

INNOVATIVE APPROACH TO
CONSERVE WATER

Creation of Water Resource & Environment Improvement

Namli's initiative to conserve the urban environment & innovative water resource creation proves to be a best practice.

2014-2015

Entry For
Ecological Sustainability / Rain Water Harvesting

Submitted by : Namli Nagar Parishad , Madhya Pradesh

Recommendation by : Urban Development & Environment Department, GoMP

Documentation by : City Managers Association Madhya Pradesh



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With this initiative Namli has walked on the track of conservation of National bird peacock, resulting in the abundance of peacock in the town



Namli a small municipality of Ratlam district of Madhya Pradesh, demonstrates how innovative approaches and governance can change the overall service delivery scenario of a place . Famous for the abundance of Nation Bird "Peacock" , the town once had a very rich bio-diversity. Five years back, Namli nagar parishad (NNP) was facing acute shortage of water due to scanty rainfall and low yield of ground water . Alongwith this, there was a major issue of improper waste management. The biodiversity was also getting a negative impact. The newly elected council in the year 2009 considered the sensitivity of the matter and placed water on the highest priority of it's work agenda.

The innovative approach of water conservation and local technologies were pooled together. A low lying land parcel was identified in the "Kochha area" (within Municipal boundary). This area receives heavy storm water during rains. The ULB through mutual consent with a road construction agency got excavation work done and created a lake without any capital investment. Rainwater flowing in the natural drain was retained in the Kochha Talab. The process eventually rejuvenated all the wells and handpumps, which ultimately solved the problem of water in the town. The nearby area of the site selected for lake creation had a waste dumping ground which could have polluted the ground water and eventually the lake water. Nagar Parishad Namli innovatively converted the dumping ground into a beautiful park. The lake and park combinedly act as a regional tourist site.

In the entire process most important aspects were use of local technology, traditional approach and community participation.

As a result, Namli nagar parishad succeeded in providing 70-90 lpcd water to its citizens and the citizens are also assisting parishad by paying water charges regularly. A tremendous rise in the groundwater level has been observed in the town as well as in the 250 nearby towns. The initiative has also enhanced the bio-diversity of the town. It is one of the most innovative initiative for service delivery, taken by any of the ULBs of Madhya Pradesh . It shows the success of community participation, traditional approach and good Governance.

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2. Background

Water conservation through creation of artificial structures

Namli, a nagar parishad town (census 2011 population - 9860) is located 14 kilometers from the district headquarter's town Ratlam in the Malwa region of Madhya Pradesh.

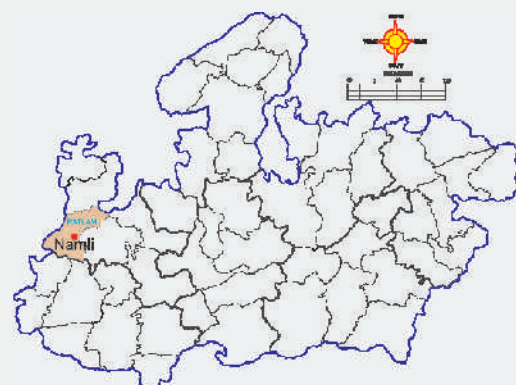
About 3 years back, town was facing severe drinking water problems. Reasons behind it were, non-perennial water bodies, decreasing water table and failure of water transport system.

Water conservation : The newly elected council (year 2009) took initiative to recharge ground water resources through creation of artificial structures, so as to improve ground water level of the whole town.

An artificial lake was created in Kochha area. Water collected in the lake recharges nearby dug-wells and water remains available at 20-40 feet, even in summers. Similarly other water bodies were also recharged and rise in water table has been tremendous.

The idea of holding Rain water through creation of artificial lake looked infeasible and cost intensive.

But, hard work, scientific assessment and consultative approach of representatives, municipal officers and



local people translated their dreams into reality. The total cost involved in the initiative was almost nil as the project was done by involving a road construction agency.

Within a short span of time, a great rise in groundwater level has been recorded. In the present scenario, nagar parishad is supplying water at the rate of 70 lpcd to its citizens.

The environmental improvement due to park and waste management is tremendous.

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2.1 Situation prior to initiative

In the absence of reliable water source, nagar parishad Namli was facing severe water problems. On the other hand the ground water extraction reduced the water table and almost all the water structures like well, tube-well got defunct.

