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SHOULD ECOLOGICAL ENTREPRENEURS IGNORE THE EQUITY OF DEVELOPMENT? INSIGHTS FROM THE *SATYAMEV JAYATE WATER CUP* BY PAANI FOUNDATION

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Abstract

What should be the right approach to water harvesting and management: (1) convenience, (2) prudence, or (3) the integration of both? The convenience approach refers to the tendency of governments and organizations to focus largely on increasing the supply of water without telling citizens to use water rationally. The prudence approach insists on the minimal and judicious use of water, something governments seldom tell citizens for the fear of losing popularity. The integration approach absorbs the best methods and technology available to intervene in the supply as well as demand side of water. With a focus on the integration approach, this study undertakes a case analysis of the Satyamev Jayate Water Cup (SJWC) by Paani Foundation that converted many draught-prone regions of the Maharashtra state of India into water-sufficient and prosperous zones by utilizing low-cost, indigenous knowledge systems and eco-friendly measures. The study aims to highlight the limitations of this massive socio-ecological campaign in the context of water management and governance.

Keywords: *Satyamev Jayate Water Cup, Paani Foundation, watershed projects, strategic environmental management, social and inter-generational equity*

The background of the case

Soil quality degradation, water scarcity, desertification, crop failure attendant economic bankruptcy, and social stress have compelled thousands of farmers to commit suicide in Maharashtra state of India (Talule, 2020). Consequently, the availability of water and access to water for irrigation and domestic use has remained a hugely contentious issue in the political economy of Maharashtra (Chinnasamy, Hsu, and Agoramoorthy, 2019). Because of the political-populist approach to interventions, the public supply of water has not yielded any lasting solution to the water crisis. Water is rationed at 40 liters per day for each family. In extreme water-starved areas, a storage drum can be visible outside every house for collecting water from government-supplied tankers. Due to persistent droughts, there are glaring cases that farmers have abandoned half-grown crops in their fields and, in some cases, have abandoned agriculture as a profession as well. There is a mass exodus of farmers from villages to cities in search of employment - leading to urban congestion and unsustainable cities. The irony is that the life of the farmer post-migration is as tough as earlier because of the minimal availability of jobs, meager salaries, unhealthy accommodation, poor

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nutrition and lifestyle, and social marginalization. Therefore, abandoning agriculture and the village is not the solution. The farmer has to stay put and find a prosperous life in his village.

Paani Foundation and the Satyamev Jayate Water Cup (SJWC): The idea of the creation of a foundation followed from a television show named Satyamev Jayate that ran from 2012 to 2014 on various television channels in India. The creative team of the program was in quest of a cause that could have a mass connection and could be positioned as a wake-up call for a large part of Indian society. The strategic leaders of the show, after a lot of deliberations, zeroed upon the water crisis in general and water harvesting in the state of Maharashtra in particular.

As a follow-up to this ambition, Paani Foundation, a not-for-profit company, came into being in 2016. The renowned Bollywood actor Amir Khan and his wife Kiran Rao were the founders and Satyajit Bhatkal was the CEO of the company. Interpreting the water crisis as a man-made condition, the foundation aimed at eradicating drought in rural Maharashtra through the collective efforts of the people, socio-political leaders, intellectuals and technocrats, and the media. The mission was to harness the power of communication to mobilize, motivate, and train people to resist drought. The foundation offered training in scientific watershed management as well as leadership and community building,
As of today, Paani Foundation is active in approximately 90% of the drought-hit regions of Maharashtra. Its flagship project, the SJWC was instituted in 2016 to motivate villages to apply the knowledge, skills, and experiences gained during the training period toward watershed management for collective development. Hosted from 2016 to 2019, the SJWC was an annual, 45-day program based on soil and water conservation that provided a platform for volunteers from thousands of villages to showcase their efforts in a competitive spirit.

Review of literature and research questions

This study undertakes a case analysis of the SJWC that converted many draught-prone regions of Maharashtra into water-sufficient and prosperous zones by utilizing indigenous knowledge systems and eco-friendly measures. It is hugely educative because it is one of the rarest examples of mass mobilization and social change. Built upon the real-time events and actions that include the entire value chain - *the initiative, the process, the momentum, and the rewards*, this article is a case study in Sustainable Development (SD) and Social and Inter-Generational Equity.

"Sustainable Development" is a holistic combination of "sustainability" and "development". Sustainability, in its literal sense, connotes the capacity to sustain a certain *entity*, *outcome*, or *process* over some time (Basiago, 1999). Moreover, it is the *dynamic equilibrium* through which a given population interacts with the environment on which it depends (Ben-Eli, 2015). Sustainable development empowers the population to fulfill its needs based on the optimum utilization of natural resources without producing irreversible adverse effects on the carrying capacity of the environment (United Nations, 1972). Despite many divergences in approaches and applications, scholars agree on the ideas of sustainable development by referring to the inter-generational and intra-generational equity of development founded upon the harmonious integration of social, economic, and environmental factors (Mensah, 2019).

Compared to developed countries, developing countries including India are more exposed to the vagaries of climate change because of poverty, ignorance, low per capita income, uneven distribution of resources, poor disaster management infrastructure, ineffective policies and governance, and minimal social support (IPCC,2020). For natural-resource-dependent communities in the developing world, coping with climate change challenges is tough (Adger *et al.*, 2003) because of declining resources, poor governance, and uneven access to resources.

