North Darfur State Ministry of Health
Locality of El Fasher
El Fasher Municipal Administrative Unit

Environmental Sanitation and Hygiene Master Plan
2017-2027
FOREWORD BY THE NORTH DARFUR STATE GOVERNOR

The North Darfur State Government realises the importance of developing a visionary roadmap to guide the improvement of environmental sanitation and hygiene across all communities of El Fasher Town. In that respect, the State Ministry of Health and the Locality of El Fasher, under the guidance of the Sudan National Sanitation and Hygiene Strategic Framework (SNSHSF) has developed a 10-Year Environmental Sanitation and Hygiene Master Plan (ESHMP) 2017-2027.

The ESHMP maps out a strategic direction for improving environmental sanitation and hygiene in households, schools, primary healthcare facilities and public places. It also outlines a long-term visionary strategy and objectives that reflect the aspirations of the residents of El Fasher town. It has been formulated based on our collective vision of living in a clean town free from open defecation & waste matter, where we all have access to sanitation, hygiene and enjoy a healthier and productive life.

This master plan is intended to guide the improvement of environmental sanitation and hygiene within the Municipal Administration Unit of El Fasher within El Fasher Locality, North Darfur State. It sets a good model for consolidating multi-sectorial planning for health and education while integrating social, environmental and economic aspects. The plan complements development objectives for North Darfur State as stipulated in various sector development strategies including the North Darfur WASH Strategic Plan. It provides a springboard for North Darfur State to champion the attainment of Sustainable Development Goals at least for El Fasher town come 2030. As a starting point, as the residents of El Fasher town, we are awakened to the reality our strict target of eliminating open defecation by 2019.

The State Ministry of Health and the State Ministry of Education together with their sector partners will use this plan as a guide for their sanitation and hygiene programs in communities and schools within El Fasher Municipal Administrative Unit. This is the case because this master plan does not only target households, but also schools, primary health centres and public places. In the realisation of this cross-sector collaboration, the state government will highlight in its development agenda the provision of improved WASH facilities in schools, health centres, and public places.

The ESHMP comes in as a response to numerous social and economic challenges that contribute to low health indicators within the town, but also the entire North Darfur State. For instance, in the recent months, the state was among the worst hit by water-related diseases such as diarrhoea, trachoma and malaria. These diseases spread through poor sanitation and hygiene practices which among others include defecating in the open, unsafe disposal of child faeces, lack of handwashing after using toilets, before handling food, unsafe handling of drinking water supply and unsafe handling of food.

The effects of these diseases include diversion of household resources to health care, loss of productive time, malnutrition among children and yet in unfortunate circumstances, lives are lost. The most important aspect is the realisation that as a single large community we have the power to avoid all these undesirable effects only if we choose to agree to adopt good sanitation and hygiene practices. Therefore, we need to realise our potential in making a lasting impact on our future, that of our children as well as the of many more generations to come.

The masterplan has further clarified important roles and responsibilities of various stakeholders whose contribution has a strong bearing on the master plan implementation. To this effect, I would like to thank the United Kingdom (UK) Government through Department for International Development (DFID) for financing the Urban Water for Darfur Project which has developed this master plan. I would also like to thank UNICEF for providing technical support during the development of the master plan and for making a financial contribution towards the initiation of the implementation phase. I thank the Federal Ministry of Health for the overall policy guidance.

More importantly, I express my gratitude to the Minister, management and staff of State Ministry of Health for coordinating the entire master planning process. I commend the Commissioner of El Fasher Locality for championing stakeholder engagement and community engagement. I thank the Executive Director and Locality staff for work well done. Last, but not least I thank all sector partners including state line ministries, departments, UN Agencies, the private sector, religious leaders, community leaders and NGOs. This masterplan is indeed a roadmap for the long journey that lies ahead of us, and we need to walk together.

Abdulwahid Yousif Ibrahim
State Wali, North Darfur State, Sudan
FOREWORD BY THE MINISTER OF HEALTH

The State Ministry of Health in North Darfur is pleased to disseminate this 10-Year Master Plan for the Environmental Sanitation and Hygiene Master in El Fasher Town. The plan focuses on the vision that the residents of El Fasher town have which is to live in a clean town free from open defecation & waste matter, where all residents have access to sanitation, hygiene and enjoy a healthier and productive life. It has been developed under the guidance of the Sudan National Sanitation and Hygiene Strategic Framework (SNSHF). The State Ministry of Health believes that through this plan, the state will record remarkable progress towards the attainment of the national health strategic goals and more importantly towards the Sustainable Development Goals.

In Sudan, only 68 percent of households have access to improved water supply, and only 27% have access to improved sanitation. The situation is worse in North Darfur State where only 50% population has access to improved water supply. Only 12% of the population has access to improved sanitation, with 41% practising open defecation and the incidence rate of diarrhoea is 38%. Just like the rest of North Darfur State, El Fasher town has enormous evidence of the impact of poor sanitation and hygiene on human health where WASH-related diseases have gained predominance.

It is sad that between April and September in 2017, El Fasher health facilities in EL Fasher town alone, treated over 25,000 town residents with water, sanitation and hygiene-related diseases including diarrhoea, malaria, and trachoma. Our data shows that 56% of these cases are diarrheal diseases, and half of the affected are children aged below 5 Years. It is believed that the actual number of cases is very higher considering those who sought clinical services from private health facilities and those that get treated at home. Eighty percent of the water sources and 63% of household water container are contaminated while 7% of the of the residents defecate in the open.

The observance of personal hygiene among the residents is low especially the practice of handwashing with soap at critical times such as before eating and feeding others, after using or visiting the toilet, after wiping baby stool, before handling foods, the list is long. Again, residents are yet to internalise behaviour change for reducing the generation and proper disposal of waste. These issues are widespread, and they cut across urban, peri-urban and IDP settlements; but again, in residential areas, institutions and public places.

Twenty-nine percent of pre-schools and 14% of basic schools do not have toilet facilities. The number of toilets is highly inadequate, with one toilet serving over 100 students in most of the schools and is well above the standard of 1 toilet for 30 girls and one toilet for 50 boys. Healthcare facilities lack fully operational WASH facilities. Even within the hospital compound, there is open defecation. Health care providers, as well as patients, have to spend much money to buy water from tanker vendors. Again, only 10% of the residents can receive garbage collection services from the Locality leading the emergence of several informal dumpsites which are also hotspots for open defecation.

The master plan provides the State Ministry of Health and its stakeholders with a clear plan of action to improve sanitation and hygiene in El Fasher. Over the next ten years, we will support the locality in coordinating and managing environmental health initiatives that will lead to the elimination of open defecation and improved waste management in EL Fasher town. Hygiene awareness will increase among the town residents especially handwashing, water safety and food safety.

Over a ten-year period, 130,000 school children will benefit from improved WASH services including facilities for menstrual hygiene management and ease of access for the disabled children. They will be taught proper sanitation and hygiene practices and engaged in maintaining a clean environment in schools. Primary Health Facilities will have adequate WASH services.

On behalf of the Ministry of Health and other sector line ministries, I would like to call upon all stakeholders including communities to join (well washed!) hands and make our town clean, and our citizens healthy. The State Ministry of Health is committed to providing sectoral leadership including the necessary resources to ensure the successful implementation of the Master Plan for El Fasher.

I extend my deepest appreciation to the United Kingdom Government through the Department for International Development for supporting the development of the master plan and initial funding for its implementation. I thank UNICEF for providing technical support and making a financial contribution toward the initial implementation of the master plan. I thank all stakeholders for work well done and wish you all the best during the implementation.

Eng Anwar Ihsag Suleiman
Minister, State Ministry of Health
ACKNOWLEDGEMENTS

The State Ministry of Health and Locality of El Fasher acknowledges that the development of the master plan was made possible because of a generous contribution from Federal Government of Sudan, North Darfur State Government, Locality of El Fasher and residents of El Fasher Administrative Unit. The United Kingdom Government through the Department for International Development (DFID) financed the development of the master plan. UNICEF provided technical support towards the planning process, and this was done in consultation with many other sector partners such as Government institutions, Non-Governmental Organisations (NGO), Universities, Community Based Organisations, private sector institutions and other UN agencies.

With sincere gratitude State Ministry of Health (North Darfur) and the Locality of El Fasher acknowledges the following partners in alphabetical order, among many others which have not been mentioned:

All Locality Administrations and their staff
COOPI Cooperazione Internazionale
Department of Locality Affairs, North Darfur State
Environmental Sanitation and Hygiene Project
Federal Government through Federal Ministry of Health
Humanitarian Aid Commission
Office for the Coordination of Humanitarian Affairs
Oxfam America
Peace Action Organisation (P.A.O)
Patients Helping Fund (PHF)
Plan Sudan
State Government and Governor’s office
State Ministry of Education
State Minister of Finance
State Ministry of Health, North Darfur
State Ministry of Physical Planning and Public Utilities
State Ministry of Social Affairs
Sudan Central Bureau of Statistics
Taha Investments (Sanitation Entrepreneur)
United Kingdom Government through Department for International Development
United National Development Program
United Nations Children’s Fund
United Nations Environment Program
United Nations Mission in Darfur
United Nations Coordination of Humanitarian Affairs
United Nations Office for Project Services
University of El Fasher
University of Khartoum
TERMINOLOGY AND DEFINITIONS

Definitions adopted in this document are those recommended by the Government of Sudan through the Sudan National Sanitation and Hygiene Strategic Framework (SNSHSF).

<table>
<thead>
<tr>
<th>Term</th>
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<tr>
<td><strong>Hygiene &amp; Sanitation</strong></td>
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| Critical times to wash hands with soap | Times when handwashing with soap becomes uncompromisingly essential to avoid the transmission and ingestion of diseases causing organisms. Such critical times include the following:

- Before preparing food/cooking.
- Before and after eating.
- After using the latrine.
- Before feeding babies, sick people or elderly people.
- After cleaning someone else’s faeces.

Moreover, also:

- After cleaning compound.
- After handling animals.
- After cleaning animal faeces.
- After cleaning animal shelter.
- After changing female sanitary pads. |
| **Hygiene** | The conditions and practices that help to prevent the spread of diseases and maintain health and dignity. |
| **Hygiene promotion** | A planned, systematic approach which encourages and enables people to take action and adopt safe hygiene practices and behaviours to prevent diseases and protect health. |
| **Health and sanitation promotion** | Health promotion is the process of enabling people to increase control over and to improve their health. It is about persuasive communications designed and delivered to inspire target audience to action. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions. |
| **Personal hygiene** | The principle of maintaining personal cleanliness and grooming of the body and clothes, including hands, hair, nails and all parts of the body including menstrual hygiene. |
| **Menstrual hygiene** | Conditions and practices that help women of reproductive age to maintain their menstrual period in a healthy way and with dignity. |
| **Menstrual hygiene management** | Women and adolescent girls are using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required, and having access to safe and convenient facilities to dispose of used menstrual management materials. They understand the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear. (JMP definition) |
| **Environmental hygiene** | Hygiene and cleanliness of the environment that helps reduce vectors prevents the spread of disease and makes the environment more pleasant to live in. |
| **Food hygiene** | Food safety and wholesomeness in its production, storage, preparation, distribution and sale, until consumption. |
| **Medical hygiene** | A specific set of practices associated with medical contexts that preserve health, for example, environmental cleaning, sterilization of equipment, hand hygiene, water and sanitation and safe disposal of medical waste. |
| **Social norms** | Implicit or explicit standard pattern of behaviour in a social group or community; includes descriptive norms, what is typically done in a setting, and injunctive norms, what is approved in a society. |
| **Sanitation** | The hygienic means of promoting health through prevention of human contact with the hazards of wastes. It can include the provision of facilities and services for the safe disposal of human and animal excreta, solid wastes, domestic wastewater (sewage or grey water), industrial and agricultural wastes and may involve vector control.  

*Note:* The Water / WASH sectors most commonly refer to ‘sanitation’ only in relation to the safe disposal of excreta and urine. See below for additional definitions related to excreta and urine disposal. |
<p>| <strong>Sanitation ladder</strong> | A tool for tracking improvement in sanitation coverage in step-wise increments from open defecation to a safe, hygienic, and enclosed latrine |</p>
<table>
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<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td>Sanitation marketing</td>
<td>Application of social marketing practices to scale up the demand and supply for improved sanitation, particularly among the poor</td>
</tr>
<tr>
<td>Environmental sanitation</td>
<td>The hygienic means of promoting health through prevention of human contact with the hazards of wastes in the environment. It can include the provision of facilities and services for the safe collection, transfer, disposal, recycling and reuse of wastes. This includes human and animal excreta, solid wastes, domestic wastewater (sewage or grey water), industrial wastes, agricultural wastes and vector control. It can also include the air pollution prevention and clean housing environments.</td>
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| Environmental health (EH)   | This is the branch of public health that is concerned with all aspects of the natural and built environment that may affect human health through physical, biological, chemical, social and psychosocial factors. The environment is everything that surrounds us. The following EH intervention areas are considered part of S&H under this framework:  
  - Safe excreta and urine management; solid waste management; health care and hazardous wastes management; vector control; food safety; drinking water safety; wastewater disposal (black, grey and rainwater).  
The following EH intervention areas are not being covered as part of S&H for the purpose of this framework:  
  - Air pollution control; industrial wastes management; quality of housing. |
| Public health               | All organized measures (whether public or private) to prevent disease, promote health, and prolong life among the population as a whole. Its activities aim to provide conditions in which people can be healthy and focus on entire populations, not on individual patients or diseases. Public health is concerned with the total system and not only the eradication of a particular disease. |
| Sanitation definitions related specifically to the disposal of excreta and urine |                                                                                                                                            |
| Basic sanitation            | A basic sanitation service is considered as access to an improved sanitation facility which is not shared by two or more households. (JMP definition) |
| Improved sanitation         | Improved sanitation facilities are those that effectively separate excreta from human contact, and ensure that excreta do not re-enter the immediate household environment. Improved sanitation facilities include:  
  - A pit latrine with a superstructure, and a platform or squatting slab constructed of durable material. A variety of latrine types can fall into this category, including composting latrines, pour-flush latrines, and ventilation improved pit latrines (VIPs).  
  - A flush toilet connected to a septic tank or a sewer (small bore or conventional). (JMP definition) |
| Adequate sanitation         | Implies a system which hygienically separates excreta from human contact as well as safe reuse / treatment of excreta in situ, or safe transport and treatment off-site. (JMP definition) |
| On-site sanitation          | The collection and treatment [or disposal] of waste at the place where it is deposited.                                                  |
| Open defecation             | Excreta of adults or children are deposited (directly or after being covered by a layer of earth) in the bush, a field, a beach, or another open area; discharged directly into a drainage channel, river, sea, or another water body; or are wrapped in temporary material and discarded. (JMP definition) |

Source: Adopted from SNSHSF (2016) and WSP\(^1\)

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<tr>
<td>BOP</td>
<td>Build, Operate and Transfer</td>
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<td>C4D</td>
<td>Communication for Development</td>
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<td>CFU</td>
<td>Community Facilitation Unit</td>
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<td>CLTS</td>
<td>Community-led Total Sanitation</td>
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<td>EHP</td>
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<td>GWMM</td>
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<td>Humanitarian Aid Commission</td>
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<tr>
<td>HCW</td>
<td>Health Care Waste</td>
<td></td>
</tr>
<tr>
<td>HWST</td>
<td>Household Water Storage and Treatment</td>
<td></td>
</tr>
<tr>
<td>IDP</td>
<td>Internally Displaced Person</td>
<td></td>
</tr>
<tr>
<td>JICA</td>
<td>Japanese International Cooperation Agency</td>
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<td>MHM</td>
<td>Menstrual Hygiene Management</td>
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<td>OD</td>
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<td>Primary Health Centres</td>
<td></td>
</tr>
<tr>
<td>PTA</td>
<td>Parent Teacher Associations</td>
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<td>Sudanese Pound</td>
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<td>SLTS</td>
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<td>School Management Committees</td>
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<td>State Ministry of Physical Planning &amp; Public Utilities</td>
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<td>TOT</td>
<td>Trainers of Trainers</td>
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<td>UCLTS</td>
<td>Urban Community-led Total Sanitation</td>
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<td>UNAMID</td>
<td>United Nations Mission in Darfur</td>
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<td>United Nations Environment Program</td>
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<td>UNOPS</td>
<td>United Nations Office for Project Services</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
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<tr>
<td>UW4D</td>
<td>Urban Water for Darfur project</td>
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<td>WASH</td>
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<tr>
<td>WES</td>
<td>Water and Environmental Sanitation</td>
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EXECUTIVE SUMMARY

1.1 OVERVIEW

The Environmental Sanitation and Hygiene Master Plan (ESHMP) is an actionable roadmap towards achieving sustainable access to basic sanitation and hygiene for all citizens of El Fasher town by 2027. The master plan is an articulation of strategic priorities, key policy and systemic interventions to guide investments and move beyond ad-hoc interventions to a more durable long-term solution, eventually leading to the attainment of SDG-6 target on sanitation.

The vision of the people of El Fasher town is to live in a clean town free from open defecation & waste matter, where all residents have access to sanitation, hygiene and enjoy a healthier and productive life.

This will be achieved by:

- Promoting improved sanitation and hygiene practices;
- Ensuring clean sanitation & handwashing facilities in schools, hospitals and public places; and
- Improving the management of solid and liquid waste to provide a cleaner and safer environment.

This master plan is a ten-year development plan (2017 – 2027) aimed at reaching 654,777 people and is complemented by water supply improvements through the Water Supply Master Plan for the same population. The master plan will contribute towards improved human health, dignity and aid economic development for the residents of El Fasher town. It is estimated that Sudan loses 2% of its GDP annually due to poor sanitation. This translates to US$ 490 million per year, nearly equal to the funds required to achieve SDG-6 basic water and sanitation targets for Sudan. Investing in sanitation & hygiene makes good economic sense.

1.2 SCOPE OF THE MASTER PLAN

The geographical area of focus is the El Fasher administrative unit under the El Fasher Locality. Specifically, the plan will cover the urban and peri-urban areas of El Fasher Township and the two IDP settlements of Abu Shouk and El Salam. Of the targeted population of 654,777, 39% reside in the urban areas, 43% in peri-urban and 18% within the IDP settlements. The master plan integrates the planning and management of human excreta, faecal sludge, grey water and solid waste; hygiene practices; Water, Sanitation and Hygiene (WASH) in Institutions (schools, Primary Health Care facilities, Public Places) through sound institutional and financial arrangements and realistic action planning.

1.3 FORMULATION OF THE MASTER PLAN

Under the leadership of the State Ministry of Health (SMoH), this master plan has been developed with inputs from key stakeholders namely - Locality and town residents, State Government, NGOs, the private sector, CBOs and various development partners.

The study for development of the Master Plan was undertaken during June 2016 - May 2017 and involved extensive consultations with stakeholders at the state and locality levels. The collection, review of the existing documents/information and Household Surveys. Focus Group discussions were conducted in the initial stage of the study during June - October 2016. A series of consultation workshops with key stakeholders comprising state Ministries, Departments and localities were held during January and May 2017 to discuss and agree on the key findings and recommendations for the Master Plan.

1.4 CURRENT SITUATION

According to 2014 Multiple Indicator Cluster Survey (MICS) report, North Darfur State is one of the states with low WASH indicators where child mortality is 91/1000 above the national average of 68/1000. Diarrhoeal incidences are as high as 38%. Fifty percent of its population is reported to have access to the improved water supply as against the national access rate of 68%. Just 12% of the population has access to improved sanitation (below the national average of 33%, while 41% of the population practice open defecation (higher than the national average of 29%).


[3] The Water Master Plan is developed by UNOPS to ensure the availability of adequate sustainable safe water to complement the sanitation and hygiene interventions – thus achieving a holistic WASH intervention

With similar levels of low access in El Fasher town, Health Care facilities report high incidences of WASH-related diseases including diarrhoea, hepatitis, trachoma and typhoid. As of June 2016, 36% of households reported having nursed diarrhoeal cases in the two weeks preceding the survey. The locality also witnessed the recent Acute Water Diarrhoea outbreak (20% incidence rate as of June 2017) alongside the long-standing Trachoma.

1.4.1 Water Supply situation in El Fasher

Only 13 percent of town population use piped water from the Urban Water Authority (UWA). Eighty-one percent of El Fasher residents access to water through water vendors (water tankers 54%, donkey carts 27%), open wells (10%), mini water yards (6%) and communal water distribution points (6%). Only 43% of the water sources across the town meet the minimum standards for safe drinking water supply.

There are altogether 454 schools in El Fasher Municipal Administrative Unit (298 public schools and 156 privately owned). Only 19% of the public schools have access to piped water and covered by UWA. Sixty-four percent of the schools rely on water tankers or donkey carts for meeting their daily water needs, which costs an average of 40SDG (US$2.50) per day. Water bought at such a cost is closely guarded and restricted to drinking purposes, with very limited quantities available for hand washing and none for cleaning toilets.

El Fasher town has 47 Health Care Facilities (HCFs) which include five hospitals, 25 health centres, and 17 health units. For this master plan, 42 Public HCFs are being considered, and these include one hospital, 24 health centres and 17 health units. All the public HCFs have means of securing water supply through an urban piped water system, water tanker and hand pumps, though there are challenges with exorbitant cost, storage capacity and water quality.

The locality has 36 public places in consideration for improved WASH services which include ten marketplaces, nine sports centres, ten bus terminals, two animal slaughterhouses and five community centres. The main sources of water supply for these public places include vendors (water tankers and donkey carts) with five of them connected to urban water supply network.

1.4.2 Sanitation situation in El Fasher

Overall 93% of the residents use sanitation facilities (64% use improved latrines, 13% use shared latrines, and 16% use unimproved latrines). Though only 7% of town residents defecate in the open, the practice is prevalent in all settlement areas (comprising 11% in peri-urban, 9% in IDP settlements and 1% in urban areas) posing wider public health risks. The disparities in sanitation access reflect the social, economic and regulatory dynamics on the ground.

Challenges related to sanitation uptake include low awareness, lack of access to affordable sanitation products, exorbitant construction costs and lack of space to build sanitation facilities. Though hand washing is a norm as part of worship, the practice of handwashing with soap at critical times is very low. Only 5% of households reportedly have functional handwashing stations with water and soap.

Twenty-nine percent of pre-schools and 14% of basic schools do not have toilets facilities. Access to sanitation facilities in pre-schools is the lowest with 129 students using one toilet. Basic schools have average (user to the toilet) ratios of 100 for Girls (against one toilet for 30 girls) and 99 for Boys (against one toilet for 50 boys), while in secondary schools the ratios are 127 for Girls and 111 for Boys. Toilets do not feature wheelchair access, too dirty and unsafe to use and lack menstrual hygiene facilities. The highest deprivations to access are in peri-urban schools (23%) followed by IDP camps (14%) and lastly in urban areas (12%).

Hygiene is taught more as an academic subject in schools rather than a means to inculcate proper hygiene practices at an early age. Teachers are an important catalyst for effective school WASH management, but they lack mentorship and facilitation skills to engage students and parents. Schools do not have essential commodities such as soap for handwashing, supervision by teachers and availability of handwashing facilities and more importantly water.

