

# Developing Water Visitor Centres



# Addis Ababa Water and Sewerage Authority (AAWSA) Visitor Centre



## Location:

Located just beneath one of Addis Ababa Water and Sewerage Authority (AAWSA) surface water reservoirs called Legedadi.

## Contact info:

**Training manager:**  
Shitaye Dessalegn  
(+251911-15 87  
89/+251116620940)

**Center manager:** Dejene  
Belachew  
(+251913090342)



*Developed under the Source to tap and Back project (S2T&B) in 2019*



# Main goal and purposes

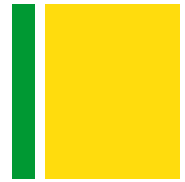


The AAWSA Visitor Centre is open for all centre, which provides:

- a visual tour from source to tap and back
- fun and games
- scale models
- and the opportunity roam from AAWSA's water treatment plant, dam and reservoir

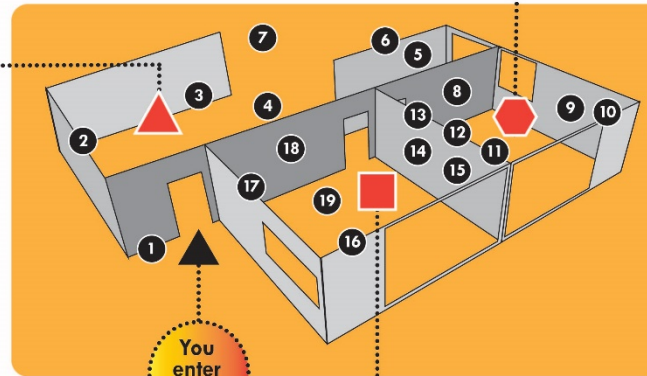


# Elements in the centre



## Entrance Hall

- 1 Representation of 1 cubic meter of water
- 2 Ethiopia Welcome
- 3 3D model of the Legedadi WTP
- 4 AAWSA wall
- 5 Picture Gallery
- 6 Water Facts
- 7 WASH posters and stickers



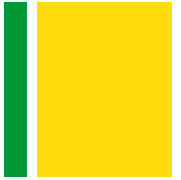
## Room-1

- 8 Water Cycle
- 9 Water Use wall
- 10 Drinking Water Facts
- 11 Soil tubes
- 12 TV screen
- 13 Legedadi Water Treatment

## Room-2

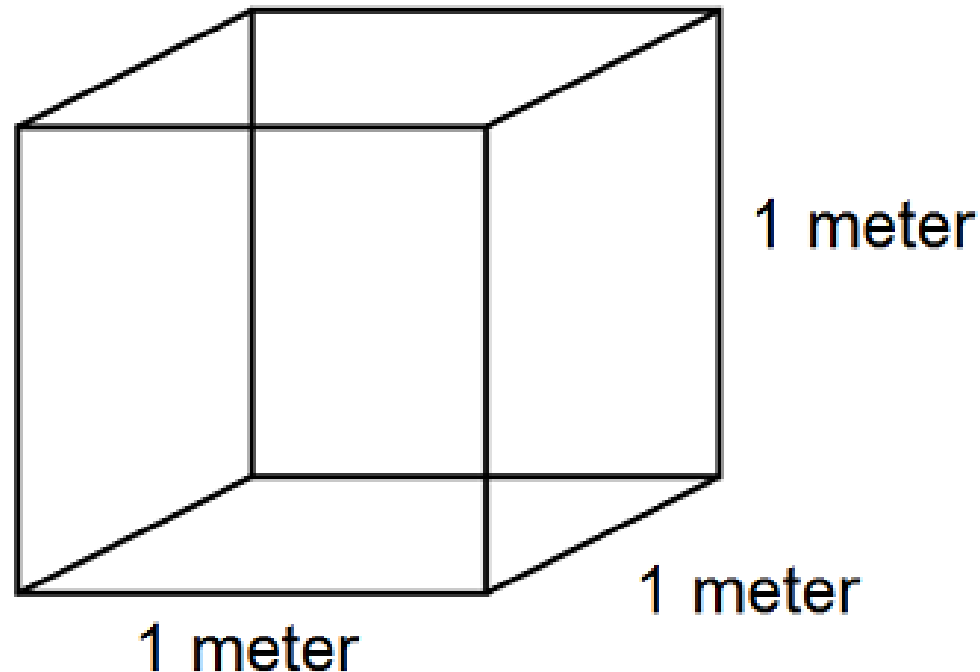
- 14 Kaliti Wastewater Treatment Plant infographic (WWTP)
- 15 TV screen
- 16 F-diagram
- 17 Wastewater wall
- 18 Awash Falls
- 17 Game Play

# Entrance Hall Elements



## 1. Representation of 1 cubic meter of water

Here visitors can see how much 1 cubic meter of water is! This will help visitors to have a sense of this unit which is used in the majority of the posters and infographics of the AAWSA visitor center.



