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Jalasangvad

A Dialogue on Water
Editor: Dr. Datta Deshkar



Cover Story:
Aakar Charitable Trust:
- Shri Vinod Hande

Famous rivers in the world

(1) Pechora River (Russia)



(2) Usa River (Russia)



(3) Vaga River (Russia)



(4) Yug River (Russia)



Jalsamvad



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Mouth Piece of Bharatiya Jala Sanskriti Mandal

■ August 2023

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Very recently , we celebrated the Skill Day in our country. Skills are needed not only for securing job but also for promoting entrepreneurship. For proper and gainful use of available resources for the economic development of the country, promotion of entrepreneurship is essential. Till now, skill development was associated with science and industry but in fact, entrepreneurship is needed in all the walks of life. Even for accurate, speedy and decent typing skill is needed. Not only that, even for cooking, skill is very much required.

We are now concerned more to use skill development in water sector. We can look at water sector from three different angles: water conservation, water management and quality of water. Let us try to find out what are the job opportunities available in all these three major issues.

Take the issue of water conservation. Out of the total rainfall, we are, at present, successful just to store 15 percent of water. What happens to the rest of water? It is either evaporated or flows back to the sea. On one hand, we strive for more water and on the other hand, we allow that water to flow away. Can we not increase our storing capacity? We can select a team of 10-15 young active youth from every village, train that team to build up water resources at village level. This team can get the guidance from experts as to where ponds can be dug to store water. If every village has such 5-10 ponds in the village, water stored there would prove to be a boon to the community. If water is collected in every village in this way, that would also help the flood control. At one particular moment, after rainfall, water starts flowing from all the villages at one and the same time. When this flow reaches the rivers that develops into floods. At SSC level one course in Water management should be designed where intensive training can be given to the rural youth. This team selected, would work under the Village panchayats.

Another problem is that of water management. There is a huge wastage of water at every level. People need training as to how they should use water. Nearly 80 percent of the available water is used for agriculture. Flow irrigation is a common practice throughout the country. If the modern systems of irrigation are used for watering the fields huge saving of water would be possible. This team selected should train the farmers as to how these systems are used.

When I visited one village in connection with a lecture on water literacy, I found that there was not a single nalla carrying waste water in the entire village. The sarpanch told me that in every house a trench was dug where the entire waste water was diverted there. Near those trenches trees were planted resulting in the development of greenery everywhere. This does not need any special training but somebody should be there who would inspire every villager to do this. Our team would be a good motivator for every villager.

Next issue is that of quality of potable water. In one village I found water ATMS serving good quality of water to every village house. A small charge had to be paid by every user for getting water from the ATM. Such ATMS should be started in every village by our team members.

Every year we spend crores of rupees on water related issues with no permanent solution. If such paid staff is appointed in each village miracles would take place we can arrive at some solution to this problem.

Dr. D.G.Deshkar
Editor

Sustainability and Climate Change -

The Way Forward

Dr. Prashant Khankhoje



The dictionary meaning of Sustainability is the ability to be maintained at a certain rate or level.

The sustainability of economic growth

Avoidance of the depletion of natural resources in order to maintain an ecological balance.

The pursuit of global environmental sustainability

Sustainability consists of fulfilling the needs of current generations without compromising the needs of future generations, while ensuring a balance between economic growth, environmental care and social well-being. Sustainability is the ability to exist and develop without depleting natural resources for the future.

The foundation of a sustainable community revolves around eight major pillars: Economy, Health, Energy, Environment, Nature, Community, Social Equity and Transportation.

Sustainability is the ability to maintain or support a process over time. Socially, sustainable practices can help strengthen community bonds, improve quality of life and provide hope for a better future. Environmentally, sustainable practices can help protect natural resources, mitigate and adapt to climate change and promote biodiversity.

The term sustainability is broadly used to

indicate programs, initiatives and actions aimed at the preservation of a particular resource. However, it actually refers to four distinct areas: human, social, economic and environmental – known as the four pillars of sustainability.

The United Nations defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It assumes that resources are finite, and so should be used conservatively and carefully to ensure that there is enough for future generations, without decreasing present quality of life. A sustainable society must be socially responsible, focussing on environmental protection and dynamic equilibrium in human and natural systems.

ESG - Environmental, Social, and Governance :

ESG stands for Environmental, Social, and Governance. Investors are increasingly applying these non-financial factors as part of their analysis process to identify material risks and growth opportunities

The concept of sustainability is based on three core sustainability principles. These

principles are environmental, social, and economic sustainability, each focusing on a company's impact on those three aspects of the world

Sustainability challenge can be broken down into 4 Cs: Collaboration, Control, Communication and Commitment

Sustainability supports the well-being of individuals and communities. Sustainability promotes a better economy where there is little waste and pollution, fewer emissions, more jobs, and a better distribution of wealth.

The Sustainability concept revolves around 4Ps & 4Cs

The 4Ps Product, Price, Place, and Promotion refer to the products offered by the company and how the product is reaching to the consumer.

The 4Cs refer to Customer need, Costs, Communication, and Channels of distribution which are all different aspects of how the company functions.

Benefits of Sustainable Development

- Safe, Healthy, Quality working lives for our people
- Products that accelerate more sustainable lifestyles
- Products that create sustainable infrastructure
- Efficient use of resources and high recycling rates
- Trusted user of air, land and water
- Responsible energy user that helps create a lower carbon future

The concept of sustainability is composed of three pillars: environmental, social and economic—also known informally as profits, planet, and people. These are, in particular, relevant to corporate sustainability and efforts made by companies. Environmental protection is the most frequently discussed element.

Sustainability is important because it will help us

1. Use the available resources judiciously and working towards maintaining the ecological balance.
2. Prevent degradation of the environment and laying emphasis on protecting the environment.
3. Prevent over-exploitation of resources

Initiatives in India

India is facing challenges of sustaining its

rapid economic growth while dealing with the threat of Climate Change. The environmental challenges of India are the loss of biodiversity, scarcity of water, air pollution, waste management and conservation of natural resources.

The Climate Change threat is due to the accumulated greenhouse gas emission in the atmosphere generated from intensive Industrial growth and high consumption life style. According to the Inter-governmental Panel on Climate Change (IPCC), anthropogenic Greenhouse Gas emissions (GHG) are mainly driven by population size, economic activity, lifestyle, energy use, land use patterns, and technology. Moreover, the rise in temperature, unseasonal rains, floods & draught is affecting the utilisation of natural resources and in turn, adversely affecting the livelihood of people.

Climate change is caused by humans using oil, gas and coal for their homes, factories and transport. When these fossil fuels burn, they release greenhouse gases - mostly carbon dioxide (CO₂). These gases trap the sun's heat and cause rise in the temperature on earth.

The world is now about 1.2c warmer than it was in the 19th century - and the amount of CO₂ in the atmosphere has risen by 50%.

Some of the sustainability challenges in India are:

- Climate change
- Energy consumption
- Wastage
- Threats to public health
- Poverty
- Management of natural resources
- Loss of biodiversity, and
- Land use

Sustainable technology is the combination of two complementary ideas:

1. Technology that is meant to remedy, improve, or offset carbonization, environmental setbacks, or problems.
2. Technology that is produced using green or ecologically responsible materials or processes.

With the climate crisis, there is a current movement towards sustainability as a more appealing priority for businesses, as people begin

to live more sustainable lives.

It is likely that, in the future, positive impact on climate across the whole value chain, improved impact on the environment, people, and atmosphere, and productive input in society, will be the expectations from businesses.

Companies will be held accountable for all aspects of industry, and any environmental damage or harmful emissions should be limited or removed from productive processes.

It is also expected that resources will be used to suit the global increase in population in what is commonly referred to as a 'circular economy'. This change would allow one person's waste to be another's resource, in a process that would greatly reduce waste and create a more efficient supply chain. India, and entire world is planning several measures to promote sustainable processes & life style.

Sustainable Development Goals (SDGs)

World leaders have agreed upon 17 Global Goals (Sustainable Development Goals or SDGs).

The Sustainable Development Goals (SDGs) aim to transform our world.

SDGs are a call to action to

End poverty and inequality

Protect the planet, and

Ensure that all people enjoy health, justice and prosperity

It is now up to all of us, governments, businesses, civil society and the general public to work together to build a better future for everyone.

Both ESG and SDGs aim to address and solve social and environmental problems while also achieving a sustainable society. Where they differ is



in their approach and target audience: ESGs are concerned with companies and the business community, whereas SDGs are concerned with countries and the general public

7 key initiatives to achieve Sustainability goals

- Infrastructure Imperatives
- Carbon Management
- Green Energy
- Circular Economy
- Environment Conservation
- Water Conservation and
- Energy Efficiency

LOCALISING SDGs – THE INDIAN MODEL

National institutions are paramount to the achievement of the Sustainable Development Goals (SDGs). The strengthening of national institutions for SDGs has been a priority in many



countries since the global agreement on the 2030 Agenda. In India, the government has made significant strides in strengthening the national and sub-national institutional architecture to localise the SDGs. Furthermore, Civil Society Organisations (CSOs) and the private sector have also stepped up and are contributing to the efforts of the government and have consequently initiated actions as part of their operations towards achieving the SDGs. Government of India's leadership in shaping the SDGs has been globally recognised.

