

TAKING THE LEAD



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Empowering Older Women as
Leaders of Climate Action in the Thar Desert, India





Taking the Lead

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Leaders of Climate Action in the Thar Desert, India

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CONTENTS

Chapter 1 : Introduction and context setting	9
Chapter 2 : About GRAVIS and the EOPC Project	11
Chapter 3: Role of older women in climate action	13
Chapter 4: Interventions and impact	17
Chapter 5: Effective strategies	25
Case studies	27
Acronyms	30
Glossary	31
References	31



Author's Note

Women across the world have been championing change and demonstrating resilience in unimaginable ways. And yet, this process has taken decades to achieve and deeply entrenched barriers to overcome. The Thar region is home to several such stories of self-reliance, resilience and unflinching spirit. Whereas for decades together, women have been put at the end of the development narrative, GRAVIS has been instrumental in acknowledging the role and contribution of women to climate action. Particularly, the role of older women in safeguarding traditional practice, knowledge and methods and carefully disseminating them to the future generations.

Every project that aims at empowering communities to combat climate change is a ray of hope for thousands of those living in hope, despair, and dearth. For the pace at which climate change is impacting lives, there is a compelling need to devise quick, effective, and efficient solutions. Furthermore, it must be curated with the limited pool of resources that are available. In majority of the cases, contrasting to the usual belief that technology can mitigate risks and enhance productivity, the reliance on local, traditional, and indigenous methods has proven to be more effective in hostile agro-climatic settings such as the Thar region in the State of Rajasthan, India.

Every time I have had an opportunity to engage with the interventions undertaken by GRAVIS and read about the impact these have had on the beneficiaries, I am inspired. I am indebted to GRAVIS for giving me this opportunity to delve into the extensive nature of interventions undertaken as part of the Expanding Older People led Climate action in the Thar (EOPC) Project. I hope this creates a ripple effect and amplifies across other regions as well.

Jyotsna Sripada
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Executive summary

The Thar region in Rajasthan is an extremely challenging place to live in. Extremely high temperatures, scarce and unpredictable spells of rain and dwindling means of livelihood. During summers, the temperatures soar upto 50 degree Celsius and the region receives anywhere between 100 mm and 500 mm for a very short period during the year. Navigating through these conditions is an extremely arduous task for the people of this region and despite the unfavorable conditions, eighty percent of the population is dependent on rainfed agriculture. Rainfed agriculture and livestock rearing are the two main livelihood activities that families pursue in this region, and that too, in extremely challenging climatic conditions that are imposed on them. Despite the challenges that they are compelled to navigate through, the people of this region defy all odds, forging a life of hope, grit and indomitable spirit.

Women across the world face a higher burden when it comes to climate change and bear the brunt of varying climatic conditions that impact their access to basic resources. During extremely high temperatures, droughts or famines, the primary responsibility to secure food and water falls on women. In many cases, they are also responsible for producing the food consumed at home. Despite the fact that a significant percentage of them are engaged in producing food or rearing livestock, women, young or old, are not empowered enough to determine the distribution or utilization of what is produced, procured or consumed. Generations of women are trapped in the vicious cycle of drudgery, often forced to give up their bare necessities for the sake of the family.

The EOPC Project has been designed to transform the lives of older women, by acknowledging their role as leaders in climate action. The project is unique in the sense that it emphasizes upon the role of an extremely vulnerable group such as older women and identifies pathways in which their role and contribution can be leveraged for climate resilient action. This publication aims at capturing the key learnings and practices from the EOPC Project, which can be leveraged to strengthen policies concerning older women and their role in climate change, at a national level. The learnings emanating from this project can also be replicated in areas and regions that seek to galvanize the role of women in climate action.

This publication discusses some of the key roles that women, particularly older women, can anchor to address climate change and alleviate it's impact including women as custodians of indigenous practices and traditional methods of agriculture, women as the backbone of resilience and women as agents of change. The EOPC Project combines a plethora of practices that have steered the progress and helped realize the objectives that were envisaged, quite effectively. The integrated approach, consisting of well-designed interventions have contributed to strengthening the water, food, nutrition, health and income security of thousands of people living in Barmer District, Rajasthan. It has brought to fore the importance of gender sensitive and gender specific approaches, thrusting older women at the helm of progress. Older women are stakeholders, custodians, and leaders of the climate action progress and the EOPC Project is a befitting tribute to their competence, contribution and expertise.



