

## OUR VILLAGE - OUR TANKS

"My name is Varalakshmi. We belong to an agricultural family. We practice agriculture since the time of our ancestors. Nagulacheruvu a tank is the main source of water for our agriculture. Since two years Nagulacheruvu didn't possess enough water, hence, we had to go for rainfed crops."

**Discuss with your friends and write.**

Crops grown when the tank has plenty of water	Crops grown when the tank has less water

"This year the rainfall has been very low. Since two years the growth of paddy has been low. So, instead of paddy we grew jowar, ground nut, horse gram and raagi. But these crops also failed because of less rainfall."

**Think...**

**What happens when there is scanty (less) rainfall?**

"This year also the rainfall was not enough in the beginning. But for the last three days there was heavy rainfall which is favourable for sowing."

"I want to go to Nagulacheruvu when the rain stops. But on the way to Nagulacheruvu there is a small pond called Laddhamadugu which is overflowing, making it difficult to cross."

"Children! in rainy season the flow of water in small canals is very rapid. You should never get into such canals, otherwise you will be carried away by the rushing water."

"In the afternoon the rainfall was not heavy. It was only drizzling and we were able to see the sun. We saw a rainbow in the sky."

"Hurriedly I reached Nagalacheruvu. As soon as I reached there, I saw Hanmaiah, Satyappa, Ramgopal, Nayak, Pullappa, and Mannepu Reddy. Just then Gouri and Annapurna also reached there. Flood water was flowing into the tanks. The tanks became full and were overflowing."



What is meant by overflowing?

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"We all discussed about the tanks being filled with water and overflowing. The seeds to be sown, strength of the embankments etc. We were all happy because we could harvest two crops this year."

"While I was getting down the embankment I saw Narahari. Narahari knows not only about our village but also villages near by. He has information about all the families, Tanks, crops, temples etc., in our surrounding villages. He always talks about the history of tanks."

**Collect :**

Which tanks are there near you? Advantages of having Tanks.



Name of the village where tank is loacted	Name of the tank	Uses

## 9.1. History of Nagulacheruvu

"My name is Narahari. We have some land near Nagulacheruvu. We practice agriculture, but our main occupation is to narrate the history of Nagulacheruvu. This is being practiced since the time of our ancestors. I know very well about Nagulacheruvu. My father and grand father also told many stories about this tank. I remember a lot of things about the tank when I see it with full of water."

"Prior to Nagulacheruvu there used to be a small pond in that place. That pond used to get filled up even during small rains. The water from this pond was used by the farmers who have land near the pond. A farmer named Mallikarjun met the tahsildar to take necessary action, so that the water could be used by all farmers. Engineer Abdulbari surveyed the region near the pond and planned to convert the pond into tank.

**Think...**

**What is the difference between a pond and a tank?**

## 9.2. Construction of a tank

Construction of the tank has started. Everybody in the village was involved. It was a collective programme.

First they identified the source of the flood water.

What is flood water?

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They dug canals from the regions from where the water was flooding. Then they started constructing bunds. They carried mud in bullock-carts from near by villages. They build the bund with stones from the inside. They brought stones from the nearby hills. They built two outlets from the embankment, on both the sides.

**Think...**

**What is an outlet?**

**Why do tanks have outlets?**



The outlet was constructed by Abdulbari. A scale in white paint was drawn to know the level of water. It helps to drain the excess water by letting it out. In the beginning people used to be surprised when the water was released. When a gate is opened water flows out into the fields. When it is closed water stops flowing.

### Do you know?

Some tanks are connected with other tanks with the help of canals. Water flows from one tank to another in rainy season. Bukkapatnam, Dharamavaram tanks in Ananthapur district are of this type. In the same way canals are dug to fill the tanks with river water. Such tanks are found in Krishna, west and east Godavari Districts.

After completion of building the outlets, care was taken to prevent soil erosion. Soil erosion takes place when the water flows from the outlets. For this, large stones were layed in the path of the water. This work was taken up by the masons in our village. At the time of construction everybody ate their lunch sitting together. They discussed about the division of labour. They dug canals and built, them with cement and sand. These canals helps the water to flow into the fields.

### Discuss in groups



- ◆ What is the necessity of canals, outlets and embankments in the construction of a tank?

"There was sufficient rainfall in the year in which we constructed the tank. Farmers sowed paddy crop. The harvest was very good. There was a drastic change in the lives of the farmers. Our family also came out of economic problems."

