

Climate Action through intergenerational solidarity in India: GRAVIS approach

1. Climate crisis in the Asia Pacific

The Asia and Pacific region is more [susceptible](#) to effects of climate change than other regions of the world, because of its substantial dependence on natural resources, agriculture, densely populated coastal areas, insufficiently climate resistant infrastructure and services, and poverty among a considerable section of the population. Over the past 60 years, [temperatures in this region have increased faster](#) than the global mean. Extreme, unpredictable weather events and natural hazards like droughts, heatwaves, floods and tropical cyclones have become more frequent. These recurring and intense phenomena have displaced communities, damaged their health, aggravated their poverty forcing them to live under a state of constant stress for survival.

Climate action was the only Sustainable Development Goal (SDG 13) in which outcomes [reversed](#) in the Asia-Pacific between 2015 and 2023. If timely measures aren't ensured, climate change will only intensify the ongoing crises and endanger sustainable development. [Majority of the countries in Asia and the Pacific are insufficiently prepared](#) and lack finances to support adaptation and mitigation efforts as well as data to inform climate action. Having said that, the region has a vast potential to accelerate climate actions with [adaptation](#) as the key strategy to reduce harmful impacts of climate change whilst building opportunities for collaboration, knowledge sharing and enhancing the adaptive capacity of communities.

Lives of agrarian communities inhabiting regions that are severely impacted by scarcity of fundamental resources are also inherently affected by variability in climate which further hampers agriculture, forestry and livestock related activities. While climate change may generate economic opportunities in some parts of the world, [adapting to and accepting it are urgent issues for the developing economies of Asia](#).

Adaptation measures in the realm of natural resource management may include development of new crop varieties, maximizing water use efficiency through integrated water resource management, building institutional and human capacities, and changing the policymaking environment. Enhancing adaptation capacity of the most vulnerable sections from the society into development planning calls for [involvement of relevant stakeholders](#), including policymaking agencies, research institutions, the private sector and civil society.

There is a large resource of untapped knowledge and experience within local communities who know how to cope with climatic variations, extreme weather events and health risks, aspects which should become intrinsic to developmental planning and mainstreaming climate change adaptation measures. It is proven that [community-based approaches can considerably reduce the degree of vulnerability to climate change](#) by building resilience and sense of awareness within communities.

2. The Thar Desert in India: Challenges and effects of climate change in the region

The Thar Desert, which is the largest desert in the Indian sub-continent, is one of the most [challenging](#) climatic zones in the country. Inhabited predominantly by the farming communities largely dependent on rainfed agriculture and related activities, the desert has witnessed recurrent droughts, acute water shortages and food scarcity. The [effects](#) of climate change in the water scarce regions are largely seen in terms of erratic rainfalls and enhanced variability in the temperatures and rains. Whereas extreme weather conditions are not new to the desert, the occurrence of climate change has aggravated the extremities, making it impossible for those with limited resources to lead a healthy life with sufficient food, water and nutrition. These [extreme](#) variabilities in rains and weather have eventually resulted in reduced ability of farmers from the region to produce sufficient food, rapid groundwater depletion and decreased soil quality.

Developed and resource abundant regions continue to benefit from technological advances and alternative solutions to tackle with the impacts of climate change. It is the poor and resource deficient regions like the Thar, have to face the most difficult consequences arising from the phenomenon and its many manifestations. Further, the impacts of climate change affect differently and vary between groups of people. [Older people are more vulnerable](#) to the effects of temperature extremes and have a greater risk of mortality because of their increased [susceptibility](#) to disease, reduced mobility and the effects of shortage on the food and water supply. They are confronted with an array of [challenges](#) including chronic health problems, poor infrastructure, lack of access and control over productive resources, social isolation and inability to contribute financially to their households.

Their dependence on the family to meet specific needs combined with these challenges pose a huge threat to their ability to cope with climate changes. Amidst limited access, very little information and awareness of issues concerning their development, this particular section is neglected from policies, plans and interventions as they are not viewed as direct beneficiaries of progress. Traditional societies unlike modern societal arrangements are still transitioning. Hence, we will easily find that three or four generations still live together under one roof in many households and they continue to interact and support each other in different ways. It is also true that over a period of time disconnect develops between the younger and older generations. Older people feel isolated as their problems and issues are not recognized by the younger generation and the latter believe that older people do not have the capacity to understand the complexities of modern-day living.

Both older men and women are generally labelled as non-productive liabilities and their participation in community activities as well as decision making takes a back seat because of their declining physical health and discrimination by younger generation. The biggest blow to their self-esteem and dignity could be when their work or contribution is not recognized by their immediate families. Even when elderly people are not in a position to contribute financially, they continue to contribute to many household and community activities that allow younger members to take on physically and mentally challenging roles. For example, it is a given that [child care remains a responsibility of elderly men and women while others are out on work](#). When young males migrate seasonally, older people also look after the entire household.