Chapter 1: Introduction and Context setting

“Every drop of water we manage to procure in this region is precious whether it is clean or not, we make do with what is available. Surviving here is a challenge, given how little is there. Yet, we strive hard to make things possible” - Bheekhi, an old age woman residing in Ambedkar village, Chotan Block, Barmer district

Bheekhi's journey in the Thar region is a story that resonates with several women living in the Thar region of Rajasthan, India.

Bheekhi's life has witnessed several challenges, yet, what trumped all these woes were food and water scarcity. For years together, Bheekhi and her family have struggled to achieve sufficiency in terms of food and water security. Consuming a diverse and nutrient diet or safe drinking water has been a distant dream, quite literally. Many women like Bheekhi walk anywhere between five to ten kilometers a day to procure water for drinking and household purposes. The physical and mental drudgery that these women endure is unimaginable and continues irrespective of how old the women are. The sight of old women struggling to trek long distances, along with the other women in the family, is not uncommon, as every possible effort must be directed towards procuring just enough for the family to survive.

The Thar region in Rajasthan is an extremely challenging place to live in. Extremely high temperatures, scarce and unpredictable spells of rain and dwindling means of livelihood. During summers, the temperatures soar upto 50 degree celsius and the region receives anywhere between 100 mm and 500 mm for a very short period during the year. Navigating through these conditions is an extremely arduous task for the people of this region and despite the unfavorable conditions, eighty percent of the population is dependent on rainfed agriculture. Rainfed agriculture and livestock rearing are the two main livelihood activities that families pursue in this region, and that too, in extremely challenging climatic conditions that are imposed on them. Despite the challenges that they are compelled to navigate through, the people of this region defy all odds, forging a life of hope, grit and indomitable spirit. The women of this region guard all these values very closely hoping that, one day, their families will overcome all these challenges.

Women across the world face a higher burden when it comes to climate change and bear the brunt of varying climatic conditions that impact their access to basic resources. During extremely high temperatures, droughts or famines, the primary responsibility to secure food and water falls on women. In many cases, they are also responsible for producing the food consumed at home. Despite the fact that a significant percentage of them are engaged in producing food or rearing livestock, women, young or old, are not empowered enough to determine the distribution or utilization of what is produced, procured or consumed. Generations of women are trapped in the vicious cycle of drudgery, often forced to give up their bare necessities for the sake of the family. This is further exacerbated by rigid social and cultural barriers such as patriarchy or the purdah system that excluded women from participating in key decision-making



processes that impacted their lives. Neither do they have an enabling environment in their own homes where they can voice out their needs or opinions, nor can they step outside of their homes to interact openly or independently with other women in the community.

Women in this region wade through a complex web of barriers, some of which are deep rooted and extremely hard to overcome. With age, their physical and mental strengths deplete and in cases where they are no longer able to contribute to any of the activities essential to the survival of the household, they are regarded as a burden. Their old age is often spent in neglect, desperation, and uncertainty. Devoid of attention, care and dignity, older women are reduced to frail frames.

The EOPC Project has been designed to transform the lives of older women, by acknowledging their role as leaders in climate action. The project is unique in the sense that it emphasizes upon the role of an extremely vulnerable group such as older women and identifies pathways in which their role and contribution can be leveraged for climate resilient action. The project recognizes older women not just as recipients of the interventions undertaken to address climate change but also as custodians of climate action. By placing them at the forefront of climate action, the EOPC Project honours the role of older women, the traditional knowledge and wisdom they possess and resilience they emanate, if given the opportunity. This publication aims at capturing the key learnings and practices from the EOPC Project, which can be leveraged to strengthen policies concerning older women and their role in climate change, at a national level. The learnings emanating from this project can also be replicated in areas and regions that seek to galvanize the role of women in climate action.



A young girl drawing water from an underground water storage structure



Chapter 2: About GRAVIS and the EOPC Project

"I do not know how to express the relief I feel for my daughters, quips Ameer with tears of joy in his eyes. They will be able to rest a bit, thanks to the taanka that has been built just outside our home to store rainwater. We will have clean water to drink, bathe every day and for other domestic needs. More than anything we will be healthy."- Ameer, a 64-year-old man residing in Jani Ki Basti, a village in Barmer district.

Ameer's narrative is one of the many thousands of testimonials that have emerged from the Thar region. If one had to delve deep into what has led to this transformation, one would certainly discover the wide range of issues, themes and domains that GRAVIS has had the opportunity to engage with and make an impact. Issues such as water insecurity, food and nutrition insecurity, physical and mental health, poverty, acute resource shortages, unfavorable climate conditions are interconnected issues that commonly impact all those who dwell in this region, particularly older women. For over four decades, GRAVIS has engaged with a diverse, yet interconnected, set of themes to enable communities, vulnerable groups and specific groups of stakeholders to combat climate change and the cascading effects it has had on their lives.

