



# **Investing in Future**

**Regional Centre for Development Cooperation**



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# The Concept

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**W**ATER is no longer an infinite resource contrary to the age-old popular belief. Warning bells already have started ringing. Despite efforts by the governments and huge investments, population not having access to adequate quantity of water is increasing in leaps and bounds with every passing year. Water is becoming scarcer not because of ever-increasing population, degrading natural resource base or climatic change only. Improper management of water, conflicting uses and comodification of this common resource are a few malice of recent origin. Dooms day prediction that the third world war will be fought over water are being made while every day smaller wars are fought by the poor and disadvantaged to get a few liters of this elixir of life or the invisible enemies inflicting waterborne diseases. Predictions of war are no more relevant as wars are here right at our neighborhood. And this will become bloodier as the time forges ahead and the blue planet that we have inherited from the future generation will no longer be the same. As the problems relating to water has been complicated by this generation it also is the responsibility of this generation to prepare the future generation to address these problems. What could be more prudent in investing in the students for making them aware of the problems and the possible solutions?

The water resource of the country especially the fresh water resources are facing multitude of challenges of availability, accessibility, quality and sustainability. The future generations are more vulnerable. Water is the basic need for their survival. Drinking water crisis can break their backbone to survive, so they should learn to conserve the water, which will be a compulsion after a few years if the present rate of degradation of water resources goes unabated. And of course they should recognize the value of water. So they need to learn different aspects of water, contradictions associated with development and water and also should master the technique of conservation of water. All this and many more could be made possible through educating the stu-

dents on water in the schools and may be if this education is a part of the educational curriculum.

Through 'School Water Education', students can organize themselves to learn more about the safe drinking water and its sustainability and also take action to improve their practices in this regard.

For teachers, it is a wonderful opportunity to use their creative skills and the experience of teaching for long years to educate, build attitudes and help students take up activities that has great relevance in the real world, in a way that the constraints of the existing classroom and curriculum does not allow them to do.



"School Water Education" can help to extend the boundaries and scope of formal educational system, encouraging creativity and empowering students for constructive action- education-having relevance in day-to-day activities.

## Our Perspectives in this regard

### The issue:

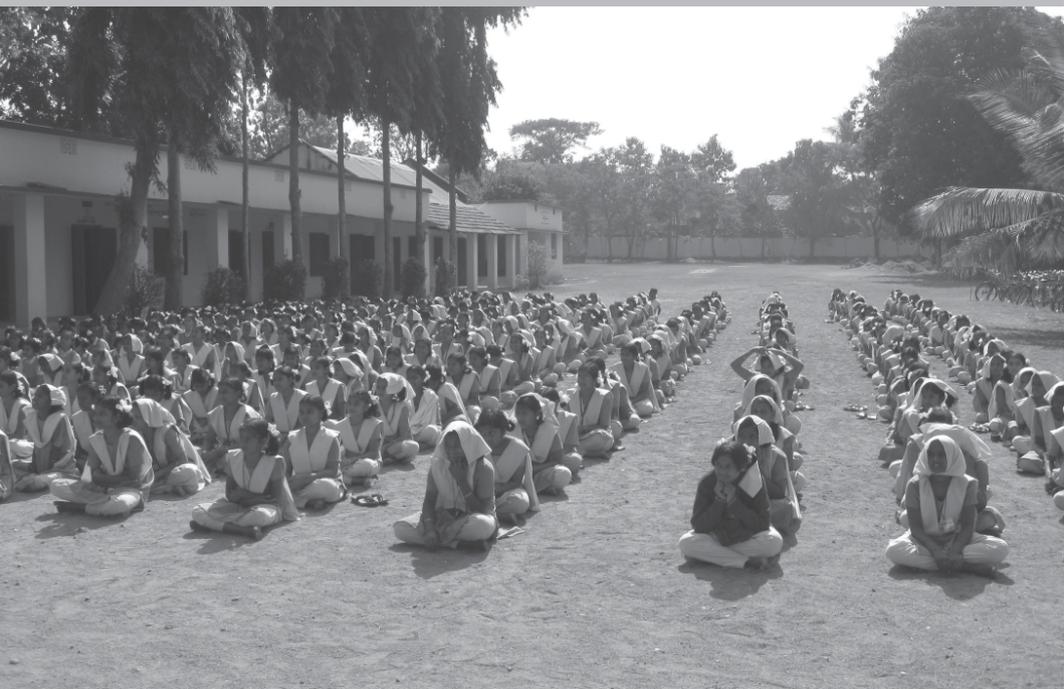
Water is fast emerging as a scarce resource and preparing the future generation for its judicious use will go a big way in proper management of water. For safe and better practice of water management and use and its sustainability, proper understanding and optimum participation of future generation is a must.