India was a key member-country involved in formalising the UN resolution on 'Transforming our World: The 2030 Agenda for Sustainable Development' and developing the global indicator

framework for monitoring the SDG targets. The government continues to demonstrate proactive and strong leadership in the localisation and implementation of the SDGs. The Government of India's (Gol) strong commitment to the SDGs is also driven by the fact that the globally agreed goals substantially reflect the national agenda of development.

Globally, transport accounts for approximately 23% of total energy related CO2 emissions, with road transport itself accounting for 17-18%. In urban areas, mobility is rapidly becoming one of the greatest challenges due to increasing number of passenger cars. With depleting oil resources and rising pollution, Electric Vehicles (EVs) provide an alternative to a sustainable future. Government of India has launched an e-mobility programme such as National Electric Mobility Plan (NEMP) that aims to provide an impetus to the entire

e-mobility ecosystem which includes electric vehicle manufacturers, charging infrastructure development companies, fleet operators, service providers, etc.

With over 25 million vehicles on road and automobile being the major manufacturing industry in the State, Maharashtra Government aims to maximize the adoption and manufacturing of EVs in the State. Hence, Maharashtra State Government has categorized Electric Vehicles manufacturing, infrastructure and servicing as a thrust sector. The State Government has also launched EV & Related Infrastructure Policy 2018 & amended in 2021, to promote the sector.

Use of electric vehicles is an important component in achieving the Sustainable Development Goals –

- (1) Affordable and Clean Energy (SDG-7)
- (2) Responsible Consumption and Production (SDG -12) and
- (3) Climate Action (SDG-13).

The Indian model of SDG localisation is structured around four inter-related pillars operating sequentially and simultaneously at the national level, anchored by NITI Aayog in the centre and by respective state and UT governments at the

sub-national level. The four foundational pillars in this model are:

Pillar 1: Creating institutional ownership

Pillar 2: Establishing a robust review and monitoring system

Pillar 3: Developing capacities for integrating SDGs in planning and monitoring.

Pillar 4: Promoting a “whole-of-society” approach

Decarbonisation

It refers to the process of reducing ‘carbon intensity’, lowering the amount of greenhouse gas emissions produced by the burning of fossil fuels. Generally, this involves decreasing CO2 output per unit of electricity generated by either Conservation of Energy or shifting to Renewables.

Burning of fossil fuel can also be restricted by using Electric vehicles. Reducing the amount of carbon dioxide occurring as a result of transport and power generation is essential to fight against Climate change.

Net Zero

It means achieving a balance between the emission produced and that removed from the atmosphere in order to reduce global warming. Becoming net zero refers to balancing negative emission by removing emission from the atmosphere to achieve carbon neutrality.

India has set a goal of achieving Net Zero by 2070.

National Action Plan on Climate Change

To deal with the challenges of Climate Change, India has developed ‘Eight National Missions’ keeping in mind the famous dictum “The Earth has enough resources to meet people’s need, but will never have enough to satisfy people’s greed”

‘Eight National Missions’ form the core of the National Action Plan representing multi-pronged, long term and integrate strategies for achieving key goals in the context of climate change.

These Missions are:

1. National Solar Mission
2. National Mission on Enhanced Energy Efficiency
3. National Mission on Sustainable Habitat
4. National Water Mission

5. National Mission for Sustaining the Himalayan Eco-system
6. National Mission for a Green India
7. National Mission for Sustainable Agriculture and
8. National Mission on Strategic Knowledge for Climate Change

COP26- INDIA'S 5 COMMITMENTS

India has announced its five commitments (AMRIT TATVA) to tackle climate change related issues.

1. By 2030, India will increase its non-fossil fuel capacity to 500 Gigawatts (GW).
2. India will fulfil 50 percent of its energy requirements with renewable energy by 2030.
3. India will reduce one billion ton of the total projected carbon emission between 2021 and 2030.
4. By 2030, India will reduce its economy's carbon intensity to less than 45 percent.
5. India will achieve the target of net zero emissions by 2070.

Climate change-solution

Mitigation – reducing climate change –

Reduction in the flow of heat-trapping greenhouse gases into the atmosphere either by

- a) reducing sources of these gases (for example, the burning of fossil fuels for electricity, heat or transport) or
- b) enhancing the “sinks” that accumulate and store these gases (such as the oceans, forests and soil).

Adaptation – adapting to life in a changing climate –

Adjusting to actual or expected future climate is the emphasis. The goal is to reduce our vulnerability to the harmful effects of climate change (like sea-level encroachment, more intense extreme weather events or food insecurity).

Local adaptation

Cities and municipalities are at the frontline of adaptation. Cities and local communities around the world have been focusing on solving their own climate problems.

Sustainability

Taking action now to enable a future where the environment and living conditions are protected and enhanced.

Objectives :

- Energy efficiency & management
- Use of renewable energy
- Conserve and protect water resources through efficiency, reuse, and rainwater harnessing
- Eliminate waste, prevent pollution, and increase recycling
- Design, construct, maintain, and operate high-performance sustainable buildings

Government of India has undertaken a two-pronged approach to cater to the energy demand of its citizens while ensuring minimum growth in CO2 emissions, so that the global emissions do not lead to an irreversible damage to the earth system.

On one hand, in the generation side, the Government is promoting greater use of renewable in the energy mix mainly through solar and wind and at the same time, shifting towards supercritical technologies for coal-based power plants. On the other side, efforts are being made to efficiently use the energy in the demand side through various innovative policy measures under the overall ambit of Energy Conservation Act 2001.

The Energy Conservation Act (EC Act) was enacted in 2001 with the goal of reducing energy intensity of Indian economy. Bureau of Energy Efficiency (BEE), a statutory body under Ministry of Power is responsible for spearheading the improvement of energy efficiency in the economy through various regulatory and promotional instruments. Bureau of Energy Efficiency (BEE) was set up as the statutory body on 1st March 2002 at the central level to facilitate the implementation of the EC Act.

The EC Act mandate :

1. standards & labelling of equipment and appliances
2. energy conservation building codes for commercial buildings
3. energy consumption norms for energy intensive industries

Ministry of Power, through Bureau of Energy Efficiency (BEE), has initiated a number of energy efficiency initiatives in the areas of

1. Household lighting
2. Commercial buildings
3. Standards and labelling of appliances
4. Demand side management in agriculture/municipalities, ME's and large industries

Electricity Act 2003: section 86(i)e:

The state commission shall discharge the following functions, namely:

Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee.

“We have not inherited this earth from our ancestors, we have merely borrowed it for our children.”

MAJOR RE PROGRAMS

Government of India has ambitious plans to increase percentage of RE in the energy mix of India. Target set by India is to achieve 500 GW by 2030.

Various Initiatives are

- Pradhan Mantri Kisan Urja Suraksha Evam Utthan Mahabhiyan (PM KUSUM)
- Mukhyamantri Solar Yojana
- Roof Top Solar (RTS) Programme
- Renewable Energy Hybrid Projects
- Waste to energy initiatives
- India's Dream - One Sun One World One Grid
- Green Energy Open Access

Highlights in the India Budget 2023 - Energy Sector – A step towards sustainable future:

- 1) Green Growth as one of the important priorities
- 2) Positive steps to approach net zero carbon by 2070
- 3) Energy Transition INR 35000 Crs
- 4) Green Hydrogen mission -Annual production 500 MMT of Green Hydrogen by 2030
- 5) Battery Storage 4000 MWH VGF
- 6) 13 GW RE in Ladakh
- 7) Replacing old polluting vehicle

- 8) BCD on Coal increased to 2.5%
 - 9) Waste to Wealth GOBARdhan Scheme
 - 10) Sustainable Ecosystem development
- To work towards Sustainability, we need to adopt following;

- Take care & use what we already have
- Think twice before we shop.
- Eat the food we buy (reduce food wastage)

Remember the new Rs of Sustainability:

- 1) Remember the need
- 2) Refuse and assess
- 3) Reduce
- 4) Reuse
- 5) Refill
- 6) Repair
- 7) Re-gift
- 8) Recycle and Repeat

A Collective Pursuit for Our Common Future and Prosperous Economy

A rolling stone gathers no moss. The age-old proverb can be extended to illustrate the contemporary design of metrics to track progress to achieve sustainable development. Every now and then we push the benchmarks of performance to newer heights. This avoids complacency and demands repurposing our strategies and actions. The approach assumes significant importance in these uncertain times.

Environmental, Social, and Governance – The Praj Way!

In the unprecedented times of increasing global challenges such as climate change, social inequality, and concerns over unethical corporate practices, there is a growing importance of Environmental Social Governance (ESG) in shaping a sustainable and equitable future.

ESG encompasses a framework that evaluates a company's performance on environmental, social, and governance factors. It provides valuable insights into the sustainability and ethical practices of organizations.

Green Manufacturing Overview

Before we define Green Manufacturing, let us try to understand its main purpose, which is that

all manufacturers can help make the environment better. Green Manufacturing will help stop or slow down man-made disasters, epidemics like respiratory diseases, stress and psychological issues and other pollution-related diseases from happening.