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Sustainability issues like climate change or social inequity are complex and adaptation to these challenges can be challenging because they subsist within multiple systems (Parks, 2005). While sustainability problems are aggravated by stakeholder conflict and uncertainty, adaptations to sustainability challenges require new values, skills, and structures (Burns, Diamond-Vaught, and Bauman, 2015). The call for a more sustainable future demands mass participation and therefore ecological campaigns, instead of offering a top-down solution, should create the opportunity for all stakeholders to come hand in hand to generate their solutions (Ferdig, 2007). Moreover, local community development projects are well-guarded when they are *co-produced* by experts and citizens (Vanleene, Voets, and Verschuere, 2017). NGOs, voluntary groups, and civil society groups strengthen the vital social capital of a country, but their strategy and contributions depend on the *local conditions of production* (LiPuma and Koelble, 2009). Therefore, ***Research question 1****:* With sensitivity to the local conditions, what were the key strategies adopted by the Paani Foundation to restore water in the drought-prone areas of rural Maharashtra?

The restoration, governance, and management of water resources are beset with the questions of social and inter-generational equity. The social equity of water refers to equitable access to water as well as benefits from water use by people from diverse demographic backgrounds irrespective of gender and economic status. This also involves mitigating the problems of entitlement, access, and control (Lenton and Muller, 2009).

Social equity of water has also remained contested between the tangible and subjective needs of the individuals versus the totality of social values derived from the economic efficiency of water management. People often get more benefits from the indirect use of water, i.e., the transfer of benefits through the economic system, than the direct use of water. Such indirect benefits include direct or indirect employment or availability of products and services linked to water use by governments, industries, and institutions. This also includes the varied outcomes of water management in forwarding social goals such as poverty eradication, promotion of food security, reduction in rural to urban migration, etc (Peña, 2011).

The Brundtland Report (1987) envisages sustainable development as the equitable fulfillment of current human needs without jeopardizing the rights of future generations (Brundtland, 1987). While social equity refers to the opportunity to participate in an environmental conservation program and the distributional justice of access to the benefits, inter-generational equity refers to the longevity of natural resources and the continuity of the benefits over generations. According to the National Academy of Sciences (1999), inter-generational equity can be realized in three ways: (a) The *principle of future options* that does not allow present actions to spoil the needs and welfare of future generations, (b) The *principle of conservation* of the quality of the environment, and (c) The *principle of access* ensured through resources conserved for future generations. Research by Guha (2019) supports that, in the Indian context, NGOs have executed many effective programs at the local level. However, despite their huge potential to benefit larger populations over a longer period, the impact of these ventures has remained limited due to the lack of successful scaling up. Subsequently, the transformative effects of many projects have not been fully realized. Therefore, ***Research question 2****:* From the lens of social and inter-generational equity, can the SJWC be called a truly transformative campaign?

Extant research has discussed at length the diverse trade-offs and conflicts nested in social and ecological outcomes, design mechanisms, communication, and public engagement that integrate the diverse stakeholders into all stages of water harvest and governance. The advocates of social equity are mostly preoccupied with (a) increasing the supply side of water harvest and (b) equitable allocation of water. They tend to neglect the fact that usable water is no longer a free good because of the steady decline in its availability. Therefore, they seldom focus on the rationalization of water consumption or systematic interventions into the demand side of water management. Therefore,

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Research question 3: What insights a socio-ecological entrepreneur can draw from the SJWC concerning the demand side of water harvest and management?

The analytical framework

In response to the three research questions raised above, the study moves ahead in three parts. Corresponding to Research Question 1, a qualitative analytical framework is developed to analyze the goals, strategies, actions, and outcomes of the SJWC. The framework is primarily based on the GTZ (2006) manual on sustainable development and, then, expands to include a few more parameters derived from a review of extant literature and case studies on strategic environmental management. The GTZ Manual (2006) is founded on the social, economic, and environmental principles of sustainability proclaimed in the United Nation's 1992 Rio Conference.

In response to Research Question 2, this study analyzes two major limitations of the SJWC: (a) the poor understanding of the complexity of human-environment interactions and (b) the failure to ensure the social and inter-generational equity of development. It draws insights from a growing body of research led by Di Baldassarre *et al.* (2018, 2019) on the negative consequences of the anthropogenic water harvest system, i.e., the side effects of dams and artificial reservoirs, and the need for addressing the emerging issues in human-water interactions, especially, the ever-increasing demand for water vis-à-vis the depleting water resources. This section argues that the social and inter-generational equity of water cannot be ensured without the integration of supply-side intervention and demand-side intervention into the core philosophy of water management.

In response to Research Question 3, the conclusion section explains the important lessons to be learned from the SJWC, especially by policymakers and future socio-ecological entrepreneurs. It is grounded on the United Nation's emphasis on the principles of Protect-Preserve-Respect and Reduce-Recycle-Reuse.

Key strategies adopted by Paani Foundation

Social mobilization

Intervention plans usually target a large ecological issue and then focus intensively to fight it back in specific localities (GTZ, 2006). The first step in this direction is to highlight the relevance of the project to draw maximum moral support (Dash and Dash, 2021). In this context, the foremost challenge before Paani Foundation was to make more water available in the villages so that they could be self-sustained. To start with, it was imperative to find alternate sources of water and to convince and win the heart of a critical mass of people to venture into this quest. The leaders of the Foundation made a systematic survey of the water sources and the availability of water for irrigation and domestic use. They realized that a large portion of the available natural water, especially rainwater, is left unused due to ignorance, negligence, and collective inertia or helplessness. The survey enabled the leaders to take the right decision – massive construction of watershed projects across all villages of the state.

The initial survey by Paani Foundation revealed that out of the 358 talukas of Maharashtra, about 158 were acute drought-prone. So the Foundation concluded that they have to draw the attention of the people and win their affection, educate them for raising awareness, and train them to ingrain the skills to construct the watershed projects. In that way, the campaign began to take a new turn – a combination of top-down plans and bottom-up efforts. The idea of the SJWC emerged out of this desire.

