Travel-Vehicle use)	16
		9400	9400	NDMA	NDMA	18800	70000 (Operating Expenses)	27
	4.4 Mid term and Terminal Evaluation/ Annual Audit	0	8000	UNDP	IBSA	8000	71200-International consultant	23
		3000	3000	UNDP	IBSA	6000	74100-Professional services	22
		2000	4000	UNDP	IBSA	6000	71300-National consultant	24
		1000	1000	UNDP	IBSA	2000	75700-Workshop and training	25
	4.5 Direct Project Support costs	9465	9465	UNDP	IBSA	18930	74300	26
	UNDP General management costs,	14990.25	14990.25	UNDP	IBSA	29980.5	75100 (General Operating Expenses)	
Total for Output 4						204830		
GRAND TOTAL INCLUDING IBSA FUNDS AND CO-FINANCE						**1,129,350**		

Budget notes:

1: Design of solar panel system, boreholes and rainwater harvesting, water storage, filtration system, procurement, installation and inspection services

2: Workshops and Training costs (Meetings, trainers fees, venue, refreshments)

3: Construction materials for building handwashing facilities and toilets as smaller number of demonstration facilities during training

4: Soapmaking and recycling kits

5: Staff costs, consultant/trainer cost

6: Knowledge materials- videos, brochures, printing

7: Design, Site preparation and construction of pavements and water harvesting system using permeable concrete technology

8: Development of guidelines, manual on permeable concrete

9: Monthly monitoring and evaluation

10: Construction materials for rainwater harvesting system with filtration

11: Farm inputs, compost, tools

12: Mobile app development and training for farmers to use the app

13: Drip irrigation kits

14: Construction materials for fish ponds

15: Start up inputs for fish ponds including fingerlings

16: Flight tickets, accommodation, visa, insurance, DSA, Covid-19 tests, Logistics during travel

17: Knowledge products

18: To ensure quality and result orientation of the project document, UNDP in consultation with government partner engaged a project development consultant. This activity was completed and there is need for cost recovery.

19: Workshop costs

20: Salaries for Project Management Unit Staff

21: Purchase of computers

22: Annual audit fees

23: International consultant fees

24: National consultant fees

25: UNDP Country Office support to project implementation activities (procurement and international travel facilitation)

26: Indirect project costs for quality assurance and oversight (3% of total grant)

27: Office space and other project cost

Table 5 Total funds allocated per partner

Partner	Activities	Funds $
UNDP	4.1, 4.2, 4.4, 4.5	58,980
NDMA	2.2 (Linking farmers to markets $80,000), 3.1, 3.2, 3.3, 3.4, 4.3, Monitoring	240,370
ACAT	2.1, 2.2 (excluding linking farmers to market ($80,000), 2.3, 2.4	335,000
WaterAid	1.1A, 1.2,1.3, 1.4	157,500
Mbabane and Matsapha Municipalities	1.5	207,500
TOTAL IBSA funds		**999,350**
TOTAL Co-finance	WaterAid- 75,000 (Activity 1.1B) NDMA-55,000 (Activity 4.3, Project Management Unit)	130,000
GRAND TOTAL IBSA and Co-Finance		**1,129,350**

Table 6 Co-Finance provided by partners

Partner	Co-Finance in $	Activity supported
WaterAid	75000	Construct 1 solar powered boreholes and rain water harvesting water supply systems
NDMA	5000	Computers for Project Management Unit
NDMA	7200	Fuel for local travel during project duration
NDMA	24000	Vehicle use
NDMA	8400	Office space
NDMA	10400	Indirect project costs (other overheads)
TOTAL CO-FINANCE	**130000**	

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

"The India, Brazil and South Africa Facility for Poverty and Hunger Alleviation (IBSA Fund) is a pioneering initiative to implement South-South cooperation for the benefit of other Southern countries in partnership with the United Nations system. Its purpose is to identify replicable and scalable projects that can be disseminated to interested developing countries as examples of best practices in the fight against poverty and hunger. The United Nations Office for South-South Cooperation (UNOSSC) serves as the Fund Manager for this initiative" (UNOSSC, 2020). The UNOSSC through the UN Resident Coordinator of Eswatini nominated UNDP country office in Eswatini to be the UN agency for managing the funds in the country for this project. UNDP will work with NDMA, who is the implementing partner for this project.