Drivers of Business Sustainability and Success

Every businessman would like to grow his business and earn profit. In fact, profit is the driving force behind every business and inspiration for starting a business. I have been closely working with MSMEs, startups and emerging companies. From my experience, I have few tips for the success of these businesses and their sustainability.

Corporate Governance- 'Corporate Governance' in lay man's language refers to the compliance of the applicable laws in true spirit.

Sustainability and Climate Change The Way Forward

The dictionary meaning of Sustainability is the ability to be maintained at a certain rate or level.

- The sustainability of economic growth
- Avoidance of the depletion of natural resources in order to maintain an ecological balance.

Sustainable Sale and Purchase: A Mirror Image Background

Sustainable means worthiness of something, which is important for lasting long on earth and the worthiness is measured in terms of life cycle value, cost, risk and impact.

Sale means exchange of goods for mutually agreed benefits. In this kind of transaction, 'value' is the centre of focus.

Same is the case with 'Purchase', but here 'cost' is the centre of focus.

Sale and Purchase are mirror images of each other.

Corporate Social Responsibility - Mandatory and Voluntary

For companies falling within a certain financial bracket, CSR is a mandatory activity and they are required to spend at least 2% of their profit for social causes. However, there is no upper limit of how much a company can spend on CSR. While it is mandatory for these companies to spend, it is voluntary for other companies and they can continue contributing towards CSR.



The Climate Change and Global Warming

of the Year

News



Following the success of the inaugural event, CCGCONF – the international conference on climate change – is returning in 2023.

The first goal of CCGCONF is to ensure that attendees are presented with unparalleled learning opportunities. Global warming and climate change present highly complex and unavoidable problems that threaten the well-being of billions of people. That's why CCGCONF makes no compromises when it comes to the quality of content. It will feature presentations on the most pressing issues, ensuring the diversity of opinions and expertise.

The second goal of the event is to facilitate meaningful actions. The innovative format of the event and countless networking opportunities will allow the attendees to engage in insightful discussions, brainstorm creative solutions, and become a part of a large international network of academics, non-profit organizations, businesses, government agencies, and other stakeholders who are invested in addressing the challenges of climate change.

The Climate Change conference will assist you in improving as a scholar not just by listening to talks and presentations but also by the overall

experience of attending the event. You'll hear a lot about topics in the areas of global warming and climate change that you might not be familiar with.

Meet Ramveer Tanwar, Noida-based Engineer Who Quit His Job To Revive India's Dying Lakes

Unless you are living under a rock, you would know that climate change and global warming have been posing a serious threat to the environment. While international environmental activists like Greta Thunberg raise global awareness about the significance of climate change, there are a few foot soldiers back home in India as well who have been doing their bit to save the environment. And if we are to talk about them, we cannot miss out on Ramveer Tanwar, a 29-year-old engineer from Greater Noida, who has taken upon himself the responsibility to bring a change.

Ramveer, a resident of Dada-Dabra village of Greater Noida has a degree in mechanical engineering and also had a well-paying job in a multinational company. However, the perks of a well-paying job were not what intrigued the young man, but a drive to contribute to a better world. He started preserving ponds after quitting his job. So far Ramveer has revived about 40 ponds in multiple states.

Talking to News18, he says, “Just like Taj Mahal and Red Fort are monuments left behind by our ancestors for us, ponds and lakes are the same. These are ancient water conservation measures that our ancestors taught us. But our ponds and lakes are drying. So, will we leave the pits of dry ponds for our future generations? We have to preserve the ponds and lakes for our future generations.”

Talking about how he started, he says that he used to coach children during his first year of engineering and it was then that he and around 40 of his students took up an initiative named Jal Choupal which raised awareness about the importance of preserving groundwater bodies.

The cleanliness campaign that started in India motivated him to take up the preservation of water bodies. However, since it was increasingly

difficult to balance it with work, he decided to leave his job and fully engage in the work of preserving ponds and lakes. He says, “I quit my job in January 2018 to pursue this work.”

Ramveer admits that he faced severe opposition from his family after. However, undaunted, he started organising a weekly meeting, Jal Chaupal, in his village, which aimed to keep nearby ponds and lakes clean and healthy.

When people started appreciating his work, his fame started rolling out to other villages. After that, when the former DM of his district came to know about this initiative, he got a 2-minute documentary shot appreciating the work of Ramveer.

He has cleaned the waste lying in the water of Ghazipur village of Delhi including many areas of UP, such as Chauganpur in Greater Noida, Rauni village, Morta village of Ghaziabad, and Nana Khedi village of Saharanpur. He has established an organisation named Say Earth, undertaking these activities.

Dubbed the Pond Man of India, he has also been appreciated by Prime Minister Narendra Modi, who mentioned him in his Mann ki Baat.



Organization - Aakar Charitable Trust

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Aakar Charitable Trust (ACT) was founded by Amla Ashok Ruia. She is an Indian social activist known for her work in water harvesting. She was inspired by severe droughts in 1999, 2000 and 2003 to improve water harvesting in Rajasthan villages. To provide water security in villages she partnered with them to build check dams. Her first check dam project was in Mandawar village which was a success. Farmers earned up to 120 million rupees in a year via two check dams built by trust. By the end of 2017 Aakar Charitable Trust had built more than 200 dams in more than 115 villages of Rajasthan. The Trust provides 60-70 percent of the resource required to construct each check dam while villagers are required to bear remaining amount of cost with responsibility of its maintenance. The check dams allow the aquifers to be replenished during the monsoon, so that bore wells and hand pumps are recharged. With the increased amount of water villagers are able to grow three crops during year and can also keep live stock. Girls are able to attend school as they no longer need to help their mothers in carrying water from long distances. Aamala Ruia is popularly known as Paani Mata. Aamala Ruia belongs to the Dalmia family who built Dalmia Nagar in Bihar. She married into the Ruia family who owned Phoenix Mills in Mumbai. Aamala says, I believe that the two foremost issues in our country are water and education so the trust has taken up both sectors seriously.

Apart from Rajasthan Ruia and her team have extended their efforts in other states such as Madhya Pradesh, Maharashtra, Odisha, Chhattisgarh. They are also planning to extend their work in Bihar, Haryana, Uttarakhand and Uttar Pradesh.

Though Amla was born with silver spoon in her mouth, her heart bled seeing the sufferings of people due to acute water shortage. She realised that sending money and clothing to victims of disasters was not a permanent solution. She set out of her wealthy home with a mission to create water sources. From 2006 to 2022 the trust has completed 600 check dams impacting 600 villages.

Initially she started check dam construction work with her own money and funds from her relatives. After sometime Rotary club came to her support. She says in the first year she could build 2-3 and next year it increased to 6-8. Ruia has involved the community in construction of check dam and they required to contribute 20 percent while Trust bears remaining 80 percent of money. The villagers take the ownership of the check dam. From 2000 to 2005 the trust has built 200 drinking Water Kunds in which around 1 crore liters of pure natural drinking water from the rain is collected year after year in remote places where no municipal water is available. Here villagers contribute 25 percent of total cost.



To encourage villagers of Maharashtra for water harvesting the trust organized 'The Aakar Jal

Puraskar' of Rs. 100000/- which was given to the village that did the best water harvesting. This competition was organized from 2003 to 2006. Construction of 600 hundred check dams in period of 16 years from 2006 to 2022 brought 714880 people well above poverty in 378 villages. Similarly indirectly benefitted 807096 people in 377 village. So in the total 1521976 people benefited from 755 villages. As per trust, up till now villagers contributed 11.5 crores and 28 crores was sponsors money. Villagers are earning 1500 crores year after year which have taken them to new level of prosperity and self sufficiency.

The following are the few benefits of Check dams,

- Farmers start taking three crops annually.
- Cultivable land increases year after year.
- Animal husbandry adds to the income.
- Migrant labor returns to the village.
- Women are greatly relieved of providing water for the household.
- Girls can attend school.
- Health and hygiene improve because of availability of water.
- Environment is restored.

Ruia says check dams are answer to the floods and drought. Bihar is prone to floods so by building sufficient number of check dams we can control floods. She has given great encouragement and the motivation to build more dams. In the early days she had no idea about solving the water problems that was causing starvation, deaths. To solve above she has taken guidance from "water man of India" Shri Rajendra Sing who is running Tarun Bharat Sangh.



Aakar Charitable Trust was set up in 2003 and today they are in a position to build 30 check dams a month. Her dream is to complete 3000 check dams before she leave earth. Her most of the dams are in Rajasthan. When she started work in 2006 check dam construction cost was Rs.2.5 to 3 Lakhs. But now it costs Rs.25 lakhs depending on the size of dam.

The biggest dam is constructed by Aakar trust is located in Pali district of Marwar. This was earthen dam constructed earlier by Govt. at a cost of Rs.75 lakhs and was washed away in the very first rain. Villagers approached trust to build proper one. Trust took initiative and build dam at a cost of Rs.36 lakhs. Trust contributed Rs.25 lakhs and villagers Rs.11 lakhs. In a very first year dam gave return of Rs.54 crores to the 7000 villagers. Trust don't start work until villagers make their contribution. This give them a feeling of ownership.