All HCFs have sanitation facilities, but their functionality is compromised due to lack of adequate care and maintenance. Health-Care facilities also lack operational capacity and technical skills for managing Health-Care waste regarding waste segregation, containment, collection, treatment and disposal.

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5 Socio-Economic Assessment of Water Market in 2 Urban Areas in Darfur, UNOPS, 2017.
6 Administration records from El Fasher Education Administration Unit (April, 2017).
7 North Darfur State Ministry of Health, 2017
8 World Health Organisation categorises Health-Care Waste into five groups: first, Non-risk waste or general waste; second, waste that requires special attention; third, infectious and highly infectious waste; fourth, other hazardous waste and-and fifth, radioactive waste.
Functional sanitation facilities (flush toilets and pit latrines) exist in 22 of the 36 public places. Provision of sanitation services in public places had been the sole responsibility of the locality until three years ago when sanitation entrepreneurs began to venture by providing pay-as-you-use WASH services. Public latrine users consider privately operated WASH services as efficient and effective. However, these services do not suffice the demand and are not regulated to meet WASH service standards.

Lack of enough sanitation facilities coupled with poor operation & maintenance of existing ones aggravates open defecation in institutional premises posing grave public health risks to the wider community. Management of grey water is equally low, with 30 percent of households managing their grey water by channelling into drainage systems such as soak-away pits or home gardens.

El Fasher town currently generates about 300 tons of solid waste per day comprising bio-waste, paper, plastic, glass, and metals. Only 34% of the generated solid waste is collected, transported and dumped at the designated Zamzam dump site. Garbage collection service is confined to the urban areas with less than 10% of households accessing these services. About 10% of the waste is estimated to be recovered/reused. The private sector is not yet fully engaged to offer solid waste management services, with potential for improved service once this is done.

Faecal sludge collection service comprising the collection, transport, and disposal at an open site next to Zamzam dump site is entirely provided by a sole entrepreneur, whose services currently reach 16% of households and some institutions. Only 50% of households are aware of its existence. There is no treatment of faecal sludge currently and poses a huge risk to water pollution.

1.5 INSTITUTIONAL ARRANGEMENTS
The Locality has 120 health workers as frontline staff for environmental health promotion including sanitation and hygiene. Against a recommended standard of 1,000 people per health worker, El Fasher has one health worker serving more than thrice the recommended figure. In the face of high staff turnover, health workers have expressed limited knowledge and skills in community engagement, especially through participatory approaches.

The environmental health department of the locality, the focal point for the master plan implementation has no clear budgetary mechanism and usually operates on less than 25% of its budgetary requirements. Locality does not have any budget for WASH services in key institutions such as schools and HCFs. Lack of standard operating procedures and appropriate skill among staff in these institutions is a major limiting factor to quality services.

1.6 APPROACH
The ESHMP incorporates the key principles outlined in the Sudan National Sanitation and Hygiene Strategic Framework (SNSHSF) namely community engagement and equity; leadership, coordination, and partnerships; capacity development; sustainability; and monitoring, evaluation, and learning. The master plan would adopt a participatory approach by engaging citizens and key stakeholders throughout the process of development & implementation of the master plan recommendations under the strong leadership of SMOH.

By having the ESHMP implemented alongside the Water Supply Master Plan, there will be cost savings and greater integration between sanitation, hygiene and the water supply components. The leadership role of SMOH will be vital to support the locality in constant engagement with State Water Cooperation seeking synergy, complementarity, and cooperation at all times to achieve maximum benefit for the target populations.

The ESHMP will have five key components:

- Sanitation & Hygiene – eliminating open defecation, and ensuring all citizens have equitable access to basic sanitation and adopt proper hygiene practices;
- Water, Sanitation & Hygiene (WASH) in Schools – reaching 130,000 school children with equitable access to WASH facilities;
- WASH in Primary Health Care facilities – ensuring 42 Health-Care facilities have sustainable access to WASH facilities;
- WASH in Public Places – ensuring all the 36 public places have functional and well-managed WASH facilities; and
- Solid Waste Management - the town has improved waste management system including efficient containment, collection, transportation and safe disposal.

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9 SMOH WASH assessment report
10 Based on the per-capita garbage generation of 0.6Kg per person per day which is the acceptable standard for Sudan.
11 Sudan National Sanitation and Hygiene Strategic Framework, Federal Ministry of health, 2014
1.7 PRIORITIES

To address the aforementioned challenges in terms of prevalence of open defecation, poor hygiene practices, low access to improved sanitation with high deprivations in peri-urban areas, low access to WASH in Institutions (Schools, Health centres, Public Places), disparities in access to sanitation & hand-washing facilities between boys and girls in schools and for the physically challenged and low institutional capacities, the ESHMP will prioritize the following:

- **Ownership and buy-in** of the master plan by engaging with key stakeholders and the public;
- Putting in place institutional arrangements and capacity building of locality & state level staff for the effective, planning, implementation and monitoring of the master plan interventions;
- **Elimination of open defecation** with progressive increase in access to improved sanitation, initially focussing on IDP camps and the most vulnerable areas (peri-urban areas);
- **Promotion of proper household practices** (hygiene, food, water handling & storage, waste);
- **Develop/Update Policies/Guidelines** to scale-up model “WASH in Schools”, paying particular attention to specific needs for girls and children with special needs;
- **Develop Strategies/Guidelines** to scale-up model “WASH in PHCs”;
- Foster private sector engagement in the management/delivery of sanitation services;
- **Enhance partnerships and inter-sectoral collaboration** between the various line Ministries to mobilise resources and avoid overlaps.

1.8 PHASING OF INTERVENTIONS

The implementation of the ten-year master plan is divided into three phases with the first phase covering July 2017-June 2019, followed by Phase-II (July 2019- June 2023) and the last phase stretching from July 2023 to until the end of 2027. Separate progress trajectories are envisaged for household sanitation, WASH in Schools, WASH in PHCs and WASH in public places. This is largely based on the potential funding needs, the time needed to effect behaviour change, putting in place systems and enable partnerships. The aim is to help El Fasher achieve SDG target of universal access to improved sanitation by 2030 including access to WASH in Institutions, WASH in Health Care Facilities and Public Places.


This phase will prioritize setting up of the building blocks including the development of the financing plan to support Phase-II and subsequent interventions. Phase-I prioritizes capacity development in all thematic areas, and the implementation of Urban Community Approaches to Total Sanitation (U-CATS) for achieving a town-wide Open Defecation-Free (ODF) environment. The priority will be the elimination of open defecation by encouraging households to build and use latrines.

Behaviour change communication will be introduced as part of the U-CATS focusing on handwashing, food hygiene and household water handling and safe storage practices. Action plans following triggering sessions will, therefore, incorporate improvements for both environmental sanitation and hygiene behaviour change. Sanitation marketing initiatives aimed at developing affordable sanitation products & services will also be launched in this phase.

This phase will also see the implementation of WASH in schools and WASH in healthcare facilities as per revised guidelines that will be developed. Management of faecal sludge will be articulated in this phase along with a pilot treatment facility. Phase-I will also include the development and piloting of Public Private Partnership (PPP) models for WASH in Public Places and Solid Waste management informed by detailed Solid Waste Management study. Monitoring framework and databases will be established during this phase to allow subsequent monitoring and prioritization.

Community-based initiatives for solid waste management will be supported to complement community-wide action priorities identified during U-CATS facilitation.

**Key Results: Phase I (Jul 2017– Jun 2019)**

- An Open Defecation Free El Fasher Town benefitting all its 498,845 residents;
- All the residents of El Fasher town sensitized on personal hygiene, water and food safety, and proper waste management;
- An additional 75,861 people will gain access to sanitation by 2019 (58,081 people in IDP camps, 8890 people each in urban and peri-urban areas);
- Model “WASH in Schools” program featuring gender segregated Sanitation & Handwashing facilities, provisions for menstrual hygiene management & the disabled, and safe water supply piloted in 10 schools;
• 5 pilot Primary Health Care Facilities will have increased access to gender-segregated WASH facilities;
• Public-Private Partnerships (PPP) will be piloted and draw lessons for scaling-up WASH in Public places and solid waste management;
• A detailed, costed study informing the solid waste management system for the town;
• Faecal Sludge management services will be marketed and extended to cover 20% of households;
• Water & sanitation gaps in Abou Shouk and El Salam IDP camps addressed.

1.8.2 Phase II (Jul 2019– Jun 2023): Sustaining Open Defecation Free Environment

The focus of this phase will be to sustain the open defecation free environment in the town through ongoing promotional activities while expanding WASH interventions in Schools and Healthcare facilities. Achievements and lessons learned during Phase-I will help refine approaches for scaling-up sanitation coverage. Households will continue to build and upgrade sanitation facilities, and will increasingly avail faecal management services for emptying pits. Public-Private Partnership (PPP) models for solid waste management and WASH in public places will be further scaled-up by attracting more individuals and established enterprises into the sanitation business.

Key Results: Phase II (Jul 2019– Jun 2023)

• Open Defecation-Free (ODF) environment sustained across the town;
• An additional 128,457 people will gain access to improved sanitation;
• 20% of households (118,257 people) practice handwashing with soap at critical times;
• 15% of households (88,692 people) adopt safe water handling and storage practices;
• School children from an additional 110 schools will have model WASH in Schools;
• WASH services expanded to cover some additional 15 health care facilities;
• PPP model for WASH services in public places will be extended to cover an additional 36 public places;
• 20% of the town have access to the proper solid waste management system (118,257);
• 50% of households (295,642 people) access faecal sludge collection services;

1.8.3 Phase III (Jul 2023– Jun 2027): WASH Facilities in all Schools, Health Centres and Public Places

Long-term priorities including sustaining existing services, expansion of Sanitation services in Institutions and public places and progressive improvements in the level of services, building on lessons learned from Phases I and II. Phase-III will also be an opportunity to prepare for the gradual attainment of 2030 SDG-target on sanitation.

Key Results: Phase III (Jul 2023– Jun 2027)

• Open Defecation-Free (ODF) environment sustained across the town;
• An additional 86,709 people will gain access to improved sanitation;
• 50% of households (327,389 people) adopt safe water handling and storage practices;
• 40% of households (261,911 people) practice safe water handling and storage practices;
• School children from an additional 178 schools will have model WASH in Schools;
• WASH services expanded to cover additional 22 health care facilities;
• PPP model for WASH services in public places covers all (36) public places in the town;
• Community-based solid waste management systems operational in all the 120 neighbourhoods and 2 IDP settlements.
• 70% of households (458,344 people) access faecal sludge collection services.

1.9 BUDGET AND FINANCING

The total funding required for the master plan during 2017-2027 is about US$ 14 million, of which US$ 556,160 is for preparatory activities & household sanitation & hygiene; US$9,212,600 for WASH in Institutions (Schools, Health care Facilities, Public places); US$ 1,354,500 for waste management and the remaining US$1,000,000 for Institutional Strengthening, Learning, Monitoring and Evaluation. Phase-I funding is estimated at US$1,569,830, Phase-II at US$5,826,167 and Phase III is US$6,606,369. The table below provides a further breakdown:

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
<th>Phase I 2017-2019</th>
<th>Phase I Funding Sources DFID</th>
<th>UNICEF</th>
<th>Phase II 2019-2023</th>
<th>Phase III 2023-2027</th>
<th>Amount (USD)</th>
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<td>A</td>
<td>START-UP ACTIVITIES FOR THE ESHMP</td>
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<tr>
<td>No</td>
<td>Activity</td>
<td>Phase I Funding Sources</td>
<td>Phase II</td>
<td>Phase III</td>
<td>Amount (USD)</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>2017-2019</td>
<td>DFID</td>
<td>UNICEF</td>
<td>2019-2023</td>
<td>2023-2027</td>
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<td>B</td>
<td>HOUSEHOLD SANITATION AND HYGIENE</td>
<td>366,960</td>
<td>326,960</td>
<td>40,000</td>
<td>95,800</td>
<td>85,800</td>
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<td>C</td>
<td>WASH IN SCHOOLS</td>
<td>341,200</td>
<td>154,200</td>
<td>187,000</td>
<td>2,838,000</td>
<td>4,252,000</td>
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<td>WASH IN HEALTH FACILITIES</td>
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<td>569,000</td>
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<td>WASH IN PUBLIC PLACES</td>
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<td>G</td>
<td>INSTITUTIONAL STRENGTHENING AND LEARNING MONITORING &amp; EVALUATION</td>
<td>200,000</td>
<td>88,000</td>
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<td>TOTALS (A+B+C+D+E+F+G)</td>
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<td>747,160</td>
<td>612,000</td>
<td>5,044,300</td>
<td>5,719,800</td>
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<td>plus 10% contingency</td>
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<td>673,200</td>
<td>5,548,730</td>
<td>6,291,780</td>
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<td>plus 5% inflation</td>
<td>74,754</td>
<td>41,094</td>
<td>33,660</td>
<td>277,437</td>
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<td>TOTALS</td>
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<td>862,970</td>
<td>706,860</td>
<td>5,826,167</td>
<td>6,606,369</td>
<td>14,002,366</td>
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</table>

Financing of the master plan will require multiple sources of funding including from State & Federal government, contributions from the private sector and development partners and the possible introduction of taxes. State financing will be targeted towards building institutional capacity, follow-up and sustainability activities as well as some infrastructure that may not attract funding. The state government would also need to put in place necessary regulatory and legal framework to gain private sector confidence for investing in sanitation.

Some of the possible financing options mentioned below will be further explored and refined during Phase-I:

- **Household financing of their sanitation facilities** – currently 80% of households have already invested in their sanitation facilities. As community-led processes gain ground, more households will invest in constructing/upgrading their toilets;
- **Financing of institutional sanitation through private businesses** building on the success of ongoing Build Operate and Transfer (BOT) projects. El Fasher Teaching Hospital is one such example, where the hospital has already engaged a private business to Build, Operate and later transfer WASH facilities. Other approaches allowing businesses to lend and operate existing facilities will also be considered.
- **Reach out to development partners** to support the master plan activities especially under Phase I and Phase II by building on the successes and lessons in the current DFID funding arrangement;
- **Mix of government and development partner’s funding** for stand-alone thematic-area projects such as “WASH in Schools” and “WASH in Health Care Facilities”;
- **Private sector funding** (as part of Corporate Social Responsibility) in specific areas;
- **Introduction of taxes**
2. INTRODUCTION

2.1 Background

According to the 2015–2019 National Environmental Health Strategic Plan, NEHSP, Sudan has low WASH indicators. Only 32.9 percent of the population has access to improved sanitation, 29.2 percent practices open defecation. Fifty-three percent of households practise safe disposal of child faeces, and only one percent have access to sewerage systems. Although 68 percent of households have access to improved water sources, only 28.2 percent have access to both improved drinking water and improved sanitation. There are significant rural disparities with 5% of the urban population and 40% of the rural population practising open defecation (MICS, 2014); and variations across States, with 1.7% of the people in Khartoum State practising open defecation and 44.9% in Kassala State.

Additionally, there are significant differences in access for people of different wealth quintiles, for example with only 6.2% of the poorest quintile having access to an improved latrine, against 91.9% of the richest quintile. Only 12.3 percent of North Darfur population has access to improved sanitation, 41.1 percent practices open defecation. This reality, coupled with unsafe hygiene practices, has manifested itself in the form of damaging effects on health, schooling, living conditions, and the country’s economy.

In Sudan, long-term displacement of population caused by cyclical conflicts and deprivation has created contiguous peri-urban areas comprising long-term IDP settlements. The livelihoods of such long-term IDPs are practically integrated into town activities but lack formally planned the delivery of services. This phenomenon has entrenched among the population a dependence on humanitarian assistance for basic levels of service, including water supply and sanitation. Abu Shouk and Al Salaam IDP camps are typical examples of communities that have gone through the protracted humanitarian experience. These two camps have recently been incorporated within the town the administrative jurisdiction of the El Fasher Administrative Unit which is apparently the North Darfur state capital. It is one of the four towns where the UW4D project is in operation besides Zalingei, Geneina and Nyala in Central Darfur State, West Darfur State and Sothern Darfur State respectively.

The objective of the UW4D project is to effect sustainable and more equitable access to water and improved sanitation and hygiene behaviour for 400,000 urban population in targeted four state capitals in Darfur. The project is funded by the United Kingdom (UK) through Department for International Development (DFID) and jointly implemented by the United Nations Children’s Fund (UNICEF) and the United Nations Office for Project Services (UNOPS). In North Darfur State, State Ministry of Health and State Ministry of Physical Planning and Public Utilities is the primary beneficiary government institutions.

The project positions the beneficiary state governments towards long-term development thinking by initiating this the creation of a comprehensive strategic plan for both water supply and sanitation sectors. The Environmental Sanitation and Hygiene Master Plan (ESHMP) concerns the town of El Fasher in North Darfur State of Sudan with emphasis on service improvement for environmental sanitation and hygiene in households, public places and institutions (schools and Primary Health Centres). It is a 10-year development plan targeting to provide the projected 2027 population of 654,777 people with sustainable and more equitable access to sanitation services and better hygiene practices.

2.2 Overview

The ESHMP is an actionable roadmap towards achieving sustainable access to basic sanitation and hygiene for all citizens of El Fasher town by 2027. It is a ten-year development plan (2017-2027) complemented by water supply improvements through the Water Supply Master Plan\textsuperscript{12}. The ESHMP will contribute towards improved human health, dignity and aid economic development for the residents of El Fasher town. It is estimated that Sudan loses 2% of its GDP annually due to poor sanitation. This translates to US$ 490 million per year\textsuperscript{14}, nearly equal to the funds required to achieve SDG-6 basic water and sanitation targets for Sudan. Investing in sanitation & hygiene makes good economic sense.

\textsuperscript{12} 10-Year projected population for El Fasher town at the population growth rate of 3.4percent assuming normal growth rate for urban, peri-urban and IDP settlements. Sudan National Bureau of Statistics, 2017.

\textsuperscript{13} The Water Master Plan is developed by UNOPS to ensure the availability of adequate sustainable safe water to complement the sanitation and hygiene interventions – thus achieving a holistic WASH intervention

\textsuperscript{14} Sanitation and Water for All (2012) Sudan - Briefing: Economic Impact of Water and Sanitation
The master plan is an articulation of strategic priorities, key policy and systemic interventions to guide investments and move beyond ad-hoc interventions to a more durable long-term solution, eventually leading to the attainment of the SDG-6 target on sanitation.

**The vision of the people of El Fasher town is to live in a clean town free from open defecation & waste matter, where all residents have access to sanitation, hygiene and enjoy a healthier and productive life.**

This will be achieved by:
- Promoting improved sanitation and hygiene practices;
- Ensuring clean sanitation & handwashing facilities in schools, hospitals and public places; and
- Improving the management of solid and liquid waste to provide a cleaner and safer environment.

The ESHMP has considered five thematic areas, which are: Household sanitation and hygiene; Water, Sanitation and Hygiene (WASH) in schools; WASH in Health Care facilities; WASH in public places; and Waste Management. The latter is further subdivided into three areas: solid waste management, grey water management and faecal sludge management. The ESHMP took into considerations critical factors that can affect the implementation of such a plan. These factors included societal issues and norms issues; economic; environmental realities, institutional structures, and available resources (human capacity and financial resources).

Considering the complex nature of urban sanitation programmes the master plan has allowed for a systematic implementation of institutional strengthening and capacity development. The government has already illustrated in its policy, adjustments by encouraging private sector engagement to influence resource mobilisation and capacity development. In 2016, the Government of Sudan came up with the Sudan National Sanitation and Hygiene Strategic Framework (SNSHSF) which illustrate an integrated approach to urban sanitation. The framework acknowledges the relevance of holistic stakeholder engagement in sanitation and hygiene.

For these reasons, planning has been interactive, since developing solutions to some problems can cause other problems to appear, or may intensify the urgency of existing plans. For instance, increasing the amount of water available at a household level in a given neighbourhood setting might mean that an immediate solution is required regarding waste management. Planning must also be strategic, allowing for new external or internal circumstances, such as the resettlement of some IDP groups.

This plan permits the occurrence of realistic changes, based on priority shifts, as well as actual human and institutional capacity and the financial and logistical resources available at a given time. Lessons and innovations that will be drawn during implementation will be useful for future adjustments to some or all parts of the planned actions. The budget, therefore, has been designed while bearing in mind the gradual introduction of thematic areas in the future as well as progressive increases in the delivery of services.

Some of the complex issues associated with adopting a global typical sanitation approach include low institutional and consumer priority for all aspects of sanitation, low ability and willingness to pay for services, land and tenancy issues, densely populated areas, groundwater pollution, environmental pollution, seasonal river pollution and lack of policy awareness, the poor local institutional capacity to address the challenges and provide long-term operation and maintenance of services. These obstacles have been taken into account in this master plan. Since this Master Plan ends in 2027, only three years before the Sustainable Development Goals (SDG) targets, which aim for 100 percent access to sanitation, the goal of the plan will not only be the achievement of access to full sanitation by its end date, but also the achievement of a change in social norms regarding Open Defecation Free (ODF).

This ESHMP is locally-owned by the State Government of North Darfur, represented by the State Ministry of Health (SMOH) and technically supported by UNICEF. El Fasher Locality is the focal point for the implementation of the master plan as a designated institution responsible for delivering environmental and sanitation services within El Fasher town locality. Both the state and the locality will engage cross-sector partners to leverage its resource mobilisation to meet an efficient implementation of the master plan. As such, funding support will be sought from internal sources such as local and state government as well as from external donors such as DFID, Japanese International Corporation Agency (JICA), European Union and International Non-Governmental Organisation (INGOs).

### 2.3 Location and scope

The geographical focus of the master plan is El Fasher Town in El Fasher Locality, North Darfur State in Sudan. El Fasher Town is located between longitudes 25°18’42” and 25°24’01 East and between latitudes 13°33’56” and 13°41’14” North. Specifically, the plan will cover three settlement zones of urban, peri-urban and IDP camps of Abu Shouk and El Salam. Of the targeted population of 654,777, 39% reside in the urban areas, 43% in peri-urban and 18% within the IDP settlements. The master plan integrates the planning and management of human excreta,
faecal sludge, grey water and solid waste; hygiene practices; WASH in institutions (schools, Primary Health Centres and Public Places) through sound institutional and financial arrangements and realistic action planning.

2.4 Process of the master plan development

This master plan was developed through vigorous and comprehensive consultative process that dated back to early 2016 starting with situation analysis through literature review, community consultations, interviews and onsite assessments. The process started with KAP study followed by complementary assessments on household sanitation, ‘WASH in Schools’, WASH in Health Care Facilities, and Waste Management. Various consultation workshops and meetings were conducted with community leaders, government officials, UN agencies, NGOs and private sector institutions. Figure 1 below outlines a record of stages of the master plan development.