### Collect :



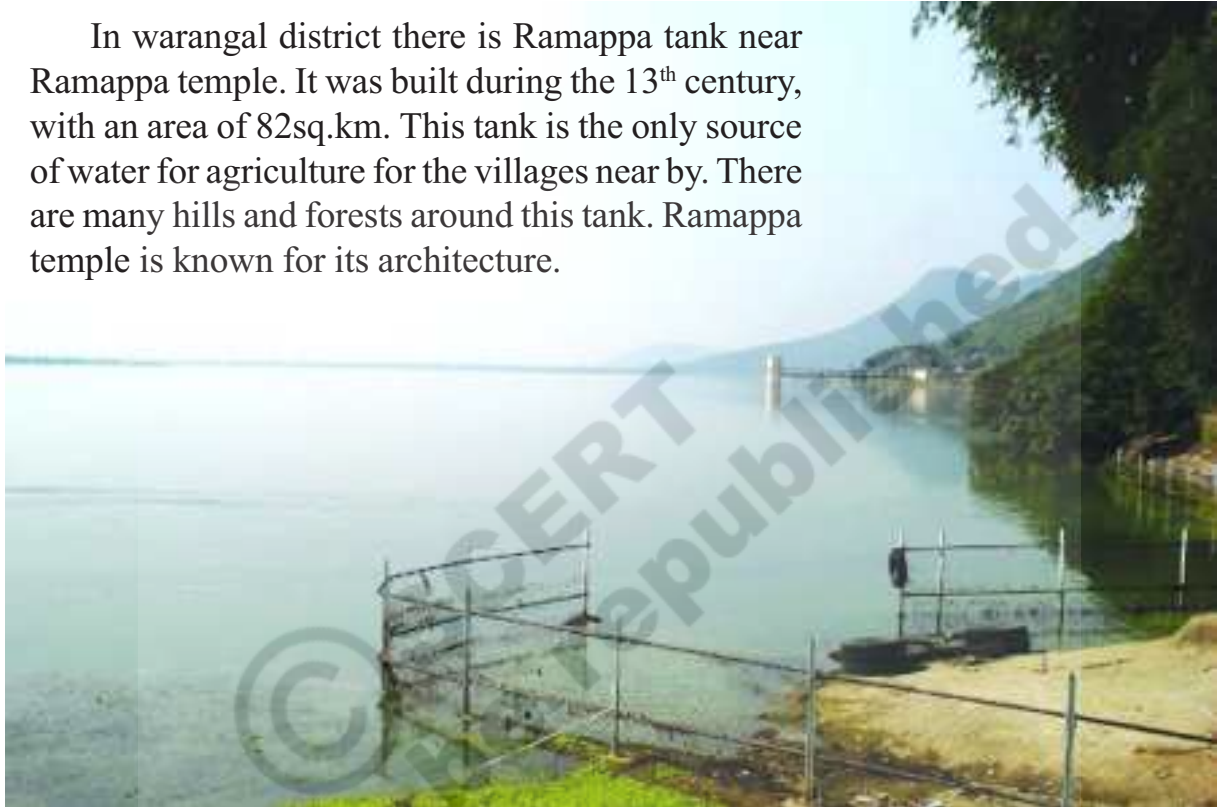
- ◆ Collect information about how a tank is constructed.
- ◆ Visit the tanks located in your surroundings and estimate the area covered by the tanks.

### 9.3. Big tanks of our state

Like Nagulacheruvu we have many tanks in the state. Let us know about our state.

#### 9.3.1. Ramappa tank:

In warangal district there is Ramappa tank near Ramappa temple. It was built during the 13<sup>th</sup> century, with an area of 82sq.km. This tank is the only source of water for agriculture for the villages near by. There are many hills and forests around this tank. Ramappa temple is known for its architecture.



#### 9.3.2. Kambham tank:



Kambham tank is in Prakasham district. It is one of the oldest man made tank in the whole Asian sub continent. It is located in Nallamala hills. This tank was constructed by Orissa Gajapati Rajulu in the 15<sup>th</sup> century. It is 7km in length and 3.5km in width. This tank is giving water to about 10,300 acres of agricultural land.

### 9.3.3. Hussain Sagar tank:



Hussainsagar is located in Hyderabad. It is one of the biggest tanks. This was built by Hazrath Hussain in 1562. The bund of this tank was made into a road in 1946. This bund joins the twin cities of Hyderabad and Secunderabad. The area of this tank was 5.7sq.km but has decreased now. Filled with Eichhornia plants, waste thrown by visitors, inflow of drainage water, industrial effluents etc., Another important and major cause of pollution of this tank is immersion of 'Ganesha idols'. The depth of the tank was 32 feet but it got silted to a large extent.

Another tank in Hyderabad is ' Usman Sagar'. It was built on the sub river of Musi. It is also known as ' Gandipet tank'. To this day the water of this tank is being used for drinking by the people of Hyderabad.