Check dams constructed by trust has transformed several dry villages into green. Check dams check the flow of water. They hold water in dams for three to four months which is huge a reservoir. The water seeps into the ground through soil and reaching wells of village for the use of irrigation and to drink. Her dream is that structure they construct should stand strong for 500 years. Seeing the fabulous returns of the check dams, Aakar Charitable Trust wants to popularize the concept of water harvesting first in India and then in the whole world.

Aakar Cheritable Trust in the field of Education :

For primary education trust joined hands with an NGO called Grammangal. They have developed a Teacher's training Program which

competes with the very best models practiced anywhere in the world. They have 800 trained teaching staff.

- They have helped Grammangal in the construction of their hostel for teachers taking training.
- Built a Preprimary and primary school at Ramgarh in Sikar Dist. of Rajasthan.
- At Ramgarh, Shekhawati they are having girl's school from class 6th to 12th.
- Value based series of 10 audio cassettes have been developed by Ruia for school children of class 1 to 5.
- Similarly series of 18 CDs have been developed for the students of 6th to 10th class. There are another 4 CDs of 80 poems called "safalta aur Saralta" covering 80 values.
- Under the guidance of Shri Shri Ravi Shankar ji 5 well known Shastras have been translated from Sanskrit to Hindi. Those five shastras are 1) Ashtavakra Geeta, 2) Narad Bhakti Sutra, 3) Shiv Sutra, 4) Patanjali, and 5) Ishavasya Upanishad.

What they do – Present Scenario in check dam construction :

They tell the villagers that they can construct medium to small size check dams in their village. They also tell them how they have built 600 check dams up to June 2022 in the highly water deprived areas of Rajasthan, Uttar Pradesh, Bihar, Orissa, Madhya Pradesh, Maharashtra and Haryana with glowing results.

Time and Cost of Construction :

The time required is about one and half months for repairs and 2 to 3 months for new construction. If funds are provided the jobs will be completed well before monsoon. On an average large structure would cost around Rs.7 to 8 lakhs excluding 30 percent share of villagers.

Methodology :

1. First their karyakartas contact with local people and spread an awareness among villagers about the benefits of water harvesting. To gain confidence of villagers trust's field worker work hand in hand with local people and help them solving their problems and understand hardship they face. Having gained their confidence , villagers guide

them for site selection process and also them in every decision making steps.

2. Experts with experience of at least 2000 water harvesting structures are employed for designing the structure in consultation with villagers.

3. A meeting is conducted with entire villagers and it is told them that trust is ready to help them if they agree to help themselves. The trust provides JCB, cement, mason and labor expenses.

Site selection by Trust :

Site selection is an important criteria in this work. Following points are considered in deciding site.

- It should be a some what hilly terrain where run off is expected during rain and millions of liters of water is collected by couple of hours of good rain.

- There should be enough spread of land which would be able to hold accumulated water. Secondly masonry work should be minimum to reduce cost and to avoid possibilities of cracks.

- It should be in the upper side so that it would impact in the village down hill and large of number of people get benefits from the project.

- The villagers should be ready to contribute at least 1/3rd of the expenses towards the structure. It gives them a sense of ownership and maintenance becomes easier.



Difficulties faced by Aakar Charitable Trust in construction of check dams :

- There are several problems but most important is to convince the villagers for the contribution and collection of their contribution.

- The villager's life is insecure and any small mishap in the family can damage the hopes of completing the project on time.



- The check dam may have to be made over several peoples land holding who have varied views about construction of the structure.
- And main is , there are plenty of negative thinkers in every village who would not like to let good thing happen in the village and will find trust's drawbacks of every construction.

Benefits of check dam construction as stated by trust :

- Check dams are providing us a very important element i.e. water and at same time rejuvenate our ecology.
- They are giving us pure chemical free water from heaven.
- Check dams safeguard the area from drought as well as from floods.
- They recharge all the bores and wells in the vicinity and thus ensuring hassle free kharif.
- With the availability of water farmers develop additional land for cultivation for winter crop. Earlier 2 percent of land was ploughed ,now 98 percent of land comes under irrigation. There is jump in income.
- Migrate labour returns.
- Women need not go long to collect water.
- With the availability of water animal husbandry becomes a source of income.
- Each village has now 4 to 5 tractors and 2 wheeler in every home.
- Check dams have all advantages of large dams.

Aakaar Charitable Trust have covered 16 districts in Rajasthan, 1 in Maharashtra (Jalna under Aurangabad division.), 1 in UP, 4 in M.P., 1 in Haryana, 1 in Bihar and 1 in Odisha. In all trust have constructed 600 check dams up to June 2022 ,

which directly benefited 714880 people of 378 villages and indirectly benefited 807096 of 377 villages. So all together 1521976 people of 755 villages. Up till now total 12.5 crore of sponsor money and 5.2 crores of villager's contributed money spent on check dam projects.



Direct benefit means : These villages have become drought proof. Villagers are debt free and are above poverty line. All children male and female are going to school.

Indirect benefit means : Villagers have much improved living conditions and are able to take two crops per year. All children male and female are going to school.

Since Aakaar Charitable Trust's work is extremely transparent and have constructed medium to small size check dams very economically, their work lauded by electronic media. They have received numerous awards for their work. BBC has selected one of their project for



40 minutes documentary and will be translated in twelve languages. Aamala Ruia received “The Global Women Achiever Awards” in 2019. She is also known as “Kisanoke ke Mahanayak” and “Water Mother”.

One can decide the way of donation to Aakar Charitable Trust, from followings,

- Sponsor the full amount and have an exclusive check dam in the memory of your family members.
- Corporate, take care of their CSR by joining hands with Aakar Trust.
- Give them commitment for Rs.2000/- per month, by the end of year it will be Rs.24000/- per year, your name will be on a name plate of the project at the end of year.
- Give them individual commitment of Rs.10000/- and you will get recognition on the name plate. Your gifts are eligible for 80G Tax Benefit.



Contact Details of Aakaar Charitable Trust

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Email : amlashokruia@gmail.com

Contact Person: Mr. Kashinath Birwadkar
Email: kashinathbirwadkar@phoenixmill.com

Email: aakartrust31@gmail.com

Mobile- 9833298801

Description	Account Name	Bank	Account no.	IFSC code
Donation in Indian Rupees	AAKAR CHARITABLE Trust	Union Bank Of India	520141001414190	UBIN0555037
Donation in Foreign Currency	AAKAR CHARITABLE TRUST	State Bank Of India	40124247338	40124247338



World Water Day - 2017

Why Waste Water?

Shri. Gajanan Deshpande, Pune -(M) : 9822754768



(A new article series has been launched from August 2021 to learn more about the importance of World Water Day and the various water awareness programs implemented every year.)

Globally, more than 80% of wastewater produced by our homes, cities, industries, and agriculture flows back into nature without treatment or recycling. This causes serious environmental pollution that leads to disease and harms safe drinking water and food supplies. An attempt was made to draw attention to this issue on the occasion of World Water Day 2017. A special campaign, "Why Waste Water?" was also launched to motivate the community to think about what should be done to reduce and recycle waste water.

Wastewater is a valuable resource to help achieve sustainable development. One of the goals to achieve that is to reduce the waste water quantity by halving the amount and increasing water reuse and recycling worldwide. Wastewater can be used for various purposes after proper treatment. For example, you can reuse that water in cooling towers and even for irrigation.

Domestic, agricultural and industrial effluents that are released in large quantities into the environment every day pose a serious problem. If we look at that water as a valuable resource rather than a problem, we will realize that it has great potential for development.

One of the objectives is that if the waste water generation is basically reduced, it will automatically save water and reduce the cost of processing it.

A large portion of wastewater is still either not collected or is released into the environment untreated. This is particularly the case in low-

income countries, where on average only 8% of domestic and industrial wastewater is treated, compared to 70% in high-income countries. As a result, water contaminated with bacteria, nitrates, phosphates, and other solvents is released into lakes, rivers, and oceans in many regions of the world, causing negative impacts on the environment and public health.

The volume of wastewater that needs to be treated will increase significantly in the near future, especially in cities in developing countries with rapidly growing populations. At the same time, sewage generation is one of the biggest challenges associated with the growth of informal settlements (slums) in developing countries.

Population and city growth, rapid economic development, and agricultural expansion play integral roles in degrading the quality of wastewater discharged into nature. By 2050, nearly 70% of the world's population will live in cities, as compared to 50% as of today. Currently, most cities in developing countries do not have adequate infrastructure or resources to handle wastewater management in an efficient and sustainable manner.

Wastewater is often an underestimated and neglected resource. If managed properly, it can be recycled back into industrial processes, agriculture, or natural freshwater systems through treatment and recycling systems. Treating and reusing wastewater is considered one of the simplest circular economy practices.

Wastewater is not only ignored as having no value; it is not even visible to us, just as groundwater is invisible to us and flows through our freshwater ecosystems. Human waste, highly toxic

chemicals, and medical waste contaminate the freshwater systems we use to prepare our food and drink.