# Entrance Hall Elements



## 2. Ethiopia Welcome Map

A painted outline of Ethiopia indicating the most important locations in terms of geography, water sources and nature, covering the majority of the wall. Where needed, additional explanation is be given through small plastic signs. For example: the map highlights the simian mountains and additional information is given on the flora and fauna of that area as well as the importance of the park

### Key take away messages

- Knowledge on the main geographical points, the main water sources and the most important nature parts in Ethiopia
- Ethiopia is rich in flora and fauna



# Entrance Hall Elements



## 3. 3D model of the Legedadi WTP

A 3D model of the catchment area including the AAWSA treatment plant. People can walk around this model, read texts and push buttons that are linked with lights in the model to corresponding elements. Also, different spoken water related stories of users in the catchment area are added.

### Key take away messages

- Geographical sense of the catchment
- Difference between upstream and downstream
- People have different water sources
- People use water for different purposes
- Interests of people can be conflicting
- Water use upstream can affect water availability/ quality downstream



# Entrance Hall Elements

## 4. AAWSA wall

A wall dedicated to AAWSA experience in the past and present. Messages are expressed through video and poster presentations. The [video](#) includes a word of welcome by AAWSA (Current Director and Voice over) and explanation on the treatment plant itself. The visuals show the history of AAWSA and includes the history of AAWSA, its general activities as well as numbers numbers on production.

### Key take away messages

- What is happening on the site (water collection, treatment and transport)
- Numbers on production (how much liter is treated, what are the costs, how many people are served)
- History of the treatment plant

**Addis Ababa Water and Sewerage Authority**

**TIMELINE**

- 1963: Construction of the first water supply system in Addis Ababa.
- 1967: Construction of the first sewerage system in Addis Ababa.
- 2003: Construction of the first water treatment plant in Addis Ababa.
- 2005: Construction of the first sewerage treatment plant in Addis Ababa.
- 2010: Construction of the first water supply system in Addis Ababa.
- 2015: Construction of the first sewerage system in Addis Ababa.
- 2020: Construction of the first water supply system in Addis Ababa.
- 2025: Construction of the first sewerage system in Addis Ababa.

**GENERAL ACTIVITIES**

- Dam construction
- Water Treatment
- Groundwater abstraction
- Water distribution to the users
- Sewerage system
- Sewage trucks
- Sewage Treatment

**MAP**

Geomatics view, Enlarged view, Discharge

**FACTS**

**WATER SUPPLY**

- 100% of the population is served
- 100% of the population is served
- 100% of the population is served

**SEWERAGE TREATMENT**

- 100% of the population is served
- 100% of the population is served
- 100% of the population is served

**CONTACT**

- www.aawsa.gov.et
- AAWSA
- @Addis Ababa Water and Sewerage



# Entrance Hall Elements



## 5. Picture Gallery

Ten pictures with people and scenery of Ethiopia. These pictures illustrate the diversity and connectivity between water, nature and people in Ethiopia.

### Key take away messages

- Awareness on sweet water availability (global, national)
- Awareness on importance of water for our own body
- Understanding that it takes more water to produce food than the water content it holds (water footprint)
- Awareness on water use at household level
- Awareness on vulnerability of water in terms of quantity and quality



# Entrance Hall Elements



## 6. Water Facts

Six different posters with information about all aspects of water:

1. Water on Earth
2. Water Use Water Footprint
3. Water at Household Level
4. Water & the Human Body
5. Access to Safe Water

