



POND Rejuvenation Model





Need for revival of ponds for water conservation

About 40 lakh ponds and water conservation related structures are present in a total of 6,64,369 villages, towns, and cities in about 718 districts of the country. By reviving these ponds, we can remove about 50 percent water crisis of the country.

According to NITI Aayog, about 4500 rivers and 20 lakh ponds and wells have dried up in our country in the last decade and if the situation continues like this, by the year 2030, 40 percent of the country's population will not have potable water. It has been established by much previous research that ponds have an important role in keeping the rivers alive and keeping the wells alive. In the last few decades, we have almost forgotten the role of ponds and we have destroyed about 60 percent of the ponds. The remaining 40 percent of the ponds are either on the way of completion or the dirty water of the population keeps getting accumulated in them, due to which they are rotting and causing diseases in the villages. If seen seriously, we have almost completely ruined the natural water sources. The ponds and puddles which were earlier used to preserve the pure rainwater and recharge the underground water, today collect the very dirty water of the population and as a result today the first part of the water under the ground is not drinkable.

For some time, our governments are moving towards reviving the ponds, which is a good sign, but the method being adopted to revive the ponds is not suitable because at present the problems of the ponds have changed. For example, for the purpose of reviving the ponds, by excavating the ponds, only they are deepened, in which the dirty water of more population starts collecting, which contaminates the underground water more than before.

Now here the question arises that what is the right method to revive the ponds? There are many such educational and research institutes in our country which have made a lot of





efforts to revive the ponds in this direction and have also done a lot of groundwork. One of the few works done in this direction is the method of IIT Bombay, which has also been adopted by NIH Roorkee.

How to do the work of pond revival?

The following precautions or information are necessary for pond revival.

- First, collect the government documents (FARAD - Revenue Record, and any map of the pond) of the pond which has been selected for revival. With this you will know the area of the pond and its KHASRA (plot) number.
- The pond should be selected only with the consent of the public representatives of the local body village/ Nagar panchayat/municipality/municipal corporation and representatives of the administration.
- Assess the current condition of the pond by going near the pond -
 - Is the pond populated or unpopulated?
 - What is the importance of the pond, its name, and its history?
 - Is the pond encroached or not? If so, how much?
 - If the pond is encroached, then how much is the raw encroachment and how much is the concrete encroachment?
- Is there any dispute regarding the pond in any court or not?
- Is there dirt and silt in the pond or not?
- Is the pond dry or is it full of water?
- Whether there are water hyacinth, grass, or water spinach etc. plants in the pond or not?
- How many ways are there for water to enter the pond?
- What is the quantity of water coming into the pond?
- What is the quality of the water coming into the pond?
- What other things come into the pond along with the water through the drains like cow dung and plastic etc.?

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After getting all the above information regarding the pond, it can be decided correctly that what kind of strategy must be made to revive the pond? How much will this work cost and in what time will the work be completed? If there is any kind of legal dispute on a pond, then working in it should be avoided. Before doing the work of pond revival, photographs must be taken from all the four corners of the pond so that the picture of change can be presented to the society after the pond revival work is completed. This increases the morale of the worker/person/organization doing the work of pond revival, while others also get inspired by the good work.

If the pond is full of water and silt:

In such a situation, first, take out all the water from the pond with a pump set or electric motor and by stopping all the means of water coming into the pond, decide in such a way that the outside water does not enter the pond until the silt of the pond dries up. For this, water can be stopped by making a pit on one side of the pond and when the work on the other part of the pond is completed, the work of improvement of that pit can be done.

If water hyacinth, grass and other floating dirt is filled in the pond:

In this, it must be decided whether the water of the pond has not rotted or dried up due to water hyacinth, grass, or other floating dirt. If it is so, then first that water should be taken out through pump or motor. Very good manure can also be made from water hyacinth and grass etc. coming out of the pond. For this a liquid bioenzyme must be sprayed on it. You can also contact the local agriculture department in this regard.