This project will be overseen by the Project Board (or Project Steering Committee) (see Fig.4) chaired by the Deputy Prime Ministers Office. Other members of the Project Board will include:

Ministry of Health Department of Environmental Health; Coordinating Assembly of NGOs (CANGO); Ministry of Agriculture Department of Fisheries; Deputy Prime Minister's Office Department of Gender and Family Issues; Ministry of Natural Resources and Energy Department of Water Affairs and the Secretariat-NDMA Project Management Unit.

The Project Board will be responsible for making management decisions for the project when guidance is requested by NDMA as the Project Implementing Partner. The Project Board will:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Make strategic decisions, including the approval of project revisions (i.e., changes in the project document);
- Authorize any major deviation from the project document and agreed annual plans;
- Review annual progress reports;
- Review and recommend for UNDP approval of end project report;
- Address project issues as raised by implementing partners and make recommendations on follow-on actions and
- Provide guidance on new project risks and agree on possible countermeasures and management actions to address specific risks.

The key distinct roles of the members of the Project Board are;

1) An Executive: individual representing the project ownership to chair the group. In this project, the "Executive" will be an official from Deputy Prime Minister's Office, as NDMA is under this office and NDMA is the main implementor of the project.

2) Senior Supplier: individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. In this project, the "Senior Supplier" would be an official from UNDP.

3) Senior Beneficiary: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. In this project, a representative from the Ministry of Tinkhundla Administration and Rural Development will perform the role of Senior Beneficiary, they will be invited to participate in project board meetings on agenda items related to the Project implementation.
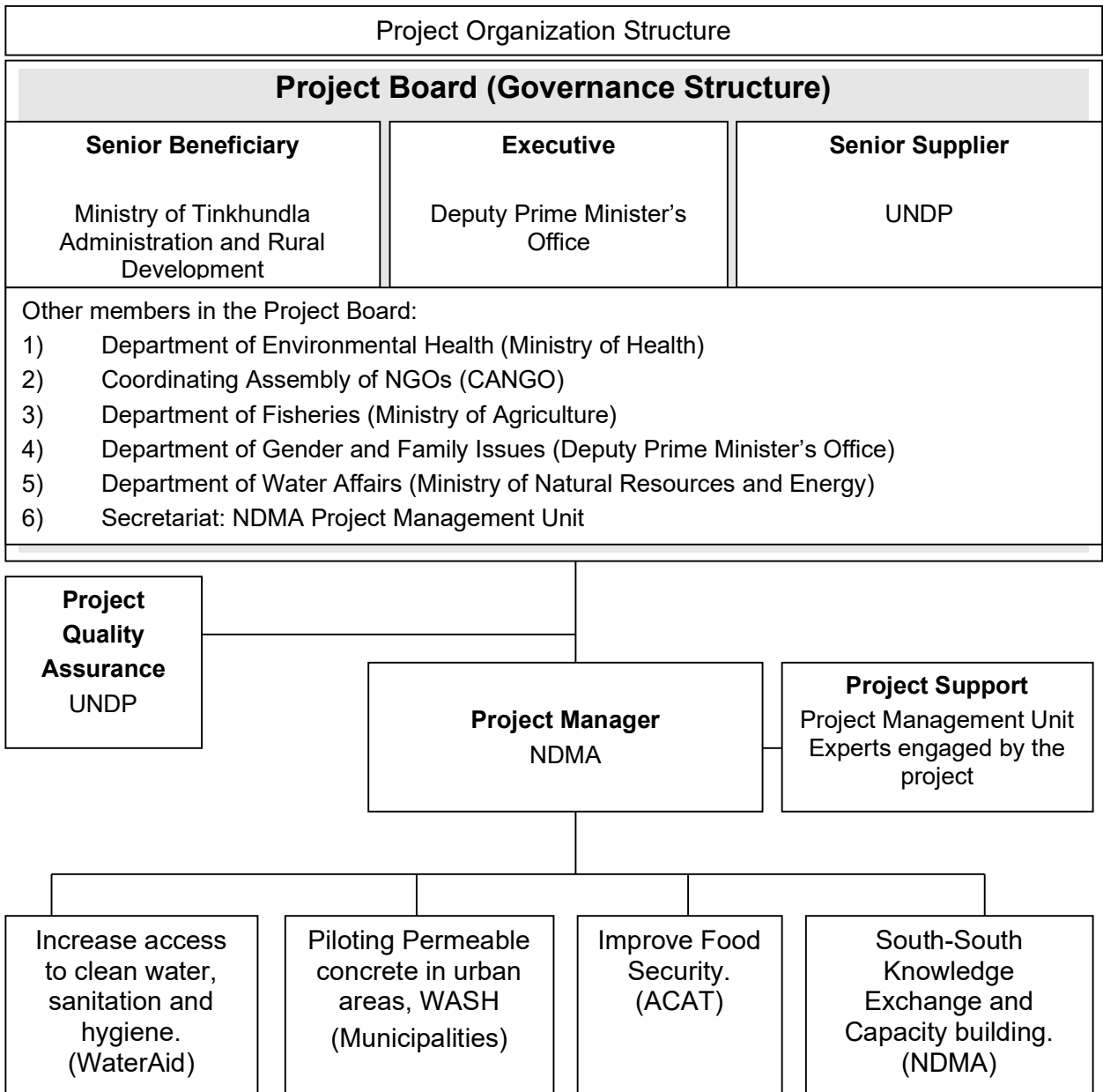
Project Organization Structure