Gradually, water level went on decreasing and the municipality kept on boring deeper tube-wells. Due to repeated boring of tube wells, water level went down to 250-300 feet. All the alternative sources like wells, ponds also went dry.

Due to unavailability of water, agriculture and allied businesses also got defunct.

The water was supplied through tankers and that too once in 5-7 days. Major expenditure of the ULB was on water transport.

Disputes over getting water from the tankers became a common practice and masses were badly irritated and tormented due to this mismanagement. When the problem became uncontrolled, people came on the streets and started road block agitations /hunger strike etc. The conditions were worsening as a girl was killed during one of the agitation. This resulted in mismanagement and helplessness in the ULB.

Not only people suffered from the unavailability of water but the impacts were felt by the livestock population

also. This is in addition to the loss to agriculture, the major source of livelihood for people in peripheral municipal area.

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3. Establishment of Priorities & Process Adopted

The local body elections were held in the year 2009 and the biggest challenge in front of the newly elected council was:

"To overcome the problem of drinking water by creating new surface water source"

Scarcity of water was the biggest hurdle in achieving this goal. Degrading environment was another serious issue. Thoughts were directed to reach the permanent solution of water supply problem. The major issue identified was unavailability of reliable surface water source. **Nothing was being done in terms of creating water harvesting structures.** Hence, one more goal was set:

"to create new surface water sources so as to improve underground water level of the whole town"

The idea was to create a lake at best possible location so that the rain water could be retained. It was necessary to undertake redemption work of old legacy like wells, bawadis etc. to recharge all water resources with rain water so that

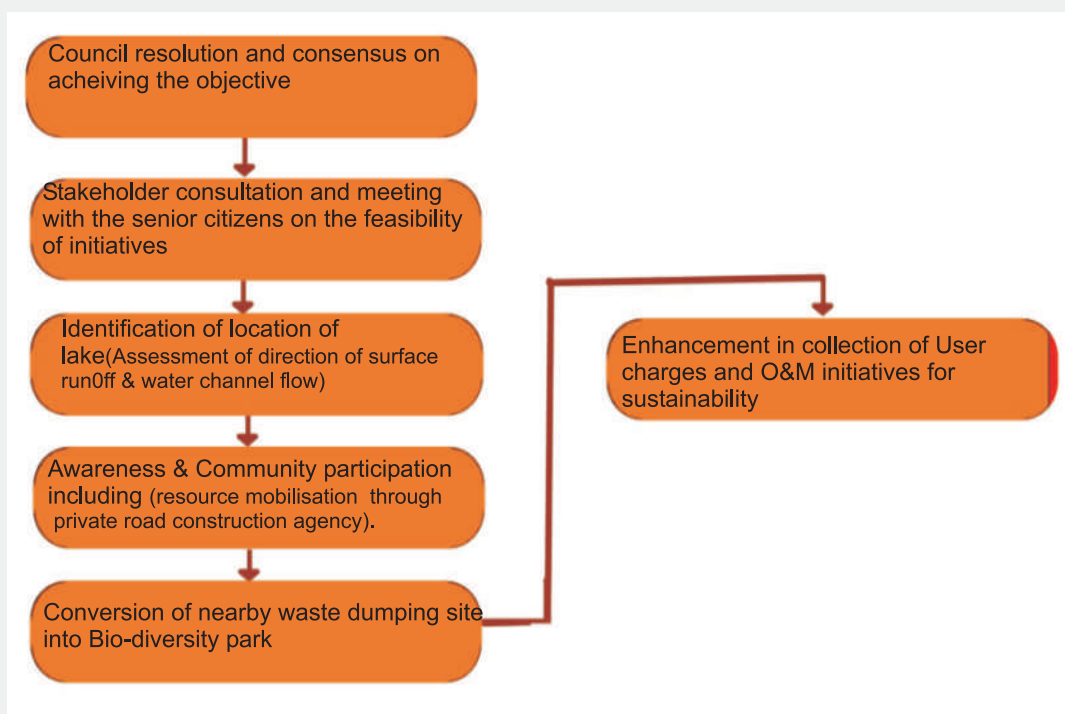
they can survive for the whole year and sustainability could be achieved.