To be eligible to partake in the SJWC competition, a village has to pass a *gram sabha* (village meeting) resolution and delegate five persons from the village to undergo the training for acquiring technological and leadership skills offered by Paani Foundation. The Foundation established a cluster of training centers with a pool of technical experts and influential persons as volunteers to

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train the nominated villagers. The Foundation made it clear that the whole campaign was based on voluntary service to rebuild the village ecosystem and economy and to make an example of the village through extraordinary efforts and award-winning achievements.

To start with, Paani Foundation imparted free-of-cost training on watershed development to a few hundred villagers from three talukas in 2015. These trained villagers went ahead to lead the watershed projects in their villages. The 45-day-long competition was founded upon the principle of *shramdaan* to build up the structures for local water storage capacities. Cash prizes for the winners of the competition were announced in advance. It was decided that the contributions made by the villages towards water harvesting and management would be counted out of 100 marks. The participating villages were given a well-defined scheme of evaluation.

An ecological campaign must diversify its range of stakeholders by drawing the goodwill of NGOs, corporate entities, banks, donors, and government institutions (GTZ, 2006). This includes the seamless efforts to reshape the environmental aspects of public policy toward sustainable transitions through wider institutional support. Moreover, research supports that institutional arrangement for the co-management of social learning and adaptation to uncertainties and environmental changes triggers environmental values and commitments (Armitage *et al*., 2011). In this context, building up wider institutional alliances was a part of the multi-stakeholder approach of Paani Foundation. It enabled the convergence of volunteering forces: the people, the State government, local public administration, corporate promoters, and thousands of NGOs. This could be achieved in two stages: (1) strategic public relations and (2) the wake of the momentum. Organizations like Samast Mahajan Group, Jnana Prabodhini, and the Jalayukt Shivar Abhiyan came forward to provide social, financial, and moral support to the cause. Five corporate bodies - the Tata Trusts, Reliance Foundation, Deepak Parekh, HDFC Bank, and Rajiv Bajaj - provided the funds for the projects. The funds were used for human resource development and the building up of a people's force that, in turn, would take care of the infrastructure and watershed management.

A strategic socio-ecological leader tries to communicate the importance of the project to the public to build up complementary discursive support for the core actions and stimulate pro-environmental public behavior (Dash and Dash, 2021; Spence and Pidgeon, 2009). In the SJWC campaign, the leaders worked on the principle of *communication mix* drawing upon TV shows, features and documentaries, stage shows, posters, roadshows, word of mouth, village-level meetings, training camps, personal outreach, storytelling, and social media campaign. The star appeal of Amir Khan was a natural advantage. The leaders - Kiron Rao, and Bhatkal were from the cinema background with very good influence across the media circles and had the add-on of being the opinion leaders. By 2018, notable university faculty namely Prof. Khurne and Prof. Bhostekar became a part of the campaign and arrived at the construction site for *Shramdaan* at Konambe, situated in Sinnar. Eminent personalities from all over India who had a significant contribution to water and environmental reconstruction were invited as guests for the TV shows to share their knowledge and experience with the folks. These people, directly and indirectly, did the role of *opinion makers* to draw the attention of the masses. Farmers who made significant fortunes from the successfully installed village water harvest systems were projected asthe *change agents* of the campaign. The motivational stories told by the trainers at the training camps often served as the moral triggers for standalone volunteers.

Water conservation and restoration

The knowledge, values, and skills linked to environmental education can be taught and shared effectively in "a process- and action-oriented way" (GTZ, 2006, p. 12). Moreover, private players and informal networks bring a lot of creativity and flexibility to contribute significantly to societal learning processes to adapt to changes (Pahl-Wostl, 2009). Paani Foundation focused on the behavioral dimensions of learning by creating a fun-filled, enjoyable learning environment. The

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training was designed for four and half days. It was imparted in the local language. An appropriate syllabus was developed that coved the science of watershed management in the simplest possible way. The first phase of the training covered the scientific and technical details to build up watersheds. The second part of the training covered social skills such as team building, problem-solving and conflict resolution, and inspiring and leading. It was experimental as well as experiential because of the induction of games and role-plays at intervals. The games on social training aimed at building up sensitiveness to water as a shared, community resource and village-level plans for the use of water.

The curriculum of the training focused on (a) calculating the annual rainfall of one's village vis-a-vis the water wastage and the potential for saving water annually; (b) understanding the functioning of basic watershed structures like farm ponds and contour trenches through live models; (c) a visit to a successful village watershed; (d) understanding customization, i.e., development of a watershed according to the topography of one's village; (e) understanding the function of value-added activities like soil testing and plantation; (f) Participating in games on leadership, teamwork and the importance of water; and (g) effective use of Paani Foundation App. Complex skills like engineering design and site selection were taught using additional audio-visual and print material. Trainees were instructed on how to use the supplementary materials while constructing watersheds in their village. Paani Foundation was in constant touch with the trained volunteers and village heads to extend any type of technical support needed.