*Figure 1: ESHMP preparation process*
3. SOCIAL AND INSTITUTIONAL CONTEXT

3.1 Demographics and settlement patterns

Sudan, the third largest country in Africa, has a total population of approximately 39.6 million; it comprises 18 federal states, including North, South, Central, East and West Darfur. The five states of Darfur Region accommodate eight million people and include the largest population affected by humanitarian emergencies in the country. The Government of Sudan’s Humanitarian Aid Commission (HAC) estimates the number of IDPs since 2003 to be 2.5 million. North Darfur State comprises 18 localities, including El Fasher, and has a total population of approximately 2,296,068 persons, of which 616,693 are IDPs. El Fasher Locality has three administrative units, and El Fasher town is the state capital of North Darfur. The town has a population of 466,051 people, of which 85,157 are IDPs.

Settlement areas in the town are classified as urban, peri-urban, and IDP settlements. Urban dwellers live in planned, better and larger homes and have access to most services, including home water connections and solid waste collection services. Peri-urban areas are more informal, with some residents not owning the land they live on, and IDP settlements are subject to relocation in the short or medium term; most of the homes are made of mud. Since the Darfur crisis have not yet been resolved, the IDPs future resettlement situation is still unknown.

3.2 Socio-economic context town profile

Since 2003, with the influx of humanitarian aid from the United Nations to IDPs as a result of the Darfur crisis, El Fasher town has experienced a significant economic and population boom and is now the economic hub of the North Darfur and neighbouring states. El Fasher town is a transiting town for transboundary businesses to Chad and the Central African Republic. Rents and retail sales increased, the number of gas stations have tripled, and employment opportunities have increased in recent years. The coming of the United Nations peacekeeping mission, International NGOs and private businesses has contributed to economic growth through employment, exchange for services or goods.

The town is administratively divided into 10 sectors which are further sub-divided into 120 neighbourhoods. Town residents cut across those who live in urban, peri-urban and two IDP settlements of Abu Shouk and Al Salaam. Those in IDP settlements and peri-urban are characterised by a lack of landholding rights. They live in small plots of 100sq metres which only fits small dwelling households and in some cases, have failed even to site toilets within their compounds. Households in urban areas live in relatively larger plots of between 500-700 square metres which can accommodate at least septic tanks or stand-alone pit latrines.

The town has 454 schools, of which 298 are government owned while 156 are privately operated. Three universities are also in operation, and they include Al Fasher University, Islamic University and Open Sudan University which contribute to raising the population in the town. For instance, Al-Fasher and Islamic universities have a combined population of over 5,000 students. There are also hospitals, health centres and health units. El Fasher Teaching Hospital is considered a state referral hospital, but there are also institutional hospitals for the military and police.

A large water body lies within the central part of the town is a primary source of water used for construction, gardening and many other consumptive uses. It serves the purpose of recreation but seasonally dries up because it captures its water during rainy season only. Around this lake are various amenities such as a private family park, stadium and various shops and eating places.

El Fasher town has 47 Primary Health Centre (PHCs)15 which include five hospitals and 42 Primary Health Centres (25 health centres, and 17 health units). Additionally, 36 public places across the town are also being targeted with

15 North Darfur State Ministry of Health, 2017
improved WASH services. They include ten marketplaces, nine sports centres, ten bus terminals, two animal slaughterhouses and five community centres.

Residents have a diverse means of household income including employment (education institutions, UN, private business, government), retailing, banking, insurance, casual work (e.g. water vendors and garbage collectors), cattle herding and agriculture. Some local businesses include transport, catering, construction and retailing. There are seven large markets which supply livestock, vegetables, fruits and some imported items.

Figure 3\textsuperscript{16} below shows that business and trading (35 percent) is the most common source of income across the three settlement areas and they all include retail shops, food selling points, welding shops and trading businesses in market centres. Businesses in urban areas are relatively large-scale compared to those in IDP and peri-urban settlements, and they are mostly situated in the central business area of the town which also includes the largest market. The majority of the urban households (44 percent) live on formal employment while those in peri-urban areas (42 percent) depend on small-scale businesses while the IDP relies on casual work (36 percent).

IDP households are relatively low-income earners compared to those in urban and peri-urban settlements getting an average of 555SDG\textsuperscript{17} (35US$) per month. The Majority of the IDPs are employed in the informal sector such as brick making businesses, water vending, casual work in market centres and urban areas. Income level is an important determinant of people’s affordability to pay for basic services such as water, health and sanitation services.

\textsuperscript{16} WASH Assessment conducted by SMOH, 2017
\textsuperscript{17} Based on the rate 1US$=15.9SDG as of June 2017
Figure 4: State and Locality Structure (Administrative, Legislative and Health Services)
MAP OF EL FASHER TOWN

Figure 5: Map of El Fasher Town

Source: United Nations Mission in Darfur (UNAMID), GIS Section, 2017
3.3 Policy and institutional arrangements

This master plan has developed with acknowledgement of Sudan’s institutional framework for the WASH sector. **Federal Ministry of Health** is the overall leading institution of health services in Sudan, and environmental health services are among the devolved functions to state-level Ministry of Health. This arrangement is provided for in the national constitution for Sudan, under Section 19 that stipulates the provision for delivering public health services. The same provision is echoed in the North Darfur State Government constitution and so too the North Darfur Local Government Act (2006).

In 2016 the Federal Ministry of Health developed the Sudan National Sanitation and Hygiene Strategic Framework (SNSHSF) as an overarching guiding document for implementation of Sanitation and Hygiene programming in the country. This document was developed with the vision of achieving universal access to improved sanitation (excreta disposal), dispose of solid and liquid wastes safely and practice healthy hygiene behaviour; contributing to a clean environment, a disease-free Sudan, the upholding of a range of human rights and the long-term prosperity and development of the country.

**State Government** is responsible for translating national policies and relay them to all sanitation and hygiene initiative in the state. The State Ministry of Health (SMOH) is the leading government institution responsible for clinical and preventive health services. The Environmental Health Department within SMOH is responsible for public health services. Health Promotion Department underscores the relevance for health education in the state, and this includes disseminating hygiene and sanitation-related messages in various forms and through various means.

**El Fasher Locality** (Figure 6 on next page) is responsible for the provision, supervision, regulation, monitoring and enforcement related to all Environmental Sanitation and Health services in the area of the Locality / Municipality (health promotion, excreta disposal, Solid Waste Management, Healthcare Waste Management, vector control, food safety, water safety) and coordination of stakeholders working in the Locality. In its regulatory functions, the Locality formulates and enforces by-laws known as ‘Local Orders’ which include provisions for environmental health promotion.

**The Municipal Administrative Unit** (MAU) is responsible for service providers such as community capacity building, service regulation, monitoring and enforcement related to all Environmental Health, Sanitation and Hygiene services within localities jurisdictions. Other services of environmental health included health promotion, excreta disposal, Solid Waste Management, vector control, food safety, water safety. Additionally, the administration unit looks into tax collection and payments for solid waste management services and stakeholder coordination. Figure 4 below shows the state and Local structure.

The Municipal Administrative Unit has 120 health workers as frontline staff for environmental health promotion including sanitation and hygiene. Against a recommended standard of 1,000 people per health worker, El Fasher has one health worker serving more than thrice the recommended figure. In the face of high staff turnover, health workers have expressed limited knowledge and skills in community engagement, especially through participatory approaches.

MAU’s environmental health department is the focal point for the ESHMP implementation. However, the department has no clear budgetary mechanism and usually operates on less than 25% of its budgetary requirements. Besides, the Locality does not provide any budgetary support for WASH services in key institutions within the administration unit such as schools, PHCs and public places. The department operates with inadequate standard operating procedures. Staff lack appropriate skill to manage their work and this is worsened by high staff turnover.
The administrative is divided into 10 geographical sectors which are further subdivided into 120 neighbourhoods. Neighbourhoods are headed by elected leaders who operate with the help of Neighbourhood Committees. These committees are composite groups of individual members who serve are representatives from Women Unions and Youth Groups.

**Neighbourhood committees** are responsible for planning and coordinating environmental health activities at the community level and more importantly enforcing local orders.\(^8\)

**Standard training manuals and guidelines:** State Ministry of Health has a list of standard documents which include manuals and guidelines for the WASH sector.
According to 2014 Multiple Indicator Cluster Survey (MICS) report, North Darfur State is one of the states with low WASH indicators where child mortality is 91/1000 above the national average of 68/1000. Diarrhoeal incidences are as high as 38%. Fifty percent of its population is reported to have access to the improved water supply as against the national access rate of 68%. Just 12.3% of the population has access to improved sanitation (below the national average of 33%, while 41% of the population practice open defecation (higher than the national average of 29%).

With similar levels of low access in El Fasher town, Primary Health Centre reports high incidences of WASH-related diseases including diarrhoea, hepatitis, trachoma and typhoid. As of June 2016, 36% of households reported having nursed diarrhoeal cases in the two weeks preceding the survey. The locality also witnessed the recent Acute Water Diarrhoea outbreak (20% incidence rate as of June 2017,) alongside the long-standing Trachoma.

4.1 Water supply situation in El Fasher

Urban Water Authority (UWA) is institutionally responsible for water supply services across the town but at currently serves only 13%\(^1\) of town population through household connections. Otherwise, 81% of El Fasher residents depend on water vendors (water tankers 54%, donkey carts 27%), open wells (10%) while 6% depend on mini water yards and communal water distribution points.

Water sources are prone to contamination, and only 43%\(^2\) of them meet the minimum standards for safe drinking water. Additionally, water safety measures do not exist at both institutional and household levels leading to only 37% of the sampled households meeting safe water standards. Although the systems are in place, animals (donkeys and horses) and their operations are rarely examined to certify their public health suitability to transport drinking water.

Only 19% of the 298 public schools are connected to urban water services by UWA. Sixty-four percent of the schools rely on water tankers or donkey carts for meeting their daily water needs, which costs an average of 40SDG (US$2.50) per day. Water bought at such a cost is closely guarded and restricted to drinking purposes only; as a result, very limited quantities are available for hygiene purposes such as hand washing and toilet cleaning. Besides, schools have limited water storage facilities which are also rarely cleaned or disinfected to safeguard water quality.

All the public PHCs have means of securing water supply through an urban piped water system, water tankers and hand pumps. Apart from medical use, water is primarily used for drinking and hygiene purposes. Main challenges related to water supply in PHCs include high costs, limited storage capacity, lack of water safety management as well as lack of fully functional operation and maintenance system.

Five of the 36 public places are connected to urban water supply network, and the rest depend on water vendors (water tankers and donkey carts). Water is primarily used for public WASH services but also for food preparation in restaurants as is the case in marketplaces. Main concerns include lack of water quality assurance mechanisms and limited quantities to meet the consumer demand.

A water quality surveillance\(^3\) that was conducted between August and September 2017 showed that 59% percent of water sources are faecally-contaminated. This finding suggests that to a large extent, residents in the town are at are prone to serious health risks associated with the lack of water safety management. In fact, the study showed that 63% of households store contaminated water. All open wells are faecally contaminated, and these are the primary sources for the majority of the water vendors who constitute the primary water source for 81% of households. After all, 80% of the water supplies transported by water vendors were contaminated. Besides, both the animals and individuals involved water vending had long gone through health and fitness checks although this is a requirement within the Local orders that the Locality put in place.

4.2 Sanitation and hygiene situation in El Fasher

Currently, 93% of the residents use sanitation facilities while 7% practice open defecation. Of those who use sanitation facilities include 64% who use improved latrines, 13% who use shared latrines, and 16% who use

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\(^{1}\) Socio-Economic Assessment of Water Market in 2 Urban Areas in Darfur, UNOPS, 2017.

\(^{2}\) Water Quality Assessment findings by State Ministry of Health, 2017.

\(^{3}\) A study done by State Ministry of Health to establish baseline for the master plan (Sept 2017).
unimproved latrines. Though practised by only 7% of the residents, open defecation poses wider public health risks such as the spreading of diarrhoeal diseases.

Open defecation is high in peri-urban areas involving 11% of residents followed by 9% of IDPs and 1% of urban residents. Besides, only 7% of households with Under-5-year-old child safely dispose child faeces against the belief that child faeces are not harmful. Mothers and the community are not aware that unsafe handling of children faeces could equally be risky because child faeces contain higher prevalence of pathogens which causes hepatitis A, rotavirus, and E. coli.

The levels of sanitation access across various settlements reflect the lack of awareness, regulatory dynamics as well as social and economic disparities across urban, peri-urban and IDP settlements. Households are yet to be reached with relevant messages to enrich their knowledge about the importance of sanitation facilities for defecating and disposing of child faeces. Additionally, affordable sanitation products are not readily available and at the same, poor households in peri-urban and IDP settlements lack sufficient land to build latrines.

Twenty-nine percent of pre-schools and 14% of basic schools do not have toilets facilities. Access to sanitation facilities in pre-schools is the lowest with 129 students using one toilet. Basic schools have average (user to the toilet) ratios of 100 for Girls (against 1 toilet for 30 girls) and 99 for Boys (against 1 toilet for 50 boys), while in secondary schools the ratios are 127 for Girls and 111 for Boys. Toilets do not feature wheelchair access, too dirty and unsafe to use and lack menstrual hygiene facilities. The highest deprivations to access are in peri-urban schools (23%) followed by IDP camps (14%) and lastly in urban areas (12%).

All PHCs have sanitation facilities, but their functionality is compromised due to lack of adequate care and maintenance. PHCs also lack operational capacity and technical skills for managing Health-Care waste regarding waste segregation, containment, collection, treatment and disposal.

Functional sanitation facilities (flush toilets and pit latrines) exist in 22 of the 36 public places. Provision of sanitation services in public places had been the sole responsibility of the locality until three years ago when sanitation entrepreneurs began to venture by providing pay-as-you-use WASH services. Public latrine users consider privately operated WASH services as efficient and effective. However, these services do not suffice the user demand and are not regulated to meet WASH service standards.

Lack of enough sanitation facilities coupled with poor operation & maintenance of existing ones aggravates open defecation in institutional premises posing grave public health risks to the wider community. Management of grey water is equally low, with 30 percent of households managing their grey water by channelling into drainage systems such as soak-away pits or home gardens.

El Fasher town currently generates about 300 tons of solid waste per day comprising bio-waste, paper, plastic, glass, and metals. Only 34% of the generated solid waste is collected, transported and dumped at the designated Zamzam dump site which is situated some 15km to the south of the central part of the town. Garbage collection service is confined within urban areas benefiting only 10% of town households. Only the Locality is responsible for garbage collection services although informal service providers exist with the help of donkey carts which are considered illegal according to local orders. After all, although most preferred, informal garbage collectors tend to prefer depositing garbage in informal dump sites because they cannot afford to reach Zamzam dump site.

About 10% of the waste is estimated to be recovered/reused, and those involved do so at their own risk because their work is not regulated and essentially done without protective clothing. In the course of their work, they get in contact with expired food waste which is open for reclaim and consumption because it is not destroyed once confiscated. Again, together with young children, they get in contact with hazardous healthcare waste which ideally should be incinerated by any means.

The ideal faecal sludge management should involve safe containment, collection, transportation, treatment and final disposal to open environment. However, without treatment facilities, El Fasher town could be considered as a large open defecation community where sludge is discharged to open environment next to Zamzam dump site. Faecal collection services are entirely provided by a sole entrepreneur who currently enjoys a customer base of 16% of the households in addition to all institutions. However, only 50% of households are aware of faecal sludge management.

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22 World Health Organisation categorises Health-Care Waste into five groups: first, Non-risk waste or general waste; second, waste that requires special attention; third, infectious and highly infectious waste; fourth, other hazardous waste and-and fifth, radioactive waste.

23 SMOH WASH assessment report

24 Based on the per-capita garbage generation of 0.6Kg per person per day which is the acceptable standard for Sudan.
collection services. Furthermore, without faecal sludge treatment facilities, residents in the town are at risk of having their water resources contaminated and besides direct transmission of diseases.

Only 5% of households have functional handwashing stations with water and soap. Though hand washing is generally a norm as part of worship, the practice of handwashing with soap at critical times is very low. Lack of handwashing with soap coupled with poor handling of drinking water supplies and food are also of major concern as far as household-based hygiene practices are concerned.

Drinking water is stored in large clay pots which are covered and kept under shade to keep it cool. However, water storage pots are seldom cleaned. Moreover, the use of one cup to drink water from open-mouthed containers could lead to water contamination as this is the case in households, schools and public places. Also, the consumption of expired food products is common among the residents, and this happens due to lack of awareness on the side of consumer and violation of local orders on the side of the traders. Food covering is considered a norm, and this is practised to protect food from harmful insects and dust but also to keep it warm.

Hygiene is taught more as an academic subject in schools rather than a means to inculcate proper hygiene practices at an early age. Teachers are an important catalyst for effective school WASH management, but they lack mentorship and facilitation skills to engage students and parents. Moreover, schools do not have essential commodities such as soap for handwashing, supervision by teachers and availability of handwashing facilities and more importantly water.

4.3 Incidences of water-related illnesses

El Fasher is the capital town of the North Darfur State whose health-related indicators are lower than the national average. According to 2014 Multiple Indicator Cluster Survey (MICS) report, North Darfur State is one of the states with low WASH indicators where child mortality is 91/1000 above the national average of 68/1000. Fifty percent of its population is reported to have access to improved water supply compared to the national access rate of 68 percent. About 12.3 percent of the population has access to improved sanitation, 41.1 percent practices open defecation. Additionally, the incidence rate of diarrhoea among children is 37.9 percent, and this poses a huge threat to child survival beyond a fifth birthday.

Currently, residents in the town are at risk of getting infected water and sanitation-related diseases. Health facilities in the town are treating various ailments among others including, diarrhoea, hepatitis, trachoma and typhoid. As of June 2016, 36 percent of households reported to have nursed diarrhoeal cases within the recent two weeks, and the situation seems not significantly improve. The locality with help from the state is battling Acute Water Diarrhoea outbreak alongside the long-standing Trachoma which until June 2017 stood at 20 percent incidence rate.

By September 2017, the State Ministry of Health had registered a cumulative total of 25,15925 cases of water-related diseases based on data reported from 20 Primary Health Centres (PHCs) across the town (Figure 7). In terms numbers, diarrhoea remains the most recorded diseases alongside eye infection and malaria. Under-5-year-old children constitute 37% all reported cases and 52% of other diarrheal diseases.

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25 Data collected from SMOH, through Health Management Information System (HMIS), April – Sept 2017 Data. 2017
Figure 7: Water-related diseases (Mar-Sep 2017)

Source: HMIS, SMOH, 2017
## SUMMARY OF ENABLING AND CONSTRAINING FACTORS

Based on the existing situation outlined above, an analysis has been made to clarify the enabling and constraining factors for the successful implementation of environmental sanitation and hygiene program. Factors outlined in the table below have been used to inform on strategic options in the ESHMP.

<table>
<thead>
<tr>
<th>Enabling factors</th>
<th>Constraining factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faecal contamination is more noticeable in the town; therefore it is easy to stop its sources.</td>
<td>Cross-contamination in towns is more critical so even only a small portion of the population still practice open defecation, everyone gets affected.</td>
</tr>
<tr>
<td>State and Local authorities have a strong buy into sanitation and hygiene improvements.</td>
<td>For larger populations, more targeted and repeated triggering sessions are required to reach everyone.</td>
</tr>
<tr>
<td>Easier to use certain mass media channels like radio, bulletins, vans with loudspeakers, marketplace demonstration; therefore, it is easy to mobilize people due to higher concentrations.</td>
<td>Institutional and public toilets need to accompany promotion of ODF among households since cross-contamination is greater.</td>
</tr>
<tr>
<td>Easier to reinforce bye-laws like all homes should have a toilet with regular inspections and penalties imposed.</td>
<td>High staff turnover in the Locality could create technical capacity void along the way.</td>
</tr>
<tr>
<td>Residents have demonstrated their ability to pay for improved sanitation but would need to be exposed to multiple and affordable technology options to choose from.</td>
<td>Heterogeneous communities who lack cohesion are more common in towns.</td>
</tr>
<tr>
<td>Easier to encourage competition among neighbourhoods to influence accelerated results.</td>
<td>It is technically difficult to build latrines in the town due to loose soil formation.</td>
</tr>
<tr>
<td>People are organized in blocks, religious organizations, associations and other homogeneous groups which can easily be targeted for triggering.</td>
<td>Some populations are transient, such as IDPs and it is harder to change behaviours.</td>
</tr>
<tr>
<td>More people have access to mobile phones and social media, so these can be used to pass messages and mobilize people.</td>
<td>Plots not large enough to accommodate the construction of toilets.</td>
</tr>
<tr>
<td>Availability of private sector businesses willing to take part in the town-wide sanitation and hygiene movement.</td>
<td>Communities are not adequately engaged in issues related sanitation and hygiene.</td>
</tr>
<tr>
<td>In a water-stressed environment, awareness of alternative uses for grey water will motivate some in putting it to good use (e.g. watering certain garden plants).</td>
<td>Lack of institutional capacity and effective systems for promoting household sanitation and hygiene as well as for providing related services.</td>
</tr>
<tr>
<td>Income from sorting and selling and reusing and recycling garbage motivate garbage collectors and might in future keep collection fees low</td>
<td>The absence of political will for increasing budget for sanitation improvements.</td>
</tr>
<tr>
<td>There are a few paper, plastic, organic matter and metal recycling opportunities which can be brought to the town opening new business opportunities.</td>
<td>Existence of illegal settlements where people are reluctant to invest in sanitary infrastructure.</td>
</tr>
<tr>
<td>Some waste management initiatives exist such as solid waste recovery and greywater recycling.</td>
<td>It is difficult to mobilise people in urban setting; people are always busy and have less time to attend triggering sessions and to do volunteer work.</td>
</tr>
<tr>
<td>UNAMID and other UN agencies are available and willing to support capacity development efforts.</td>
<td>Poorest households who might not afford a proper latrine or paying for desludging services.</td>
</tr>
<tr>
<td>State, Locality and communities learn from their experiences and open to new ideas.</td>
<td>More biases in urban sectors that CLTS does not work in the urban context.</td>
</tr>
<tr>
<td>Resistance to engage communities and decentralize decision making.</td>
<td>No alternative technology options for faecal sludge collection apart from vacuum trucks.</td>
</tr>
<tr>
<td>Private sector lack marketing opportunities for their products and services.</td>
<td>No mechanisms and platform of interaction between policymakers, government officials and the general public.</td>
</tr>
</tbody>
</table>
ENVIRONMENTAL SANITATION
AND
HYGIENE STRATEGIC FRAMEWORK

2017-2027
6. STRATEGIC FRAMEWORK

6.1 Vision
The vision of the people of El Fasher town is to live in a clean town free from open defecation & waste matter, where all residents have access to sanitation, hygiene and enjoy a healthier and productive life.

6.2 Objectives
The overall objective is to support the State Government of North Darfur to have a clear roadmap towards achieving sustainable access to basic sanitation and hygiene for all citizens of El Fasher by 2027.

Specific objectives for five thematic areas of the master plan include:

a. **Household sanitation and hygiene promotion**: Achieve access to basic sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

b. **‘WASH in Schools’**: School children have equitable access to improved sanitation and hygiene facilities with progressively attaining the national standards for sanitation facilities in school (1:30 for Girls and 1:50 for Boys).

c. **WASH in Primary Health Centres**: PHCs have sustainable access to improved sanitation and hygiene facilities.

d. **WASH in public places**: All people accessing public places have access to sustainable WASH facilities.

e. **Waste Management**: At least 50 percent of all waste generated is collected, transported and disposed of safely.