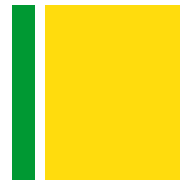
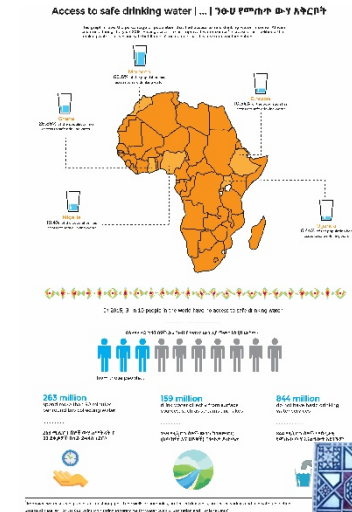
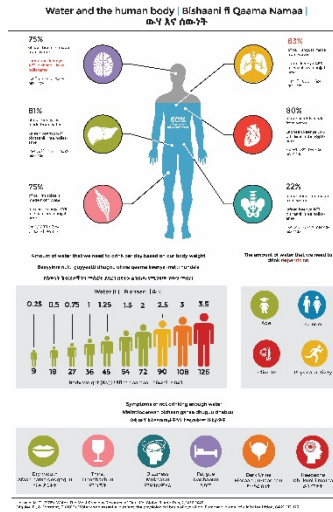
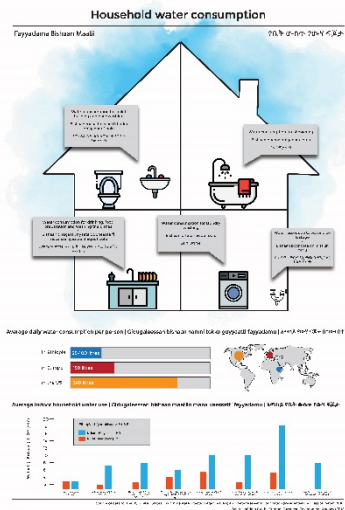
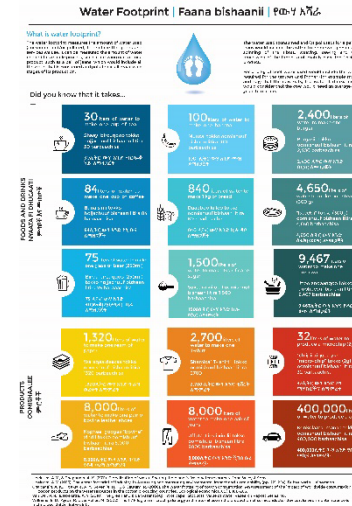
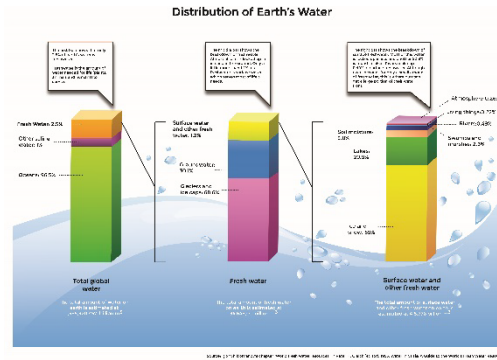
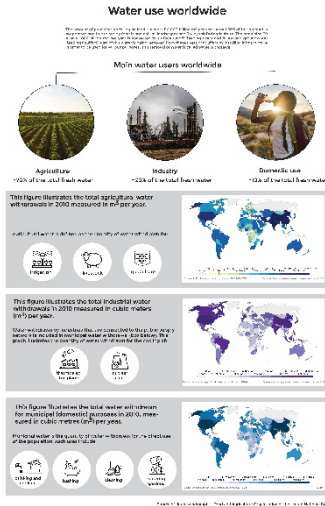
### Key take away messages

- Awareness on sweet water availability (global, national)
- Awareness on importance of water for our own body
- Understanding that it takes more water to produce food than the water content it holds (water footprint)
- Awareness on water use at household level
- Awareness on vulnerability of water in terms of quantity and quality

**More  
pictures in  
the next  
slide**

# Entrance Hall Elements

## 6. Water Facts



# Entrance Hall Elements



## 7. WASH posters and stickers

The inside of the doors on the toilets are good places to share information on sanitation messages in terms of hygiene practices as well as water saving messages.

### Key take away messages

- How much water is flushed away
- How to wash hands and how that contributes to hygiene
- What does healthy feces look like
- How does poo look like from different animals



# Room -1



## 8. Water Cycle

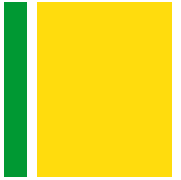
This painting of the water cycle shows you the continuous journey of water: from evaporating from the sea, to clouds in the sky and as rain on our land and back through rivers to our lakes and the sea. Visitors can see the surroundings of Legedadi and how water flows. This movement of water is vital to life as it supports plants, animals and us human beings.

### Key take away messages

- Visitors know how the water moves and that it is a continuous process



# Room -1



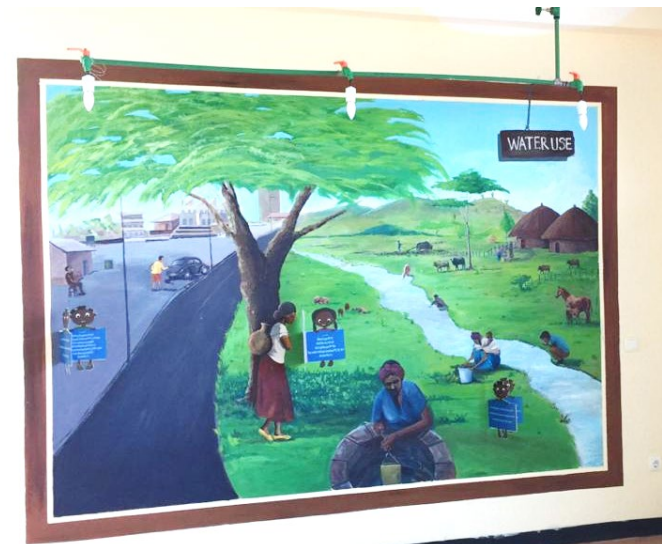
## 9. Water Use Wall

On this wall visitors can see the wide variety of (drinking) water sources and (drinking) water collection methods. Water quality is different for every source and sometimes these may run dry, with no water left. The time we spend on collecting water is also different as some spend hours every day to carry and some just simply turn the tap.