With an integrated approach embedded as a core part of their work, GRAVIS is steered by two key principles: GRAVIS-the Gandhian philosophy of Sarvodaya - all rising, but the last person first - is the foundation for GRAVIS's vision and mission. Accordingly, GRAVIS works for the collective mobilization and development of men, women, and children, regardless of economic situation, caste or religion. Addressing the situation through the empowerment of rural communities, GRAVIS also adheres to another Gandhian notion, Gram Swarajya or village self-rule, when implementing its efforts. GRAVIS works toward the rehabilitation of the rural community, enabling village ownership and control over its environment, institutions, and relations.

Over four decades, GRAVIS has implemented several projects aimed at strengthening social structures, processes and mediums through which knowledge can be generated, shared and enhanced. The primary focal area of intervention by GRAVIS has been on the restoration of dwindling natural resources and on the upliftment of marginalized groups. Through community-based organizations such as village development committees, older people organizations, self-help groups, intergenerational learning groups, etc, GRAVIS has fostered important and mutual connections amongst the community members, to promote sustainable and resilient means of survival. It believes in blending the traditional wisdom with new techniques to create long-term, sustainable and cost effective means for improving the lives of rural inhabitants. In order to achieve its overall goal of creating self-reliant village communities, it strives to involve the local communities in its programmes and interventions, train and build their capacities further and develop community ownership. GRAVIS' actions focus on the poor, backward and marginalized section of Thar Desert communities with particular emphasis on women, children and elderly. GRAVIS has a deep concern for the development of children, women empowerment and gender justice. Accordingly, the participation of women, particularly older women, has been ensured in all the programmes and activities.



The Expanding Older People led Climate Change (EOPC) project is yet another significant step undertaken by GRAVIS. The overall primary goal of the project will be to expand older people-led climate change adaptation in 6 villages of rural India and to create and advocate for a scalable model benefitting a larger population in future. The sub-goal of the project will be to contribute in improving the health and living conditions of about 1,500 older people and their 10,500 family members (living in 6 villages) within the Thar Desert by focusing on water, nutrition and health aspects, and to demonstrate the effectiveness of an older people led water, nutrition and health model.

Specifically, the project objectives is driven by the following objectives:

- Form and strengthen the capacities of new Older People's Associations and develop the skills of newly formed OPAs in 6 villages
- Enhance water availability through rainwater harvesting techniques
- Ensure food and nutrition security through farming and horticulture innovations
- Improve the health status of OP and other members of the community through community-based health interventions
- Bridge the gaps between Government programmes and communities through the leadership of OP
- Impart training and capacity building to relevant civil society organizations and to government agencies for wider replication of OP led climate change adaptation (CCA) model, and to encourage OP's participation in various programmes
- Document OP led climate change adaptation for wide scale expansion

The project has been designed to pave the way for a robust network of older person associations in the six villages in which the project has been implemented. Furthermore, it is expected to lead to strengthened focus and capacities to contribute to drought mitigation, climate change adaptation, poverty reduction and a well-documented model for expansion. The project, since it's inception, has directly benefited 1,500 OP and their 10,500 family members. Overall, the project has benefitted 12,000 people living in six villages in Chohtan Block, Barmer District of Rajasthan, India. Furthermore, about 800 older women and a total of about 6,000 women have been reached out to, along with hundred older persons with disabilities.



Chapter 3: Role of older women in Climate Action

Over the past few decades, there has been a growing emphasis on the role of women and young girls in climate action. Women are responsible for half of the world's food production and in some regions, up to almost eighty percent (United Nations). They play a pivotal role in fostering and securing practices and methods that are key to addressing climate change, including storing drought resistant seeds, preserving crop and seed varieties, adapting robust soil management techniques, leading community-based efforts to combat climate change or leading the information dissemination process across generations. Despite the wide spectrum of roles they undertake, women are not participants in key decision-making processes. For instance, despite being engaged in agricultural production and contributing significantly to this process, they have little or no say in how the crops would be sold or what would the money be used for. Similarly, at a household level, a larger proportion of women are said to be engaged in unpaid work than men.