6.3 Strategic priorities
Based on the situation so far analysed and the context of El Fasher town, eight strategic priorities have been identified to effectively guide the implementation of the Environmental Sanitation Master Plan by 2027 and the eventual attainment of Sustainable Development Goal 6 by 2030. As illustrated in Box 1 below, the eight strategic priorities include building local ownership of the master plan, capacity development, elimination of open defecation, promotion of best household practices, policy review, private sector engagement and inter-sectoral collaboration.

**Box 1: ESHMP Strategic Priorities**

1. **Facilitation of ownership and buy-in** of the master plan by engaging with key stakeholders and the public.
2. Establishment of **institutional arrangements and capacity building** of locality & state level staff for the effective, planning, implementation and monitoring of the master plan interventions.
3. **Elimination of open defecation** with a progressive increase in access to improved sanitation, initially focussing on IDP camps and the most vulnerable areas (peri-urban areas).
4. **Promotion of proper household practices** (personal hygiene, food safety, water safety and waste management).
5. **Development/review of Policies/Guidelines to scale-up model “WASH in Schools”**, paying attention to specific needs for girls and children with special needs.
6. **Development of Strategies/Guidelines to scale-up model “WASH in PHCs”**.
7. **Fostering private sector engagement** in the management/delivery of sanitation services.
8. **Enhancement of partnerships and inter-sectoral collaboration** between the various line Ministries to mobilise resources and avoid overlaps.

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26 Sustainable Development Goal 6 seeks countries to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations, by 2030.
Strategic priority 1: Facilitate ownership and buy-in of the master plan by engaging with key stakeholders and the public.

Ownership building is aimed at internalising the master plan in government planning system at the state, locality and community levels. Specific actions pertaining to ownership building are as follows:

- Alignment master plan activities with sector plans by the environmental health directorate of the State Ministry of Health.
- Full respect of all tiers of government structure from federal, state, locality and administrative unit.
- Recognition of the political leadership of the State Wali and the Locality Commissioner in facilitating active community participation and allocation of adequate resources for the master plan implementation.
- Recognition of the administrative structure particularly operational leadership of the Executive Director at Locality level and the Administrator at Administrative Unit level with regards to planning and execution of all master plan activities.
- Decentralised planning and execution of activities within El Fasher Municipal Administrative Unit, its 10 sectors, 120 neighbourhoods and 2 ID camps.
- Targeting smaller homogeneous groups within the communities which can be identified within settlements such as functional committees, businesses, water operators, youth groups, women groups and student groups.
- Detailed engagement of community leaders through dedicated staffing structure of the Environmental Health Department of El Fasher Administrative Unit in El Fasher Locality.
- Facilitation of participatory situation analysis and community-led action planning in all 10 sectors and their respective 120 neighbourhoods and 2 IDP camps.

Strategic priority 2: Putting in place institutional arrangements and capacity building of locality & state level staff for the effective, planning, implementation and monitoring of the master plan interventions.

Putting in place institutional arrangements and capacity building of locality & state level staff for the effective, planning, implementation and monitoring of the master plan interventions by undertaking the following:

- Facilitate the establishment and institutionalisation of information database, monitoring framework and mapping of essential services; establish/strengthen government institutions and systems for delivering services.
- Develop a detailed capacity development plan for the effective delivery of the Environmental Sanitation and Hygiene Master Plan at state, locality and community level.
- Provide operational support to enable SMOH, and the Locality undertakes their functions in the form of transportation and information management.
- Train frontline staff within El Fasher Administration Unit in essential skills regarding sanitation and hygiene promotion, community engagement and monitoring.
- Establish community-based WASH committees and train them in their respective functions such as hygiene promotion, monitoring skills and reporting.

Strategic priority 3: Elimination of open defecation with a progressive increase in access to improved sanitation, initially focusing on IDP camps and the most vulnerable areas (peri-urban areas).

Facilitate sanitation promotion in all communities ensuring that realistic actions plans are developed to eliminate open defecation. The following specific activities will be undertaken to eliminate open defecation:

- Promote the equitable use of improved sanitation for defecation in all communities, institutions and public places.
- Promote progressive uptake of improved household sanitation, paying priority attention to vulnerable communities in IDP camps and peri-urban areas.
- Apply Urban CATS/CLTS approaches to facilitate community-wide behaviour change and action plan to eliminate open defecation.
- Link households to supply market of affordable sanitation products by engaging the private sector in sanitation promotion activities.
- Promote complementary hygiene practices that lead to increased use of sanitation facilities such as safe disposal of child safe faeces.
Strategic Priority 4: Promotion of proper household practices (personal hygiene, food safety, water safety and waste management).

The master plan will promote three important hygiene practices such as personal hygiene, water safety and food safety. The following activities will be implemented:

- Integrate hygiene promotion messages in U-CATS/CLTS activities to ensure collective enforcement of positive hygiene behaviours.
- Promote handwashing with soap at critical times and ensuring that handwashing stations are maintained in households.
- Promote dialogue involving residents, policymakers and the citizenry through formal gatherings and use of local media. Besides other platforms, a live youth-led talkback radio show program will be established with one of the local radio stations.
- Promote food safety including safe handling during preparation, storage and consumption.
- Promote safe water handwashing from source, during transportation, storage and consumption.

Strategic Priority 5: Develop and update policies/guidelines to scale-up model “WASH in Schools”, paying attention to specific needs for girls and children with special needs.

The effective promotion of environmental sanitation and hygiene is based on an effective quality assurance mechanism through standard policies, approaches and guidelines. To this effect the master plan seeks to prioritise the following actions:

- Consolidate WASH sector policy documents, guidelines and manuals which are currently being used by health promoters, schools and health care facilities.
- Review and develop policy guidelines in line with local context; paying special attention ‘WASH in Schools’ Guidelines paying particular attention to specific needs for girls and children with special needs.

Strategic Priority 6: Develop Strategies and Guidelines to scale-up model “WASH in Primary Health Centres”.

The master plan will facilitate the development of strategies for scaling-up service delivery models in Primary Health Centres (PHCs). Specific actions will include:

- Detailed assessment studies to evaluate existing systems for planning and managing WASH services.
- Review standard operating procedures for WASH inventory management, operation and maintenance.
- Formulate detailed strategies for improving and sustaining WASH services in PHCs with particular attention to health care waste management.
- Review, develop and launch standard guidelines for WASH services in PHCs.

Strategic Priority 7: Foster private sector engagement in the management/delivery of sanitation services.

The master plan has been developed with the full knowledge that the private sector is already participating in delivery WAS services in public places and PHCs. However, the private sector engagement mechanism is not fully developed to reach the scale. Concerning this, the master plan implementation will prioritise the following:

- Conduct a town-wide assessment to map the availability of sanitation products and services as part of the market research study. Identify people’s preference, levels of affordability and expectation levels. Establish database/inventory or a catalogue of sanitation service providers and product suppliers.
- Define private sector capacity and needs development, to focus on national strengths and weaknesses, and make a comparison with countries where the private sector has become fully and productively engaged.
- Facilitate ‘Sanitation Fairs’ to link communities to affordable sanitation markets; but also to facilitate business partnerships between communities, institutions, the locality and private sector.

Strategic Priority 8: Enhance partnerships and inter-sectoral collaboration between the various line Ministries to mobilize resources and avoid overlaps.

The delivery of this master plan calls for multi-sectoral collaboration to leverage resource mobilisation and efficient service delivery. Priorities for the first phase include building partnerships involving government institutions,

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private sector players, academic institutions, NGOs, Community Based Organisations (CBOs) and communities. The following priority actions will be undertaken:

- Reaffirm the stakeholder analysis process at all levels ensuring that all viable partnerships are identified to government institutions, involve communities, the private sector, Community Based Organisations (CBO), individual entrepreneurs and many others.
- Leverage resources and partnerships for improving/enhancing services, including by influencing domestic planning, financing and delivery of services.
- Collaborate with ongoing initiatives and projects such as the North Darfur Development Initiative which is currently undertaking self-initiated sanitation improvements across the town.\(^{28}\)
- Develop partnerships with NGOs to facilitate capacity development as well as community-based and institutional-based sanitation and hygiene activities such as community engagement through CATS/UCLTS approaches.

\(^{28}\) For instance, Government managed projects such as the “Capacity Building for Enhanced Gender Participation in Peace and Economic Activities” project which the Ministry of Finance and National Economy is currently implementing in localities across Darfur region including El Fasher and Zalingei.
7. THEMATIC AREAS OF THE MASTER PLAN

**Thematic Area 1: Household sanitation and hygiene**

**Strategic objective 1:** By 2027 achieve access to basic sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.

Under this objective, the Locality will first, eliminate open defecation within the first two years of its master plan implementation. Second, facilitate households access to affordable sanitation products through sustainable markets. Third, strengthen institutional capacity for effective community engagement and monitoring, and fourth; support innovative solutions and business models that will emerge to leverage use and access to sustainable solutions.

As shown in Table below, the Sanitation and Hygiene Promotion package constitutes a package of four components including environmental sanitation promotion, hygiene promotion, sanitation marketing and management aspects.

<table>
<thead>
<tr>
<th>Environmental sanitation</th>
<th>Hygiene promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation facilities available (used by all)</td>
<td>Handwashing with soap at critical times</td>
</tr>
<tr>
<td>Faecal sludge collection and disposal</td>
<td>Menstrual hygiene management (MHM),</td>
</tr>
<tr>
<td>Household waste management</td>
<td>Safe water handling and storage,</td>
</tr>
<tr>
<td>Household greywater management</td>
<td>Safe food handling, storage and consumption</td>
</tr>
<tr>
<td>Vector control</td>
<td>Safe disposal of excreta</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation marketing</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market supply and market demand/s</td>
<td>Capacity development</td>
</tr>
<tr>
<td>Development of sanitation products</td>
<td>Monitoring and reporting</td>
</tr>
<tr>
<td>Supply chain of sanitation products</td>
<td>Community policies</td>
</tr>
<tr>
<td>Sanitation as a business</td>
<td>Sustainability</td>
</tr>
</tbody>
</table>

**Environmental sanitation** incorporates the promotion household use of sanitation facilities which are accessible and usable by all regardless of sex, age and physical abilities. Because the town has no sewerage systems, the master plan has allowed for offsite faecal sludge management. Furthermore, the residents will be taken through processes that will lead to safe and clean household environment through proper disposal of solid waste and grey water. These initiatives will incrementally lead to collective community-wide initiatives such as water point cleaning and vector control. The plan is for El Fasher town to achieve Open Defecation Free Status by June 2019 and after that proceed with scaling up the uptake of improved sanitation. Figure 8 below shows a trajectory of household sanitation uptake during the 10-Year period.

**Figure 8: Projected Sanitation improvements**

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29 Critical times to wash hands with soap include immediately before preparing food/cooking. Before and after eating. After using the latrine. Before feeding babies, sick people or elderly people. After cleaning someone else’s feces. And also: After cleaning compound. After handling animals. After cleaning animal feces. After cleaning animal shelter. After changing female sanitary pads.
**Hygiene promotion** will focus on handwashing, water safety, food safety and safe disposal of excreta (use of sanitation facilities by adults and children as well as safe disposal of baby stool). Handwashing promotion includes cleaning hands with clean running water and soap as detergent. Besides handwashing, menstrual hygiene management will be promoted through focus group dialogue with women and girls with due respect to all elements of community beliefs.

Hygiene promotion aims at influencing behaviour change among residents to internalised personal hygiene, household water treatment and safe storage and food safety. A hygiene behaviour change and communication plan will be put in place concerning evidence, social norms, global experience and existing policies. Apart from communication activities, residents will be triggering for hygiene behaviour change as part of CATS facilitation. Figure 9 shows faecal transmission route and points of barriers through behaviour change and hardware interventions.

*Figure 9: Faecal-Oral Transmission Route*

Water safety will include the promotion of safe handling of water from the point of the collection but also safe transportation, storage and consumption at the point of use. Food safety incorporates the elements of safe handling during preparation, storage, consumption as well as safe disposal of food waste. As a public health measure, the consumption of expired food products will be discouraged at all cost, and this will fall within the overall communication plan as well as inspection checklist.

Among other approaches, hygiene promotion will be achieved through community-based triggering sessions as an integral part of CATS but will also through tailored messages through media but as well as drama and music shows. Hygiene messages will be delivered incrementally to avoid overloading communities, and this will allow for community internalisation of promoted behaviours. As a sustainability measure, communities will be supported to undertake a self-reflective analysis of hygiene barriers and come up with collective policies to influence the uptake of positive social norms.

**Sanitation marketing** aimed at linking households to affordable sanitation products and services. A detailed sanitation market assessment will be carried out to establish key drivers and barriers to household sanitation uptake. This assessment will lead to four important deliverables such as development of demand creation and supply chain strategies, community savings and loans initiatives, private community partnerships (CPP) as well as the strengthening of regulatory arrangements.

The locality will be supported to adopt sanitation marketing approaches that will balance sustainable access to affordable sanitation products and services by all households. The creation of market demand for sanitation products will be initiated through CATS/UCLTS processes coupled with social and commercial marketing activities. Alongside this, a market supply assessment will be carried out, sanitation products will be developed, and interested sanitation entrepreneurs will be brought on board and provided with relevant training. As a matter of priority, products to be developed will among others include toilet models, toilet construction services and faecal sludge collection services.

**Management aspects** include capacity development plans, monitoring arrangements and strengthening the rationale for building community pride in coming up with their policies aimed at promoting positive social norms. This also includes sustainability arrangements that incorporate the elements for strengthening WASH committees and all functional committees and local ownership. Particularly, communities will be supported with essential skills for establishing systems for the continued flow of sanitation products and maintenance of positive social norms. Among other incentives, communities will be linked with catchment Primary Health Centres to track the reduction of diarrhoeal diseases in proportionate with increased sanitation and hygiene behaviour change.

**Thematic Area 2: WASH in schools**

**Strategic objective 2:** By 2027, school children have equitable access to improved sanitation and hygiene facilities with progressively attaining the national standards for sanitation facilities in school (1:30 for Girls and 1:50 for Boys).
As shown in Table below the WASH in Schools package encompasses the provision of safe drinking water, hygiene promotion, sanitation improvements and management arrangements. The implementation of school WASH interventions will be founded on incremental improvements starting with behaviour change promotion, strengthening of management systems, infrastructure investments and use, management (operation and maintenance) and monitoring.

<table>
<thead>
<tr>
<th>Water supply</th>
<th>Hygiene promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe water available for children and teachers</td>
<td>Handwashing</td>
</tr>
<tr>
<td>Water safety mechanisms in place</td>
<td>Hygiene education</td>
</tr>
<tr>
<td></td>
<td>Supervised toilet cleaning</td>
</tr>
<tr>
<td></td>
<td>Menstrual hygiene management</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation facilities available (gender separated).</td>
<td>Operation and maintenance</td>
</tr>
<tr>
<td>Compound cleaning and waste disposal</td>
<td>Capacity development</td>
</tr>
<tr>
<td>Faecal sludge collection and disposal</td>
<td>Supply of commodities</td>
</tr>
<tr>
<td></td>
<td>Monitoring and reporting</td>
</tr>
</tbody>
</table>

**Water supply improvement** will include connecting schools to urban water network and other improved water systems. Other considerations will include promoting water safety management particularly by emphasising on safe water handling, storage and consumption.

**Hygiene promotion** will include the promotion of handwashing with soap, drinking water safety, menstrual hygiene management as well as toilet cleaning. In basic schools, handwashing with soap will be an essential practice to promote especially as part of the regular school activities. Schools will support the relevant capacity to translate hygiene education lessons into practical sessions and ultimate behaviour change championed by School Health Clubs.

Toilet cleaning will be an integral part of the school hygiene promotion especially when it is associated with the promotion of the proper use of toilets and use of appropriate cleansing materials among other practices. In girls or mixed schools, school management authorities will undertake menstrual hygiene management as-a-mandatory component of WASH in Schools.

A Three-Star approach is a model for facilitating school-based capacity development among teachers and parents in ensuring the internalisation of hygiene and sanitation behaviour change. It also promotes self-initiated monitoring as schools set clear milestones for attaining improved school WASH services. In the case of El Fasher, the Three-Star approach will be reviewed to come up with the realistic and contextual classification of schools in the light of incremental WASH improvements.

**Sanitation services** will focus on equitable provision and use of well-maintained sanitation facilities by children of all age groups regardless of their gender and physical abilities. School staff which include teachers will also be provided with separate toilets for female and male users. Sanitation facilities for students will be gender segregated provided in accordance with recommended proportions of 1:30 for Girls and 1:50 for Boys. School toilets will be regularly emptied to sustain the effective number of functional toilets at any given point in time.

Compound cleaning is an important element that will be promoted in all schools to achieve clean learning environment but more importantly to build life skills for students. School WASH activities will be tailored to promote collectiveness and sense of responsibility on the side of students. Figure 10 below demonstrates how the envisaged trend of progress between 2017 and 2027.
Management aspects for WASH in schools include operation and maintenance to ensure that WASH services are always operational. Capacity development for staff, students and school management committees will help to link schools with community-wide sanitation improvements. Additionally, school management authorities will be trained in resource mobilisation skills to leverage the availability of essential supplies such as soap for handwashing. In relation to the same schools will be supported with operational and technical skills to attain the required to sustain the functional levels of school WASH services.

Thematic Area 3: WASH in Primary Health Centres

Strategic objective 3: By 2027 Primary Health Centres have sustainable access to improved sanitation and hygiene facilities.

ESHMP interventions in Primary Health Centres are designed to simultaneously improve service access related to water supply, sanitation, hygiene promotion, healthcare waste management and capacity development. This is the case because to a large extent all PHCs have access to WASH infrastructure although its functionality is extremely constrained due to lack of proper management mechanisms. The fact that PHCs are among the hotspots for open defecation also call for the highest level of attention so that these facilities form part of setting best models for promoting a healthier environment.

Additionally, all facilities lack substantial means of sustainably manage healthcare waste such as solid waste, medical waste and faecal sludge. A complete package for WASH in PHCs is tabulated below:

<table>
<thead>
<tr>
<th>Water supply</th>
<th>Hygiene promotion</th>
<th>Sanitation</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water supply connection</td>
<td>Handwashing facilities</td>
<td>Sanitation facilities available</td>
<td>Operation and maintenance arrangement</td>
</tr>
<tr>
<td>Water safety management</td>
<td>Hygiene promotion</td>
<td>Compound cleaning</td>
<td>Monitoring and reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health care waste management</td>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Faecal sludge management</td>
<td>Provision of essential commodities</td>
</tr>
</tbody>
</table>

Water supply improvement will include connecting PHCs to urban water network and other improved water systems. Other considerations will include promoting water safety management by emphasising on safe water handling, storage and consumption.

Hygiene promotion will include the promotion of handwashing with soap, drinking water safety, menstrual hygiene management as well as maintaining the cleanliness of PHC rooms. Hygiene messages will be disseminated on a regular basis to patients a routine for starting daily activities.

Sanitation services in PHCs relate to the safe collection, segregation, transportation, treatment and disposal of healthcare waste. This waste includes general waste, medical waste which also includes hazardous as well as non-hazardous waste and it is a good practice not to mix these categories of waste because their required forms of
disposal are not the same. As a long-term measure, the master plan has incorporated the installation of least cost incinerators, but this will go in line with relevant capacity enhancement arrangement.

Management services include operation and maintenance of WASH facilities, monitoring and reporting, maintaining Standard Operating Procedures and provision of essential commodities. The ESHMP has specifically recommended the application of Water and Sanitation for Health Facility Improvement Tool (WASH-FIT). In consideration of the local context, Standard Operating Procedures will be modified in line with what SMOH and stakeholders will agree upon.

Figure 11 below shows the progressive improvements of WASH and waste management coverage in PHCs.

*Figure 11: Projected targets for WASH in Primary Health Centre improvement*

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**Thematic Area 4: WASH in Public Places**

**Strategic objective 4:**

ESHMP interventions in public places are aimed at improving access to WASH services by building upon the existence of willing and active private sector partners. The master plan will address critical concerns such as low service coverage, lack of standardised approach to service delivery, lack of quality control aspects and lack of organisation and coordination among private sector players. WASH in public places will be implemented according to the following package:

<table>
<thead>
<tr>
<th>Water supply</th>
<th>Hygiene promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water connection</td>
<td>Handwashing</td>
</tr>
<tr>
<td></td>
<td>Routine hygiene education</td>
</tr>
<tr>
<td></td>
<td>Food safety</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sanitation</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation facilities</td>
<td>Operation and maintenance</td>
</tr>
<tr>
<td>Solid waste management</td>
<td>Capacity development</td>
</tr>
<tr>
<td>Faecal sludge collection</td>
<td>Monitoring</td>
</tr>
<tr>
<td>Grey water management</td>
<td>Partnerships</td>
</tr>
</tbody>
</table>

**Water supply** will focus on connecting public places to urban water supply network. With regard to market centres, the Locality will facilitate the arrangements for water connections of various businesses.

**Hygiene promotion** will focus on behaviour change for handwashing with soap at critical times, hygiene education and food safety. The Locality will use a combination of regulatory arrangement with participatory approaches to promote hygiene behaviour change. Regulatory arrangements mean each public place will have a specific set of rules that will enforce good hygiene practices. Food selling points in public places will be regularly inspected to ascertain their compliance with Public Health Act and local orders.

**Sanitation services** involve the promotion of toilet use as well as management of waste (solid waste, faecal sludge and grey water). Through this master plan, the Locality will build sanitation facilities in selected public places which will later be transferred to interested business entrepreneurs to operate in partnership with the Locality. Building on successes and lessons drawn during the first phase, the Locality reaches more public places while also improving on service package in general.
Management aspects include Operation and maintenance, capacity development, partnerships and monitoring. The provision of integrated public WASH services will be accompanied by plans for sustainable cost recovery and routine maintenance as an integral part of the partnerships that will be established. Capacity development will involve transferring relevant skills and knowledge for sustainable public WASH service delivery to Locality staff, market committees and service operators. Monitoring will include routine performance checks, inspections and a system for progressive improvement.

Figure 12 below highlights the envisaged achievements for the three phases of the plan. In the first phase, the Locality will focus on establishing best models for public WASH services.

Figure 12: projected WASH improvements in public places

Thematic Area 5: Waste Management

Strategic objective 5: By 2027, at least 50 percent of all waste generated is collected, transported and disposed of safely.

The ESHMP seeks to undertake a holistic approach to waste management incorporating solid waste, grey water and faecal sludge management as shown in Table below. Waste management will be undertaken with respect to decentralised action planning starting from the point of generation up to the community and municipal level. Interventions will primarily focus on strengthening of enabling environments for effective and sustainable services. These interventions are meant to entail improved service delivery and behaviour change by waste generators. Among others, the ESHMP has laid activities that will trigger behaviour change and policy improvement in this thematic area.