**FUN PLAY:** Visitors can read the questions on the blue windows and try to answer them. Inside the window, answers are provided on the possible sources of water and on the reasons affects its quality.

### Key take away messages

- In the catchment there is a variety of (drinking) water collection methods e.g. tankers, public stands, surface water, vendors, groundwater pumped up through different methods.
- Different sources are of different quality
- A sense of time spent on fetching water for the different sources
- The effect of AAWSA's interventions on water source and quality
- Know what are potential sources of pollution





# Room -1



## 11. Soil tubes

Different tubes containing water and soil (soils that are also found in Ethiopia). The soils include from the most coarse sand to least coarse and fine particles of clay.

**FUN PLAY:** Visitors can turn the tubes around to see how much time it takes for water to pass through each different soil type. In fact, the bigger the soil particles, the less time is needed for the water to pass through.

### Key take away messages

- Soil type affects infiltration rate
- Coarse soils are more prone to erosion
- Soil cover reduce the infiltration speed and also reduce erosion



# Room -1

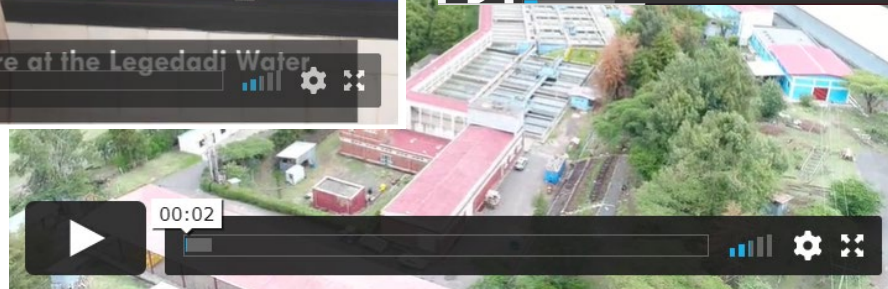
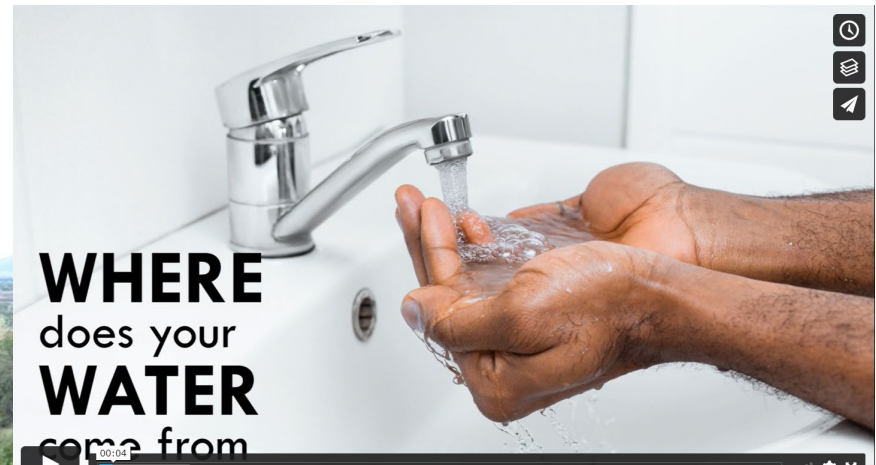


## 12. TV screen

A screen showing several educational videos related to drinking water. Visitors can sit on the bench or stand behind it to watch the videos.

### Videos:

1. [Legedadi Water Treatment Plant](#)
2. [Where does your water come from?](#)
3. Groundwater movement and soils