The ecological leader must know how to use the positive aspects of local myths and folk tales, other cultural factors, and indigenous environmental discourses to generate people's respect for and belongingness to nature (Hristova, DragićevićŠešić, and Duxbury, 2015) and to build up public support to a campaign. Paani Foundation exploited volunteering and *shramdaan* as the twin central signifier in the semiotic positioning of the SJWC competition. In all its public communications including TV shows, Paani Foundation referred to water as a nurturing force that is a part of nature, the ultimate mother force. This was in harmony with the Indian philosophy of nature as *Prakriti*, the revered protective mother. The careful induction of a range of Marathi words and phrases such as "*paani*" (water), "*duskal-mukta*" (draught-free), "*shramdaan*" (donation of labor), "*ToofanAlaya*" (the hurricane has come), "*Jalmitra*" (friend of water), "*jalasandharan*" (increasing the water absorption capacity of soil), "*mrudsandharan*" (increasing soil fertility) and others into the critical vocabulary of the campaign was quite appealing to the masses. Each watershed project began with *bhumi puja(*the worship of mother earth by the appropriate ritual) which included the cracking of coconuts, flower offerings, and other activities. Field marches around the villages were celebrated with folk dances as well as the popular dances from the cinema accompanied by drums, harmonium, and other traditional musical instruments.

Modern SD projects usually combine the best of modern technology and indigenous knowledge systems. This helps to overcome resource crunch and technological deficits and to preserve and promote traditional knowledge systems (Hill *et al*., 2020). However, the SJWC did not involve any sophisticated construction technology. That is because the focus of the SJWC was on creating traditional water conservation systems based on *shramdaan* as a cultural wake-up. The overall approach of the campaign can be understood by looking at the crucial components of the competition and the scores against them **(see Table 1).**

Table 1. Overheads and maximum marks of the SJWC competition
Source: Paani Foundation, 2019

Contribution of the volunteers		Maximum Marks
1.	Wastewater management	5
2.	Conservation of trees	5
3.	Soil and water conservation structures built through *Shramdaan*	25
4.	Soil and water conservation structures built using machines	15
5.	Adequate weightage to area treatment and ridge line work	10
6.	Quality of structures	10

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7.	Soil testing	5
8.	Farms free of crop burning	5
9.	Water-saving techniques	5
10.	Water budgeting	10
11.	Repair of existing structures/innovative initiatives	5
Total		100

Strategic environmental reconstruction depends upon the assimilation of incremental experiences and learning to modify the core strategy (Rubin and Abramson, 2018) and the establishment of culture, structure, and process for creating value through incremental innovations (Varadarajan, 2009). In 2016, the first year, 116 villages came forward to participate of which 40 to 45 did wonderful work. Approximately 30-35 villages did the average level of work and others did not do anything noticeable. However, the enthusiasm shown by the leading villages was a matter of confidence-building. The experiences gained in the first year helped in assessing the scalability of the project. Accordingly, the operation was expanded to 30 talukas in the second year with the participation of 1,300 villages. The Foundation could scale up and maintain control over the quality of training and subsequent village-level construction work. There was an impulse to open the campaign to one taluka in each district. Internal debates among the leaders helped them to curb this impulse because they understood that the effort would risk the small organization spreading out too thin. Therefore, instead of spreading out to the whole state, the Foundation decided to expand the activities to the nearby 30 talukas in the second year so that the required number of accomplished trainers and training centers could be arranged.

In 2019, the campaign stayed in 76 talukas of the state covering 24 districts. The team leaders were selected through online exams and auditions starting in September/October 2018. This helped them in selecting trainers, coordinators, watershed attendees, and the team for the operations of the Foundation (Paani Foundation, 2021). To spread public awareness, the Foundation organized a two-day exhibition in each of the 76 participating talukas. The exhibition displayed, among others, 28 giant posters and several watershed models. Keeping in mind future collaborations, members of the local administration, NGOs, and educational institutions were involved. The exhibitions drew the attention of approximately 70,000 students, 87,000 villagers, and 6,000 Sarpanchs and Gram Sevaks (Paani Foundation, 2021).

Impact evaluation

Evaluating the impacts of a project is important to formulate corrective measures and initiate follow-up actions (GTZ, 2006; Moya-Clemente, Ribes-Giner, and Pantoja-Dıaz, 2020). In 2019, the Foundation developed a system for evaluating the impact of the campaign. There were two major parameters: (a) the impact on groundwater by observing the water levels of dug wells and (b) the utilization of the groundwater by observing the sown area in the Rabi season. A geo-referenced network of observation wells was developed to monitor the impact twice a year, before and after the monsoon. Appropriate control villages were selected from the list of non-participating villages compared to which the progress of the participating villages was recorded (Paani Foundation, 2021). Jnana Prabodhini Institute of Psychology (JPIP) was entrusted with the assessment of the social impact of the SJWC in terms of participation, unity, leadership, empowerment, etc. The six critical pillars of measuring the human factors were Inclusion-Cohesion, Group Motivation, Leading by Selfless Behavior, Agency and Feeling Empowered, Commitment to Action, and Adaptive Vibrant Community. Qualitative as well as quantitative techniques were followed to collect feedback from the villagers. Results indicated that women scored highly on most of the factors except leadership (JPIP, 2019). Villages with high or medium water scarcity or low or zero irrigation facilities scored high in all parameters. Two external factors (a) Annual Rainfall and (b) Gram Panchayat Elections

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influenced the output-outcome-impact cycle critically. Training interventions had a positive impact on the performance of the villagers (JPIP, 2019).

Can the SJWC be called a truly transformative campaign?

Despite its stellar achievements, the SJWC campaign was biased in its approaches to SD because of its fallacious understanding of drought as a condition and water crisis as a phenomenon. It primarily conceptualized drought as a consequence of insufficient rainfall and water crisis as the lack of water. According to Kale (2018), the SJWC competition was based on a "misleading framework of drought eradication". There can be many types of droughts such as meteorological drought, agricultural drought, hydrological drought, socio-economic drought, and so on. There can be several causes of drought such as the increase in land and water temperature, changes in air circulation and weather patterns, depletion of soil moisture levels, the mismatch of supply and demand of water including excessive irrigation, and too much or less availability of water during agricultural seasons. Paani Foundation was not articulate enough about which type of drought it was trying to mitigate. With an inadequate conceptualization of drought and water, it went on addressing the issues with a set of measures that are equally erroneous and unidirectional.