<table>
<thead>
<tr>
<th>Solid waste management</th>
<th>Faecal sludge management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste reduction, recovery/recycling, reuse</td>
<td>Collection, transport and treatment</td>
</tr>
<tr>
<td>Collection, transport and treatment</td>
<td>Awareness</td>
</tr>
<tr>
<td>Awareness</td>
<td></td>
</tr>
<tr>
<td>Community-based waste management</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grey water management</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drainage and disposal</td>
<td>Capacity development</td>
</tr>
<tr>
<td></td>
<td>Operations management</td>
</tr>
<tr>
<td></td>
<td>Regulation</td>
</tr>
<tr>
<td></td>
<td>Private sector engagement</td>
</tr>
</tbody>
</table>

As a matter of priority, a detailed waste management study has been scheduled as a priority intervention to inform on appropriate best options for behaviour change and service delivery. This study will be undertaken during the first phase of the master plan implementation and will involve overall assessment of waste generation, regulatory arrangements, levels of service as well as social and environmental considerations. Ongoing private operations will be examined and their potential levels of success determined. Again, this study will provide a more detailed account of financial implications for service improvement regarding scaling up the current level of service.

The ESHMP has allowed for ongoing dialogue on waste management bearing in mind that the Locality and the state have been in constant discussions with various sector players. Among others, UNICEF will provide technical support to the Locality in consulting with some of the interested UN agencies such as UNEP, UNAMID, UN-Habitat. Further discussions will be pursued with the University of El Fasher, NGOs, CBO, Youth Group Initiatives and media institutions.

Solid waste management will involve the prevention, reduction, reuse, recovery and safe disposal. All these elements will be promoted as part of the behaviour change leading to avoidance and the reduction of waste.
generation at generation point, maintaining a clean environment and capitalising on opportunities related to turning waste into raw materials for valuable products.

Residents, as waste generators, will be encouraged to properly segregate waste while also ensuring that they are living in the clean environment. At the community level, the attention will get collective initiatives through “community-based waste management” system developed through CATS. At the municipal level, emphasis will go towards building systems that will lead to enhanced operational capacity and efficient service delivery.

The ESHMP will promote safe handling and disposal of greywater from homes, institutions or commercial areas. Grey water does not include water that has come into contact with faeces; however, it contains a significant amount of dirt of various forms. It does not usually contain many pathogens, but it does contain soaps and detergents. For this reason, it can be used to water garden plants, and this will be encouraged in the town.

The ESHMP will facilitate efficient faecal sludge management services for households, schools, health facilities and public places in the towns of El Fasher. A partnership agreement will be facilitated involving sanitation entrepreneurs and the Locality with clear performance terms. To ensure that all households are reached, manually operated rammers and gulpers will be introduced as part of the ESHMP implementation.

**Faecal sludge management** is aimed at achieving safe faecal containment, collection, treatment and final disposal to the environment. ESHMP activities will include service awareness particularly to benefit those whose toilets have been filled up. Awareness messages will promote the importance of faecal sludge collection services as a sustainable solution of prolonging the lifespan of toilet facilities. Other dimensions will include the capacity development of the Locality to effectively enforce sanitation designs that will accommodate emptying services in terms of accessibility. Again, the private sector operators will be encouraged to source a diverse range of desludging technologies so that all forms of sludge systems are equally serviced.

An important element will be to assess the feasibility of sustainable technology options for faecal sludge management with emphasis to treatment. This has been considered as a priority in the master plan because, without sludge treatment, El Fasher town is considered as a large community in an open defecation environment.

**Grey water management** will include a public awareness to ensure that generation points are well equipped with appropriate drainage facilities for safe disposal of grey water. At community levels, these developments will lead to a collective set of options such as improvement of drainage systems. However, priority will be given to household behaviour change and build institutional capacity for regulation but also the promotion of alternative solutions. Among others, wastewater reuse will be promoted, but this will be aligned with best public health practices.

In overall terms, Figure 13 below illustrate projected regarding improving services delivery and behaviour change.

*Figure 13: Projected targets for waste management*
8. PHASING OF INTERVENTIONS

The implementation of the master plan is divided into three phases with the first phase covering July 2017-June 2019, followed by Phase-II (July 2019-June 2023) and the last phase stretching from July 2023 to until the end of 2027. Separate progress trajectories are envisaged for household sanitation, WASH in Schools, WASH in PHCs and WASH in public places. This is largely based on the potential funding needs, the time needed to effect behaviour change, putting in place systems and enable partnerships. The aim is to position El Fasher town achieve SDG target for universal access to improved sanitation by 2030 including access to WASH in Institutions, WASH in Primary Health Centre and in Public Places. Figure 14 illustrates the three phases of the master plan.

Figure 14: Phasing of Master Plan Implementation

8.1 Phase I: Open Defecation Free Phase

This phase will focus on eliminating open defecation thereby declaring the entire town Open Defecation Free by June 2019. This will be achieved by community-led activities that will be facilitated using various strategic interventions including Urban Community Approaches to Total Sanitation (UCATS). Other interventions during this phase will include capacity development starting for state-level partners as well as communities.

Various models will be initiated during this as well including partnerships involving the Locality and Private Sector partners through Public Private Partnerships (PPP). Other models that will be demonstrated will include WASH in schools, PHCs and public places. The total budget for Phase I is $1.57 million including US$862,970 from DFID as part of the UW4D Project with complementary funding of US$706,860 from UNICEF.

8.2 Phase II: Sustaining Open Defecation Free Status

This phase aims to sustain open defecation and promote household sanitation to acquire improved sanitation facilities while also supporting new household acquire sanitation. Building upon successes, the Locality will intensify community follow-ups, capacity development and building systems for monitoring and reporting. This phase will also prioritise WASH improvements in even a large number of WASH facilities in schools, PHCs and public places. The total budget for Phase I is $5.83 million all of which has not yet been sourced.

8.3 Phase III: Access to WASH in Institutions

This phase prepares the Locality and the state to start demonstrating strategies towards achieving Sustainable Development Goals (SDG). Main interventions during this phase will include scaling up of PPPs and WASH service in institutions levels. This phase will reach schools, PHCs and public places with improved services, capacity support and will also initiate new project towards achieving the SDGs by 2027. The total budget for Phase I is $6.61 million of which has not yet been sourced.
## 8.4 Summary of thematic targets

### 8.4.1 Household Sanitation and Hygiene

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulative targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
</tr>
<tr>
<td>Number of targeted communities</td>
<td>0</td>
</tr>
<tr>
<td>Number Open Defecation Free Communities</td>
<td>0</td>
</tr>
<tr>
<td>People living in ODF environment</td>
<td>0</td>
</tr>
<tr>
<td>People reached with hygiene messages</td>
<td>0</td>
</tr>
<tr>
<td>People with access to household sanitation</td>
<td>372,841</td>
</tr>
<tr>
<td>People with access to improved sanitation</td>
<td>298,272</td>
</tr>
<tr>
<td>Households where residents wash hands at critical times (%)</td>
<td>5%</td>
</tr>
<tr>
<td>Households adopting safe water handling and storage (%)</td>
<td>2%</td>
</tr>
</tbody>
</table>

### 8.4.2 WASH in Schools

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulative targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
</tr>
<tr>
<td>Number of targeted schools</td>
<td>0</td>
</tr>
<tr>
<td>Model schools with school WASH interventions.</td>
<td>0</td>
</tr>
<tr>
<td>School children benefiting from school WASH activities</td>
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</tr>
</tbody>
</table>

### 8.4.3 WASH in Primary Health Centre

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulative targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
</tr>
<tr>
<td>Targeted Primary Health Centres</td>
<td>0</td>
</tr>
<tr>
<td>Number of PHCs with fully functional WASH facilities</td>
<td>0</td>
</tr>
<tr>
<td>Number of PHCs with Standard Operating Procedures for WASH and waste management services</td>
<td>0</td>
</tr>
</tbody>
</table>

### 8.4.4 WASH in Public Places

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulative targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
</tr>
<tr>
<td>Targeted public places</td>
<td>0</td>
</tr>
<tr>
<td>Public places with fully operated WASH facilities</td>
<td>0</td>
</tr>
<tr>
<td>Public places with effected PPPs for WASH services</td>
<td>0</td>
</tr>
</tbody>
</table>

### 8.4.5 Waste Management

<table>
<thead>
<tr>
<th>Description</th>
<th>Cumulative targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
</tr>
<tr>
<td>Number of targeted households</td>
<td>0</td>
</tr>
<tr>
<td>Households receiving garbage collection services</td>
<td>10%</td>
</tr>
<tr>
<td>Households with proper solid waste management system</td>
<td>10%</td>
</tr>
<tr>
<td>Households with access to faecal sludge collection services</td>
<td>16%</td>
</tr>
<tr>
<td>Households with proper greywater management system</td>
<td>30%</td>
</tr>
</tbody>
</table>

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30 Includes 120 neighbourhoods and 2 IDP camps
31 Means households with designated handwashing stations with water and soap
32 Schools featuring gender segregated Sanitation & Handwashing facilities, provisions for menstrual hygiene management & the disabled, and safe water supply
PHASE I
Open Defecation Free Phase
1 July 2017 – 30 June 2019
PHASE I: OPEN DEFECATION FREE PHASE

This phase will prioritize setting up of the building blocks including the development of the financing plan to support Phase-II and subsequent interventions. Phase-I prioritizes capacity development in all thematic areas, and the implementation of Urban Community Approaches to Total Sanitation (U-CATS) for achieving a town-wide Open Defecation-Free (ODF) environment.

The priority will be the elimination of open defecation by encouraging households to build and use latrines. Behaviour change communication will be introduced as part of the U-CATS focusing on handwashing, food hygiene and household water handling and safe storage practices. Action plans following triggering sessions will, therefore, incorporate improvements for both environmental sanitation and hygiene behaviour change. Sanitation marketing initiatives aimed at developing affordable sanitation products & services will also be launched.

This phase will also see the implementation of WASH in schools and WASH in PHCs per revised guidelines that will be developed. Management of faecal sludge will be articulated in this phase along with a pilot treatment facility. Phase-I will also include the development and piloting of Public Private Partnership (PPP) models for WASH in Public Places and Solid Waste management informed by detailed Solid Waste Management study. Monitoring framework and databases will be established during this phase to allow subsequent monitoring and prioritization.

Community-based initiatives for solid waste management will be supported to complement community-wide action priorities identified during U-CATS facilitation.

Summary of key results

- An Open Defecation Free El Fasher Town benefitting all its 498,845 residents;
- All the residents of El Fasher town sensitized on personal hygiene, water and food safety, and proper waste management;
- An additional 75,861 people will gain access to sanitation by 2019 (58,081 people in IDP camps, 8890 people each in urban and peri-urban areas);
- Model “WASH in Schools” program featuring gender segregated Sanitation & Handwashing facilities, provisions for menstrual hygiene management & the disabled, and safe water supply piloted in 10 schools;
- 5 pilot Primary Health Centre will have increased access to gender-segregated WASH facilities;
- 3 Public places will have improved WASH services.
- Public-Private- Partnerships (PPP) will be piloted, and lessons are drawn for scaling-up WASH in Public places and solid waste management;
- A detailed, costed study informing the solid waste management system for the town;
- Faecal Sludge management services will be marketed and extended to cover 20% of households;
- A detailed, customised guide of how UCLTS will be approached has been developed as a customised document to this master plan.

9.1 Household Hygiene and Sanitation

Phase I interventions will focus on community engagement to eliminate open defecation across the town, hygiene behaviour change and also capacity development. The master plan will prepare the locality to start focusing on their incremental sanitation achievement against the sanitation ladder towards SDG targeted by 2030. Policy documents will be reviewed and produced, and these include training manuals, facilitation guide and monitoring tools. Sanitation promotion will be facilitated through Community Approaches to Total Sanitation (CATS) of which Urban Community-Led Total Sanitation (UCLTS) is part of. A detailed guide of how UCLTS will be approached has been developed as a customised document to this master plan.

Each triggering session will lead to community action planning for sanitation improvements, water safety management, waste management and handwashing with soap among others. At this stage, the immediate action will be to facilitate sanitation markets by developing affordable sanitation products and by linking households to suppliers and service providers. Where necessary this process will include developing service and supply agreements. Following all these, technical support will be undertaken by health promoters to households acquiring new sanitation solutions to ensure that all operational and technical bottlenecks are timely addressed. Figure 15 shows an estimated number of toilets that households will build between 2017 and 2027.
Specific strategic activities

(a) **Eliminate open defecation by 2019 through Urban Community Approaches to Total Sanitation (CATS) based on local context.**
   - Review and develop CLTS facilitation manuals, training packages, monitoring manuals, guidelines, monitoring tools concerning local context.
   - Train 120 Locality Facilitators in CATS/CLTS including practical field sessions for them to train neighbourhood facilitators, WASH committees as well as to coordinate community-based activities.
   - Carry out institutional triggering sanitation and hygiene targeting senior officials from the State Government and El Fasher Locality to facilitate town-wide mass movement towards household sanitation improvement.
   - Facilitate CATS in 122 communities by triggering for household sanitation first by targeting peri-urban households followed by IDPs and urban communities. Facilitate community-based action plans for eliminating Open Defecation and promoting access to improved sanitation, identify natural leaders and establish of WASH Committees.
   - Conduct supportive supervision to community facilitators and WASH committees including meetings with community members, Masons, NGO partners and the locality and natural leaders.
   - Verification and certification of communities upon reaching Open Defecation Free status

(b) **Promote hygiene behaviour change through a clear communication plan and community engagement.**
   - Develop/adopt a communication strategy for sanitation and hygiene promotion, including relevant promotion/communication materials. Integrate all elements of hygiene promotion including personal hygiene as well as water and food safety.
   - Implement a sanitation and hygiene communication activities in collaboration with local media, music groups, drama groups, and comedians.
   - Facilitate community-based campaigns for hygiene behaviour change by triggering household for handwashing, water safety and food safety.
   - Build partnerships for reaching a wider audience with action-oriented messaging. Ensuring that hygiene messages are uniformly disseminated through a wide range of channels which will include radios, public awareness campaigns, community meetings, through religious leaders and print materials.
   - Undertake live ‘Talk Back Show’ on the local radio station through a youth-led radio program to engage the general public on matters concerning mass mobilisation for sanitation and hygiene.
   - Facilitate water safety management plans in 122 neighbourhoods in collaboration with the university and interested development partners.

(c) **Facilitate household access to sustainable and affordable sanitation markets.**
   - Conduct sanitation marketing assessment (product assessment, demand assessment and come up with a package of marketable sanitation product options).
   - Design appropriate and affordable improved sanitation products and services customised to local context (consumer preferences and technical requirements).
   - Conduct sanitation financing study (assess sanitation financing models, sanitation options and economic analysis).
• Facilitate sanitation services supply chain – identify and train 100 sanitation entrepreneurs including masons, financial service providers, distributors of sanitation products and service providers.
• Pilot demonstration toilet models in strategic locations across the town, ensuring that local artisans are fully acquainted with various technology options.
• Conduct "Sanitation FAIR" involving sanitation entrepreneurs (artisans, suppliers, service providers etc), SMOH departments, UN Agencies and NGOs involved in sanitation and hygiene.
• Provide logistical support/equipment/toolkits to sanitation entrepreneurs, masons et
• Link communities and sanitation entrepreneurs to private sector institutions to leverage sustainable household access to affordable sanitation products.

\( \text{(d) Strengthen the enabling environment for sustainable improved sanitation and hygiene behaviour change.} \)

• Review and develop community engagement guidelines and associated tools in consultation with continued dialogue with all stakeholders.
• Facilitate capacity development for government staff, NGOs, private sector players and community groups especially focusing on strengthening systems for promoting sanitation and hygiene behaviour change.
• Advocate for local orders to strengthen local markets for sanitation products to ensure that households are provided with a diverse range of options for viable technical and governance options in dealing with their environmental health-related challenged.
• Initiate sector financing plans to support the sustenance of household sanitation improvements.
• Establish and institute monitoring and evaluation plan for household sanitation improvements; ensuring that appropriate structures and tools are in place for information management and reporting.

\( \text{9.2 WASH in Schools} \)

Phase I interventions will focus on setting up a model for effective WASH service planning and delivery in schools. Emphasis will be given to capacity development, setting up standard guidelines, piloting student-led WASH activities as well as monitoring and reporting. This phase will also see the targeted schools acquiring WASH facilities that satisfy the Toilet-User ratio of 1:30 for Girls and 1:50 for Boys. Model “WASH in Schools” program will feature gender segregated Sanitation & Handwashing facilities, provisions for menstrual hygiene management & the disabled, and safe water supply piloted in 10 schools;

\( \text{(a) Strengthen enabling an environment for WASH in school improvement across the town.} \)

• Review and develop the policy guidelines to streamline the delivery of WASH services in schools with leadership from Federal and State Ministry of Education in collaboration with all WASH sector players.
• Develop a standard package for WASH service delivery in schools ensuring that the required toilet-student ratios are adequately addressed for girls (1:30) and boys (1:50) and the need for all students.
• Establish and facilitate WASH monitoring through routine inspections and reporting by school inspectors and school management authorities as well as ensuring the inclusion of WASH monitoring as part of the Education Management Information System (EMIS).
• Develop institutional and technical capacity for education authorities at state and locality level to provide guidance in planning, implementation and monitoring of all school WASH services improvement. This will include undertaking specific training activities for School Management Committees (SMCs), teachers and school health clubs.
• Initiate and promote school-based group WASH activities especially in pre-schools and basic schools to allow an internalised behaviour change among students.

\( \text{(b) Improve access to equitable and sustainable WASH services in schools} \)

• Improve water supply facilities in 10 schools by rehabilitating/repairing existing water connections and by making new connections where applicable.
• Build and rehabilitate child-friendly toilets in 10 schools ensuring the integration of disability access for all toilets and menstrual hygiene facilities for girls toilets.
• Promote the establishment of school-based resource mobilisation arrangements for WASH facilities, soap for handwashing, toilet and compound cleaning materials, solid waste collection facilities as well as water storage equipment and drinking water treatment.
• Establish school-based WASH management systems by training schools teachers, PTAs, SMCs and school health clubs.
• Promote environmental sanitation elements including drainage improvements and installation of solid waste handling facilities such as bins and dumping pits facilitated by regular supervised compound cleaning.
• Install fixed handwashing facilities at strategic locations within the school compound to facilitate routine handwashing by students, i.e. next toilet facilities; alongside this, facilitate mechanisms for the continued supply of soap for handwashing.

(c) Facilitate sanitation and hygiene behaviour change in schools.
• Establish and facilitate school-based hygiene and hygiene behaviour change and other student-led school WASH activities.
• Promote water safety management plans in schools by first, facilitating the identification potential and existing risks related to the safety of drinking water supplies.
• Promote school-based WASH activities with the full participation of communities through PTAs.
• Facilitate the establishment and roll out of a resource mobilisation plan for WASH in schools including operation and maintenance as well as maintenance of stock levels of essential commodities.

(d) Improve the quality WASH services in schools
• Establish, rejuvenate and train school health clubs in basic school sanitation and hygiene promotion particularly by promoting group handwashing with soap and compound cleaning activities.
• Implement capacity development plan such as training teachers, PTAs, SMCs and school clubs in all essential aspects of WASH in schools.
• Take schools through WASH monitoring activities such as functionality of facilities, observance of school WASH activities, the functionality of health clubs, routine and participatory toilet inspection, community contribution and plans for improvements.
• Take schools through the operationalisation of Operation and Maintenance Plans by establishing service agreements to keep WASH facilities operational at all times.

9.3 WASH in Primary Health Centres
Phase I will focus on strengthening the enabling environment for WASH in PHCs by reviewing policy guidelines, capacity development and piloting models for better services. Five PHCs will be targeted for rehabilitation works and piloting of operation and maintenance models, as well as initial activities on Healthcare Waste Management. Private sector engagement models will be explored by drawing lessons from the ongoing partnership that El Fasher Teaching is managing.

(a) Strengthen the enabling environment for improved WASH services in Health Care Facilities.
• Develop technical guidelines for a WASH in PHCs and Healthcare Waste Management as well as facilitating their rollout.
• Train health facility personnel in essential elements for WASH management including water management, medical waste and solid waste and faecal sludge management.
• Implement a capacity development programme for health personnel in healthcare facilities, addressing management aspects, water management, water safety, waste management, policy support, monitoring and reporting.
• Establish a system for routine monitoring checks and apply necessary tools such as the Water and Sanitation for Health Facility Improvement Tool (WASH-FIT).
• Rehabilitate/construct WASH facilities at least in 5 PHCs to pilot best models for operating and maintaining WASH facilities.

(b) Improve access to sustainable WASH services in PHCs
• Repair/rehabilitate and construct new WASH facilities to meet existing gaps followed by facilitating their arrangement for regular cleaning and maintenance. Establish backup plans for PHCs to maintain use of improved sanitation facilities in times of natural disaster, lack of water supply and in case of breakdown eventualities.
• Collaborate with the private sector, research and academic institutions to develop and facilitate the flow of affordable sanitation products to PHCs including physical construction, pits emptying and management of sanitation facilities.
• Facilitate the establishment of Standard Operating Procedures for service maintenance systems for WASH and Healthcare Waste Management in Healthcare facilities.
• Establish and operationalise Healthcare Waste Management systems and implement relevant capacity development activities including collection, transportation, treatment and appropriate disposal of healthcare waste.
• Linking PHCs to faecal sludge/pit emptying services ensuring that appropriate measures are promoted to facilitate the feasibility of this services on a routine basis.
• Pilot private sector engagement models for sustainable WASH services in PHCs by building on experiences from El Fasher Teaching Hospital where an entrepreneur is already operating WASH facilities.

(c) Facilitate hygiene behaviour change and improved use of WASH facilities.
• Strengthen hygiene behaviour change training programs in PHCs through regular staff training and distribution of relevant communication materials.
• Promote handwashing with soap as a primary hygiene habit for all staff, patients and co-patients in all Healthcare Facilities.

(d) Improve the quality of school WASH services in Healthcare facilities
• Establish systems for routine maintenance of WASH facilities.
• Introduce waste management plans for each Healthcare Facility and facilitate their implementation as part of the standard operating procedures.
• Equip all staff in PHCs with relevant skills for proper management of WASH and waste.
• Facilitate routine inspections to verify adherence of PHCs with minimum standards, among others access for people with disabilities and introduction of Menstrual Hygiene Management.

9.4 WASH in Public Places
Phase I will focus on strengthening the enabling environment for public WASH services through the reviewing local, standardisation of WASH facilities as well as long-term financing arrangements. Hygiene and sanitation promotion campaigns will be carried out with full participation of the general public and businesses. Capacity development activities will be implemented including training of Locality staff, sanitation entrepreneurs. Other activities will focus on piloting partnership models involving private sector players and CBOs.

Phase I activities will be carried out in three prioritised public places including marketplaces and bus terminals. Existing infrastructure will be rehabilitated and where necessary new facilities will be installed and then leased out to interested operators.