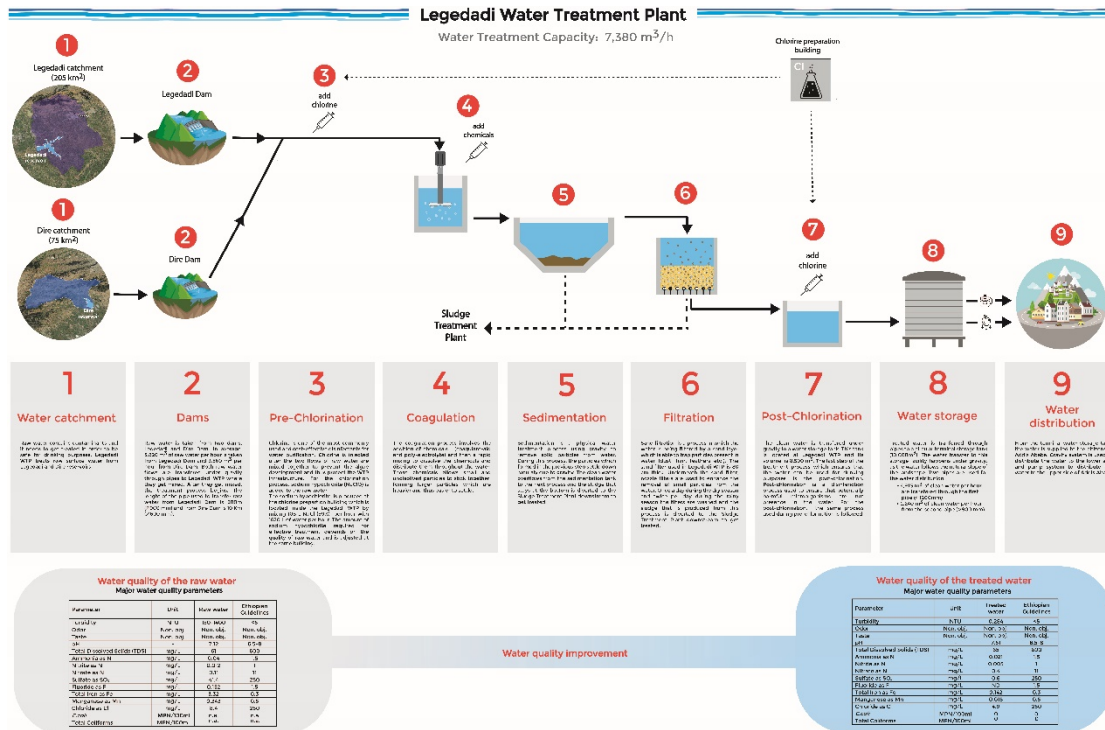


# Room -1



## 13. Legedadi Water Treatment Plant infographic

This poster illustrates the treatment steps that are made in the Legedadi WTP to treat the water and make it safe for drinking purposes. Water treatment is important because the raw water coming from Legedadi and Dire reservoirs contains contaminants that might affect people's health. Visitors can read the infographic and the text under each step carefully to understand how the Legedadi WTP works.

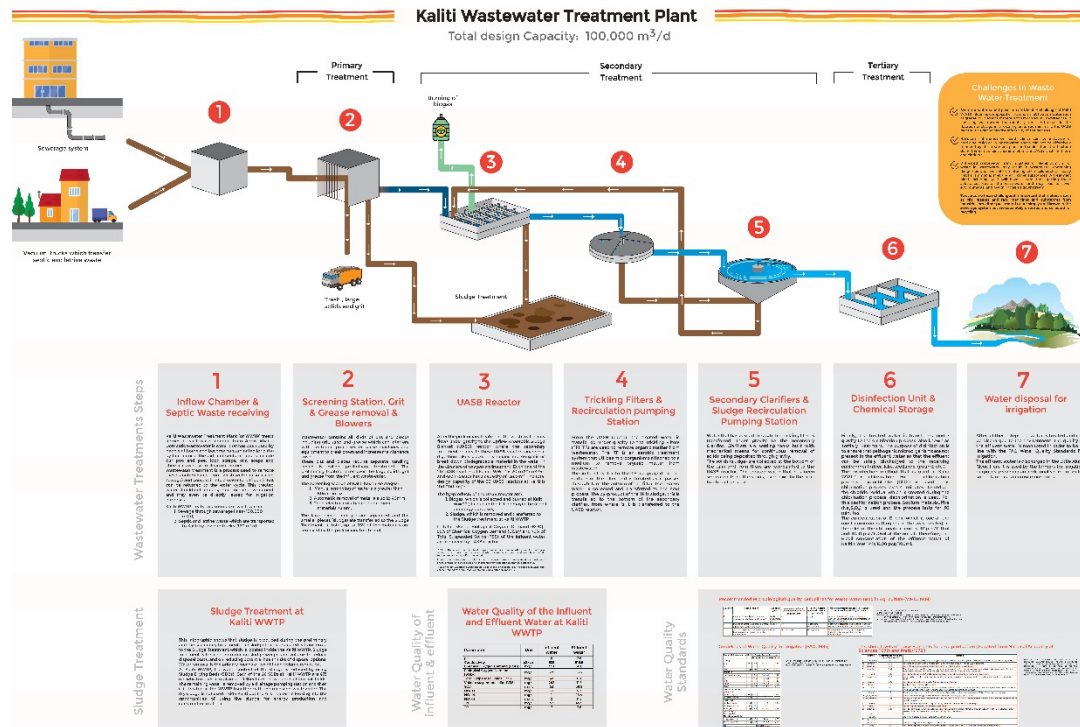


# Room -2



## 14. Kaliti Wastewater Treatment Plant (WWTP)

The water we use needs to be treated. This poster illustrates the treatment steps followed in Kaliti WWTP to treat the wastewater so it can be discharged to the environment or be used for irrigation purposes. Visitors are welcome to read up on the purpose of each treatment step as well and find water quality numbers (particle concentrations) of the water that flows in and out of Kaliti WWTP.