1800 million people in the world use faeces-contaminated drinking sources, putting them at risk of cholera, dysentery, typhoid, and polio. About 0.842 million deaths occur every year due to unsafe water and a lack of sanitation. However, sewage management is neglected, which is critical. Its disposal should be viewed as a resource rather than a burden, so that it can be transformed into a useful resource.

Wastewater should be reduced and reused rather than wasted. We can reuse this grey water in our homes, gardens, and plots. We can treat waste water in our cities and reuse it for city gardens and greenery.

Water quality in lakes and rivers around the world is deteriorating mainly due to agricultural and domestic waste and other chemical pollutants. This has serious effects on fish and other forms of

aquatic life, and there is especially rapid growth of algae. For this, more effective new management practises are being developed by integrating traditional hydrological assessment methods and local techniques, which preserve water quality and facilitate efforts to improve the quality of degraded lakes and rivers.

A number of treatment processes and systems have now been discovered that will help these wastewaters meet the growing water demands of our growing cities, support sustainable agriculture, increase energy production, and promote industrial development. This will prove to be a boon for more sustainable, efficient, and equitable water use worldwide. For that, we have to focus on how this water cycle will work better for every living being by using this precious resource properly.



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Indian Council of Water & Culture -

A Bird's EyeView - 2

Dr. Datta Deshkar - Shri. Gajanan Deshpande



Holding of Separate Session In History Meet :

History council of All Maharashtra has decided to hold a separate session in its Annual meet at the insistence of this council and since last five years it has conducted such separate sessions in our principal collaboration.

It would be interesting as well as useful to know the conclusions drawn from these workshops /seminars

- Special laws be enforced for the revival of the historical water systems and making them functional.
- Social organisations should come forward and pursue the preparation of necessary rules and regulations for effective implementation of these schemes.
- Funds be made available from Central / State governments for the necessary renovation of these systems for making them functional through peoples participation.
- Special efforts be made for raising the public awareness / education, enhance women's participation in the cleaning and maintenance activities of the old water bodies like lakes, wells etc by arranging public workshops and seminars in a big way.
- It should be seen that a proper setup of assured nature is established for the cleaning and maintenance of these water bodies including the financial aspects for every year with the help of stake holders and they be made well aware of their responsibilities.
- A special organisational setup for gathering data, and all relevant information of the various water bodies in the country be established. Social

organisations should take a lead in this regard.

- These ancient water bodies be declared a s Archeological monuments and a proper provision be made for their preservation and allocating responsibilities. Efforts be made for the inclusion of some of the selected water bodies / systems like the Phad System in the list of world heritage sites.
- Bigger cities as well as rural areas should meet their domestic water demands by making extensive arrangements of Rain water and Roof water harvesting , and that should be made compulsory.
- Traditional systems like Patkai which involves people's participation for the construction of tanks and lakes as well as farming be implemented in the hilly and tribal areas. The government should extend helping hand to it.
- Water management is everybody's topic of concern, which involves agriculturists, sociologists, economists, historians, engineers, archaeologists, environmentalists, scientists, botany and zoologists, philologists etc. For the proper growth and development of this topic it is a need of hour that these experts join the organisations like the ICWC and form its branches all over.

Strengthening Water-Culture Network On International Level:

To help realize GWP vision, efforts to establish a water and culture network in the South Asia region is under way. The council is a member organization of Global Water Partnership (GWP) and it has also been named to act as a driver organization for strengthening the network of Water and Culture in South Asia region.

Management of water is not a new concept in South Asia. South Asian Culture is agrarian and the most outstanding feature of this culture centers

around the conservation and civilization emerged and flourished with and around water sources. Dearth of water led to decay and abandonment of settlements and civilization. Our history is bound with stories of how people and their rulers embarked upon ventures to store water during monsoon and devise ways and means of distributing it on equitable manner during the dry season. Traditional water wisdom, technology and cultural conceptualisation of water led to development of various techniques of water storage, management of water resources for drinking and irrigation purposes in many South Asian countries including Sri Lanka, India, Nepal, Pakistan and Bangladesh. Our region is abound with evidences and experience of Water Culture and wisdom related to conservation, preservation, purification/ water quality, multiple uses and management of water resources for domestic and food production purposes. In many parts of the region, these cultural principles and practices are still in practice. Many cultures prescribe a code of conduct for its people toward resource management. There is a growing evidence to suggest that water management principles based on Cultural understanding and practices have proven more acceptable to people and are sustainable.

Understanding Importance of a Network system for South Asian countries to respond to the management and sustainability challenges of water resources:

Current approaches to water management are usually focussed on technical improvements and sectoral solutions without sufficient attention to their basic social and sustainable goals. Recent studies have shown that the joining together of traditional knowledge, cultural practices and scientific knowledge provide new and powerful means to overcome management.

It is encouraging that recent policy documents recognise the importance of the socio-cultural dimensions in the development and management of water resources. South Asian countries need to come together and begin a more effective process of sustainable and integrated use

and management of water resources. These countries need to share each others experience and strive for a beneficial and optimal use of the resources in a sustainable manner. Hence, the networking of water and culture not only enhance knowledge on water wisdom but also help develop an effective water management approach, sustainability measures and effective water administration system.

Mouth piece of the Council- Jalsamvad (a dialogue on water) :

To propagate the philosophy of the Council, it was thought proper to start one magazine by name Jalsamvad (Jala means water and samvad means dialogue). Dr Deshkar took the lead and in the year 2005 . Right from that date this magazine is being published regularly. Till today 220 issues have seen the light of the day. Jalsamvad was successful in creating team of dedicated writers who contribute very regularly to the magazine. On popular demand, it was decided to publish the English version of the magazine. With the continuous flow of written material on water issues, we have started publishing the internet edition of Jalsamvad. Thus, every month three issues are being published regularly.

Every issue of Jalsamvad contains information pertaining to one national river, one international river, one dam in the country and one dam outside the country, one lake in the country and one lake outside the country, water problems faced by any specific country, one success story in the field of water, introduction of one water activist in the country, and four to five articles on specific water problems.

Till now we have published more than 50 special issues of the magazine on topics like IWRM, water and women, water and agriculture, water and culture, water rates, water and electricity, water users associations, water and famine of farmers, ground water, quality of water, Stockholm water prize and their recipients, Pollution of water, privatization of water, flood lines, flood disaster, water conservation etc.

Special Dewali Issue : **Jalopasana (woship of**

water)

In India Dewali Festival is celebrated with great pomp and show. Every Magazine brings out Dewali issues on this occasion. Jalsamvad magazine also has started publishing special Dewali Issue on water for last ten years. This issue is named ad Jalopasana (jala means water and Upasana means worship)In the beginning of the year itself the topic is finalized and articles are collected from learned water activists. The subjects chosen till now are : Water literacy, Ground water, Pollution of rivers, Sarovar (Lakes) Samvardhan (Conservation), Water and environment, Water on International Platform, Quality of water, Success stories in the field of water Etc. These issues have storage value and most of the colleges in Maharashtra maintain a special section in their libraries for these volumes. Special reading material for school children :

Dr. Deshkar has taken another initiative i.e. publishing reading material for school children on different water issues. He prints these booklets in Large number and freely distribute them to the school children. These booklets are on the topics like water literacy, ground water, water pollution, water and famine, lake conservation, quality of water, sustainable farming, forest farming, etc. Some local magazines have printed these booklets as they are in their magazines.

Jalsamvad radio :

Dr. Deshkar has left no stone unturned in spreading water literacy. He has started one radio on water which can be tuned 24 X 7 on any mobile. There is one international server by name Shout cast. Nearly 72000 radios are linked to this server. One of them is Jalsamvad Radio. The theme of this radio is every thing on water.

Water and culture will explore cultural perspective on a number of water management practices, issues and concerns. By studying/ understanding these issues in the cultural context, we may be able to derive water management principles that are in harmony with currently accepted principles of sustainable water management/ irrigated water resources management. Its mandate is to initiate support and

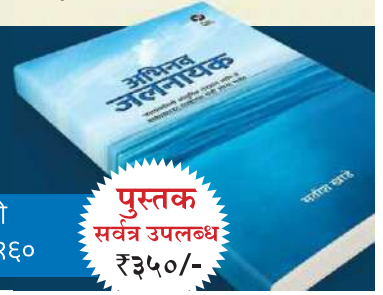
अभिनव जलनायक सामाजिक कार्यकर्त्यांनी का वाचावे ?