### Discuss in groups



- ◆ What is the need of tanks?
- ◆ Do you have such tanks in your districts? Where are they located?
- ◆ Write about big tanks located in our state and locate them in Andhrapradesh map.

## 9.4. Relation between the farmers and the tanks

We know that the tanks have many advantages. Chennaiah had a close attachment with Nagalacheruvu. Let us know what he say about the tank.

"My name is Chennaiah. I had a great attachment to Nagalacheruvu. My father taught me swimming in this tank. I used to wash my clothes near the tank along with my friends

I used to catch fish, crabs etc., with my friends. I was scared to see big frogs and water snakes. Some times we find tortoises. We used to bring them home and leave them in small tubs and took care of them. We enjoyed seeing the birds flying on the water. My son prepared Ganesh idols with mud brought from the tank. He did this on his teacher's advice. I also prepared some idols using mud.

### Think...

How do the people of your village make use of the tank water?

## 9.5. Advantages of tanks

Our field is near to the tank - every day I used to go to Nagulacheruvu and open the outlet. This was my daily routine. Every person in our village has a special attachment with Nagulacheruvu. Everyone is dependent on that tank one way or the other. Many people have farms near Nagulacheruvu. This is the only source of water for agriculture. When the tank is full it is like a feast to farmers and agricultural labourers. Children of our village learn to swim in this tank. People wash clothes and take up fishing. Now-a-days small fishes are let in to the tank for breeding. Fibre plants like Amaranthus, Jute, flax etc., are soaked in water to make ropes.

Three years ago borewells were drilled and water tanks were constructed to supply water to every house. To this day Nagulacheruvu is the only source of drinking water for birds and animals.

When the tank is full the level of water in the wells, tubewells, check dams rise.

When the level of water in the tank decreases people take up fishing, some farmers grow water melon, musk melon and cucumbers. Farmers take up desiltation during summer. This mud is used in their fields because it is very fertile. Desilting helps in increasing the capacity of the tank.

### Discuss in groups



- ◆ What is the use of rope to farmers?
- ◆ Why are borewells drilled?
- ◆ What is the use of silt from the tanks?

## 9.6. Tanks-pollution

You have learnt the advantages of tanks! Look at the following picture.





### Think...

- How are tanks being polluted?
- What are the affects of tank pollution?

Tank is getting polluted in different ways. The people of the village wash their clothes in the tanks. Many people don't have toilets and use tanks for the purpose, they wash cattle etc. People immerse Ganesha idols in the tank every year. The colours used are very poisonous chemicals which pollute water in the tank due to which fishes are dying. The sewage water from the houses are let into the tank. The people who visit tank in the evenings for relaxation throw eatables and empty covers into the tank. Such activities make the water polluted. Chemical effluents from medicine manufacturing factories make the underground water and tank water polluted. Once the water of this tank was used for drinking, but now it is fully polluted. Now-a-days some programmes are being taken up to control water pollution.

Last year some people planned to establish an industry near the tank but the people of the village stood against the decision and won.

There used to be a tank in our uncle's village. In which I used to swim in my childhood. But we cannot see that tank today, it is occupied by new houses, nobody can imagine that there used to be a tank in that place earlier.

### Discuss in groups



- ◆ What will you do to prevent pollution of water in tanks?
- ◆ Why were the people against the establishment of an industry?
- ◆ Why people are building houses in the tanks? What are the consequences?
- ◆ In olden days kings used to construct tanks. Discuss about this in your classroom.

## 9.7. Tanks - we

I sleep on tank bund at nights during harvest season. To eat my food under the shade of trees on the bund has become a habit for me. When the tank is full people perform 'Pochamma' festival and let the water out to fields. For this celebration all the people of our village donate rice, money etc., Everybody dines on the bund and releases the water to the fields.

During 'Bathukamma' festival they leave Bathukamma's into the tank, it is very beautiful to look at. I always like to watch sunrise and sunset standing on the bund. The weather is cool near the tanks. Farmers rest under the shade of trees. Birds flying on the bunds from the fields at night and fragrance from the gardens make the village life very beautiful. Blooming lotus, insects flying on water, fish eating insects, cranes hunting for fish are the scenes worth watching.

### Drying of tanks - Drought

Look at the following picture:-



### Discuss in groups



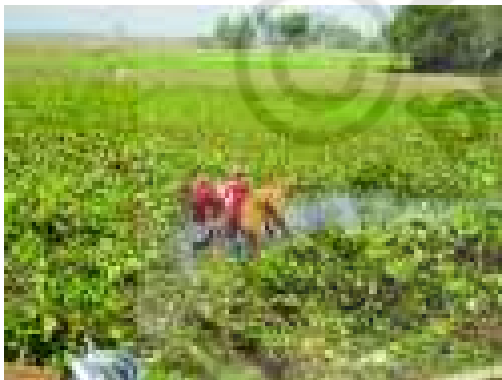
- ◆ What happens when there is no water in the tanks?
- ◆ What problems do the people face when the water in the tanks dry up? Mainly the people who depend on it.