(a) Strengthen enabling environment for improved WASH services in public places
• Review and develop policy guidelines for WASH services provision in Public Places regarding design, installation and management arrangements.
• Develop a service package for public WASH services and institute its implementation plan; establish minimum specifications for the required level of service.
• Implement private sector partnerships involving the Locality and sanitation entrepreneurs through PPP models on Public WASH services; facilitate performance monitoring plan for the partnerships.
• Construct/rehabilitate WASH facilities and facilitate their operation by selected women groups in partnership with the Locality; starting with markets and bus terminals.
• Facilitate community-led regulations and policies in public places to complement external policy enforcement from locality health promoters/inspectors.
• Implement capacity development activities through training to Locality staff, sanitation entrepreneurs.

(b) Improve access to sustainable WASH services in public places.
• Facilitate water connections to public places and establish cost recovery arrangement as well as a water demand management plan.
• Rehabilitate/construct WASH facilities in public centres starting with 5 public places in (marketplaces, bus terminals
• Organise women and youth groups to venture into public sanitation business by adopting newly constructed and rehabilitated WASH facilities. Apart from women groups activities will specifically target individuals interested in shifting their livelihood from water vending to sanitation-related business.
• Establish Waste Management system for public places by promoting waste reduction, segregation, efficient mechanisms for garbage collection, treatment and disposal.

(c) Facilitate hygiene behaviour change and improved use of WASH facilities.
• Implement public awareness campaigns for improved hygiene behaviours including handwashing at critical times, household water treatment and safe storage and safe food storage.
• Training WASH committees in public places and facilitate community-led hygiene promotion plans such as collective regulations for enforcing good improved hygiene practices.
• Install handwashing facilities in all strategic locations in public places and establish a plan for sustaining their usage regarding provisions of essential commodities such as soap and water.
• Facilitate routine inspections to verify adherence to improved hygiene practices such as water treatment and safe storage, safe food storage and functionality of handwashing facilities.

(d) Improve the quality of public WASH services
• Train sanitation entrepreneurs and facilitate regular coordination meetings with the Locality to review service improvements plans.
• Establish WASH committees and identify focal points for coordinating sanitation and hygiene promotion activities in all public places.
• Promote the equitable use of WASH services by among other measures ensuring that facilities are usable by both men and women, people with disabilities and children.
• Facilitate performance monitoring plans for all major public places and recognise best performing public places on a routine basis.

9.5 Waste Management
Phase I activities will focus on strengthening the enabling environment for within the municipal jurisdictions and so too within communities, institutions, institutions and public places. That will be achieved by reviewing policy guidelines for service provision, and these will be sourced from Federal and State Governments as well as from the Locality.

Strategic activities:

(a) Strengthen the enabling environment for improved waste management services (solid waste, greywater and faecal sludge).
• Review policy guidelines to facilitate effective solid waste management leading to reduced generation, efficient collection and disposal.
• Undertake a study to (i) identify viable partnership models relevant for the effective and efficient management of waste in El Fasher town, (ii) identify opportunities for waste recycling and, (iii) opportunities for scaling up services including collection/transportation, treatment and disposal.
• Advocate for local orders that will enforce regulations around waste reduction, promotion of environmental cleanliness.
• Develop a strategy for private sector engagement through PPP models on Public WASH services and performance monitoring plan (also incorporating waste management).
• Train local entrepreneurs, youth groups and women groups to practice and demonstrate various products through reuse and recycling of solid waste, e.g. fire briquettes.

(b) Improve solid waste management in residential areas, institutions and public places.
• Establish community-based solid waste management initiatives and link them to the municipal solid waste management system. Carry out a detailed Solid Waste Management study (infrastructure - collection, conveyance, treatment, disposal, recycling, reuse, recovery etc), capital investment, management, tariffs, private sector engagement, etc).
• Train local entrepreneurs, youth groups and women groups to practice and demonstrate various products through reuse and recycling of solid waste, e.g. fire briquettes
• Develop and pilot PPP models that are aimed at facilitating efficient service delivery for collecting, transporting and disposal of waste; including recycling initiatives.
• Provide relevant training to Locality personnel involved in solid waste management.

(c) Improve greywater management in residential areas, institutions and public places.
• Conduct public awareness campaigns on the importance of safe handling, reuse and disposal of grey water management.
• Facilitate household and community-based greywater management as part of the CATS/UCLTS implementation.
• Carry out a study on the economic viability of reusing, recycling, recovering and treating grey water; and provision of policy development support.

(d) Improve faecal sludge management
• Review and develop a strategy for faecal sludge management for El Fasher town.
• Develop business module for PPP on faecal sludge management and performance monitoring plan.
• Raise awareness to citizens with facilitators and mass media on the importance of proper faecal sludge storage and disposal.
• As part of sanitation marketing initiative, link households to service providers and facilitate long-term community-driven service agreement in the form of Public-Community-Private partnership.
PHASE II
Sustaining Open Defecation Free Status
1 July 2019 – 30 June 2023
10. PHASE II: SUSTAINING OPEN DEFEICATION FREE ENVIRONMENT

The focus of this phase will be to sustain the open defecation free environment in the town through ongoing promotional activities while expanding WASH interventions in Schools and Primary Health Centres. Achievements and lessons learned during Phase-I will help refine approaches for scaling-up sanitation coverage. Households will continue to build and upgrade sanitation facilities, and will increasingly avail faecal management services for emptying pits. Public-Private Partnership (PPP) models for solid waste management and WASH in public places will be further scaled-up by attracting more individuals and established enterprises into the sanitation business.

Summary of key results

- Open Defecation-Free (ODF) environment sustained across the town;
- An additional 128,457 people will gain access to improved sanitation;
- 20% of households (118,257 people) practice handwashing with soap at critical times;
- 15% of households (88,692 people) adopt safe water handling and storage practices;
- School children from an additional 110 schools will have model WASH in Schools;
- WASH services expanded to cover some additional 15 health care facilities;
- PPP model for WASH services in public places will be extended to cover an additional 36 public places;
- 20% of the town has access to the proper solid waste management system (118,257);
- 50% of households (295,642 people) access faecal sludge collection services;

10.1 Household Sanitation and Hygiene

Phase II interventions will focus on sustaining ODF status while also supporting emerging households in acquiring sanitation products. Sanitation entrepreneurs will keep supporting households from upgrading their sanitation facilities, acquiring handwashing facilities as well as desludging services.

(a) Sustain open defecation status while promoting the uptake of improved household sanitation.

- Conduct town-wide follow-up activities to support households maintain use of sanitation facilities.
- Ongoing certification and awarding of best-performing communities regarding uptake of improved sanitation.
- Follow-up community involving community leaders, WASH committees, community health promoters and champions.

(b) Promote hygiene behaviour change through a clear communication plan and community engagement

- Review communication plan in line with KAP findings for the First Phase and other social and institutional dynamics. Ensure that all critical hygiene elements are integrated such as handwashing as well as water and food safety.
- Implement a sanitation and hygiene communication activities in collaboration with WASH committees, community health promoters, local media, music groups, drama groups, and comedians.

(e) Facilitate household access to sustainable and affordable sanitation markets.

- Build on the successes of Phase I to accelerate results regarding facilitating local markets for sanitation products for households. This phase will see an increased uptake of improved sanitation facilities across all settlement areas and will also increased use of desludging services.
- Maintain sanitation markets and promote sanitation uptake by new households; facilitate household uptake of improved sanitation along the sanitation ladder to reach at least 80 percent.
- Review policy guidelines, regulations and standard approaches which will have been developed during the first phase.

(f) Strengthen the enabling environment for sustainable improved sanitation and hygiene behaviour change.

- Undertake policy review for community-led sanitation improvement models.
- Continue with capacity development activities at all levels.
- Continue with resource mobilisation plans to ensure adequate staffing levels, increased financial allocations and maintenance of assets.

10.2 WASH in Schools

The emphasis in Phase II will go towards building sustainability models for school WASH services while capitalising on successes and lessons drawn from Phase I. Additional 110 schools will be reached with a complete package of water supply, sanitation improvements, hygiene promotion and strengthening of management.

Strategic activities:
(a) **Strengthen the enabling environment for WASH in school improvement across the town.**

- Review all schools WASH improvement activities and build successes to make necessary improvements. This will include reviewing policy guidelines developed in Phase I and make necessary improvements and adjustments.
- Strengthen sector monitoring through EMIS, school inspection activities and school-based WASH management systems.
- Continue with capacity development activities for WASH in schools targeting teachers, students and SMCs.
- Advocate for the institutionalisation of school WASH package as mandatory for school development.

(b) **Improve access to equitable and sustainable WASH services in schools**

- Improve water supply facilities by rehabilitating/repairing existing water connections and by making new connections where applicable.
- Build and rehabilitate latrines in 110 schools addressing user needs for children of all age groups, children with disabilities and also providing for menstrual hygiene management.
- Promote the establishment of school-based resource mobilisation arrangements for WASH facilities, soap for handwashing, toilet and compound cleaning materials, solid waste collection facilities as well as water storage equipment and drinking water treatment.
- Mobilise and train SMCs to identify thematic areas that will require their regular attention especially resource mobilisation for operating and maintaining WASH facilities, provision of moral support to girls towards MHM issues and children with disabilities.
- Promote environmental sanitation elements including drainage improvements and installation of solid waste handling facilities such as bins and dumping pits facilitated by regular supervised compound cleaning.

(c) **Facilitate behaviour change for improved use of WASH facilities in schools.**

- Undertake systematic school WASH activities by building on demand for improved WASH services through behaviour change activities ahead of hardware interventions.
- Promote water safety management plans in schools by first, facilitating the identification potential and existing risks related to the safety of drinking water supplies.
- Carry out regular monitoring of WASH services including a checklist for the availability and functionality of WASH facilities.
- Facilitate the establishment and roll out of operation and maintenance plans of installed facilities with contribution from PTAs and SMCs.

(d) **Improve the quality WASH services in schools**

- Establish, rejuvenate and train school health clubs in basic school sanitation and hygiene promotion particularly by promoting group handwashing with soap and compound cleaning activities.
- Implement capacity development plan such as training teachers, PTAs, SMCs and school clubs in all essential aspects of WASH in schools.
- Take schools through WASH monitoring activities such as functionality of facilities, observance of school WASH activities, the functionality of health clubs, routine and participatory toilet inspection, community contribution and plans for improvements.
- Take schools through the operationalisation of Operation and Maintenance Plans by establishing service agreements to keep WASH facilities operational at all times.

10.3 WASH in Primary Health Centre

Phase II will see the continuation of Phase I activities, but intensify on capacity development and the establishment of standard operating procedures according to national standards and also best practices for similar environments as stipulated by World Health Organisation. New facilities will be installed, and existing ones will be rehabilitated, and operation and maintenance systems will be established.

Strategic activities:

(e) **Strengthen the enabling environment for improved WASH services in Health Care Facilities.**

- Strengthening local resource mobilisation towards WASH in PHCs through access fees and private sector engagement.
- Review and update policy guidelines as well as operationalise their application.
• Strengthen Monitoring arrangements for WASH services in Healthcare Facilities.
• Maintain capacity development activities for Healthcare Facility personnel concerning WASH and Healthcare Waste Management.
• Rehabilitate/construct WASH facilities at least in 5 PHCs to pilot.
• Intensify waste management system including segregation, collection, treatment and disposal.

(f) **Improve access to sustainable WASH services in PHCs**
- Work in 25 HCs to repair/rehabilitate and construct new WASH facilities to meet existing gaps followed by facilitating their arrangement for regular cleaning and maintenance. Establish backup plans for PHCs to maintain use of improved sanitation facilities in times of natural disaster, lack of water supply and in case of breakdown eventualities.
- Repair/install incinerators and facilitate their operation and maintenance plans to sustain their functionality for a long term.
- Collaborate with the private sector, research and academic institutions to develop and facilitate the flow of affordable sanitation products to PHCs including physical construction, pits emptying and management of sanitation facilities.
- Facilitate the establishment of Operation and Maintenance systems for WASH and Healthcare Waste Management in Healthcare facilities.
- Establish and operationalize Healthcare Waste Management systems and implement relevant capacity development activities including collection, transportation, treatment and appropriate disposal of healthcare waste.

(g) **Facilitate hygiene behaviour change and improved use of WASH facilities.**
- Strengthen hygiene behaviour change training programs in PHCs through regular staff training and distribution of relevant communication materials.
- Promote handwashing with soap as a primary hygiene habit for staff, patients and co-patients in all Healthcare Facilities.

(h) **Improve the quality of school WASH services in Healthcare facilities**
- Establish systems for routine maintenance of WASH facilities.
- Introduce waste management plans for each Healthcare Facility and facilitate their implementation as part of the standard operating procedures.
- Equip all staff in PHCs with relevant skills for proper management of WASH and waste.
- Facilitate routine inspects check adherence of PHCs with minimum standards, among others access for people with disabilities and introduction of Menstrual Hygiene Management.

10.4 **WASH in Public Places**

Phase II will focus on expanding services through increased private sector investments based on various partnership PPP models. A more informed set of guidelines for public WASH services will be developed in consultation with the public, businesses operators and WASH sector partners. A more detailed investment plan will be established to address the aspects of ongoing capacity development and scaling up to town-wide coverage.

Strategic activities:

(a) **Strengthen enabling environment for improved WASH services in public places**
- Strengthen private sector engagement to leverage sustainable resource mobilisation towards WASH in public places.
- Support the infrastructure investments and continue with partnership arrangements for their operation and maintenance.
- Review and update policy guidelines as well as operationalise their application based on lessons and experiences drawn in Phase I. This phase will focus on other public places besides marketplaces and bus terminals.
- Strengthen Monitoring arrangements for WASH services in public places including quality assurance arrangements such as routine health inspections among others.
- Review policy guidelines, regulations and standard approaches which will have been developed during the first phase.

(b) **Improve access to sustainable WASH services in public places.**
- Facilitate water connections to public places and establish cost recovery arrangement as well as a water demand management plan.
• Rehabilitate/construct WASH facilities in public centres starting with 15 public places in (marketplaces, bus terminals
• Organise women and youth groups to venture into public sanitation business by adopting newly constructed and rehabilitated WASH facilities. Apart from women groups activities will specifically target individuals interested in shifting their livelihood from water vending to sanitation-related business.
• Maintain Waste Management system for public places by promoting waste reduction, segregation, efficient mechanisms for garbage collection, treatment and disposal.

(c) Facilitate hygiene behaviour change and improved use of WASH facilities.
• Implement public awareness campaigns for improved hygiene behaviours including handwashing at critical times, household water treatment and safe storage and safe food storage.
• Training WASH committees in public places and facilitate community-led hygiene promotion plans such as collective regulations for enforcing good improved hygiene practices.
• Install handwashing facilities in all strategic locations in public places and establish a plan for sustaining their usage regarding provisions of essential commodities such as soap and water.
• Facilitate routine inspections to verify adherence to improved hygiene practices such as water treatment and safe storage, safe food storage and functionality of handwashing facilities.

(d) Improve the quality of public WASH services
• Train sanitation entrepreneurs and facilitate regular coordination meetings with the Locality to review service improvements plans.
• Establish WASH committees and identify focal points for coordinating sanitation and hygiene promotion activities in all public places.
• Promote the equitable use of WASH services by among other measures ensuring that facilities are usable by both men and women, people with disabilities and children.
• Facilitate performance monitoring plans for all major public places and recognise best performing public places on a routine basis.

10.5 Waste management
Phase II will achieve infrastructure improvements to support waste collection, transportation, treatment and disposal. Solid waste investments include setting up various decentralised points for collecting and sorting solid waste for reuse and recycling. Private sector engagement will be more defined regarding increased capital investment, a more organise community-based solid waste management and large-scale grey water management.

Strategic activities:
(a) Strengthen the enabling environment for improved waste management services (solid waste, greywater and faecal sludge).
• Review Phase I activities and build on lessons drawn to develop advance their effectiveness.
• Rehabilitate/construct collections point with garbage sorting beds to facilitate intermediate garbage collection by private and municipal garbage trucks.
• Review and upgrade PPPs that are aimed at facilitating efficient service delivery for collecting, transporting and disposal of solid waste; including recycling initiatives.
• Construct complementary dumpsites in other parts of the town; ensure that appropriate sites have been identified and fenced for progressive improvements in future.
• Train local entrepreneurs, youth groups and women groups to practice and demonstrate various products through reuse and recycling of solid waste, e.g. fire briquettes

(b) Improve solid waste management in residential areas, public places and institutions:
• Rehabilitate/construct collections point with garbage sorting beds to facilitate intermediate garbage collection by private and municipal garbage trucks.
• Review and upgrade PPPs that are aimed at facilitating efficient service delivery for collecting, transporting and disposal of solid waste; including recycling initiatives.
• Construct complementary dumpsites in other parts of the town; ensure that appropriate sites have been identified and fenced for progressive improvements in future.
• Train local entrepreneurs, youth groups and women groups to practice and demonstrate various products through reuse and recycling of solid waste, e.g. fire briquettes

(c) Improve greywater management in residential areas, public places and institutions.
• Conduct public awareness campaigns on the importance of safe handling, reuse and disposal of grey water management.
• Construct drainage channels in strategic areas across the town to reduce risks associated with flooding.
Facilitate community-based greywater management as part of the CATS/UCLTS implementation.
Partner with University of El Fasher to establish demonstration centres on the viable economic use of grey water at household and institutional level.

(d) **Improve greywater management in residential areas, public places and institutions.**
- Review the environmental impact and suitability of the present sludge disposal site and recommend remedial action.
- Explore and introduce manual pit emptying equipment such as gulpers which can easily be fabricated locally within El Fasher Town.
- Pilot faecal sludge treatment facilities including setting up a mechanism for collection, transportation and disposal - operation and maintenance etc.
PHASE III
WASH Service in Institutions & Public Places
1 July 2023 – 30 June 2027
PHASE III: WASH SERVICES IN INSTITUTIONS AND PUBLIC PLACES

Phase III will priorities long-term priorities including sustaining existing services, expansion of Sanitation services in Institutions and public places and progressive improvements in the level of services, building on lessons learned from Phases I and II. Phase-III will also be an opportunity to prepare for the gradual attainment of 2030 SDG-target on sanitation.

Summary of key results
- Open Defecation-Free (ODF) environment sustained across the town;
- An additional 86,709 people will gain access to improved sanitation;
- 50% of households (327,389 people) practice handwashing with soap at critical times;
- 40% of households (261,911 people) practice safe water handling and storage practices;
- School children from an additional 178 schools will have model WASH in Schools;
- WASH services expanded to cover additional 22 health care facilities;
- PPP model for WASH services in public places covers all (36) public places in the town;
- Community-based solid waste management systems operational in all the 120 neighbourhoods and 2 IDP settlements.
- 70% of households (458,344 people) access faecal sludge collection services.

11.1 Household Sanitation and Hygiene
Phase III will lead to accelerated uptake of improved sanitation and improved hygiene in all aspects including handwashing with soap at critical times, water safety, food safety and other aspects of environmental sanitation. The locality will be supported by sustain sanitation marketing systems that will balance sustainable access to affordable sanitation products and services by all households.

Strategic activities

(a) Strengthen the enabling environment for sustainable improved sanitation and hygiene behaviour change.
- Undertake policy review for community-led sanitation improvement models.
- Continue with capacity development activities at all levels.
- Continue with resource mobilisation plans to ensure adequate staffing levels, increased financial allocations and maintenance of assets.

(b) Sustain open defecation status while promoting the uptake of improved household sanitation.
- Continue with the uptake of improved sanitation and awarding of best-performing communities regarding uptake of improved sanitation.
- Follow-up community involving community leaders, WASH committees, community health promoters and champions.

(c) Promote hygiene behaviour change through a clear communication plan and community engagement
- Review communication plan in line with KAP findings for the Second Phase and other social and institutional dynamics. Ensure that all critical hygiene elements are integrated such as handwashing as well as water and food safety.
- Implement a sanitation and hygiene communication activities in collaboration with WASH committees, community health promoters, local media, music groups, drama groups, and comedians.

(d) Facilitate household access to sustainable and affordable sanitation markets.
- Accelerate results regarding facilitating local markets for sanitation products for households. This phase will see an increased uptake of improved sanitation facilities across all settlement areas and will also increased use of desludging services.
- Maintain sanitation markets and promote sanitation uptake by new households; facilitate household uptake of improved sanitation along the sanitation ladder to reach at least 90 percent.
- Further review of policy guidelines, regulations and standard approaches which will have been developed during the first phase.

11.2 WASH in Schools
Phase III interventions will focus on scaling up WASH services in schools. Additional 178 schools will be targeted while carrying on with monitoring activities in schools reached in Phases I and II. School database will be in full operation, and Education Management Information System maintained at Locality level. This will go alongside improving mechanisms for school-based monitoring and reporting as well facilitation of school-level policies to
advance best practices among children. Management aspects will be scaled up during this phase and schools will be supported in attaining self-reliant status in sourcing essential commodities such as soap for handwashing, paying water bills and routine maintenance of school WASH facilities.

(a) Strengthen the enabling environment for WASH in school improvement across the town.
   • Review all schools WASH improvement activities and build successes to make necessary improvements. This will include reviewing policy guidelines developed in Phase I and II and make necessary improvements and adjustments.
   • Strengthen sector monitoring through EMIS, school inspection activities and school-based WASH management systems.
   • Continue with capacity development activities for WASH in schools targeting teachers, students and SMCs.

(b) Improve access to sustainable WASH services in schools
   • Improve water supply facilities by rehabilitating/repairing existing water connections and by making new connections where applicable.
   • Build and rehabilitate latrines in 178 schools to address WASH needs in the rest of schools ensuring that additional facilities are installed to address gaps in required levels of service.
   • Provide necessary facilities for menstrual hygiene management in mixed and girls schools providing customised lockable rooms to support menstrual hygiene management (MHC).
   • Promote the establishment of school-based resource mobilisation arrangements for WASH facilities, soap for handwashing, toilet and compound cleaning materials, solid waste collection facilities as well as water storage equipment and drinking water treatment.
   • Mobilise and train SMCs to identify thematic areas that will require their regular attention especially resource mobilisation for operating and maintaining WASH facilities, provision of moral support to girls towards MHC issues and children with disabilities.
   • Promote environmental sanitation elements including drainage improvements and installation of solid waste handling facilities such as bins and dumping pits facilitated by regular supervised compound cleaning.
   • Install fixed handwashing facilities at strategic locations within the school compound to facilitate routine handwashing by students, i.e. next toilet facilities; alongside this, facilitate mechanisms for the continued supply of soap for handwashing.

(c) Facilitate behaviour change for improved use of WASH facilities in schools
   • Undertake systematic school WASH activities by building on demand for improved WASH services through behaviour change activities ahead of hardware interventions.
   • Promote water safety management plans in schools by first, facilitating the identification potential and existing risks related to the safety of drinking water supplies.
   • Carry out regular monitoring of WASH services including a checklist for the availability and functionality of WASH facilities; ensuring that separate toilets are available for boys and girls as well for male and female teachers and ensuring that WASH facilities are safe to use by all students and that aspects of privacy are addressed.
   • Facilitate the establishment and roll out of operation and maintenance plans of installed facilities with contribution from PTAs and SMCs. This again will include ensuring that schools maintain a stock of soap to promote the maintenance of improved hygiene behaviours among children.