# Room -2



## 15. TV screen

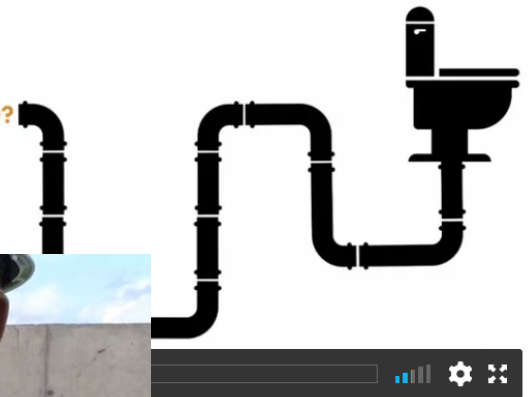
A screen showing several educational videos related to wastewater water. Visitors can sit on the bench or stand behind it to watch the videos.

### Videos:

1. [Kaliti Wastewater Treatment Plant](#)
2. [Where does your poo go?](#)



WHERE DOES YOUR POOP GO?



# Room -2

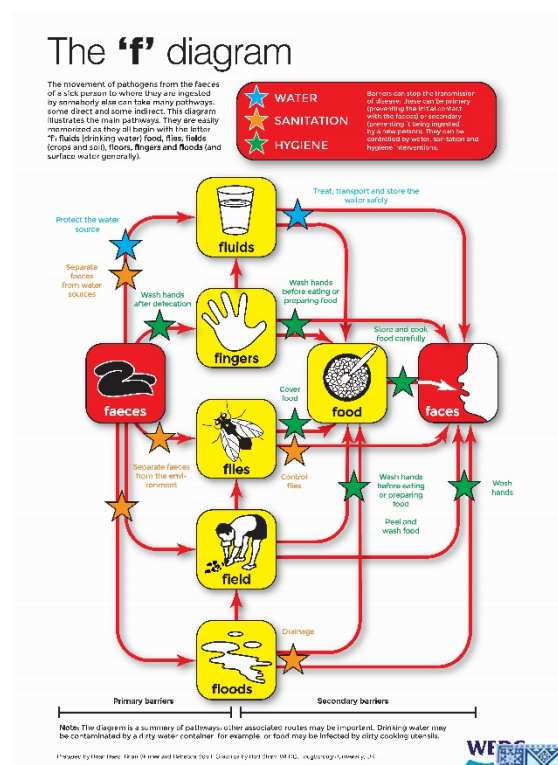


## 16. F-diagram

The F-diagram illustrates the main pathways (or movement) of pathogens that make people sick. From faeces to faces, if you directly or indirectly come in contact with faeces or other people that are sick, you may become ill as well. Visitors can take a careful look at the F-diagram with the aim to memorize the main pathways and protect yourself from diseases.

### Key take away messages

- Flies can contaminate food
- Flies like poo > we should poo in toilets.
- Open defecation is a health risk
- Hygiene is important to keep flies away
- Toilets should be cleaned
- Clean hands are important to keep food safe
- Hands need to be washed with water and soap
- Hands need to be washed after using the toilet and before eating
- Clean drinking water is important for my health
- Water can be treated by filtering or boiling
- Safe water sources contribute to safe drinking water
- A safe water source can be protected by fencing
- Sharing above knowledge among friends is important and contributes to safe water and food



# Room -2



## 17. Wastewater Wall

On this wall visitors can see all the types of wastes that can end up in the water in cities or in rural areas.

**FUN PLAY:** Visitors can read the questions on the blue windows and try to answer them. Inside the windows, answers are provided on the sources of water pollution and on the ways to prevent them.

### Key take away messages

- What is waste (solid, liquid)
- Main waste producers in the area
- A sense of waste production in numbers (for addis for example or per household per year)
- What good practices exist (e.g. clean industries)



# Room -2

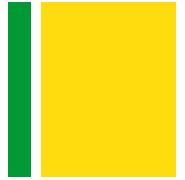


## 18. Awash waterfalls

A painting of Awash falls. Awash Falls is a series of waterfalls in a gorge in the Awash National Park in the east of Ethiopia, at about 200 kilometers from Addis Ababa.