### Strategy:

To prepare the future generation for judicious use of water ground-work will be done through working with the school children and educating them on different aspects of water. Development of a curriculum for water education, preparation of the text and experimental implementation of this in a few pockets of the state has been planned. Later on we will work on replication of the same in a wider and sustained manner. Students will be educated through different innovative ways and they will be involved in various community level activities to encourage them as well as to involve the greater community.

### Activities:

- Curriculum development with the involvement of school children, water experts, educationalists etc.
- Production of literature by the writers and artists after proper field trials.



- Orientation and training of school teachers and volunteers for "School Water Education".
- Competitions on various water related issues and practices.
- Community based activities to involve the children and the community.
- Regular follow up of the behavioral changes and better practices.
- Encouraging innovative activities of the students, teachers, parents, even community.
- Consolidation of learning from this initiative for broad basing water education.

# Finding the way

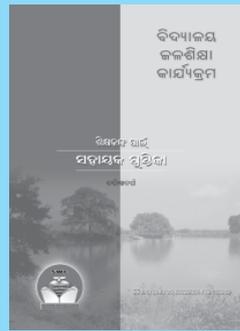
## Finding the way

### Dreaming for the future

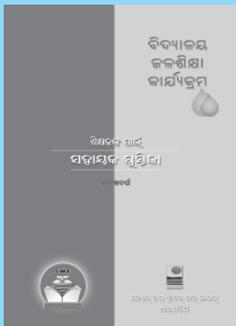
Since the inception, Regional Centre for Development Cooperation (RCDC) has been working in the field of natural resource management, as its mandate with a vision of "enabling the local communities to improve their quality of live by managing their own natural resources". While working towards our vision, we have realized from the days of inception that information is key to any change. Hence information has been an integral part of any activity undertaken by RCDC. All these years we have been generating, analysing and disseminating information for different sections of the society to bring in positive changes in resource management. We come out with newsletters in English and Oriya along with many occasional publication and research papers. But all these years we had that prick within us that only information is not sufficient to bring in the desired changes. Rather than working on the information collected, analysed and disseminated by us, the communities should generate their own information, analyse them and draw their action points. But our main effort has been to do the work for the people who should be doing it themselves. The immediate interventions like making the present generation informed, fine, but these may not be sustainable in the long run, as the challenges and complexities in resource management is changing fast. Hence the effort should be made to create an aware and motivated citizenry that understands these complexities and challenges on their own and charts their own path for sustainable management of resources. In short what is needed is a thinking citizenry. Preparing the future generation for stewardship of natural resources is a long term intervention. When we are talking about the natural resources as a whole, it is the call of the time to prepare the future generation. And the future generation can be prepared through education and attitudinal changes. This led us to think of education of children related to natural resource management.

## Intervention

In the year 2004, to begin with, we started our first intervention in school education with water as the only component, which is known as "School Water Education". In a very generalist manner, we planned our intervention on a pilot basis by initiating efforts to educate students in around ten schools each from three districts in three different geographical settings in the state. The initial plan was that a tentative curriculum will be developed. Basing on this the texts and tools will be developed and they will be field tried through demonstration classes in these schools. Basing on the feedback from the demonstration classes and the teachers, the final curriculum will be prepared and then the advocacy with the state government will be done to incorporate the curriculum in the mainstream education.



Then the activity started in a rudimentary level with the content analysis of the existing curriculum. When we went through the existing curriculum, we found a lot of inconsistency, though many chapters are



there related to water. More peculiarity was that there were lot of repetitions and much information related to the other continents, without focusing our own continent. Even there is not much about our own country and the curriculum has totally ignored the local issues and problems. Then we designed a consistent curriculum with proper importance to the local circumstances. The curriculum was divided into two groups, junior (For Class- VI & VII) and senior (For Class-VII to X). In this

regard, we started consulting with many resource persons, who have an enormous contribution in the field of education. We were fortunate enough, that the resource persons opened our eyes.