While it may seem like a gap that is difficult to fill, collective learning processes and platforms like [Inter-generational Learning Groups \(ILGs\)](#) can definitely help generate the momentum towards [bridging](#) it.

3. Older People led Climate Action through an intergenerational approach

In the face of climate change, between the slow-onset impacts and intensifying droughts, [GRAVIS](#) has been working to improve the lives of communities residing in the remotest regions of Thar desert in India. GRAVIS is a Non-Governmental Organization working in remote arid zones of India. Prioritizing their water, food and healthcare needs, it adopts integrated community-based approaches towards development programmes devised specifically for different age groups. Through these interventions, GRAVIS brings together various stakeholders including different ages, so as to foster solidarity and partnerships between generations and leverage their full potential. The aim is to enable them take leadership roles for self and community development by promoting intergenerational communication and knowledge exchange between them.

Following are the key components of GRAVIS approach:

3.1 [Community mobilization through ILGs](#)

Amidst rising temperatures, arid, inhospitable and unpredictable weather conditions, scanty rainfall and extremely poor living environment, it is critical to devise a climate change adaptation strategy that focuses towards improving the overall living conditions of communities in this region and strengthens their ability to respond and adapt to climate change with resilience. Not only this will [protect](#) vulnerable communities from extreme weather and impacts that are devastating their lives and livelihoods, but also it will safeguard the bio-diversity, improve health outcomes and bolster food as well as water security. The most critical aspect for the effectiveness of this approach is collaboration with local communities and turning to indigenous resources to design sustainable community development solutions and strategies.

Shared platforms like ILGs have been created in the desert villages of GRAVIS' operation while ensuring inclusion of younger people as well in all training programmes and sessions organized with a focus on older people, as a conscious strategy. ILGs are a group of both young and old people who come together for inclusive community development that actively engages them as agents of change not only for themselves but also for the benefit of community at large. The most important feature of their functioning is the intergenerational approach as it provides platform for conversation between older and younger generation to resolve issues of common concern. In regions where most of the older generation is either illiterate or less educated, ILGs promise an enormous potential in bridging the knowledge and skill gap prevailing for ages.

Simply put, the inter-generational approach or learning is a process that facilitates interaction with younger and older generations leading to mutual sharing of knowledge, both experiential and technical. Beyond the transfer of knowledge, it cultivates [reciprocal learning relationships between different generations](#), helps to develop social capital and relieve isolation while involving people in community activities, contributing to improved general health and wellbeing.

Older people offer life experience, wisdom, and skills that are often forgotten, and a unique perspective within their local community. They make important contributions as family members, caregivers, volunteers and as active participants in the workforce. As mentors, it energizes older adults and gives them a sense of purpose, when they are able to share their experience and skills with the young. Young people bring a new and refreshing view of the changing world we live in as well as qualities such as energy, creativity and enthusiasm. This approach works to break down the generational barriers between today's youth and seniors. It helps younger generations understand ageing and prepares them to face their own. Inter-generational work with both, the old and young, has the potential to transform the society and pave the way for balance and peace across generations. Hence, it is essential to promote this process among youngsters, local community leaders, NGOs, community-based organizations, and government agencies and ensure collective interactions among them to advance the impact of inter-generational processes.

3.2 Implementing Climate Change Adaptation (CCA) Interventions

GRAVIS' CCA strategies are anchored by ILGs in the Thar region of India and have emerged as models to reckon with. These groups engage in a variety of activities that are inclusive and ensure that are basic needs of senior citizens. These include ensuring access to nutritious food to older people by organizing horticulture units, promoting healthy and active ageing through a series of self-care sessions and creation of assets like rainwater harvesting structures and farming dykes for them to address long term issues of community's water and food insecurities. GRAVIS invests significant resources in developing the leadership skills and capacities of the group members. Their confidence and leadership skills are bolstered by trainings and other capacity building interventions which transform them into powerful social change leaders who advocate for the benefits of an entire community in addition to their own.

3.2.1 Fostering rainwater harvesting systems to enhance water security

Community ponds or *naadis* are surface based rainwater harvesting basins that can store between 700 m and 40,000 m of rainwater and provide water for 8-12 months in a year. These structures are extremely useful especially during the non-monsoon period or when the rainfall is not sufficient. The revival and maintenance of community-based resources is extremely important to ensure accessibility and availability of water for all residents, including children, women, older persons, and others belonging to the poor and vulnerable sections of the region. In the long run *naadis* contribute immensely by recharging the groundwater supplies as well as provides water to the livestock for drinking purposes.