# Room -2

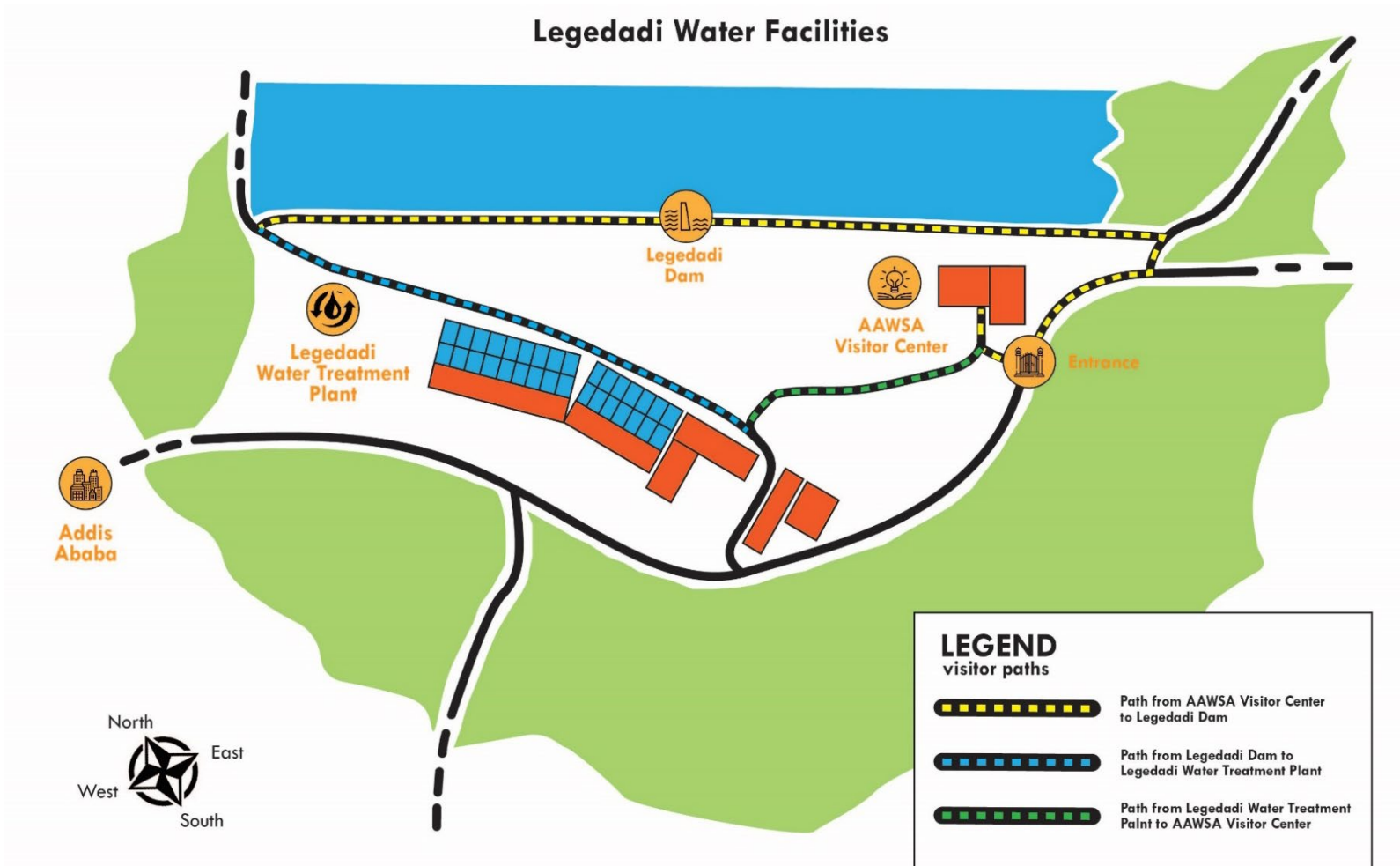


## 18. Game play

Here visitors can play 2 different games with their friends. One game is called “4’s” and the other, the “Fly over game”. Both games help visitors understand how to improve their hygiene and that of others, and what they need to do to keep their water and food clean. AAWSA visitor center staff, visitor’s guide or their teachers can explain them how to play the games.



# Also, guided walking tours are provided...



# Other ideas...



# Deyang Wetland Park



*meta*  
**META**

# Deyang Wetland Park

## **A wetland park integrated with groundwater recharge and water supply in Deyang City**

In this park, an artificial recharge water supply system is developed. This system benefits from experiences of the Amsterdam Water Supply Dune system, the main source of drinking water for the city of Amsterdam.

Endorsed by both mayors of Amsterdam and Deyang, a Sino-Dutch cooperation established this unique site which combines a recreational wetland park, artificial groundwater recharge, drinking water production, public education, and scientific research.





Up-scaling site

Mianyuan River

Pilot site

北部中心 [中央商务区CBD]  
 拓展完善城市功能  
 南部中心 [中央创新区CID]  
 提升创新服务功能  
 老城区  
 优化发展











# Housestyle development

The style matches the park features: it is simple, modern, and contains round shapes. Icons were created for each park component (e.g. sedimentation basin, water extraction). These icons are shown on the displays in the park at the relative components.