(e) Improve the quality WASH services in schools
   • Establish, rejuvenate and train school health clubs in basic school sanitation and hygiene promotion particularly by promoting group handwashing with soap and compound cleaning activities.
   • Implement capacity development plan such as training teachers, PTAs, SMCs and school clubs in all essential aspects of WASH in schools.
   • Take schools through WASH monitoring activities such as functionality of facilities, observance of school WASH activities, the functionality of health clubs, routine and participatory toilet inspection, community contribution and plans for improvements.
   • Take schools through the operationalisation of Operation and Maintenance Plans by establishing service agreements to keep WASH facilities operational at all times.
11.3 WASH in Primary Health Centres
Phase III activities will essentially build on Phase II activities but the emphasis on sustainability aspects such as stabilising financial resource mobilisation, capacity development, standardisation of service and establishment of WASH package for Healthcare Facilities.

(d) **Strengthen the enabling environment for improved WASH services in Health Care Facilities.**
(e) Establish a monitoring system for WASH in PHCs, establish a database and carry out management capacities. Facilitate the establishment of WASH sustainability plans. **Improve access to sustainable WASH services in PHCs**

- Rehabilitate and construct new water supply connections, hand-washing facilities in health facilities.
- Collaborate with the private sector, research and academic institutions to develop and facilitate the flow of affordable sanitation products to PHCs including physical construction, pits emptying and management of sanitation facilities.
- Facilitate the establishment of Operation and Maintenance systems for WASH and Healthcare Waste Management in Healthcare facilities.
- Establish and operationalise Healthcare Waste Management systems and implement relevant capacity development activities including collection, transportation, treatment and appropriate disposal of healthcare waste.

(f) **Facilitate hygiene behaviour change and improved use of WASH facilities.**

- Strengthen hygiene behaviour change training programs in PHCs through regular staff training and distribution of relevant communication materials.
- Promote handwashing with soap as a primary hygiene habit for all staff, patients and co-patients in all Healthcare Facilities.

(g) **Improve the quality of school WASH services in Healthcare facilities**

- Establish systems for routine maintenance of WASH facilities.
- Introduce waste management plans for each Healthcare Facility and facilitate their implementation as part of the standard operating procedures.
- Equip all staff in PHCs with relevant skills for proper management of WASH and waste.
- Facilitate routine inspect checks adherence of PHCs with minimum standards, among others access for people with disabilities and introduction of Menstrual Hygiene Management.

11.4 WASH in Public Places
Phase III will focus on accelerating service provision by building on successes and addressing shortfalls drawn from Phases I and III. The Locality will work towards meeting 100 percentage service coverage while building self-sustaining systems. New investments will continue in line with attractive incentives to sanitation entrepreneurs. Partnership reviews will be intensified to build a well-featured springboard into the SDG fulfilment phase between 2027 and 2030. The Locality will further establish proper financial mobilisation models. Policy reviews and capacity development arrangements will be ongoing.

**Strategic Activities**

(e) **Strengthen enabling environment for improved WASH services in public places**

- Review and update policy guidelines as well as operationalise their application based on lessons and experiences drawn in Phases I and II. This phase will focus on other public places besides marketplaces and bus terminals.
- Implement resource mobilisation arrangements for WASH and Healthcare Waste Management services in PHCs are fully operational.
- Review and update policy guidelines as well as operationalise their application.
- Strengthen Monitoring arrangements for WASH services in Healthcare Facilities.

(f) **Improve access to sustainable WASH services in public places.**

- Facilitate water connections to public places and establish cost recovery arrangement as well as a water demand management plan.
- Rehabilitate/construct WASH facilities in public centres starting with 16 public places in (marketplaces, bus terminals
- Organise women and youth groups to venture into public sanitation business by adopting newly constructed and rehabilitated WASH facilities. Apart from women groups activities will specifically target individuals interested in shifting their livelihood from water vending to sanitation-related business.
• Maintain Waste Management system for public places by promoting waste reduction, segregation, efficient mechanisms for garbage collection, treatment and disposal.

**(h) Facilitate hygiene behaviour change and improved use of WASH facilities.**

• Implement public awareness campaigns for improved hygiene behaviours including handwashing at critical times, household water treatment and safe storage and safe food storage.
• Training WASH committees in public places and facilitate community-led hygiene promotion plans such as collective regulations for enforcing good improved hygiene practices.
• Install handwashing facilities in all strategic locations in public places and establish a plan for sustaining their usage regarding provisions of essential commodities such as soap and water.
• Facilitate routine inspections to verify adherence to improved hygiene practices such as water treatment and safe storage, safe food storage and functionality of handwashing facilities.

**(g) Improve the quality of public WASH services**

• Train sanitation entrepreneurs and facilitate regular coordination meetings with the Locality to review service improvements plans.
• Establish WASH committees and identify focal points for coordinating sanitation and hygiene promotion activities in all public places.
• Promote the equitable use of WASH services by among other measures ensuring that facilities are usable by both men and women, people with disabilities and children.
• Facilitate performance monitoring plans for all major public places and recognise best performing public places on a routine basis.

11.5 Waste Management

Phase III will continue with Phase III activities but will now focus on accelerating results towards 100 service coverage for all waste management aspects. New local orders will be in place, and a more vibrant private sector will be in place to deliver the ultimate quality service. At the same time, more infrastructure investment will be carried out across the town. This will include identifying another and

**Action plan**

**(a) Strengthen the enabling environment for improved waste management services (solid waste, greywater and faecal sludge).**

• Review policy guidelines to facilitate effective solid waste management leading to reduced generation, efficient collection and disposal.
• Scale-up the implementation of piloted waste management initiatives.
• Maintain a collaboration involving UNAMID, UNEP, UNICEF and other UN agencies about joint technical support to the Locality in waste and environmental management.
• Advocate for local orders to incorporate all aspects of a reduced waste generation, and adherence to proper disposal.
• Continue with capacity development programs to prepare the Locality, communities and sanitation entrepreneurs to scale-up piloted waste management initiatives.

**(b) Expand solid waste management services by facilitating efficient processes**

• Rehabilitate/construct collections point with garbage sorting beds to facilitate intermediate garbage collection by private and municipal garbage trucks.
• Review and upgrade PPPs that are aimed at facilitating efficient service delivery for collecting, transporting and disposal of solid waste; including recycling initiatives.
• Construct complementary dumpsites in other parts of the town; ensure that appropriate sites have been identified and fenced for progressive improvements in future.
• Train local entrepreneurs, youth groups and women groups to practice and demonstrate various products through reuse and recycling of solid waste, e.g. fire briquettes

**(c) Expand faecal sludge management services in residential areas, public places and institutions**

• Maintain and monitoring partnerships for faecal sludge management involving vacuum truck owners and those operating manual pit emptying equipment.
• Construct faecal sludge treatment facilities including setting up a mechanism for collection, transportation and disposal - operation and maintenance etc.

**(c) Expand greywater management in residential areas, public places and institutions.**

• Construct drainage channels in strategic areas across the town to reduce risks associated with flooding.
• Facilitate community-based greywater management as part of the CATS/UCLTS implementation.
• Partner with University of El Fasher to establish demonstration centres on the viable economic use of grey water at household and institutional level.
The following approaches will guide the implementation of the ESHMP.

12.1 Particiapatory approaches
The implementation of the master plan will be founded on consultative processes at all levels to influence informed and collective decision making. The state and the Locality will ensure active stakeholder participation while also ensuring that staff are fully brought on board in all stages of the master plan implementation. At the community level, this will include taking the residents through a dialogue that will influence collective situation analysis, action planning, executing and monitoring of environmental sanitation and hygiene improvements.

12.2 Broad-based engagement
The implementation process of the master plan will involve all institutions, social groups, all sectors and all residents regardless of gender, age and social status. Sustainable services for environmental sanitation and hygiene will largely depend on collective efforts within communities, institutions and public places.

12.3 Community-led
The master plan will strengthen communities to prepare themselves towards leading all processes about analysis and acting towards improving their situation. The implementation of all community-focused activities will ensure consistent engagement of communities at the lowest level in generating an original set of actions to deal with their own identified challenges.

12.4 Action learning
Capacity development activities will be delivered by strengthening operational processes, providing support towards resource mobilisation and by developing human capital for sustainable services delivery. The approach will be to ensure efficient internalisation of systematic learning by building on local knowledge through formal training sessions, mentoring, coaching and evaluating progress.
This master plan will be implemented based on six principles which will promote effective planning and implementation. These principles include equity, accountability, sustainability and resilient development.

13.1 Equity and inclusion

The implementation of the master plan will demonstrate and promote equitable and inclusive considerations by addressing disparities and marginalisation to ensure that all citizens of the town are equally engaged and reached with services. In this regard, special attention will be given to gender aspects, people with disabilities, children and households with limited means of accessing sanitation and hygiene products.

Equal opportunities for gender-balanced participation in decision-making and equal access to benefits will be promoted. Monitoring plan for the master plan will involve collecting gender disaggregated data among other parameters. Other aspects include promoting Menstrual Hygiene Management, women and girls participation in WASH management structures as well as targeting women for sanitation business opportunities. Additionally, institutional sanitation improvements will adopt gender-segregated latrines and ensure that they are equipped with menstrual hygiene facilities.

People with disabilities will be engaged in all aspects of specific interventions that will lead to meeting their specific needs. Among others, WASH facilities will be provided with proper access to all forms of disabilities, and this will include wheelchair access and handrails insider toilets. Size of drop-holes will be kept to the minimum and handwashing facilities kept accessible to young children. The ESHMP will target all settlements areas of El Fasher town to address the gaps that exist among the residential areas, i.e. urban, peri-urban and IDPs. Additionally, special attention will be given to all households to acquire affordable and innovating sanitation products by establishing sanitation markets.

13.2 Accountability

The accountability plan will be built on functional relationship between Policy Makers (state, locality and administration unit), the Service Provider (NGOs, CBOs, vendors, contractors, etc.) and Service Users (beneficiary communities, institutions, households, etc.). Being the primary implementer of the master plan the Locality assumes the role of the Regulator responsible for operationalising the accountability triangle. With respect to this role the Locality will make sure that user/community needs are met and that the state and federal Government are lobbied for policy review in relevant areas. The Locality will also ensure that service providers (private sector players) are accountable to users and that they are complying with regulations and quality standards.

The accountability plan will require all parties attached to this master plan to conform to their duly prescribed roles and responsibilities about the delivery of environmental sanitation and hygiene services. At the same time, they will express their demands or expectations from other parties. Policy makers will make sure that suitable environment is maintained for efficient delivery of services. They will expect other parties to comply with policies and regulations while also delivering quality services accordingly.

Communities will create demand for efficient and sustainable flow of services and sanitation products. They will also be expected to use and pay for products and service while complying with local orders and national policies. Service providers will provide acceptable sanitation and hygiene services as well as products to users. At the same time, they will demand for responsible customers or clients while demanding for maximum protection from policy makers against risks to their areas of operation. They will expect to be involved in policy dialogue that relate to their areas of service delivery while also aiming at extending their customer base.
13.3 Sustainability
As the implementation of the master plan progresses, the locality and communities will be challenged to sustain improved sanitation and hygiene behaviours, established systems, local policies and hardware investments. To a large extent, the locality is likely to face sustainability problems along the implementation period of the master plan. Given this, sustainability plans will be facilitated by communities and institutions to safeguard results by ensuring a continued flow of essential resources, building on local ownership, promoting supportive social norms, capacity development and resilience. These elements and encapsulated into four key strategic aspects that the ESHMP will be promoted to achieved sustainability; and they include institutional, technical, social and environmental aspects.

On the institutional front, the master will strengthen various structures and policies to facilitate effective governance of environmental sanitation and behaviour change. This also includes advocating for State Government to support the Locality in mobilising adequate resources such as maintaining staffing levels, assets and finances. Technically, the ESHMP will promote durable solutions especially in locations where WASH infrastructure will be subsidised such as schools, PHCs and public places. This will also apply to waste management facilities but more importantly will focus on promoting innovating approaches for sustainable sanitation among others. For instance, the ESHMP will be exploring alternative solutions for pit emptying services while also dealing with affordable technologies for household sanitation.

On social aspects, the ESHMP will engage communities through homogeneous groups across the town for them to collectively come up with actions plans which will lead to open defecation free environment. Furthermore, the ESHMP will work on social norms that need to be addressed while building on that are positive. Environmental aspects will take various dimensions; first, the ESHMP will promote the use of toilets thereby avoiding polluting the environment especially water resources and more importantly leading to faecal-oral transmission. Second, proper waste management of waste such as solid waste, faecal sludge and grey will ensure a healthier environment. Third, community preparedness to the effects of climate change as floods and droughts will support the prolonged use of WASH use and supportive behaviours.

13.4 Climate change adaptation
El Fasher, like most parts of the country and the rest of the world, will be forced to face increasing challenges due to climate change which has a direct impact on the sustainability of water resources as well as sanitation and hygiene behaviour change. More related challenges include flash floods and longer drought periods. Based on these long and medium-term challenges, the plan has provided for increased awareness and preparedness. In this respect, communities and local authorities will be taken through practical sessions to integrates measures that will reduce the impacts related to floods and drought.

For instance, El Fasher residents are more familiar with floods which have damaged water infrastructure before and have also led to water contamination. The residents and Locality officials will be made to appreciate that floods could among other effects damage sanitation infrastructure and could also dispense human excreta to wider community settlement areas. Further planning will dwell on addressing waste security risks due to droughts and their impacts on hygiene uptake, loss of time to fetch water from distant water sources and more significantly putting waterborne sanitation into disuse.
14. PLANNING CONSIDERATIONS

14.1 Rapid population growth

Population growth is an essential element to consider in accommodating future needs for sanitation and hygiene improvement. The master plan will show the need for the State Government and the Locality to start planning for maintaining staffing levels while also seeking ways of maximising waste management. As per standard, all WASH interventions work on projected populations to meet the lifetime of the intended project. This plan is developed based on a 10-year population projection with the current population of 466,051 and projected population of 654,777 by 2027. This population growth will come with its proportionate increase of service demand such as public health extension services, increased demand for extension health services and that for solid waste collection.

Public health extension services in this regard refer to the availability of health promoters who are responsible for facilitating health promotion, sanitation inspections and community engagement among other roles. The Government standard requires one health promoter serving 1000 people, but with 120 health promoters against a population of 466,051, the Locality service level comes to “one health promoter to 3,883 people”. In practice, this figure rises to 5,000 people because the locality experiences high staff turnover and sometimes absenteeism. Figure 17 to the left shows that while the locality has 120 health promoters the actual required level of service is 466 health promoters. This helps to explain some of the operational constraints that the Locality is currently facing in promoting sanitation and hygiene in the town.

![Figure 17: Effect of population growth on sanitation services](image)

El Fasher town currently generates about 300 tons of solid waste per day, and this will increase to 355 tons come 2024 and 400 tons per day by 2027. If no service improvements are affected, the current 34% garbage collection rate will keep decreasing while garbage production rate keeps increasing. The town has various spots of informal dumpsites which are supposed to be cleared with an increased service coverage. According to residents and Locality officials, informal dumpsites are hotspots for mosquito and fly breeding, and these are enough reasons to discourage their existence. Furthermore, evidence has shown that this dumpsite creates an environment for open defecation especially for children of Under-5 Years of age. All these elements relate to reasons why solid waste management had to be incorporated into this master plan.

Current and ongoing initiatives in sanitation and hygiene such as handwashing campaigns, community mobilisation and engagement activities were considered in the master plan. The Darfur Youth Initiative is one of such. It is a very active body that draws together the like-minded youth across the town to participate in voluntary activities in promoting environmental sanitation and already helped to mobilise communities in 120 neighbourhoods, ten sectors and two IDP settlements towards the town-wide campaign for improved environmental sanitation and hygiene. By partnering with this initiative, the master plan will ensure quick results as far as community engagement and community action planning is concerned.

14.2 Transition to recovery and development.

For the past 13 years, the town has been accommodating IDPs in Abu Shouk and Al Salam settlements which have effectively become part of the town service area. The IDPs have been a centre of attention for WASH services improvements although most of the actions were in the form of emergency response. The provision of sanitation facilities has been supply-oriented and subsidised, with very minimal labour contribution from beneficiary households.

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33 Based on the per-capita garbage generation of 0.6Kg per person per day which is the acceptable standard for Sudan.
To date, nine percent of households in the camps defecate in the open; shared latrines have collapsed and posed safety risk especially to children and women. Photos in Figure 18 below show dilapidated toilet structures; the one to the left has been levelled down to an open defecation site while the one to the right has makeshift superstructure which does not even safeguard user privacy. Given this, the ESHMP has proposed activities that will in the short-term facilitate community-led initiatives to rehabilitate some of the recoverable toilets facilities while also promoting household facilities. As a long-term solution, the ESHMP communities will be linked to sanitation markets that will help to supply affordable sanitation products.

*Figure 18: A defecation site (left) and a shared latrine (right) in Abu Shouk IDP camp*
Specific Objective: By 2027, El Fasher Locality has a strengthened institutional capacity to plan, implement and improved WASH practices and related services.

Capacity development will involve the strengthening of institutional capabilities to mobilise financial, human and material resources to effectively and efficiently achieve improved sanitation and hygiene services. This include capacity to streamline processes and procedures to create enabling an environment for empowering staff to execute their duly assigned roles and responsibilities. Institutionally it means adopting appropriate policies, methods and procedures for organisational effectiveness and good governance. This, in turn, is aimed at improving the cost-effective delivery of public goods and services, thereby broadening inclusiveness. Capacity building will be a gradual and iterative process, designed to meet service delivery demands in the short and medium terms during the execution phases of the master plan.

Another critical consideration under capacity development is the fact that the master plan and introduced a lot of new concepts surrounding the adopted strategies, approaches and guiding principles. Besides, all thematic areas of the master plan contain specific technical areas which will have to be translated into local context regarding culture, level of operation and nature of targeted communities. These training activities will be tailored to specific target groups including government officials (locality and state), NGOs staff, community groups and other WASH sector stakeholders. Upon getting trained, participants in these courses will internalise these elements for immediate application in their day to day decision making. They will be designed to go along the mainstream activities, phased to avoid unnecessary in delays to the ESHMP delivery.

Facilitators for these activities will be experts in their respective areas and will be drawn through Red-R under their existing cooperate partnership agreement with UNICEF. For some of the technical areas, a couple of volunteer specialists have been identified in Canada and Australia who are willing to come and provide their experiences by transferring relevant skills especially solid waste recycling and other innovative aspects of environmental sanitation. While technical areas have already been incorporated under each of the thematic areas, this section will focus on broader capacity development issues as highlighted below.

<table>
<thead>
<tr>
<th>Phases I, II and III (2017-2027)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Equity-based approaches community WASH planning, implementation and monitoring.</strong> Addressing issues to do with town-wide planning for environmental sanitation by ensuring that interventions benefit everyone regardless of gender, age, physical abilities as well as social and economic status. Taking participants through processes for stakeholder engagement and liaison skills.</td>
</tr>
<tr>
<td>• <strong>CATS facilitation and community action planning.</strong> Equipping participants with necessary skills of building local ownership as one of the major sustainability factors in community development. This will include streamlining consultation processes, information gathering and facilitation of community-based action planning for sanitation and hygiene.</td>
</tr>
<tr>
<td>• <strong>Business approaches hygiene promotion and environmental sanitation improvement.</strong> Taking stakeholders through steps for identifying viable solutions from beyond traditional approaches. Among others, introducing business models for private sector engagement, building partnerships, force field assessment and management of the market environment. This course challenge participants to innovate local solutions through research through networking and analysis of user experience.</td>
</tr>
<tr>
<td>• <strong>Planning and integration of cross-cutting issues:</strong> including Gender, b) Equity and Inclusion, c) Accountability, d) Sustainability, e) Climate change adaptation and resilience. These issues will be delivered through standalone sessions for each one of them ensuring that all sessions entail the development of actionable steps for immediate adoption of the implementation process of the master plan.</td>
</tr>
<tr>
<td>• <strong>Planning, Budgeting, Monitoring and evaluation</strong> – This will equip Localy officials with skills for participatory planning, monitoring and evaluation. This will also incorporate the aspects of information management and analysis for decision-making and measurement of results. This course will address issues to do with accountability for results and resources through participatory processes and streamlined sharing of information.</td>
</tr>
</tbody>
</table>
South-South cooperation\textsuperscript{34} is a broad framework of collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, intraregional or interregional basis. Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts. Recent developments in South-South cooperation have taken the form of increased volume of South-South trade, South-South flows of foreign direct investment, movements towards regional integration, technology transfers, sharing of solutions and experts, and other forms of exchanges. United Nations Office for South-South Cooperation (UNOSSC)

\textsuperscript{34} South-South cooperation is a broad framework of collaboration among countries of the South in the political, economic, social, cultural, environmental and technical domains. Involving two or more developing countries, it can take place on a bilateral, regional, intraregional or interregional basis. Developing countries share knowledge, skills, expertise and resources to meet their development goals through concerted efforts. Recent developments in South-South cooperation have taken the form of increased volume of South-South trade, South-South flows of foreign direct investment, movements towards regional integration, technology transfers, sharing of solutions and experts, and other forms of exchanges. United Nations Office for South-South Cooperation (UNOSSC)
The implementation model of the master plan considers the Locality to be the owner and implementer of the master plan, receiving technical support from the SMOH and other state-level line ministries and departments, Academic institutions, NGOs, private sector institutions, UN Agencies and various donor institutions. Department of Locality Affairs will be consulted on a regular basis on institutional guidance and administrative capacity support. Listed below is a detailed summary implementation arrangements for the master plan whose details are provided in Annex 3.