The SJWC lent too much focus to the supply side of water neglecting the innovations that could rationalize the demand side including the art and science of using water. A growing body of counter-intuitive research by Di Baldassarre *et al.* (2018, 2019) can explain the errors of Paani Foundation. According to Di Baldassarre *et al.*, 2018, the proliferation of reservoirs to mitigate the issues of droughts and water shortages is fraught with two major consequences: (a) ruptures in the supply-demand cycles and (b) the reservoir effect. The former refers to the phenomenon of increased water use corresponding to the increased water supply, eventually turning the initial benefits of reservoirs inconsequential. The latter refers to over-dependence on reservoirs ripping apart the capacity to cope with droughts.

Maharashtra is privileged enough to have the highest number of dams in India supported by thousands of watershed development plans encompassing millions of soil and water conservation projects that are implemented by the government, corporate bodies, and NGOs. The Jalyukt Shivar Scheme, in particular, aimed at a drought-free Maharashtra and was able to increase the water harvesting capacity extensively. Because of these initiatives, almost every village in Maharashtra has soil and water conservation structures. The persistence of droughts defying these measures indicates that interventions into the supply side of the water have not resulted in any significant change. This scenario asks for a strategic shift in interventions into the demand side of the water by selecting the right type of crops, the use of water-efficient technologies such as drips, sprinklers, and mulching, and a renewed focus on soil fertility by using organic manures and sustainable pest management.

Sans interventions into the demand side of the water, the SJWC simply went on replicating the initiatives of the State government and its allies by adopting the populist approach to water harvest by accumulating water. Further, it failed to ensure the social and inter-generational equity of water. First, most of the people who committed *shramdaan* were poor, landless, and marginal farmers. There were no legally binding provisions that would ensure access to water for these folks. On the other hand, many of the rich farmers who did not have any contribution to the campaign got disproportionate benefits from the harvested water (Kale, 2018). Second, there was no mechanism such as follow-up measures or an effective exit plan that would ensure the continuity and longevity of the water harvest structures beyond the period of construction. In the absence of defined ownership and a dedicated governance system, sooner or later, the structures are bound to suffer from the *tragedy of the commons* (Lloyd, 1833, cited in Hardin, 1968) because of the unregulated open access to public resources and shared structures guided by unscrupulous self-interest and disregard for the common good. The unfair distribution of water resources tends to threaten

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biodiversity, public health, infrastructure, economic development, and cultural heritage across the globe (Konar *et al*., 2016). Paani Foundation left out a range of complex social issues ingrained in the *political ecology* of water conservation in specific macro- and microenvironments. By the way, it missed the opportunity to understand the unequal control over and access to water resources and the possible uneven exposure to risks around the conservation areas.

The United Nations' Sustainable Development Goal 6 necessitates an integrated approach to the management and allocation of water resources by involving all actors and stakeholders and with an understanding of how people from different strata of society connect with water resources. According to Di Baldassarre *et al.* (2019), factors like social diversity, power relations, mutual trust, cultural values, and psychological biases heavily influence people's adaptation to the changing scenarios of water abundance or deficit. The SJWC competition did not try to understand the interactions between water and human systems in such comprehensive ways.

Acute water scarcity leads to social panic and corruption whereas water abundance and under-pricing lead to misuse (Barbier, 2019). Moreover, people with better economic conditions and better access to water seldom respond to the call for cutting down water usage. Above all, it is comparatively easier to convince people to collect water than to rationalize the use of water by adopting optimal usage practices. The SJWC kept away from this sensitive issue. Although it was hugely successful in terms of uniting people for a common cause, it could not bring about the necessary transformation of human attitude towards the use of water and the equity of water. Therefore, the SJWC cannot be considered a truly transformative campaign.

Conclusion:

Implications for social entrepreneurs and policymakers

Compared to many countries in the world, India is a sweet-water-rich country. Despite its diverse water-rich profile, the current water shortage, drought, and desertification in India point at, in the words of Global Water Partnership (2000, p. 17), "a crisis of governance". According to Chandhoke (2003, p. 2957), governance refers to the "de-centering and the pluralization of the state into several levels that stretch horizontally from civil society and market organizations on the one hand and vertically from the transnational to local self-government institutions on the other". This multi-axial and multi-stakeholder approach empowers civil society groups and local organizations like Paani Foundation to participate in local water governance and address the issue of water equity more efficiently than government organizations.

The concept "equity" must be differentiated from "equality", although they are used synonymously. While equality asks for absolute equity, equity is context-specific, relative to resources, stakes, and needs. For example, a farmer with four acres of land needs more water than a farmer with half-acre of land or a family of eight members needs more water than a family of three members. However, additional water to deserving farmers can be supplied only if water is available after providing the socially fixed minimum water to each family and farmer.

Further, the idea of equity is, by and large, founded on the principle of distributive justice that supports the *fair allocation* of resources among diverse members of a community. The wealth and resources of a society are finite whereas the needs and wants of the people are infinite. Therefore, 'fair allocation' should refer to the *procedure* and the *pattern* of collection, generation, and distribution of the total resources or services available in a specific society. The problem is that justice in the context of water allocation is overwhelmingly influenced by socialist and human-rights-driven concepts of equity that under-emphasize the *duties* of the citizen towards water conservation, water usage optimization, lifestyle changes, and their overall *contribution* to the entire cycle of water management and governance.