# Visitor centre



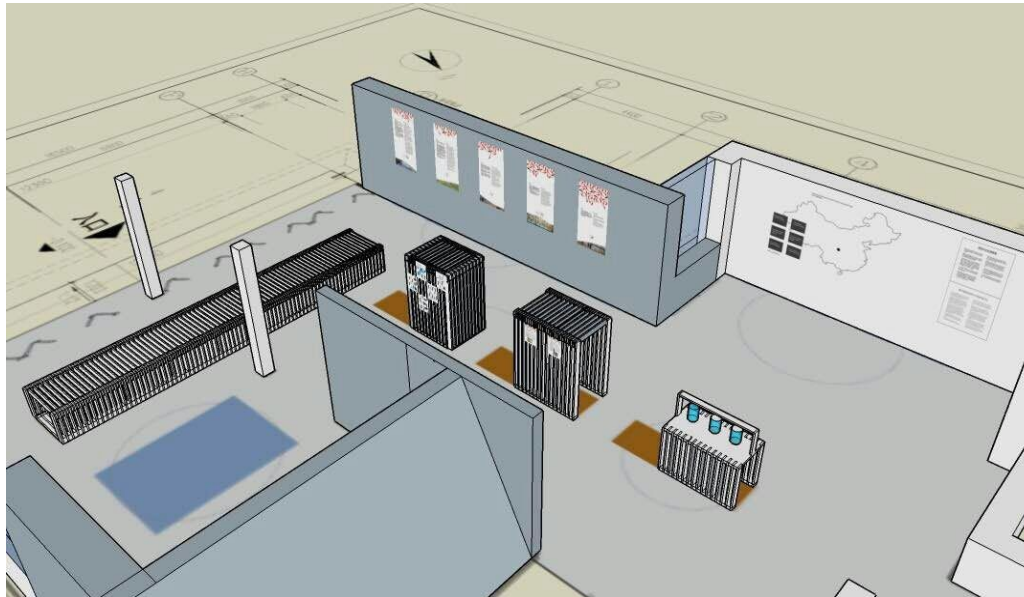
# Furniture – Education and Aesthetics

We chose to have furniture that is light (in colour and construction). The furniture is partly used to display materials (e.g. divers) and text explanation, and partly used to sit on.



# Main components

- a) General awareness & project information
- b) Explanation of the park components
- c) Monitoring groundwater and surface water
- d) Kids corner



# General awareness and project information

The wall opposite the entrance is used to explain the situation in Deyang. Water management, groundwater extraction and the concept of artificial recharge is presented on small panels as combined with scenic pictures of Deyang. On the wall a silhouette of China is painted, with a dot representing Deyang city. An infographic on the urban water cycle, tailored to Deyang is presented on a large panel (200 x 200 cm). To credit the Dutch-Chinese consortium and the funders, a project panel in the project house style was placed on the smaller wall next to the general awareness wall.



# Panels

To explain the major park components 5 panels (80 x 160 cm) were developed. All texts are in Chinese and English. At each component the representative icons - that are also visible in the park - are shown. On the left side of the wall a famous Chinese saying is painted, which translates to: “If we will not take care of our water, the last drop will be a tear”.



# Monitoring and water footprint

One piece of furniture is used to display information on groundwater and surface water monitoring (Figure 6). Divers were hung in the furniture and explanation is given in text. Another piece of furniture is used to show information on water footprint of items as rice, tea and beef. The footprint information was specifically requested by the Chinese partners to create awareness on this topic. All information was translated into Chinese.



# Kids corner

The part of the visitor centre with the slanted roof is dedicated to children. The idea is that children can play and be active in the colourful designated area. One of the parts that still needs to be installed, is a motion floor. This motion floor will project moving images of a Koi pond on the floor. When kids are walking on the floor or touching the fish in the pond, the fish will swim away. Software, a kinect (motion detector), and an adaptor are purchased from The Netherlands. Deyang municipality will order a mounted ceiling beamer and install it. This could not be done in advance, as the risk of theft was too high. Explanation has been provided for final installation.

The wall painting was based on a design and further adjusted to the Chinese context. On the wall, two wooden items were mounted for kids to play (Figure 7).



# Information in the park

In the park panels are placed at all important park elements (in Chinese and English) to explain the different components (Figure 8). Walking around the park will give the visitor additional information on the artificial recharge system and the water purification elements. As the majority of the visitors will be residents from the neighbourhood the texts are simple and easy to understand



# Main entrance

At the main entrance a welcome sign is placed. This is made from letter cut out of Corten steel. This differed from the original idea where Corten steel letters would be mounted on the park wall. This decision was made due to budget. Corten steel is maintenance free and gives a natural look, which matched the park. Two name signs were developed:

- Park name: Deyang Jingnan Wetland Park
- Sub title: A Sino-Dutch research and education site for water and ecosystem management