<table>
<thead>
<tr>
<th>Mode of implementation</th>
<th>Partnerships and contracts involved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Household sanitation and Hygiene</strong></td>
<td>SMOH will provide technical and policy support related to public health and health promotion aspects. The Locality will facilitate community-based activities such as CATS, hygiene promotion, community dialogue and will maintain the database. Media institutions will disseminate hygiene and sanitation messages, and this will include music as well as dram groups. Consultants will undertake research studies. The private sector will provide sanitation products and required services. NGOs will provide overall capacity development and will also lead to CATS implementation. Local NGOs will work directly in communities and facilitate routine monitoring through household inspections. Faith-based leaders and community leaders will influence behaviour change and support community organisation.</td>
</tr>
<tr>
<td><strong>WASH in Schools</strong></td>
<td>SMOE will provide technical and policy support including maintenance of Education Management Information System. SMOH will provide public health guidance and will be an active contributor to regulatory guidance. Locality through Education Department will maintain database, coordinate monitoring activities and influence school-based WASH activities. NGOs will facilitate WASH in Schools activities including capacity development. The private sector will provide sanitation products and services related to construction faecal sludge collection and sludge collection. School teachers will champion school-based WASH activities in direct collaboration with Parent Teacher Associations (PTA) and School Management Committees. Consultants will undertake research studies.</td>
</tr>
<tr>
<td><strong>WASH in Primary Health Centres</strong></td>
<td>SMOH will provide technical and policy support related to public health and health promotion aspects. Locality will establish and maintain a database for PHCs. Locality health promoters will regularly visit PHCs to disseminate health messages. The private sector will provide sanitation products and services related to construction faecal sludge collection and sludge collection. NGOs will provide technical support and will facilitate the development of Standard Operating Procedures. PHC staff will champion the implementation of standard procedures, enforce guidelines and monitoring. Staff will also manage healthcare waste and oversee the cleaning and maintenance of WASH facilities.</td>
</tr>
<tr>
<td><strong>WASH in Public Places</strong></td>
<td>SMOH will provide technical and policy support related to public health and health promotion aspects. NGOs will mobilize market committees and take them through local planning sessions. Locality will provide waste management services, conduct regular inspections and maintain the database. The Locality will also invest in WASH infrastructure and release them to private operators. The private sector will invest and operate WASH facilities. Market committees will implement basis sanitation and hygiene promotion activities with guidance from NGOs and the Locality. Consultants will undertake research studies.</td>
</tr>
</tbody>
</table>
| **Waste Management** | Locali...
of solid waste initiatives. The private sector will collect, transport and dump waste at designated sites; will purchase solid waste and recycling of waste.
17. **FINANCING MECHANISMS AND BUDGET CONSIDERATIONS**

### 17.1 Investment cost of the master plan

The total funding required for the master plan during 2017-2027 is about US$ 14 million, of which US$ 556,160 is for preparatory activities & household sanitation & hygiene; US$9,212,600 for WASH in Institutions (Schools, PHCs, Public places); US$ 1,354,500 for waste management and the remaining US$1,000,000 for Institutional Strengthening, Learning, Monitoring and Evaluation. Phase-I funding is estimated at US$1,569,830, Phase-II at US$5,826,167 and Phase III is US$6,606,369. As detailed budget is provided in Annex 2 and the summary is outlined here below:

<table>
<thead>
<tr>
<th>No</th>
<th>Activity</th>
<th>Phase I Funding Sources</th>
<th>Funding Phase II</th>
<th>Phase III</th>
<th>Amount (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>START-UP ACTIVITIES FOR THE ESHMP</td>
<td>DFID - 7,600</td>
<td>UNICEF 95,800</td>
<td>85,800</td>
<td>7,600</td>
</tr>
<tr>
<td>B</td>
<td>HOUSEHOLD SANITATION AND HYGIENE</td>
<td>326,960</td>
<td>40,000</td>
<td>187,000</td>
<td>548,560</td>
</tr>
<tr>
<td>C</td>
<td>WASH IN SCHOOLS</td>
<td>154,200</td>
<td>187,000</td>
<td>2,838,000</td>
<td>7,431,200</td>
</tr>
<tr>
<td>D</td>
<td>WASH IN HEALTH FACILITIES</td>
<td>16,000</td>
<td>117,400</td>
<td>569,000</td>
<td>995,400</td>
</tr>
<tr>
<td>E</td>
<td>WASH IN PUBLIC PLACES</td>
<td>162,000</td>
<td>422,000</td>
<td>202,000</td>
<td>786,000</td>
</tr>
<tr>
<td>F</td>
<td>WASTE MANAGEMENT</td>
<td>-</td>
<td>148,000</td>
<td>719,500</td>
<td>1,354,500</td>
</tr>
<tr>
<td>G</td>
<td>INSTITUTIONAL STRENGTHENING AND LEARNING MONITORING &amp; EVALUATION</td>
<td>88,000</td>
<td>112,000</td>
<td>400,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td></td>
<td>TOTALS (A+B+C+D+E+F+G)</td>
<td>747,160</td>
<td>612,000</td>
<td>5,044,300</td>
<td>12,123,260</td>
</tr>
<tr>
<td></td>
<td>plus 10% contingency</td>
<td>74,716</td>
<td>61,200</td>
<td>504,430</td>
<td>1,212,326</td>
</tr>
<tr>
<td></td>
<td>Sub-TOTAL</td>
<td>821,876</td>
<td>673,200</td>
<td>5,548,730</td>
<td>13,335,586</td>
</tr>
<tr>
<td></td>
<td>plus 5% inflation</td>
<td>41,094</td>
<td>33,660</td>
<td>277,437</td>
<td>666,780</td>
</tr>
<tr>
<td></td>
<td>TOTALS</td>
<td>862,970</td>
<td>706,860</td>
<td>5,826,167</td>
<td>14,002,366</td>
</tr>
</tbody>
</table>

### 17.2 Financing models and considerations

This budget constitutes the investment plan that will draw its resources from various sources such as Government and its development partners such as NGOs, UN Agencies, donors, private sector institutions and communities. The State Government and the Locality will make a substantial budget contribution by maintaining the availability of human resources and meeting operational costs towards this master plan. At the national level, the government of Sudan has sanitation and hygiene financing arrangement that has been outlined in Figure 19 below.
The following priority actions have been suggested to guide the financing arrangements of the master plan.

(a) Through the Urban Water for Darfur Project, DFID is the primary funding source for Phase I interventions with a sum of US$836,761. However, since the total budget for Phase I is US$1,487,751, UNICEF has identified some funds to complement the budget while yet more additional funds will be sourced through partnerships with NGOs and Private sector institutions.

(b) Household financing of sanitation facilities as part of the community-led processes that will be facilitated through CATS and creation of affordable sanitation markets. CATS/UCLTS activities will generate an accelerated sanitation uptake.

(c) Financing of institutional sanitation through private businesses building on what El Tasher Teaching Hospital has already done. The hospital has engaged a private business to Build, Operate and will later transfer WASH facilities which are currently most preferred by hospital clients. This model will integrate the strengthening of institutional capacity for the Locality to adopt viable public-private-partnership (PPP) models that will maximise WASH benefits at a long term.

(d) Public financing towards sanitation improvements through direct investments, facilitation and regulation.

(e) Leverage sustainable mobilisation of financial resources towards capacity investments and services delivery through private sector engagement. This includes strengthening the institutional capacity of the Locality in adopting viable public-private-partnership (PPP) models that will maximise WASH benefits at a long term. Depending on many legal and institutional factors the Locality would facilitate this leasing land to interested entrepreneurs to Build, Operate and later Transfer WASH facilities; or by allowing businesses to lend and operate existing facilities.

(f) Reach out to development partners to support the master plan activities especially for Phase I and Phase II activities by building on the successes and lessons in the current DFID funding arrangement.

(g) Federal and North Darfur State governments are instrumental to consider identifying or increasing funding to the Locality especially towards capital investments. For instance, the Locality has been challenged to raise US$7.4 towards ‘WASH in Schools’ component.
18. MONITORING, EVALUATION, LEARNING AND REPORTING

18.1 Reporting
The locality and the state will adopt a reporting system that will promote transparency, accountability and sound decision-making from the community up to the locality level. Physical and financial reports will be generated quarterly, annually and at the end of each phase. These reports will be based on ESHM-Years rather than calendar years; thus, running from July through June the following year. Reports will originate from CFUs up to locality level with many collations done at neighbourhood and sector levels.

18.2 Monitoring
The ESHMP will be part of the existing WASH sector monitoring at national, state levels and locality level. All health impact indicators will be collected from 21 monitoring centres that contribute to the monthly health monitoring data under the Health Management Information System (HMIS) of the State Ministry of Health. School WASH data will be tracked through Education Management Information System (EMIS). All monitoring actions will generate relevant data for the ESHMP reporting in line with Logframe Indicators. (Annex 1 is the Logical Framework).

Monitoring mechanisms will be further discussed and strengthened during the initial stages of the ESHMP implementation. Initial processes will include formulating plans for the sectors, neighbourhoods and the two IDP settlements. At locality level, the Environmental Health Director will lead the overall delivery and monitoring of the ESHMP and will maintain links with SMOH and WASH sector coordinators from the Environmental Health Department. A computer-based monitoring database will be established at locality level to facilitate easy information management and dissemination. To achieve this the locality and SMOH will need to acquire computers for the environmental health office.

The monitoring process will include comprehensive data cleaning processes since most of the system will be new to the locality and the state. Data will be generated at CFU level which will include schools, Healthcare Facilities, Public Places and a cluster of households. Progress reports from 120 neighbourhoods and the two IDP settlements will be collated and synchronised into sector reports. These reports will finally be consolidated into locality level reports. On quarterly basis monitoring, information will be shared with the state level WASH sector monitoring focal points.

ESHMP will establish customised monitoring systems in communities, schools, PHCs and public places; and this will include capturing and updating progress on simple, verifiable indicators. Community leaders and all community-based functional structures will be reviewed during initial community engagement meetings. The purpose is to build a well-informed community foundation for owning and sustaining ESH interventions while eliminating the occurrences of conflicting roles and duplication of efforts.

Community-level monitoring will include building participatory monitoring system where relevant ESH functional committees and facilitation teams will collect data on verifiable indicators not only for reporting purposes but primarily for generating the course of local actions. By adopting the action monitoring processes at the local level, the ESHMP aims to internalise local ownership and sustainability. However, simple monitoring and reporting tools will be instituted across the monitoring lines to standardise the monitoring processes. For instance, simple indicators will be used by communities such as the functioning of water supply, tariff generation, sanitation coverage and use, diarrhoeal disease and hand-washing at critical times, household water storage and treatment and operation and maintenance.

18.3 Monitoring roles and reporting
Monitoring and reporting will be an integral responsibility of all key players involved in the direct implementation, and this will be done at all levels of decision making such as state, locality, and community level. The objective will be to keep track health improvement outcomes and well as improvements in service delivery regarding quality, efficiency and effectiveness. Output information will be collected on a regular basis and will be illustrated as a result of the direct implementation of activities. Individual performance indicators will be accordingly assigned to implementing partners, and they will form part of their reporting requirements. The table below outlines monitoring levels and their associated responsible stakeholders and activities.
### Monitoring Level | Key participants | Monitoring activities
--- | --- | ---
**State Level**
SMOH, SMOE, development partners, Private institutions, SMSA, MPPPU, UN Agencies, Locality
Part of the ongoing state-level Sector Coordination meetings. Annual and Bi-Annual meetings will also involve Federal Ministry of Health, Consolidation of HMIS and EMIS data for reporting.

**Locality Level**
Locality, SMOH, SMOE, NGOs, Private institutions, Sector ESH Groups, development partners, WASH coordination teams
Quarterly review meetings involving all implementing partners. Joint field visits to talk to people in communities, schools, PHCs and public places.

**Sector Level**
Team of sector facilitators, Locality Facilitators, Sector leaders
Monthly progress review and planning. Displaying sector progress on a public information board.

**Neighbourhood Level**
Team of facilitators, Public committees, Women groups, WASH committees, Neighbourhood leaders
Monthly progress review and planning. Displaying neighbourhood’s progress on a public information board. Public cleaning campaigns to gain the trophy of the quarter.

**Community Facilitation Unit**
Households, Block leaders, community health promoters
Action planning and routine household visits to check progress on sanitation and hygiene practice. Communal cleaning campaigns.

**Blocks and Households**
Households, block leaders
Block level plans for ODF, accessing sanitation products, solid waste management, water safety management.

### 18.4 Monitoring indicators
Please refer to the Logical Framework Matrix (Annex 1).

### 18.5 Review and evaluation
Mid-year and annual reviews will include active participation from the state level institutions and WASH sector partners. Annual reviews will include KAP, and field situation review followed by formal review workshops which will deliberate on-field evidence regarding progress made, feedback from all relevant players such as communities and service users at all levels. These reviews will discuss project progress, compliance, performance, impact; risks; strategies and budget allocations and make recommendations for improvements. Lessons learnt, achievements, as well as innovations made, will be documented and shared with all stakeholders at various levels, for appropriate action. Additionally, End-of Phase evaluations will be undertaken to examine the progress achieved so far and built upon the following phase. Finally, and end Ten-Year ESHMP period will be undertaken and

### 18.6 Quality assurance
At the onset of the ESHMP implementation, the locality will develop and facilitate a quality assurance process to ensure the effective delivery of interventions. Quality controls will be put in place for community engagement, capacity development and implementation the rest of the activities. Among other checks, this will include reviewing and introducing appropriate standard policy guidelines, manuals and specifications wherever necessary. Furthermore, the locality will have to capitalise on the availability of a pool of WASH experts drawn from international organisations, UN agencies and the state to support during the initial stages. Again, short-term consultants would be called to independently evaluate the master plan interventions and make recommendations on areas calling for improvements.

### 18.7 Learning
The monitoring process will accommodate much reflective learning which will be facilitated by action learning process illustrated within the capacity development framework. Monitoring activities will build upon successes and will also address bottlenecks through technical and innovative means concerning local context and universal moral considerations.
18.8 Recognising best-performing communities

To complement community efforts and achievements, a trophy which will be hosted by the Minister of Health and the Locality Commissioner will be introduced to be competed for on quarterly basis to keep the neighbourhood’s active all year round. The trophy will be based on progress attained regarding highest number of households that have stopped open defecation, neighbourhoods with the cleanest surrounding and neighbourhoods with best innovative communal projects on improving environmental sanitation and hygiene.

The certification criteria will be duly established by the Locality through its community health inspection standards. On a biannual basis, this competition will be done at Sector level by checking sectors with the heights number of best performing neighbourhoods. This trophy will be hosted again by the Minister of Health, the Locality Commissioner and the State Governor. Special ceremonies will be organised to mark these important events and will include VIP speeches, youth displays, music shows, and will also include ‘Sanitation Fairs’ where the private sector will display their innovative products to a wider range of customers.

18.9 Community-based service accountability

Community-based service accountability focuses on communities as the focal point for the success of the master plan.

- First, communities will demand better WASH services, and this will be provided by the locality, private sector and in some cases NGOs. Better services will include equitable and adequate for community needs and affordable.
- Second, communities will require skills to plan, implement and monitor their locally developed initiatives. In some cases, they will require partial skills just to advance what they are already doing such as building new models of toilets or better water of keeping their neighbourhood clean.
- Third, communities will be required to be organised to achieve their goals such as eliminate faecal-oral transmission, improve WASH services in nearby schools and achieve sustainable solid waste services.
- Fourth, communities will require information to drive towards desirable behaviour change such hand washing at critical times, stopping open defecation, ensuring water safety through proper storage and treatment.

All players who will be involved in community-level activities will be accountable to meet community demands; these include the Locality, NGO staff and private sector institutions. At the onset, as part of the CATS facilitation, communities will be taken through a process of knowing their respective linkages with various institutions for their respective areas of contribution. Figure 20 illustrates the community service accountability model.

18.10 Mobile data collection

Mobile data collection will be promoted for the ESHMP to achieve real-time data analysis and decision making. The locality has already been introduced to Kobo Tool Box and ODK Data Kit platforms which are run for free of charge. WASH assessments that SMOH coordinated partly applied mobile data collection from public places and basic schools across the town. A team of 20 health promoters and teachers was trained on how to collect data using their phones from 38 public places and 150 basic schools. The process has been seen feasible and has generated a lot of enthusiasm and interest for the locality to consider integrating within its monitoring system.
However, this technology-based monitoring will be explored further to ascertain its feasibility regarding sustainability and effectiveness taking into consideration of the current priorities that the ESHMP will look into consideration of the current priorities that the ESHMP will look into.

### 18.11 Linking the ESHMP with sustainable development goals

<table>
<thead>
<tr>
<th>ESHMP Result Area</th>
<th>SDG</th>
<th>SDG Target</th>
<th>SDG Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Sanitation and Hygiene</td>
<td>6.b.</td>
<td>Support and strengthen the participation of local communities in improving water and sanitation management</td>
<td>6.b.1</td>
</tr>
<tr>
<td></td>
<td>3.9</td>
<td>By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.</td>
<td>3.9.2</td>
</tr>
<tr>
<td>‘WASH in Schools’</td>
<td>4.a.</td>
<td>Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all</td>
<td>4.a.1</td>
</tr>
<tr>
<td>WASH in Health Facilities</td>
<td>3.9</td>
<td>By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</td>
<td>3.9.2</td>
</tr>
<tr>
<td>WASH in Public Places</td>
<td>3.9</td>
<td>By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</td>
<td>3.9.2</td>
</tr>
</tbody>
</table>

**Waste Management**

<table>
<thead>
<tr>
<th>ESHMP Result Area</th>
<th>SDG</th>
<th>SDG Target</th>
<th>SDG Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid waste management</td>
<td>11.6</td>
<td>By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</td>
<td>11.6.1</td>
</tr>
<tr>
<td>Grey water management</td>
<td>6.3</td>
<td>By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</td>
<td>6.3.1</td>
</tr>
<tr>
<td>Faecal Sludge management</td>
<td>6.3</td>
<td>By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</td>
<td>6.3.1</td>
</tr>
</tbody>
</table>
Implementation of the ESHMP requires strong leadership, as well as a good partnership, integration, and coordination between stakeholders. Accordingly, the proposed institutional arrangement is shown below links El Fasher’s Locality to SMOH, private-sector institutions, and civil society organisations (CSOs). The table below outlines key players at national, state, local, and community levels, and also describes their prospective roles and responsibilities.

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| **State Sanitation Standing Committee** | - Providing overall strategic leadership for the delivery of integrated sanitation services in all targeted communities and institutions.  
- Assuring leadership regarding resource mobilisation by marketing the ESHMP to potential development partners.  
- Facilitating political leadership regarding policy changes to ensure equitable, inclusive, and sustainable service delivery. |
| **State Ministry of Health** | - Providing technical guidance relating to public health in line with national/state strategies, policies, and standards.  
- Providing technical assistance to the Locality in the form of training, coaching, and mentoring.  
- Supporting the local authority in obtaining funds to implement the ESHMP. |
| **State Ministry of Education** | - Providing technical guidance for WASH in schools in a manner that accords with national/state strategies, policies, and standards.  
- Providing technical assistance to the local-level education administration during the execution of ESHMP.  
- Maintaining an education management information system (EMIS) and ensuring that WASH indicators are included. |
| **State Ministry of Physical Planning and Public Utilities** | - Providing policy and technical guidance on designs, installation, and the certification of construction works.  
- Supporting the development of site plans, as well as inspecting and supervising construction works. |
| **State Ministry of Social Affairs** | - Providing guidance in identifying and training vulnerable people in the targeted community and providing advice on relevant strategies for addressing their needs.  
- Providing policy guidelines concerning equitable service delivery to all social groups in targeted communities. |
| **El Fasher Locality and El Fasher Administrative Unit.** | - Regularly updating the present sanitation situation of the town;  
- Analysing sanitation and hygiene issues and strategies in an attempt to overcome existing barriers.  
- Liaising with SMOH regarding capacity-development programs, quality assurance, and monitoring.  
- Leading the implementation of the ESHMP activities and coordinating all sanitation stakeholders so that they implement the same ESHMP.  
- Searching for funding to implement the activities proposed in the ESHMP.  
- Conducting smooth implementation and monitoring by organising review meetings and follow-up activities.  
- Monitoring all activities under implementation and ensuring regular, proper progress tracking and updating of work programs.  
- Coordinating with SMOH regarding the sharing of necessary information and decisions.  
- Holding regular coordination meetings with all sanitation stakeholders in town.  
- Organising stakeholder meetings for planning, programming, and appraising the performance of sector activities.  
- Promoting innovative and creative activities, as appropriate. |
| **University of El Fasher** | - Undertaking research studies on sanitation, solid-waste management, and faecal-sludge management.  
- Supporting university students regarding performing public-awareness events such as hygiene- and sanitation-awareness campaigns and publicising household grey-water management methods.  
- Providing training sessions for capacity building. |
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| **UNICEF**                          | - Supporting the government and private partners in the scheduled KAP studies and surveys required to track indicators and monitor knowledge, attitude, and practices relating to WASH.  
  - Providing technical support to SMOH and the Locality through the implementation of the ESHMP.  
  - Providing management support for ESHMP implementation.  
  - Developing partnerships with NGOs, private businesses, universities, and CBOs, while also assisting in DFID-funded activities under Phase I of ESHMP implementation.  
  - Supporting the strengthening of institutional capacities required for the implementation of the ESHMP.                                                                                       |
| **International and National NGOs** | - Facilitating community-engagement sessions designed to prepare community-action plans.  
  - Providing relevant training to community leaders, CBOs, youth groups, women groups, etc.  
  - Contributing to local-level monitoring through collective sector-activity meetings.  
  - Contributing to research and learning by facilitating sessions that gather lessons and experiences that can be used to assist in the implementation of the ESHM.  
  - Implementing duly agreed activities and programs outlined in partnership agreements with UNICEF.                                                                                                                   |
| **Private sector**                  | - Undertaking capital investments for the introduction of WASH facilities in public places and any other institutions, according to demand.  
  - Implementing discrete portions of the ESHMP, such as the construction of WASH facilities, UCLTS and hygiene promotion, toilet emptying, a collection of solid waste, recycling, etc.  
  - Providing sanitation products and services to client populations.  
  - Sharing lessons learned and success stories with all stakeholders.  
  - Liaising with the local authority regarding ongoing and completed activities to avoid the duplication of efforts.  
  - Providing training sessions for capacity building.  
  - Supporting their communities’ efforts to become ODF by subsidising theatre groups, radio programmes, posters and ads, along with other forms of community facilitation.                                                                                   |
| **CBOs, communities (sector leaders, neighbourhood leaders, block leaders, households, PTAs/SMC)** | - Leading UCLTS initiatives to facilitate behaviour changes, auto-construct latrines, and properly dispose of solid and liquid waste.  
  - Paying for water and sanitation services, as required, to achieve financial sustainability.  
  - Organising public cleaning campaigns across the neighbourhoods and ensuring that these events also include sessions for hygiene promotion.  
  - Identifying households that require special assistance during the implementation process and implementing the particular level of support required.  
  - Leading the mapping process designed to identify local suppliers and service providers of sanitation products, such as masons, plumbers, and garbage collectors.                                                |
| **Private entrepreneurs**           | - Providing affordable sanitation services and products in targeted community settlements and institutions.  
  - Contributing towards innovative solutions for sustainable environmental sanitation and hygiene services.  
  - Participating in WASH-sector stakeholders’ forums and contributing accordingly.                                                                                                                                                                                                             |
| **Media, households, drama groups, music groups** | - Disseminating WASH messages accordingly.  
  - Supporting the development and implementation of a communication plan and ensuring that relevant messages are passed to the targeted audience.  
  - Contributing to WASH-sector dialogue to ensure sustainable service delivery.                                                                                                                                                                                                             |
Annex 1:
ESHMP Logical Framework

Annex 2:
ESHMP Budget and Work plan

Annex 3:
ESHMP Implementation Modality

Annex 4:
Situation Report

Annex 5:
Stakeholder Analysis

Annex 6:
Faecal Sludge Flow Diagram for El Fasher Town

Annex 7:
Process for Master Plan Development

Annex 8:
Analysis of Sanitation Technology Options

Annex 9:
List of Community in El Fasher Town

Annex 10:
List of Public Places

Annex 11:
State Sanitation Declaration 2014