The only way to create a lake was through excavation at the identified "Kochha area". But it was a cost intensive project. The ULB was not in a position to make huge capital investment. Hence, an innovative plan was formulated and it was decided to involve a private partner in the implementation. Through a mutual consent it was decided that the road development company will excavate the lake area at free of cost and shall carry all the soil and stones for road construction.

As a result, a lake of 8 Hectare area was created. A nearby waste dumping site was scientifically converted into a beautiful park.

Implementation process

The implementation process involved the following steps:



● Creation of Lake

Creation of artificial lake in such a manner was considered infeasible and impractical by many departments. They were of the opinion that these efforts would not give any positive results.

Different departments estimated the cost of construction of the lake in crores, but Nagar Parishad got the construction work completed without any capital investment.

Financial arrangements :

The financial arrangements done by the nagar parishad mainly included steps for cost restriction as mentioned below :

1. Involvement of Road development company for excavation of lake. The company in return took the soil and stones for laying of roads.
1. Restriction on water transportation expenditure
2. Bio-diversity park creation : 44lakhs from Environment Planning and Co-ordination Organisation (EPCO),M.P.

● Creation of Park

Area near Kochha lake was earlier used for dumping the waste collected from the town. It was a serious issue because there was a possibility that the toxic material of waste could pollute the lake water. Hence it was decided that the waste shall be collected 100% DTD and shall be segregated and converted to manure at a different location.



Park site earlier

The existing location was scientifically treated and converted into a beautiful Bio-diversity park. This area has more than 250 peacocks. The area got conserved due to the ULB initiative.



Kochewala area
कोचेवाला तालाब स्थल



Site inspection for Lake creation
जन निजी भागीदारी हेतु चर्चा



Kochewala lake existing scenario





Result Achieved

4. Results Achieved

The success of this effort rested on the belief of the traditional knowledge and dedication of the implementing authority.

After the implementation of works, when it rained, the newly constructed Kochha lake alongwith dugwells became full with water. Within a short span of time a great rise in groundwater level was recorded. Water streams got erupted in the newly built wells near the lake region. This was a clear indication of rise in ground water level due to recharging of water bodies. This way the problem of drinking water was solved.

- Namli nagar parishad is supplying water to its citizens @ 70-90 lpcd
- Naturally filtered water is being supplied

- Namli has got a sustainable water supply mechanism alongwith a beautiful bio-diversity park

There is no more agitation amongst the citizens

Namli nagar parishad which was considered to be harshly affected by water scarcity has now become self sufficient with respect to drinking water supply. The present supply of water is equal to the URDPFI prescribed norms and the water level is tremendously high.

Most effective thing is the enhancement in the bio-diversity of the area. Tourist can easily see hundreds of peacocks near the lake and park.

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Bio-Diversity Park Developed at Dumping site



Hundreds of Peacock can be seen near park

Subsequent to the initiative the following results were achieved:

In March 20011,
Nagar Parishad expenditure on supply of water was Rs. 0.85 lakh per month. Water supply done @ 30 LPCD

In March 2013,
Nagar parishad expenditure on supply of water was Rs. 0.20 lakh per month
Water supply done @ 70-90 LPCD

● Comparative analysis

Physical analysis :

Year	Water table	Water supply	Mode of water supply
Year 2010	250-350 Ft	once in 4 days	Through Tankers
Year 2013	100-150 Ft	every day	Through tap connection 90% houses

Financial analysis :

Year	Expenditure on water tankers	Expenditure on water supply network	No. of house hold connection	Revenue Received
Year 2010	Rs. 0.75 lakh per month	Rs. 0.85 lakh per month	585	Rs. 3.16 lakh
Year 2013	-	Rs. 0.20 lakh per month	915	Rs. 4.95 lakh

5. Lesson Learned

- Total number of water connections has increased almost 70%, from 585 in the year 2010 to 915 in the year 2013.
- Total revenue generation has increased 50% and the expenditure has reduced to almost 4 times.

Intangible benefits

- There is a feeling of content and satisfaction among the citizens of Namli.
- Ground water table increased in 250 nearby villages. Villages and towns of nearby area have learned how to conserve the valuable water.
- Bio-diversity of the area has improved tremendously.

Some of the major lessons learnt from this initiative are:

1. Water availability is not a problem but its management is .
2. Community based approach is essential for sustainability of water sources.
3. Making people participate in the development activity and involving them in the planning and implementation helps in building ownership and success.
4. In contrast to the myth that people show unwillingness to contribute for development work, the community in Namli is willing to contribute as they foresee the benefits of programme.