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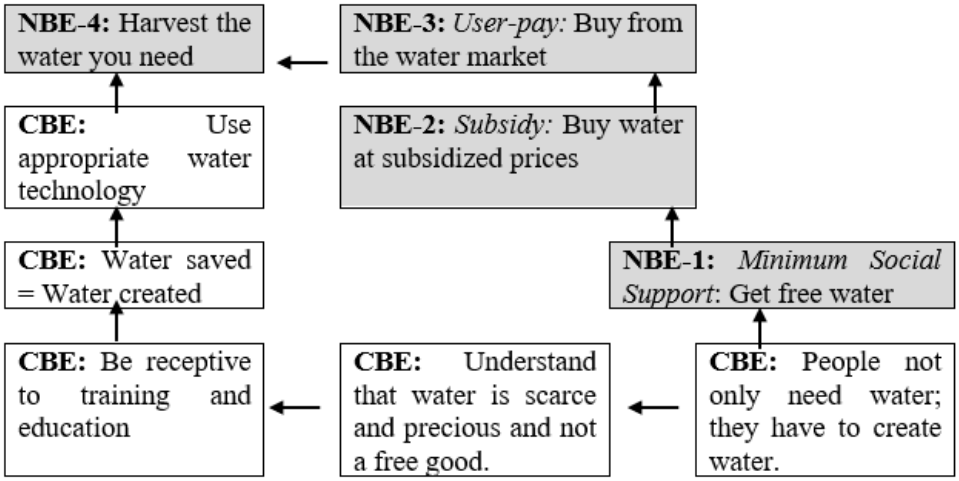
The needs of individuals cannot always be fulfilled by society. Therefore, individuals have to put their best efforts to generate water for themselves. The role of civil society bodies like Paani Foundation and other institutions is to provide training and education, and financial, psychological, and moral support to the people to achieve self-dependence in water management. From this point of view, the social equity of water can be conceived as an inter-play of *contribution-based equity* (CBE) and *need-based equity* (NBE). **Please see Figure I.**

Figure 1: Social equity of water as the integration of Need-based Equity (NBE) and Contribution-based Equity (CBE)



Two of the long-term side effects of increased water harvesting discussed by Di Baldassarre *et al*. (2018) are the *supply-demand cycle* and *reservoir effects*. The twin issue can be addressed by strategic interventions in the demand side of the water. The strategies should be developed based on research involving the feedback of the local water users. Paani Foundation should have paid attention to certain variables: (a) the amount of water available, (b) the quantum of water use by people from different demographic profiles, (c) patterns of water use, (d) user's attitude towards the water as a resource, and (e) user's sensitiveness to the equity of water. The strategic think tank of the Foundation should have observed the variations in water usage including the behavior of people during water shortage and water-sufficient periods across different locations.

The SJWC increased access to water in many parts of Maharashtra. Despite the achievements, it was important to evaluate whether it had resulted in any identifiable economic development as well as changes in people's attitude toward the water, pending which a project may not be sustainable. Therefore, the feedback mechanisms of all future conservation campaigns should be agile enough to extract the diverse modes of interaction between human and natural systems. This would help to rethink the strategic use of finance, human factors, infrastructure, technology, and public policy to manage the issue of water equity contextualizing both supply and demand sides. Based on this, **Figure 2** suggests a set of approaches, methods, and tools that can be useful to maintain the social and inter-generational equity of water to a large extent.

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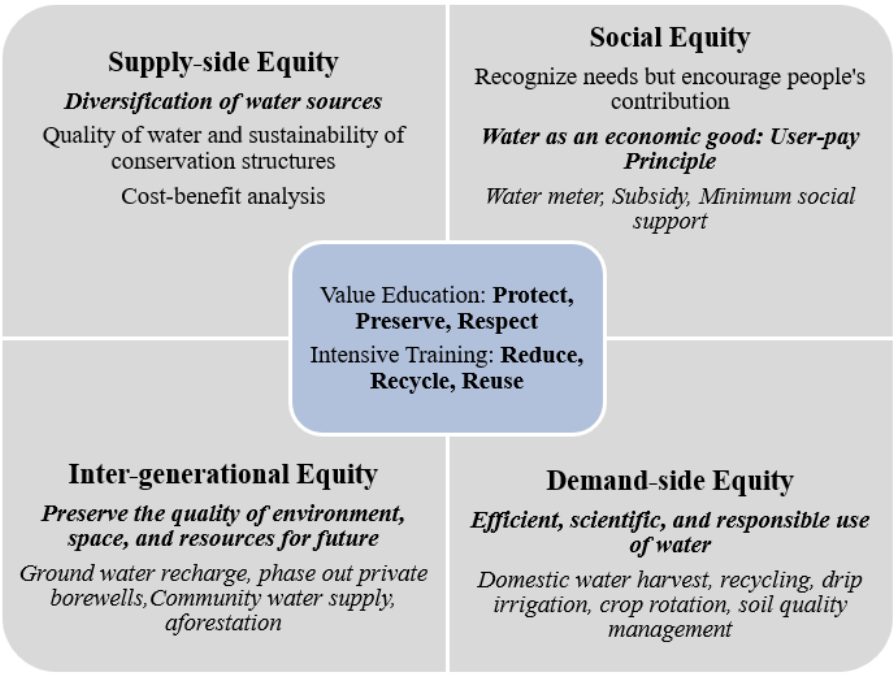
Figure 2: Social and inter-generational equity of water conservation



The water policy of India, of late, has recognized the merits of social, educational, technological, digital, legal, and financial aspects of governance. However, water governance remains messy due to the lack of unified vision and rules and responsibilities across the Central, State, and Local Self Governments. The nation needs a convergence of water laws and implementation mechanisms and strict enforcement in the matters of water pollution, water distribution, and citizen engagement programs. This would motivate organizations like Paani Foundation to focus on more complicated aspects of water management.