१. ओढ्यात, बंधान्यात, तळ्यात पाणी साठवले ,पण त्या साठवलेल्या पाण्याचे अचूक व्यवस्थापन करण्यासाठी लागणारे विविध तंत्रज्ञान.
 २. गावचे सांडपाणी ओढ्यातच करा नैसर्गिक पध्दतीने शुद्ध ! ट्रीटमेंट प्लांटचा मोठा खर्च, वीज, केमिकल्स, मनुष्यबळ यापैकी काहीही लागत नाही अशी दोन तंत्रज्ञान. ओढे नाले स्वच्छ झाले की नद्या ही होतील अमृतवाहीन्या !
 ३. आर्ये प्लॉट पेक्षा कितीतरी स्वस्तात पाणी निर्जंतुक करणारी ओझोन टेक्नॉलॉजी ची माहिती.
 ४. कचऱ्याचे डोंगर वेगाने खतात रूपांतर होण्यासाठीचा मंत्र आणि तंत्र.
 ५. कचऱ्याची दुर्गंधी पूर्ण थांबवली पुणे महानगरपालिकेने, काय केले त्यांनी ? त्याची माहिती.
 ६. बंद पडलेल्या बोअरवेल साठी जमिनीतच असणारे पाणी शोधून बोअरवेल भरण्याची किमया
 ७. बारा गावांचा गट करतो भूजल व्यवस्थापन व नियोजनाचे यशस्वी प्रयत्न.
 ८. दुर्गम भागात पिण्याचे पाणी शुद्धी करण्यासाठी मोबाईल फिल्टर
 ९. गावच्या तळ्यातले पाणी भिजवते दुष्पट क्षेत्र या तंत्रज्ञानाने
 १०. बंधान्यातून, तळ्यातून, जमिनीतून होणाऱ्या पाणी गळतीला थांबवण्याचे उपाय.
- ही सर्व तंत्रज्ञाने सोप्या शब्दात वाचा या पुस्तकात.

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conduct research to help communities in the developing world find solutions to their social, economic and environmental problems related to water resources. Collect, collate and analyse the water related cultural practices, exchange information on the formation and implementation of integrated water management practices, hygiene education and sanitation, operation and maintenance systems based on cultural values, organise seminars, dialogue and study tours with a view to enhance cross fertilisation of ideas and concepts for a sound IWRM practices.

To initialise the necessary work towards the goal, ICWC suggests following activities which will eventually help develop detail working guidelines and specific activities action plans.

1. To Finalise country coordinators from the region
2. To finalise the key members of the team
3. Identification of the organisations / institutions to further networking activities.

4. Collect and compile cultural practices relating to water.
5. Country consultation
6. Organise workshop
7. Identify best practices
8. Identify issues
9. Preparation of regional synthesis paper on Water and culture.
- 10 Preparation for Women's water Federations.

It is the need of the hour that the like-minded people / organization join initiatives of ICWC and helps restore these ancient water systems duly utilizing the glorious principles and traditional wisdom in conservation and management of water in the current context.

We hope that you know Dr M.A.Chitale, recipient of the Stockholm water prize of 1993 and also the chairperson of global water partnership, south Asia. After retirement he established 3 organizations related to water namely Sinchan Sahayog (a facilitator in the field of irrigation development), Sarovar Samvardhini , an organisation working in the field of Lake management and Conservation and the Indian Council of Water and Culture (an NGO) which we are representing here today. India has a rich heritage in the field of water. It begins right from the pious volumes like Rig-Veda and other historical documents. A common man believes that Rig-Veda is the base of Hindu religion. But if we go through the verses stated there in, we find that it is nothing but the praise of panchamahabhutas, viz: earth, water, air, fire, and atmosphere. Human being has started taking the benefit of all these facilities provided by nature and therefore in return they really deserve the praise for what they have given. This is true about the entire all the mythological documents. In fact, Hindu religion is a way of life and not a dogmatic religion like others. What we are visualizing about water today is being experience in reality today. The Basic principles about water conservation, ground water, dams, canals, water rates, water pollution and climate, rainfall relationship between plants an water have been dealt with and explained in details in volumes. Dr.



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Chitale had a thorough knowledge and study of these volumes and that is why he thought it proper to bring these facts to the notice of modern world. That prompted him to come forward and establish such an organization which would go in to the root of these resources. This organization was established in the year 2002 and registered under the society's Registration act 1860 which takes care of such organizations. In the constitution of Indian Council of Water and culture there are about 500 registered permanent members and hundreds of other members drawn from different disciplines.

10 Inspirational Stories of Fight against Water

Crisis in India will Inspire You to Conserve Water

News

Water is the elixir of life on earth. Water crisis is a looming threat to many countries including India. Water crisis in India manifests itself through severe drought during summer every year. Drought in India due to atmospheric whims of nature causes crop failure, a major reason why Indian farmers commit suicide. About 600 million people are facing acute water shortage in India, according to the Niti Aayog, an Indian government think-tank. Since necessity is the mother of invention, everyone from schoolchildren to social activists to self-motivated individuals is trying different ways of water conservation to fight water scarcity in



inspirational example of water conservation. Some 7000 schoolchildren in Pune are saving and conserving leftover water from their bottles in large drums at their schools. The collected leftover water is used instead of fresh water to clean school premises and water plants. Initiated by two Indian entrepreneurs Vedant Goel and Yusuf Soni, this water conservation campaign is one of the promising solutions to water crisis in India. Some Pune schools have kept buckets at their exit points, which students empty their bottles into while leaving for the day.

Where There is a Will There is a Way

Rural women are the most-affected victims of water scarcity in India. They spend 6 to 9 hours a day to transport 30 to 40 liters of water on their heads, ignoring its health consequences like back pain and neck injuries. But a group of 20 women in rural backwaters of Kerala is hell-bent on changing the picture. They have dug more than 100 bore well in a year to tide over water crisis in their villages. Similar is the story of the women in Khandwa district of Madhya Pradesh, who dug a well in just 40 days rather than blaming their fate or nature or god for water



India.

Just as every dark cloud has a silver lining, every drought-hit region has an inspirational story of water conservation. We at Travel Beats curated such stories of fight against water crisis from across India so that everyone is inspired to conserve water.

Little Drops of Water Make a Mighty Ocean

A few thousands of schoolchildren in the state of Maharashtra, where severe water crisis has caused life-taking drought, have set an

shortage in India. When some men came forward to



help them, they chose to rewrite the destiny on their own.

Good Human Beings are Gods Incarnate

While many people talk about water crisis and drought in India 2016, Ayyappa Masagi from Karnataka has practically found and tried a solution to it and that is water conservation. Born into a poor farmer's family, he faced water problems in childhood and used to wake up at wee hours to fetch water, which inspired him to find ways of water conservation. A mechanical engineer having 23 years of experience at a multinational corporation, Ayyappa Masagi responded to the call of earth and constructed many lakes for water conservation. He studied and practiced non-irrigation agricultural methods as solutions to water crisis which causes drought, thereby leading to Indian farmer suicides every year. This Water Gandhi of India found a mention in the Limca Book



of Records for having created over 600 lakes across

rural India.

Nothing is Useless on Earth

Two final year students of IIT-Bombay have proven it by collecting plastic waste and giving clean drinking water in return. They have built a revolutionary machine which accepts used cans or bottles and dispenses 300 milliliters of drinking water in exchange. Developed by Anurag Meena and Satyendra Meena at IIT-Bombay, this environment-friendly project will not only encourage people to recycle waste but also relieve them of drinking water crisis during summer. Trestor, a Chandigarh based startup, has funded the



project to help manufacture these 'swachh' machines.

Charity Begins at Home

Like farmers, women are also affected by drought and water crisis in rural India. They walk miles to fetch water from remote sources. A 17-year-old boy in Settisara village of Karnataka has dug a 55-foot-deep well in the backyard of his home for his mother. Since his family couldn't afford to hire laborers for such an arduous work, Pavan Kumar took advice from a local hydrology expert and dug the well where water could be found. It took him 45 days to make this impossible possible, including a brief period of preparation for his pre-university exams. While clean drinking water is a luxury for millions of rural people, he put an end to water problem for his family.

Humanity is the Best Religion



A church in Delhi came forward to serve free drinking water to those who cannot afford bottles of chilled water this steaming summer. The Mar Gregorios Orthodox Church in Janakpuri has put a food and water vending machine in the neighborhood to save the needy from furious heat. Named Share N Care and stocked with water



Mumbai-based social activist Amla Ruia belongs to this category. She helped the farmers of 100 drought-hit villages in Rajasthan with traditional water harvesting techniques. Her NGO Aakar Charitable Trust got 200 check dams built to save thousands of lives in those Indian villages. Instead of just pondering over why Indian farmers commit suicide, Amla Ruia is practically more inclined towards solving water crisis in India with a sustainable solution for water conservation.

A Little Thought Makes a Big Difference

The thought “How to save extra water that goes waste in the process of watering plants” moved Dr. Anumakonda Jagadeesh from Vellore in Tamil Nadu to find a solution to conserve water. He began using tubes from discarded car or bike tyres instead of pots to prevent evaporation of water from soil. He cut three or four holes into the tube on one side and filled those holes with soil. Used tyre tubes cost cheaper and do not get affected in sunlight. Water is not evaporated from the soil in tubes. Dr. Jagadeesh, a renewable energy expert, has



packets as well as fruits, the machine will be functional throughout this season.

Service to the Needy is the Best Virtue

Latur in the state of Maharashtra, one of the most-affected regions of drought in India, has one silver lining amidst rainless clouds over its people. Sheikh Mateen Musa, a mathematics teacher, has been giving away free water to the people hit by severe water crisis in Latur for three months. He distributes nearly 10,000 liters of water from his bore well without any condition or compensation every day. His generosity is the elixir of life for around 300 households during water shortage in Latur.

Believe in Actions not Words



executed many water conservation projects in India.