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6. Sustainability

As long as there is life on earth the requirement of water will be vital. Namli nagar parishad has emerged as an example of collecting and conserving water before exploiting it. This is the need of the day. If the rain water is conserved, the problem of water paucity will never arise.

All the water resources like stop-dam, lakes, wells etc. constructed by the nagar parishad can remain useful till infinite years.

Every year, by little maintenance and works like removing silt, dredging the importance of ponds will go on increasing.

Transportation of water and boring tube wells are temporary arrangements only. Boring tube-wells and transporting water can neither solve the problem permanently nor be useful for a developing country like India. It will only reduce the ground water level. The only option left is conserving water by constructing lakes, ponds etc. Permanent solution for water supply problem is conservation of water.

Namli Nagar Parishad followed the concept of creation and revitalizing water bodies which has proved to be sustainable since ages. All the water resources like stop-dam, lakes, wells etc. constructed by the nagar parishad can remain useful till infinite years.

- With the growth of population water demand would increase hence the nagar parishad has started capacity enhancement measures of water bodies
- Last year the total rainfall was half of the average rainfall, but still the town has sufficient water to supply to its citizens

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6.1. Awareness generated

There is a feeling of content and satisfaction among the citizens of Namli. Surrounding villages and towns have learned how to conserve and manage valuable water.

As Community based participatory approach was adopted in the process hence sustainability and success of initiative remains assured. The community is willing to contribute when they foresee the benefits of a programme, this is contrary to the myth that people are unwilling to contribute for development work.

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7. Transferability

The places facing shortage of water and those having ample amount of water should be connected so that the future generations would not struggle for water. It has been rightly said that wherever the water runs it should be walked and wherever it walks should be stopped.

The success of this 'Novel Experiment' of conserving water by Namli nagar parishad has become exemplary. Such experiments are being thought to be done by other towns also. Namli has received " State Bio-Diversity Award" and has done an exemplary work by conserving the National Bird Peacock. This model of Namli has been appreciated by the Secretary, Urban Administration and Development Department and the best practice documentary has been displayed on the website for wider dissemination.

The practice can be easily replicated initially in the region as well as wherever feasible.

State Government has recently launched a scheme for conservation and development of water bodies. Therefore more and more ULBs can develop surface water source with the support of Government grant.

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8. Mobilisation of Resources

The only way to create a lake was through excavation at the identified "Kochha area". But it was a cost intensive project. The ULB was not in a position to make huge capital investment. Hence, an innovative plan was formulated and it was decided to involve a private partner in the implementation. Through a mutual consent it was decided that the road development company will excavate the lake area at free of cost and shall carry all the soil and stones for road construction.

As a result, a lake of 8 Hectare area was created. A nearby waste dumping site was scientifically converted into a beautiful park.

Financial arrangements :

The financial arrangements done by the nagar parishad mainly included steps for cost restriction as mentioned below:

1. Restriction on water transportation expenditure
2. Use of locally available material like stones etc. for construction of lakes and wells.
3. Environmental Planning and Co-ordination Organisation (EPCO) under GoMP has extended financial support of Rs. 50 lakhs to the Namli Nagar Parishad for pitching and conservation works.

कार्यालय कलेक्टर (शहरी विकास अभिकरण) जिला रतलाम म.प्र.
क्रमांक 432/जिशविअ / 2014 रतलाम, दिनांक 05/06/2014
प्रति,

आयुक्त
नगरीय प्रशासन एवं विकास
संचालनालय म.प्र. भोपाल

विषय:- नेशनल अर्बन वाटर अवार्ड 2013 - 14 के लिए नगर परिषद नामली की प्रविष्टि बाबत ।

सन्दर्भ:- संचालनालय न. प्र. वि भोपाल का पत्र क्र. मु.श.स्व.मि./9735 /
2014- 15 दिनांक 5.6.2014