In both the above cases, after draining the water from the pond, leave it to dry for a week. In a week, the silt of the pond will come in such a condition that it can be taken out by machines or laborers. Remove the silt of the pond until sandy soil comes





at its bottom. The upper silt that comes out of the pond should be thrown away from the pond, while the lower moisture and dry silt or soil should be used to make the cover of the pond. The height of this balustrade should not be kept more than ten feet, while the width can be up to ten to twenty feet according to the situation. The inner side of the pond should be sloped. By the way, the outer part should also be sloped, but if this is not possible then there will be no problem. The bunds should also be curved on the sides of the pond. While making the bund, proper arrangement (pipe or concrete drain) should be made for the water coming into the pond from under the bund. On one side of the pond, a path of 15 to 20 feet width should be left to enter and exit the pond. Through this way, where cleaning in the pond, doing business activities and movement of animals will be easy.

If the pond is dry:

It is easier to revive a dry pond than a water filled pond. In this, two to three feet of soil from the bottom of the pond should be taken out. Pond cover can be made from this soil. It is easy to get laborers to work in such a pond.

Pond Rejuvenation Method

Connect the drains that bring water to the pond and bring it to one place. For this, a groove can be made from the outer edge of the baluster. According to the above information, proper arrangements should be made for the treatment of any kind of dirt that comes along with the water in the pond, so that no other kind of dirt other than water enters inside the pond. Adoption of three pit purification technique for this work. According to this method, the pond is divided into two parts, first a natural water treatment system is developed to clean the dirty water in one part, which is about 15 percent of the total pond, while in the rest part of the pond A construction is made which continuously collects the treated water from the first section. The water collected in the puddle is put to various uses such as fish farming,





irrigation, and automatic underground water storage. This pond is designed in such a way that rainwater can also be collected in the pond and the regular water can also be stored properly. In this way, the system of reviving the pond not only revives the pond, but it also provides a regular means of employment, such as the pond can be used for fish farming and water chestnut production.

Planting on parapet:

Saplings should be planted in the middle of the hedge made on the banks of the pond. It is best to plant trees like Neem, Jamun, SEESHAM, PEEPAL, BARGAT, PILKHAN and Guava etc. in this. The distance from plant to plant should be according to the standards fixed by the Forest Department. We must keep a distance of at least 10 to twenty feet from one plant to another.

Water system in the pond:

The ponds which are present inside the population, in them only water from inside the village keeps coming. The ponds which are outside the population were previously filled with rainwater or else there has been a system to fill most of the ponds with aquifers. In most of the ponds, there are also small drains recorded in government documents from RAJWAHA (small canal) to the pond. The time (in hours) of filling each pond with RAJWAHA was also recorded near the village patrol. When work is being done on such ponds, efforts should be made to connect it with a nearby stream through a drain, so that the excess water coming in the stream, apart from the rains, can enter the pond.

The pond should not be filled with ground water:

While the purpose of the pond is to collect the water of the village, on the other hand, the pond also absorbs the rainwater. That's why the function of the pond is to bring the water filled in it to the ground water slowly and it is used for many activities





of the village (bathing and watering animals, water chestnut farming, fishing, washing clothes of washermen and melting flax etc.) is being done. If we look at the most important advantage of the pond, then it is that the pond cleans the water in a natural way and keeps it flowing to the ground water.

In such a situation, filling the pond by extracting groundwater through tube wells etc. is against the basic spirit of the pond. Such activity cannot be justified in any way. Activities like fish farming or water chestnut farming should also be allowed only in such a pond where surface water can come from any RAJWAHA etc. Any kind of commercial activity should not be done by filling the pond with ground water. It should be banned from the government level as well.

Board The Pond

A board giving its complete introduction must be installed on the banks of the pond. The following information must be on the board.

- name of the pond.
- History of the pond.
- Pond area.
- Plot number of the pond.
- water holding capacity of the pond.
- Estimated amount of water coming into the pond in a year.
- Estimated amount of water to be recharged from the pond in a year.
- Date of revival of pond.
- Cooperation in pond revival.