Sharing is Caring

It's absolutely true about Abdul Gafarasab Mulla in Yadgir district of Karnataka. Unlike those who store water as the most precious commodity in times of water crisis, he generously distributes water from his bore well to help farmers save their farmlands and livestock from scorching heat. He has left the trench in his farm, which is filled with water from the bore well, open to all. Those grappling with water shortage in neighboring villages as far off as 3 km fetch water from Abdul's farm to survive this sizzling summer.

What's the value of a tree ? Age multiplied by Rs. 74.5 k, SC panel

New Delhi : A tree's monetary worth is its age multiplied by Rs. 74,500, a Supreme Court – appointed committee has submitted in a report, setting a guideline, for the first time in India, on the valuation of trees.

The five member committee of experts added that a heritage tree with a lifespan of well over 100 years could be valued at more than Rs. 1 Crore, and that the monetary value of a project, for which hundreds of trees are cut, is sometimes far less than the economic and environmental; worth of the felled trees.

The report was submitted before a Supreme Court bench, headed by Chief Justice of India (CJI) SA Bobde, that had asked the committee members in January last year to determine the economic value of trees, based on cost of Oxygen they release, and other benefits to the environment.

The bench, which also included justices AS Bopanna and V Ramasubramanian, stressed on the necessity to do away with the evaluation of trees only on the basis of their timber value and rather focus on the positive impact of trees on the



environment.

For this purpose, the court, while hearing a case relating to cutting down of 356 trees for construction of five railway over bridges (ROBs) in West Bengal, appointed a committee of five experts – Nishikant Mukherli (managing Director, Tiger Environment Centre), Soham Pandya, (Secretary and Executive Director at the Centre of Science for Villages), Sunita Narain (Director, Centre for Science and Environment), Bikash Kumar Maji (Assistant Chief Engineer, ROB Unit West Bengal Government) and Niranjita Mitra (Division Forest Officer, North 24 Parganas).

According to the report filed in February last year but was made public only some time back, a tree is worth Rs. 74,500 a year. Out of this, the cost of oxygen alone is Rs. 45,000, followed by cost of biofertilisers, which are worth Rs. 20,000. Upon adding costs of micronutrients and compost, the report stated, living trees will more often than not outweigh the benefit of the most of the projects they are felled for.

Commenting on the West Bengal governments plea to cut 356 trees, some of which were heritage trees, the committee evaluated their worth at Rs. 202 crore, which is more than the cost of the ROB project by the state government.

The committee also suggested that instead of cutting trees for highway projects, the governments should first explore alternatives such as using existing waterways and railway lines to facilitate traffic and transport infrastructure.

In case trees must be removed, the committee said, the first endeavor should be to relocate them, making use of modern technology, and if they must be felled, it also added that planting five saplings in lieu of one tree was not good enough since a 100 year old tree cannot be equated with a few fresh saplings. It recommended that for a tree with small crown size, 10 saplings should be planted. 25 saplings for a tree with medium crown size, and 50 saplings for a tree with large crown size. Crown is the top part of the tree from which branches grow above the stem.



A PWD worker sprays water on trees in New Delhi

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The bench, during the hearing, commended the committee's efforts, adding that it was inclined to lay down certain new guidelines for all future projects which required felling trees in view of the report. The committee's recommendation will make every government go bankrupt. So, we need to fine tune a few suggestions, the bench observed.

It found favour with the recommendation that a developer must look to use existing waterways and railway lines before insisting on a road project that required cutting trees. The top court further expressed its displeasure at a central government notification that did away with the need for an environment impact assessment (EIA) for a road project of less than 100 km. We will examine validity of your notification, the bench told additional solicitor general Aishwarya Bhati, who appeared for the Union government in the matter.



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Polavaram Irrigation Project, Andhra Pradesh

News

Background on Polavaram (Interstate agreement)

Polavaram Irrigation Project an interstate project on river Godavari has been conceived as a part of recommendations of Godavari Water Disputes Tribunal (GWDT). GWDT finalized its award in 1980. The award identifies individual projects that can be taken up by the co-basin states of Maharashtra, Madhya Pradesh (including Chhattisgarh), Orissa, Karnataka and Andhra Pradesh (AP) on the main Godavari River as well as its tributaries. As a part of the award, the states of Andhra Pradesh, Madhya Pradesh and Orissa executed an agreement dated 02-04-1980 to enable clearance of Polavaram Project to be undertaken by AP. The agreement provides for construction of the project with a Full Reservoir Level of 150 Feet and with a spillway discharging capacity of 36 Lakh Cusecs at pond level of 140 feet and not less than 20 Lakh Cusecs at a pond level of 130 feet. In order to protect the lands and properties above level of 150 feet, in Orissa and Chhattisgarh, protective embankments with adequate drainage sluices have been provided at the cost of the project. Relevant provisions of the agreement are reproduced below.

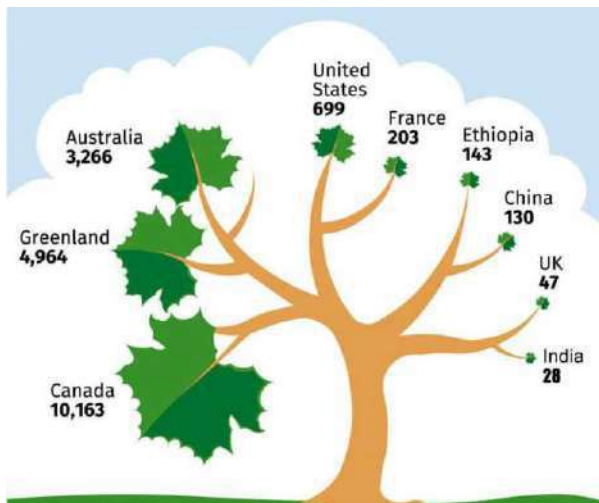
“Polavaram project spillway shall be designed for a flood discharge capacity of 36 Lakh cusecs at the pond level of 140 feet and not less than 20 lakh cusecs at pond level of 130 feet.

In order to protect the lands and properties above 150 feet in the territory of Orissa likely to be affected due to construction of Polavaram project, protective embankments with adequate drainage sluices shall be constructed and maintained at the

cost of Polavaram project. However, the state of Orissa may exercise an option at the time of construction of Polavaram project for compensation to land and property likely to be affected above 150 feet as agreed in case of state of Madhya Pradesh (now Chhattisgarh) For damages or injury to lands beyond 150 feet in the territory of Madhya Pradesh (now Chhattisgarh), in any event, the state of Andhra Pradesh shall pay full compensation for such damage or injury as may be assessed by the District Collector of the said district of the state of Madhya Pradesh (now Chhattisgarh). The matter of design of the dam and its operation schedule shall be left to Central Water Commission, which they shall decide keeping in view all the agreements between the parties including the agreement of 2nd April 1980 filed today, as far as practicable.” Project in Brief The Polavaram Irrigation Project is on the river Godavari near Ramayya peta village of Polavaram Mandal, about 34 km upstream of Kovvur-Rajahmundry road-cum-rail bridge and 42 km upstream of Sir Arthur Cotton Barrage, where river emerges out of the last range of the Eastern Ghats and enters the plains in West Godavari District of Andhra Pradesh. This multipurpose major irrigation project is intended for development of a gross irrigation potential of 4,36,825 ha and stabilization under Godavari delta. The project also envisages generation of 960 MW of hydro power, 23.44 TMC drinking water supply to a population of 28.50 lakh in enroute 611 villages and diversion of 80 TMC of water to Krishna River basin. The project implements Godavari-Krishna link under Interlinking of rivers project. The project envisages transfer of 80 TMC of surplus Godavari

water to river Krishna which will be shared between AP, Karnataka and Maharashtra in proportion of 45 TMC by AP and 35 TMC by Karnataka and Maharashtra as per the decision of the GWDT award. Status of appraisal The project proposal of Polavaram Irrigation Project was considered and accepted by the Advisory Committee of MoWR, RD&GR in its 95th meeting for Rs.10,151.04 cr at PL 2005-06 and in its 108th meeting the cost was revised to Rs. 16,010.45 cr at PL 2010-11. Investment Clearance was accorded by Planning Commission vide letter No. 2(168)/2004-WR dated 25.02.2009 for Rs.10,151.04 cr at PL 2005-06 and the revised Investment Clearance was accorded by Ministry of Water Resource, RD&GR, Gol vide letter No. P.20011/2/2016-SPR/947-58 dated 08.05.2017 for Rs. 16,010.45 cr at PL 2010-11. Subsequently, Project Authorities have submitted Second Revised Cost Estimate (RCE) of Polavaram Irrigation Project at 2017-18 PL. The Second Revised Cost Estimate (RCE) at 2017-18 PL was examined by Central Water Commission and was placed before Advisory Committee of Ministry of Water Resources, RD&GR in its 141st meeting held on 11.02.2019. The same was accepted by the Advisory Committee for an amount of Rs.55,548.87 cr. Thereafter, upon the approval of Advisory Committee of MoWR, RD&GR, a Revised Cost Committee (RCC) has been formed under the Chairmanship of JS& FA of MoWR, RD & GR on 02.04.2019 to examine the cost escalation of Polavaram Irrigation Project. The Committee has