Due to environmental pollution, felling of trees, de-forestation day-by-day there is reduction in greenary. Heat from the sun is falling on the earth directly rather than on trees. This is leading to warming of earth's atmosphere. This leads to decrease in rainfall, ultimately leading to drought in some areas. Due to failure of rains farmers are drilling borewells and drawing underground water from very deep layers. This act is causing great damage to the environment. Many people who live in villages are travelling long distances to fetch water. Most of them are depending on the tankers supplied by the government. Why this situation arises? Is this one not an important problem? for this who has to take, what action?

### Think...

**If the same situation continues in future what consequences we will have to face? What should we do to stop this?**

## 9.8. Tank management / Management of tanks



Look at the picture given. This is a picture of a tank. You can see Eichhornia plants, and Algae in this tank. Why this tank is becoming polluted? Who should take care of them? What happens if they are not taken care of? Our future is in protecting of our tanks. What is Yakub saying about the management of tanks?

"My name is Yakub. We have our fields near Nagulacheruvu. Government has formed ' agricultural water management societies' for the development of tanks. In our village our farmers elected me as the president. Every year our society takes up repairs of canals, embankments, outlets etc. De-siltation is taken up in summer and that mud is spread in fields. Check the pollution in bunds, because the tank is the only source of our livelihood.

### Collect :



Collect information on nearby tanks, agricultural water management societies, and the programmes they take up.

Do you know ?

## Udaipur - city of lakes



Udaipur - which is in the state of Rajasthan is called the city of lakes. Udaipur has many lakes, hence the name. In ancient period these lakes were constructed to use the water for drinking and agricultural purposes. Among all the lakes in Udaipur 'Pichola' lake was an important one. It was built in 1362 by Banjaras. Later on, it was developed by king Udai Singh. All the places in Udaipur were built on the banks of these lakes. Among them 'Jagnivas' and 'City palace' are important.

### Key words:

1. Agriculture
2. Canal
3. Tanks
4. Pond
5. Overflow
6. Flood water
7. Out lets
8. Tank construction
9. Embankment of the tanks
10. Agricultural lands
11. Eichhornia tanks.
12. Tank pollution
13. Uses of a tanks
14. Tank management
15. Breach in the embankment

## What have we learnt?

### 1. Conceptual understanding

- a) Why do we need tanks?
- b) For what purposes do we use tank water?
- c) What are the stages of tank construction?
- d) Why we need agricultural water societies?
- e) What crops are grown using less water in your village?
- f) What are the uses of having outlets for tanks?
- g) Who depends on tanks? Especially how do the farmers depend on tanks?
- h) How should we conserve our tanks?

### 2. Questioning - hypothesis

- a) Kavitha along with her grand father, went to a check dam. She asked many questions regarding the check dam. What would you ask?

### 3. Experiments - field observations

- a) Visit a near by tank and write your observations (on the bund, near the tank, uses of tank etc.,)
- b) With the help of your teacher visit a near by crop field. observe how water is supplied to the fields. Draw a block diagram.

### 4. Information skills, projects

- ◆ Write about a famous tank you know in your district or state. Know its history. Draw a diagram of the tank. For this information refer to books, magazines, newspapers, internet etc.

### 5. Communication through mapping skills, drawing pictures and making models

- a) Collect the names of rivers and identify Ramappa, Pakala, Salakam, Kambham, Hussainsagar in the Andhra Pradesh map. Where are they located, in which districts?

## 6. Appreciation, values and awareness towards bio-diversity

- a) There was a breach in the embankment, this was repaired by the whole village collectively. How do you appreciate each person's effort? Convey it to your friend.
- b) A tank is an elixir of life for not only human beings but also birds, animals and other insects. To protect a tank you are participating in a procession, for this write some slogans on prevention of pollution. Also suggest some measures to conserve tanks and protect them from pollution.
- c) Now-a-days people are building houses on the tanks. How is it going to effect us and animals? What should we do to stop this?

### Can I do this?

- |                                                                        |          |
|------------------------------------------------------------------------|----------|
| 1. I can explain the uses of constructing a tank and advantages of it. | Yes / No |
| 2. I can ask questions to know about check dams.                       | Yes / No |
| 3. I can identify important tanks in the map                           | Yes / No |
| 4. I can exhibit the history of tanks after knowing                    | Yes / No |
| 5. I can write slogans to protect tanks                                | Yes / No |