Project Board (Governance Structure)

Senior Beneficiary	Executive	Senior Supplier
Ministry of Tinkhundla Administration and Rural Development	Deputy Prime Minister's Office	UNDP

Other members in the Project Board:

1) Department of Environmental Health (Ministry of Health)
2) Coordinating Assembly of NGOs (CANGO)
3) Department of Fisheries (Ministry of Agriculture)
4) Department of Gender and Family Issues (Deputy Prime Minister's Office)
5) Department of Water Affairs (Ministry of Natural Resources and Energy)
6) Secretariat: NDMA Project Management Unit

Project Quality Assurance UNDP		**Project Manager** NDMA	**Project Support** Project Management Unit Experts engaged by the project

Increase access to clean water, sanitation and hygiene. (WaterAid)	Piloting Permeable concrete in urban areas, WASH (Municipalities)	Improve Food Security. (ACAT)	South-South Knowledge Exchange and Capacity building. (NDMA)

Figure 4 Organogram for the project

NDMA will be the main implementing partner for this project and house the Project Management Unit, comprising of Grants Finance Manager, Project Manager and Project Monitoring and Evaluation Officer will be housed within NDMA (terms of references provided in annex). NDMA will be responsible for overall project management and day to day running of activities to ensure the project delivers its objectives. NDMA will work closely with partners for various components of the work. NDMA will directly manage the knowledge component which includes study visits to India, Brazil and South Africa and producing knowledge products. This pro-doc provides preliminary sites for the study visits, however, details and contacts of the sites to be visited can be obtained during implementation phase through NDMA's Project Management Unit working closely with the India High Commission in Eswatini, Brazil Embassy (in South Africa) and South African High Commission in Eswatini.

For the WASH component, the partner will be WaterAid who will be responsible for implementing construction of solar powered boreholes, rainwater harvesting systems for domestic use and storage, community handwashing facility, capacity building of soap making groups and targeted hygiene campaigns with communities and trainings on construction of handwashing facilities and pit latrines.

For the agriculture component, Africa Cooperative Action Trust (ACAT) will be responsible for working with farmers in building their capacity in conservation agriculture and backyard gardens. They will train farmers to construct rainwater harvesting systems in backyard gardens, provide inputs to farmers including drip irrigation kits and compost, link farmers to the markets and construct fish pond systems for farmers. A mobile app may be developed as a tool for linking farmers to markets and this can be jointly done by NDMA and ACAT as NDMA already has a mobile app specifically for disaster risk reduction and this work could gain some learnings from that.

The piloting of permeable concrete at two urban areas will be implemented by NDMA with Mbabane Municipality and Matsapha Town Council. The procurement of contractors will be managed jointly by NDMA and the municipalities based on terms of references provided in the pro-doc annexes.

NDMA will be responsible for overall project management including management of partners and their work packages. NDMA will also be responsible for risk assessment and ensuring sustainability measures are adequately applied. Any conflicts arising from the project will first be dealt at community level using traditional structures within the community. If the problem is not solved at the community level the Project Officer may escalate to the Project Manager and if it remains unresolved, the complainant may use UNDP's website to lodge a complaint.