Considering this, GRAVIS has worked towards desilting of the ponds and building embankments around the ponds to ensure safe and secure storage of water. The ILGs play a pivotal role in disseminating traditional knowledge and wisdom in terms of identification of appropriate areas for development of *naadis*, maintenance of these surface-based structures, prevention of contamination of water and ensuring equitable access for all residents of the villages. The *naadis* have emerged as an important lifeline for the residents and livestock of the Thar and have empowered them to be self-reliant, self-sufficient and climate resilient.

In many villages, the community ponds and ground level water reservoirs are either defunct or can provide water only for a couple of months. In such circumstances, it becomes extremely important to capture rain water and store the same in a clean and safe manner. [Taankas or underground water storage tanks](#) are useful, easily constructed, accessible and sustainable storage units that can store up to 25,000 litres of rainwater. A single harvest of rainwater can be stored for as long as four months and the water stored in these units can be used for fulfilling domestic needs of communities.

The Taankas are built at an elevated level of one foot and are also equipped with a fool-proof locking mechanism to ensure that it is safe from any form of infestation. These units have been extremely useful in ensuring convenient, uninterrupted access to clean water. Built very close to the households of the beneficiaries, women do not have to spend hours of their productive time in fetching water. Extracting water from Taankas becomes less laborious and less time-taking, enabling women to devote the additional energies and resources towards themselves, their families, and the community. Most importantly, this intervention has also contributed to enhanced savings of households, which can now be utilised for health care, education and other important priorities. Through Taankas, the water security of households has been assured and the quality of water, retained. Residents of these villages, who previously were compelled to consume fluoride contaminated water, now have clean water for consumption. The chances of contracting water borne diseases has been significantly reduced with the establishment of these structures.

3.2.2 Enhancing food and nutrition security through farming dykes and horticulture units

Relying extensively on traditional knowledge, wisdom and techniques to ensure food and water security, GRAVIS has promoted the construction of [khadins or farming dykes](#). A *khadin* is a traditional bund that serves as a method of collecting water by building an earthen embankment made at the end of an upland plot of land to prevent water run-off. In the absence of adequate and consistent rainfall, *khadins* serve the dual purpose of retaining moisture from rain, however scanty it may be, while also protecting the top layer of soil from run-off water.

The moisture captured using these techniques have proven to be extremely useful in promoting higher yields of crops. This has further improved their access to markets, enabling income generation by way of selling surplus yield. The technique has restored several barren lands and has transformed them into cultivable lands, thereby also paving way for a viable source of livelihoods for the residents. The construction of *khadins* has ensured nutritional security for all, especially those belonging to the poor and vulnerable sections of the Thar. Another key feature of this intervention is the fact that the older persons of the family, for whom the *khadin* has been constructed, are identified as [owners and custodians of these assets](#). Thus, they are in a position of greater control and access to fundamental resources such as food and water.

Another important component of this multi-dimensional strategy is the establishment of [AHUs \(Arid Horticulture Units\)](#). In lands where agriculture is no longer viable, AHUs can be considered as a very useful alternative as they are not labour intensive, require very less maintenance, promote self-reliance, are self-sufficient and sustainable. The AHUs with its fundamental objective being to achieve food and nutritional security, help combating the nutritional deficiencies especially in children, women and older people. A typical AHU promotes the use of local variety of seeds, which is crucial to climate adaptation and building climate resilience. The plants grown in these lands follow inter-cropping practices, require small quantities of water and are grown entirely using bio-pesticides.

GRAVIS also promotes farm forestry practices that involves integration of trees into farming systems. This practice is beneficial to both farmers and the environment. It has improved soil health by reducing erosion, increased soil organic matter and nutrient availability. Above all, this has supported in building the resilience of farming communities towards climate variability and rampant environmental stresses such as drought and soil degradation.

4 Conclusion

Intergenerational solidarity is a critical component of the UN Framework Convention on Climate Change and the Paris Agreement. Laid down in Articles 6 and 12 of the Agreement, it is commonly known as '[Action for Climate Empowerment](#)', the end goal of which is to empower all sections and members of the society to engage in climate action through public participation, education and public awareness, training, access to information and stakeholder cooperation. In facing the challenges of climate change, younger generation can act as a bridge to other generations and vice versa. GRAVIS has been effectively utilizing intergenerational solidarity for drought mitigation and climate change adaptation in arid zones of India. In our view, intergenerational approach and exchange have the power to engage everyone effectively at all stages of decision-making, partnerships and implementation with both young and old as practical [solution-providers](#) and not just as beneficiaries or solution-receivers.

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