### Recasting the concept

When we started consulting with them, they asked a simple question to us that 'what we intend to do?' We were clear that we are going to prepare the future generation for the judicious use of most endangered natural resource- Water. Then they told that the students already have a heavy bag with them for school. We need not make those bags heavier. Secondly, the entire existing curriculum is meant for examination and once the examination is over, those have hardly any utility for the students in their real life. So we have to think beyond the school. Simultaneously we have to educate the present generation as well which will in turn, will help the education of the future generation which can be better achieved through the students. In the mean time, preparing the perspective of the water programme of RCDC, the "Water Education" got the place of a thematic programme in the perspective. Then our mode of operation totally changed and we started working on the curriculum to make it an activity based education programme, in which the family and village can be involved and the future generation can really be prepared for the judicious use of water. The School Water Education programme took the shape of an investment for our future generation, which we call as "Investing in the future".

### Grounding the dream

The sweet fruit like coconut requires a substantial labour before providing the sweet solid and liquid. Like this, we had to have a hard exercise, in fact a wild intervention to identify the real mode of operation. In this regard, without thinking of the time, we went on preparing the activity based curriculum. With the substantial ground work at



our end, after preparing the draft curriculum for the programme we started the programme in Nayagarh district.

### Identifying the field

There are two basic reasons for taking up Nayagarh district as one of our three demonstration district. First was, the district is a hilly terrain with a lot of problem pertaining to quality of drinking water. The second reason was, Nayagarh is the identity of 'Natural resource management by the communities', where students also have been involved

in various forms in the process of natural resource management. Simply the district is an example of indigenous knowledge based natural resource management.

The rest two districts were Bolangir and Balasore. Bolangir is an acute drought prone so called KBK district of western Orissa and Balasore is a vulnerable flood prone coastal district of Orissa. Considering all the three diverse geographical location and problem, we identified three districts for our demonstration of School Water Education. These three districts represent three distinct geographical features of the state.

### First investment

When a district like Nayagarh is so much advanced in the matter of natural resource management through students of various schools, the teachers are too resourceful for any further programme in this direction. Even there are a lot of resourceful personalities in the district; those have a substantial contribution in the field of education. We started our first consultation there with teachers. And luckily we had Sramik Jogi, the man behind traditional forest protection ethic of Nayagarh- "Thengapali" with us to make our investment penetrate for the betterment of future generation. Teachers always give task to the students. But it was an exception that teachers of Nayagarh took the responsibilities to prepare the methodology and curriculum. They started incorporating their findings into the methodology and activities, prior to giving approval to the draft curriculum as the final one. With this first consultation, we started our journey to have the practical knowledge regarding the School Water Education, which can really influence the students to carry forward the knowledge to the home and village level. It was practically a learning process for us. In this process we conducted two more consultations in the district to give the methodology a final shape and an action plan for three months was prepared.

## Landing in the dream lands

Nayagarh being the first district, the programme has a lot of advancement in this direction. But to cover rest two district, we started our programme in Bolangir in the same manner with two consultations and in Balasore with one consultation. For both of the later districts, the programme was quite new and probably it was the first instance for the teachers to take the students to the community in the contemporary educational frame. We found optimum interest from the side of teachers for the programme in both of the said districts, which is simply beyond our expectations. At the same time the participants of these consultations also contributed substantially to the whole process and also bringing in more clarity for us so far as school water education is concerned.



In Bolangir district, the teachers prepared an action plan for three months, which is applicable for all the identified schools. A set of activities were targeted during the time frame, which covers the basic things like essay, painting, debate and other competitions among the students and also some of the interesting activities like water mapping and household level water audit, which can involve the family members as well as the villagers in the programme. All the identified schools set a target in their mind to develop their schools a model in the programme, which can be an example for other school.

In Balasore district, the process was slightly different. In the first workshop, they accepted the content area and decided to adopt the methodology as per the situation. They also set an action plan for two months. But here the action plan was for each individual schools, where some of the activities were common for some of the schools. Nothing was mandatory for any of the schools. Here also teachers had a common target to prepare their schools as a model one in their own way.

After consulting with the teachers of all the three districts, we realized that our dream has certain relevance and nothing can be achieved through students without the real interest of teachers.

Initially we believed that an exhaustive school water education curriculum will be prepared and basing on the pre-determined methodologies, education will be imparted in the schools. But as we interacted more and more with the teachers, educationalists and students, it got refined in many ways. One aspect of school water education, that has changed consistently is that of the approach to school water education - it should be flexible, not bound by the content, methodologies and targets. School Water Education should provide the maximum creative space for the teachers who are the key to success and also the students. And it should not be limited to the boundaries of the schools.



This also should liberate itself from the teacher and student relations. The role of the villagers has to be changed. The experienced and knowledgeable in the villages (who also might be illiterates) also should play the center stage of the 'teacher' in school water education.