The Project Management Unit will be responsible for timely sharing of information to the stakeholders identified in Table 1. This can be in various means such as emails, newsletters, videos, workshops and other ways. NDMA will report to UNDP of the progress of work and seek funds for various stages of the work, subject to satisfactory completion of earlier stages. The partners for this project were carefully selected based on their track record and strength in various sectors. They will work closely with Government Departments during the implementation phase.

Project Manager of the Implementing Partner

a) Manage the overall conduct of the project.

b) Plan the activities of the project and monitor progress against the approved workplan.

c) Implement activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.

d) Monitor events as determined in the project monitoring plan, and update the plan as required.

e) Provide support for completion of assessments required by UNDP, spot checks and audits.

f) Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.

g) Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.

h) Monitor progress, plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.

i) Ensure that changes are controlled and problems addressed.

j) Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.

k) Prepare and submit financial reports to UNDP on a quarterly basis.

l) Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risk log.

m) Capture lessons learned during project implementation.

n) Prepare the annual review report, and submit the report to the project board and the outcome group.

o) Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.

Project Support (Finance and Administration)

a) Set up and maintain project files.

b) Collect project-related information data.

c) Assist the project manager in updating project plans.

d) Administer project board meetings.

e) Administer project revision control.

f) Establish document control procedures.

g) Compile, copy and distribute all project reports.

h) Assist in financial management tasks under the responsibility of the project manager.

i) Provide support in the use of Atlas and the corporate planning system for monitoring and reporting.

j) Review technical reports.

k) Monitor technical activities carried out by responsible parties.

Implementing Partner (authorized personnel with delegated authority)

l) Sign the multi-year workplan.

m) Sign the combined delivery reports.

n) Sign the FACE form.

UNDP Project Assurance:

Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. Project assurance has to be independent of the project manager. A UNDP programme or monitoring and evaluation officer typically holds the project assurance role on behalf of UNDP.

a) Ensure that funds are made available to the project.
b) Ensure national ownership, ongoing stakeholder engagement and sustainability.
c) Monitor the project's progress towards intended outputs.
d) Monitor the output contributions to intended country programme outcomes.
e) Assure the quality of the project in the required frequency using the project quality assurance rating tool.
f) Participate in the project management board.
g) Perform required monitoring activities, such as periodic monitoring visits, spot checks and scheduled audits.
h) Monitor the appropriate used of resources entrusted to UNDP.
i) Ensure that risks are properly managed and that the risk log is regularly updated.
j) When UNDP is identified as a responsible party, perform duties associated with this role including, when requested and agreed to, providing implementation support services.
k) Ensure that critical project information is monitored and updated in Atlas and the corporate planning system, including progress data in the results framework.
l) Ensure that financial reports are submitted to UNDP on time, and that combined delivery reports are prepared and submitted to the project board.
m) Report on progress to donors and to UNDP through corporate reporting mechanisms.
n) Perform additional oversight and quality assurance tasks as specified in vertical fund policies, fee arrangements and other agreements.

UNDP Programme Manager (Resident Representative or delegated authority)
a) Ensure that resources entrusted to UNDP are utilized appropriately.
b) Ensure that the programme is making progress towards intended outcomes.
c) Ensure national ownership, ongoing stakeholder engagement and sustainability.
d) Ensure that the project's outputs contribute to intended country programme outcomes.
e) Ensure that key results and issues pertaining to project performance are fed into outcome and programme level monitoring.
f) Approve the multi-year budget in Atlas.
g) Approve quality assurance ratings for projects under the programme.

IX.   LEGAL CONTEXT

Option a. Where the country has signed the [Standard Basic Assistance Agreement (SBAA)](#)

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date).   All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by [name of entity] ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

X.   RISK MANAGEMENT

Option a. Government Entity (NIM)   (National Disaster Management Agency under Deputy Prime Minister's Office)

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
    a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
    b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

5. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

7. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

8. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

9. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

10. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

11. *Choose one of the three following options:*

    Option 2: The Implementing Partner agrees that, where applicable, donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities which are the subject of this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

12. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

13. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

14. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.