References

1) Adger, W.N., Huq, S., Brown, K., Conway, D. and Hulme, M. (2003). Adaptation to climate change in the developing world. Progress in Development Studies, 3(3), pp.179–195. doi:10.1191/1464993403ps060oa.
2) Armitage, D., Berkes, F., Dale, A., Kocho-Schellenberg, E. and Patton, E. (2011). Co-management and the co-production of knowledge: Learning to adapt in Canada's Arctic. Global Environmental Change, 21(3), pp.995–1004. doi:10.1016/j.gloenvcha.2011.04.006.
3) Barbier, E. (2019). The Water Paradox: Overcoming the Global Crisis in Water Management. New Haven: Yale University Press.
4) Basiago, A.D. (1999). Economic, social, and environmental sustainability in development theory and urban planning practice. The Environmentalist, 19, pp.145–161. doi:10.1007/BF01325104.
5) Ben-Eli, M. (2015). Sustainability: Definition and Five Core Principles. [online] New York: The Sustainability Laboratory. Available at: http://www.sustainabilitylabs.org/assets/img/SL5CorePrinciples.pdf [Accessed 6 Jun. 2021].
6) Brundtland, G.H. (1987). Report of the World Commission on environment and development: our common future. Oxford: Oxford University Press, for the United Nations.
7) Burns, H., Diamond-Vaught, H. and Bauman, C. (2015). Leadership for Sustainability: Theoretical Foundations and Pedagogical Practices that Foster Change. International Journal of Leadership Studies, [online] 9(1), pp.131–143. Available at: https://pdxscholar.library.pdx.edu/elp_fac/45/ [Accessed 6 Jun. 2021].
8) Chandhoke, N. (2003). Governance and the Pluralisation of the State Governance and the Pluralisation of the State: Implications for Democratic Citizenship. Economic & Political Weekly, 38(28), pp.2957–2968.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2023.29.01.023

9) Chinnasamy, P., Hsu, M.J. and Agoramoorthy, G. (2019). Groundwater Storage Trends and Their Link to Farmer Suicides in Maharashtra State, India. Frontiers in Public Health, [online] 7, p.246. doi:10.3389/fpubh.2019.00246.
10) Dash, A.K. and Dash, R.K. (2021). Environmental and sustainability campaigns: a case study of India's Swachh Bharat Abhiyan (2014–2019). Journal of Communication Management, 25(4), pp.385–400. doi:https://doi.org/10.1108/JCOM-07-2020-0072.
11) Di Baldassarre, G., Sivapalan, M., Rusca, M., Cudennec, C., Garcia, M., Kreibich, H., Konar, M., Mondino, E., Mård, J., Pande, S., Sanderson, M.R., Tian, F., Viglione, A., Wei, J., Wei, Y., Yu, D.J., Srinivasan, V. and Blöschl, G. (2019). Sociohydrology: Scientific Challenges in Addressing the Sustainable Development Goals. Water Resources Research, [online] 55(8), pp.6327–6355. doi:10.1029/2018wr023901.
12) Di Baldassarre, G., Wanders, N., Agha Kouchak, A., Kuil, L., Rangecroft, S., Veldkamp, T.I.E., Garcia, M., van Oel, P.R., Breinl, K. and Van Loon, A.F. (2018). Water shortages worsened by reservoir effects. Nature Sustainability, [online] 1(11), pp.617–622. doi:10.1038/s41893-018-0159-0.
13) Ferdig, M.A. (2007). Sustainability Leadership: Co-creating a Sustainable Future. Journal of Change Management, 7(1), pp.25–35. doi:10.1080/14697010701233809.
14) Global water Partnership (2000). Towards Water Security: A Framework for Action. [online] https://www.gwp.org/, Stockholm, Sweden: GWP, ISBN 91-630-9202-6, pp.1–18. Available at: https://www.gwp.org/globalassets/global/toolbox/references/towards-water-security.-a-framework-for-action.-mobilising-political-will-to-act-gwp-2000.pdf [Accessed 28 Nov. 2021].
15) GTZ (2006). Strategic Communication for Sustainable Development: A Conceptual Overview. GTZ Rioplus: Environmental Policy & Promotion of Strategies for Sustainable Development. [online] Germany: GTZ, pp.1–61. Available at: https://gsdrc.org/document-library/strategic-communication-for-sustainable-development-a-conceptual-overview/ [Accessed 2 May 2021].
16) Guha, P. (2019). Going to Scale: A Case Study of an Indian Educational NGO. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 30(6), pp.1365–1379. doi:10.1007/s11266-019-00099-3.
17) Hardin, G. (1968). The Tragedy of the Commons. Science, [online] 162(3859), pp.1243–1248. Available at: https://www.jstor.org/stable/1724745 [Accessed 21 May 2021].
18) Hill, R., Adem, Ç., Alangui, W.V., Molnár, Z., Aumeeruddy-Thomas, Y., Bridgewater, P., Tengö, M., Thaman, R., Adou Yao, C.Y., Berkes, F., Carino, J., Carneiro da Cunha, M., Diaw, M.C., Díaz, S., Figueroa, V.E., Fisher, J., Hardison, P., Ichikawa, K., Kariuki, P. and Karki, M. (2020). Working with Indigenous, local and scientific knowledge in assessments of nature and nature's linkages with people. Current Opinion in Environmental Sustainability, 43, pp.8–20. doi:10.1016/j.cosust.2019.12.006.
19) Hristova, S., Šešić, M.D. and Duxbury, N. eds., (2015). Culture and Sustainability in European Cities: Imagining Europolis. London: Routledge.
20) IPCC (2020). Climate Change and Land: An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Summary for Policymakers. [online] Geneva: IPCC. Available at: https://www.ipcc.ch/site/assets/uploads/sites/4/2020/02/SPM_Updated-Jan20.pdf [Accessed 7 Jun. 2021].
21) JPIP (2019). Psycho-social Impact Assessment of Community-building of Participating Villages in the Satyamev Jayate Water-Cup Competition. [online] JPIP, pp.1–24. Available at: https://jpip.org/wp-content/uploads/2020/10/Psycho-Social-Mansandharan.pdf [Accessed 22 May 2021].
22) Kale, E. (2018). Can villages be made drought-free in 45 days? [online] www.indiawaterportal.org. Available at: https://www.indiawaterportal.org/sources/risks [Accessed 19 May 2021].
23) Konar, M., Evans, T.P., Levy, M., Scott, C.A., Troy, T.J., Vörösmarty, C.J. and Sivapalan, M. (2016). Water resources sustainability in a globalizing world: who uses the water? Hydrological