विषयान्तर्गत सन्दर्भित पत्र के तारतम्य में अनुरोध है कि, जिले की नगर परिषद नामली की पेयजल समस्या के समाधान हेतु निकाय द्वारा कोया क्षेत्र में फोरलेन निर्माणकर्ता कम्पनी तथा जनसहयोग से वर्ष 2010 - 11 में 08 हैक्टे. भूमि पर तालाब खुदाई का कार्य किया गया । तत्पश्चात वर्षा के दौरान तालाब में जल की उपलब्धता के कारण निकाय क्षेत्र के अन्य जलस्रोत कुए, नलकूप, हैंडपंप पुर्नजीवित होकर इनके जल स्तर में आश्चर्यजनक वृद्धि हुई जिसके कारण निकाय को वर्ष 2011 से अमि तक ग्रीष्मऋतु में पेयजल परिवहन की आवश्यकता ही महसूस नहीं हुई ।

जनसहयोग, निकाय निधि तथा पर्यावरण नियोजन एवं समन्वय संगठन भोपाल (एफको) द्वारा प्रदत्त आर्थिक सहायता से उक्त तालाब में जल संरक्षण के क्षेत्र में निकाय ने सराहनीय कार्य सम्पादित किए हैं जिसके फलस्वरूप आज उक्त तालाब में जल उपलब्धता के कारण निकाय क्षेत्र के अन्य जलस्रोतों में वृद्धि से निकाय में पेयजल की कोई समस्या नहीं है ।

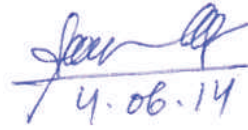
जल संरक्षण के क्षेत्र में नगर परिषद नामली द्वारा जल संरक्षण के क्षेत्र में की गई इस अभिनव पहल के लिए विषयांकित अवार्ड से निकाय को पुरस्कृत किए जाने की अनुशंसा की जाती है ।


(डॉ. संजय गोयल)
कलेक्टर
जिला रतलाम म.प्र.

**Recommendation by
Urban Administration & Development Department, GoMP**

वर्तमान परिदृश्य में मध्यप्रदेश के अधिकांश नगरीय निकाय जल प्रदाय की समस्या से जूझ रहे हैं। बहुत से निकायों में 3-4 दिन छोड़कर, जल का परिवहन कर आपूर्ति की जाती है। निकाय द्वारा अपने बजट का एक बहुत बड़ा भाग जल आपूर्ति के अस्थाई समाधान हेतु व्यय किया जाता है तथा साथ ही शासन द्वारा भी अनुदान के रूप में बहुत अधिक राशि आवंटित की जाती है। शासन तथा निकाय द्वारा प्रत्येक वर्ष राशि का व्यय करने के उपरांत भी जल प्रदाय समस्या का स्थायी समाधान नहीं हो पाता है। ऐसी स्थिति में नगर परिषद् नामली द्वारा वर्षा जल संरक्षण कर स्थायी जल आपूर्ति व्यवस्था का निर्माण अन्य निकायों हेतु अनुकरणीय है। नगर पालिका द्वारा किये गये जल संरक्षण के प्रयास से न सिर्फ जल आपूर्ति की समस्या अपितु किसानों का भी उद्धार हुआ है।

नगर परिषद् नामली द्वारा किए गए इस प्रयास को प्रदेश स्तर पर पहचान प्राप्त हो चुकी है। नगरीय प्रशासन एवं विकास विभाग इस अभिनव प्रयास को पुरस्कार दिये जाने हेतु अनुशंसा करता है।



आयुक्त
नगरीय प्रशासन एवं विकास विभाग
मध्यप्रदेश



SKOCH ORDER-OF-MERIT

AWARDED TO
NAGAR PARISHAD NAMLI
FOR
CREATION OF WATER RESOURCE & ENVIRONMENT IMPROVEMENT
FOR QUALIFYING IN
INDIA'S BEST GOVERNANCE PROJECTS - 2014
GIVEN ON THIS NINETEENTH DAY OF SEPTEMBER 2014 AT NEW DELHI

Sameer Kochhar

SAMEER KOCHHAR, CHAIRMAN, SKOCH GROUP





SKOCH ORDER-OF-MERIT

AWARDED TO
NAGAR PARISHAD NAMLI
FOR
INNOVATIVE PRACTICES OF SOLID WASTE MANAGEMENT
FOR QUALIFYING IN
INDIA'S BEST GOVERNANCE PROJECTS - 2014
GIVEN ON THIS NINETEENTH DAY OF SEPTEMBER 2014 AT NEW DELHI

Sameer Kochhar

SAMEER KOCHHAR, CHAIRMAN, SKOCH GROUP