### Diversity in Approach

The programme continued in three districts in three different geographical locations in the state with different methodologies to fulfill our one dream- "Investing in the future". The action plan finalized for all the schools of three districts. In Nayagarh, the demonstration classes were going on in one after another school, where the teachers of all identified schools participated. After the demonstration phase, the school carried on the programme at their own level. In Bolangir, the teachers had a free hand to implement the programme with their own methodology, where they developed their own school as a model school for School Water Education. And in Balasore, the teachers carried on the programme as per the plan prepared by them and after the implementation for two months, they finalized the methodology with the

feedback from each school, which became the final methodology for them and the methodology became uniform in each schools. They worked in the direction of preparing ten identical model schools in the district for School Water Education.

### Pouring the creativity

As we want to make the programme a value added one, we want to make the programme more interesting and students should not feel it as a burden on them. In this process, we have made one thing clear that nothing is mandatory in the methodology of School Water Education. Anything creative has a space in it and teachers have an absolute freedom to try any methodology at any time as per the need of the time. In this direction, it covers the basic activities like painting, essay,



debate, quiz and other competitions and at the same time it covers the household level water audit and village water mapping. Even the school can start a wall magazine under the programme to place the creative pieces of students so that those can be appreciated and the interest and creativity of students can be boosted.

### Establishing the links

As we always believe in two ways of educating people- long term and short term, we found the space for both the approaches in this programme. Through the School Water Education programme, we are educating the future generation. And at the same time we have the opportunity to educate the current generation in a better manner. Through some of the activities like water audit and water mapping, students have to move to the family and village level. Through the queries, they will have interaction with the family members as well as with the villagers and like this the education will flow from school to family and from family to village and vice-versa.



## Valuing the unvalued

Despite all the scientific inventions and discoveries, traditional knowledge has a great value in each and every aspect of life, as that has been developed through experiments for years and years. So a lot of veteran people are there in every village having optimum traditional knowledge base, which is solution to many water related problems in the locality. But in course of time, their knowledge has been suppressed by the contemporary practices and even those people have forgotten to access their resource inside them. Through the programme, students will have the interactions with those veteran people to understand the trend of change in the local water resources and to find out some of the solutions of the problems pertaining to water sector in the locality. Through this, those people will have a sense that they are still useful and resourceful and at the same time the future generation can understand the importance of the traditional knowledge.

## The change agents

Through this School Water Education programme, we are preparing the future generation for the judicious use of water. At the same time, we are also preparing them as the change agents related to water. It has been experimented that when a child says something positive in the family, that is accepted and if the thing is against the ill practice or habit of the parents, the parents felt ashamed to repeat the thing. So through School Water Education programme, we can educate the family members of the students as well as the villagers in a sustained manner, in which the students will play the main role- simply a role of the change agents.

## Sky is in the limit

In comparison to our initial plan, presently we are in a more practical and value added position, where the programme can really work for

the betterment of future as well as present generation. We have a final curriculum with us, which covers minimum aspects of water in a very logical manner. We have developed the materials as per the curriculum, which has multiple methodology options collected from three districts and of course from various other sources. Simply, we have a complete educational package for the students, which is full of activities, beyond the mainstream class room education and which has the opportunity to bring the knowledge to the family level and community level through the students. In simple word, we can now say that we are prepared to prepare our future generation for the judicious use of the most endangered resource- water.

### **Return of the investment**

One phase of demonstration class in all the identified schools of three districts, i.e. Nayagarh, Bolangir and Balasore was completed. Looking at the acceptance, the full fledged education programme is in the implementation phase in 60 schools of above three districts. Each and every teacher of all the identified schools is aware regarding the most endangered natural resource - water along with the on going programme. All the students of the said schools have shown their interest to know more and more about water. Even they have sent any questions regarding water to us through the teacher involved in the process. Many schools have introduced a wall magazine on water, which are displayed in the school wall. Every week, the students use to contribute article, news clips and poems related to water for the wall magazine. Every school has covered a series of competitions like quiz, essay, debate and painting. We have also started receiving appreciation from guardians. Every school have introduced the news reading session on water in each prayer class and the sanitation and personal hygiene aspect is properly taken care by the identified schools. There are some instances of rallies by the students to make the community

aware regarding sanitation and water conservation. Some of the schools have undertaken some programme like water audit of individual household, talking to villagers regarding various water sources of the village for water mapping of the village. Overall the programme has laid the foundation for a long term relation with the schools and students to make our future generation prepared for the judicious use of water. The initiative has gathered lot of appreciation and good wishes from teachers, parents and community along with the intellectual masses.





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