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2023.29.01.023

Processes, 30(18), pp.3330–3336. doi:10.1002/hyp.10843.

24) Lenton, R. and Muller, M. eds., (2011). Integrated water resources management in practice : better water management for development. [online] London: Routledge. Available at: https://doi.org/10.4324/9781849771740 [Accessed 13 Feb. 2022].
25) LiPuma, E. and Koelble, T.A. (2009). Social Capital in Emerging Democracies. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 20(1), pp.1–14. doi:10.1007/s11266-008-9076-6.
26) Mensah, J. (2019). Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review. Cogent Social Sciences, [online] 5(1). doi:10.1080/23311886.2019.1653531.
27) Moya-Clemente, I., Ribes-Giner, G. and Pantoja-Dıaz, O. (2020). Identifying environmental and economic development factors in sustainable entrepreneurship over time by partial least squares (PLS). PLoS ONE, [online] 15(9), p.-1 - 17. doi: https://doi.org/10.1371/journal.pone.0238462.
28) National Academy of Sciences (1999). Water for the Future: The West Bank and Gaza Strip, Israel, and Jordan. [online] Washington, D.C.: National Academies Press. doi:10.17226/6031.
29) Paani Foundation (2019). Satyamev Jayate Water Cup 2019 | Marking System. [online] paanifoundation. Available at: https://www.paanifoundation.in/wp-content/uploads/2019/02/Satyamev-Jayate-Water-Cup-2019-Marking-System-1.pdf [Accessed 15 May 2021].
30) Paani Foundation (2021). Paani Foundation Project Report: Satyamev Jayate Water Cup 2019. [online] Paani Foundation. Available at: https://www.paanifoundation.in/wp-content/uploads/2021/01/Water-Cup-2019-Report.pdf [Accessed 16 May 2021].
31) Pahl-Wostl, C. (2009). A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. Global Environmental Change, 19(3), pp.354–365. doi:10.1016/j.gloenvcha.2009.06.001.
32) Parkes, M.W., Morrison, K.E., Bunch, M.J., Hallström, L.K., Neudoerffer, R.C., Venema, H.D. and Waltner-Toews, D. (2010). Towards integrated governance for water, health and social–ecological systems: The watershed governance prism. Global Environmental Change, 20(4), pp.693–704. doi:10.1016/j.gloenvcha.2010.06.001.
33) Parks, S.D. (2005). Leadership Can Be Taught A Bold Approach for a Complex World. 1st ed. Massachusetts: Harvard Business Review Press.
34) Peña,H. (2011). Social equity and integrated water resources management. [online] Stockholm: Global Water Partnership, Technical Committee. Available at: https://www.gwp.org/globalassets/global/toolbox/publications/background-papers/15-social-equity-and-integrated-water-resources-management-2011.pdf [Accessed 13 Feb. 2022].
35) Rubin, G.D. and Abramson, R.G. (2018). Creating Value through Incremental Innovation: Managing Culture, Structure, and Process. Radiology, 288(2), pp.330–340. doi:10.1148/radiol.2018171239.
36) Spence, A. and Pidgeon, N. (2009). Psychology, Climate Change & Sustainable Behaviour. Environment: Science and Policy for Sustainable Development, 51(6), pp.8–18. doi:10.1080/00139150903337217.
37) Talule, D. (2020). Farmer Suicides in Maharashtra, 2001–2018: Trends across Marathwada and Vidarbha. Economic & Political Weekly, [online] 55(25). Available at: https://www.epw.in/journal/2020/25/special-articles/farmer-suicides-maharashtra-2001-2018.html [Accessed 11 May 2021].
38) United Nations (1972). Report of the United Nations Conference on the Human Environment, Stockholm, 5 -16 June. [online] https://undocs.org/. Available at: https://undocs.org/en/A/CONF.48/14/Rev.1 [Accessed 7 Jun. 2021].
39) Vanleene, D., Voets, J. and Verschuere, B. (2017). The Co-production of a Community: Engaging Citizens in Derelict Neighbourhoods. VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, 29(1), pp.201–221. doi:10.1007/s11266-017-9903-8.
40) Varadarajan, R. (2009). Fortune at the bottom of the innovation pyramid: The strategic logic of

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2023.29.01.023

incremental innovations. Business Horizons, 52(1), pp.21–29. doi:10.1016/j.bushor.2008.03.011.