submitted its report on 17.03.2020 and recommended for Rs. 29,027.95 cr at 2013-14 PL and for Rs. 47,725.74 cr at 2017-18 PL. As per Ministry of Finance OM No.F.No.1(2) PF-1/2014(Pt) dated 30.09.2016; Central Government will provide 100% of the remaining cost of the irrigation component only of the project for the period starting from 01.04.2014 to the extent of the cost of the irrigation component on that date. As per the directions of Ministry of Jal Shakti, DoWR, RD& GR letter. dated 21.10.2020, PPA in its 13th meeting held on 02.11.2020, approved the Revised cost estimate of Irrigation component at Rs 20,398.61 cr figure for 2013-14 PL and an amount of Rs 4730.71 cr as the expenditure incurred on Irrigation component of Polavaram Irrigation Project till 01.04.2014. Court cases (Before Hon'ble Supreme Court of India)1. Government of Orissa has filed Original Suit No. 4 of 2007 and various Interlocutory Applications (IAs) in the Hon'ble Supreme Court against clearances granted by various Central Agencies including MoWR against proceeding with the construction of Polavaram project by Andhra Pradesh Government and making defendant no. 1 to Govt. of Andhra Pradesh, defendant no. 2 to Ministry of Water Resources (MoWR), Government of India, defendant No. 3 to Ministry of Environment and Forest (MoEF) and defendant No.4 to Ministry of Tribal Affairs (MoTA).2. Government of Chhattisgarh has filed Original Suit No. 3 of 2011 along with IA in the Hon'ble Supreme Court against clearances granted by various Central Agencies including MoWR and against proceeding with the construction of Polavaram project by Andhra Pradesh Government and making defendant no. 1 to Govt. of Andhra Pradesh, defendant no. 2(a) to Ministry of Water Resources (MoWR), Government of India, defendant No. 2(b) to Ministry of Environment and Forest (MoEF), defendant No. 2(c) to Ministry of Tribal Affairs (MoTA) and defendant no. 3 to Central Water Commission.3. Government of Telangana has filed Original suit No.1 of 2019 in the Hon'ble Supreme Court against to protect more than 100 villages and important heritage sites of religious significance



and heavy water plant etc., which will face severe submergence due to all effects including backwaters of the Polavaram Project and for conducting public hearing in the affected districts of Telangana as per Environment Protection Act making Union of India as defendant no. 1, defendant no. 2 to state of Andhra Pradesh, defendant no.3 to state of Odisha, defendant no.4 to state of Chhattisgarh and others.4. Hon'ble Supreme Court vide its order dated 11.4.2011 has nominated Mr. M.Gopalakrishnan, Retired Member of Central Water Commission(CWC) along with Members of CWC to inspect of Polavaram dam and submit a report to the Hon'ble Supreme Court separately to find out whether construction of Polavaram dam is carried out in terms of GWDT Award. Mr. M. Gopalakrishnan and Members of CWC have visited the Polavaram dam during 23-24th May, 2011 and separately submitted their report dated 14.6.2011 to the Hon'ble Supreme Court. In both the reports of Mr. M. Gopalakrishnan and Members of CWC, it was concluded that the planning of Polavaram project and limited construction activities seen so far by the team at the Polavaram dam site are in tune with approved project and GWDT provisions. As per the Hon'ble Court order, the court cases OS No.4, OS No.3& OS No.1 were tagged together and further listing is awaited. Inclusion of Polavaram Irrigation Project as National Project As per Andhra Pradesh State Reorganization Act (APRA), 2014, the Polavaram Irrigation Project was declared as a National Project under Section 90 and it is expedient in the public interest that the Union should take under its control the regulation and development of the Polavaram Irrigation Project for the purposes of irrigation. And whereas under Sub-section (4) of Section 90 of the Act mandates that the Central Government shall execute the project and obtain all requisite clearances 0 including environmental, forests, and rehabilitation and resettlement norms.Ministry of Finance vide F.No.1(2)/PF-1/2014(Pt) dated 30.09.2016 has conveyed that in view of the recommendations of the Vice Chairman, NITI Aayog, that it will be appropriate for the State



Government of Andhra Pradesh to execute this project (as it is an important project and the State Government is keen to complete it at the earliest), the Government of India has agreed to the State's request for execution of the project by the State Government on behalf of Government of India. Further, the OM states that Government of India will provide 100% of the remaining cost of the irrigation component only of the project for the period starting from 01/04/2014, to the extent of the cost of the irrigation component on that date. Stop work order by MoEF As per MoEF& CC letter dated 16.02.2022, stop work order dated 08/02/2011 is further kept in abeyance for a period of two more years, i.e upto 02/07/2023.

Stockholm Water Prize-2015

Dr. Rajendra Singh, India

Shri. Gajanan Deshpande, Pune (M) : 9822754768



(An article series has been launched in August 2020 to learn more about the World Water Prize winners and their work.)

India's Dr. Rajendra Singh was honored with the 2015 Stockholm Water Prize for his innovative efforts in water conservation and extraordinary determination to ensure water security and improve the livelihoods of people in rural areas.

Born in 1959, Mr. Rajendra Singh lives in the predominantly arid state of Rajasthan, India. He dedicated his life to the task of overcoming drought and empowering the local community for decades. With tireless work and the cooperation of local residents, he and his organization revived many rivers. Those efforts restored water and life to a thousand villages, giving countless people a new lease of life. Using the Indian traditional wisdom of water recharge, helpless, neglected, and poor villages have been revived.

The Stockholm Water Prize Committee, in its citation, states that "Today's water problems cannot be solved by science or technology alone. They are actually human problems and shortcomings in governance, policy, leadership, and social resilience. Shri Rajendra Singh has dedicated his life to solving local water problems and building the necessary social capacity for them through participatory action, empowerment of women, integration of indigenous knowledge with modern scientific and technological approaches, and judicious use of resources following development traditions and social norms."

Mr. Singh always tells the locals that, whenever we see the demand for fresh water multiplying many folds, if we don't learn how to

take better care of our water, we will face a severe water crisis within decades. He has become a ray of hope there. He literally brought hundreds of villages to life. If we want to create water sustainability, we need to take lessons from Mr. Singh and act accordingly, says Mr. Torgani Holmgren, Executive Director, SIWI.

Dr. Rajendra Singh's work shows that he is a true humanitarian and a firm believer in empowerment. After studying Ayurvedic medicine and surgery, he moved to the largely impoverished rural areas of Rajasthan in the mid-1980s with the aim of actually setting up clinics to provide health care. But the villagers reminded him that the biggest need there is not healthcare but water. Its wells had dried up, crops withered, and rivers and forests were disappearing. Their villages were covered with sand and dust. Many young villagers had left for the cities in search of work, leaving behind women, children, and the elderly.

After that, Rajendra Singh did not insist on setting up a hospital there. Instead, he undertook an extensive program of construction of Johad, or traditional mud dams, through labor with the help of villagers. Within two decades of his arrival, 8,600 johads and other reservoirs were built for water. A thousand villages across the state got water through these efforts. Thanks to the efforts of Mr. Singh and his colleagues in 'Tarun Bharat Sangh', which he founded, many rivers in Rajasthan were revived through this organization. As forest cover began to grow over the region, animals like deer and leopards began to return to the area. Dr. Singh modernized the thousands of years-old traditional Indian practices of rainwater harvesting and storage. These practices were thrown out of use

during British colonial rule. But this man, who is regarded as India's water man, and his colleagues have managed to bring water back to the most arid regions of the world's most populous region, like Rajasthan.

Dr. Rajendrasinh says, "When we started our work, we were only looking at the drinking water crisis and how to solve it. Today, our mission has expanded. This is the 21st century, and it is considered the century of exploitation, pollution, and encroachment. To put an end to all this, to transform the shadow of war on water into peace, has now become the mission of my life". He adds that now, due to rainwater harvesting and groundwater recharge, our area is no longer prone to drought or floods. Our work is a way to solve both floods and droughts globally. So the impact of this work is local, national, international, and beyond. We think it will be more important at the village level."

Climate change is changing weather patterns around the world and causing more frequent extreme droughts or floods. Learning how to harvest rainwater and use snow-capped mountain peaks to fill valleys would be a key skill in most parts of the world. Some of the world's leading scientists are currently focusing on how to

manage rainfall and how to develop an information base for it. To reduce the risk of drought and floods, it is necessary to learn more about rainfall management and recharge.

Dr. Rajendra Singh was presented with the Stockholm Water Prize during World Water Week on August 26, 2015, by King Carl Gustaf XVI of Sweden in a special ceremony for his great work.

Note : While designing the issue of Jalsamvad - English we find very interesting news, information and articles specially on water and its management. That tempts us to include the same in our issues. Getting formal permission for this inclusion is that way difficult. Therefore our effort is to print them as it is in our magazine. We may kindly be excused for such inclusions. We express a deep sense of gratitude to the original writers.

Thanks.



Famous rivers in the world

(5) Mezen River (Russia)



(6) Omega River (Russia)



(7) Niva River (Russia)



(8) Voronya River (Russia)



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