Women experience deeper levels of vulnerability, marginalization and neglect, and this deteriorates further as they grow older. They are compelled to constantly depend on their partners or the elders of the family to gain access even to the most basic of their needs, and over time, this dependency is viewed as an unnecessary burden. Older women are more vulnerable as they have limited physical and emotional strength to cope with disparities, deficits and unequal distribution of resources. Having been forced into drudgery for a major part of their lives, older women are not equal participants in decision making and often do not have control over managing the funds for the house. This deteriorates further when women grow older. With no source of income or financial independence, many such women forgo their basic needs as they shy away from demanding for the same. Long years of drudgery compels older women to battle physical weakness, neurological issues, poor vision, hearing and other psychological issues. This is compounded further because of their limited participation in the formal labour force. Due to childbearing and associated responsibilities, women's participation in the labour force is often conditioned upon the number of children they bear and the number of years that are dedicated to care taking. Owing to these factors, they also face challenges while receiving long term benefits such as pensions.

Although they bear a disproportionately higher burden of climate change and are expected to shoulder arduous responsibilities such as procuring water from far off distances, undertaking all the household chores, childcare and ensuring food security in the household, they are uniquely positioned at the forefront of the climate crisis. This chapter discusses some of the key roles that women, particularly older women, can anchor to address climate change and alleviate it's impact.



- **Women as custodians of indigenous practices and traditional methods of agriculture:** For centuries together, women have played an important role in bridging the information and knowledge gap between generations. As individuals equipped with an innate ability to safeguard, nurture and promote practices, women have been at the forefront of educating and empowering their families and children, in particular, about crucial things such as habits, measures to cope with adversities, social and cultural practices, nutrition and health related interventions, to mention a few. In majority of these cases, women have had to navigate through an extremely hostile environment, with limited supply of resources or barely any freedom to access the same. Despite the challenges that entail these processes, women hold strong positions in the community as change makers and custodians of the traditional knowledge and information. The socio-economic and cultural setting, coupled with arid climatic conditions in the Thar region of Rajasthan has witnessed the surge of several women as leaders of change. These changes have transcended across a wide spectrum of activities, across multiple levels including households and communities. As key stakeholders in agricultural production, women have actively contributed to understanding the challenges, changes and opportunities that have emerged with climate change. In a region like the Thar, where rainfall is extremely scarce and access to productive resources is limited, women have emerged as custodians of traditional methods and practices that have enabled them, their families, and communities to have sustained livelihoods, water, food and nutrition security. This knowledge and information is a lifeline for the present and future generations, given how these have emerged as climate resilient, sustainable and self-sufficient. As keepers of scientific knowledge, women lead the process of awareness generation, capacity building and archiving of practices that continue to be relevant even today. The Thar region, given its vastness of space and scattered population, demands a far more effective, efficient, reliable and sustainable means to address climate change and in order to enable this, it is imperative that the role of women is recognized. Older women have contributed significantly to the knowledge creation process and have been able to pass it on to their future generations, ensuring that families and communities continue to harness resources optimally, given all that has been passed on from their ancestors. For instance, one of the interventions that has successfully improved water security in the Thar region is a farming dyke or *khadin* that was first introduced in the 15th century by the Paliwal Brahmins in Jaisalmer, Rajasthan. Knowledge about the nutritious value and health benefits of the desert variety of fruits, vegetables and greens such as *Ber*, *Gajar* and *Methi*, has been an important domain that has been safeguarded for over generations in this region. These practices continue to be in the fray today, thanks to the relentless efforts of many older women, who share their experiences, expertise and traditional knowledge. Their role has been extremely impactful and has resulted in significant progress.
- **Women as the backbone of resilience:** The social and cultural norms imposed on women in the Thar region have, for a long period of time, impacted the extent to which women are allowed to interact or participate or engage in conversations outside their household. They have not been able to engage in spaces, voice their opinions and share their perspectives in matters that impact their lives the most. For instance, participating in decisions associated with distribution and utilization of household income is



solely taken by the men of the family, although in majority of the cases, it is the women who are responsible for anchoring responsibilities such as water procuring and storage, cooking, cleaning, child care etc. Spaces for them to communicate how they feel or respond to a challenge have never existed and for generations the problems faced by women have rarely been spoken of. These challenges have been overcome quite successfully, thanks to the proactive role played by civil society organizations, community-based organizations and more importantly, women themselves. Women play a key role in generating effective demand for resources, mobilizing other women as part of the process, disseminating information and awareness, and above all, galvanizing their collective strength in order to achieve progress. Sustained efforts by various stakeholders have resulted in thrusting women to the centre for change and development processes, enabling them to steer decisions, analyze the probable impact of these changes and work towards fair and equitable distribution of resources within and outside the household. Recognizing their role in combating climate change and adapting to the same is imperative. If provided access to the right amount of resources and knowledge, farm yields could increase by 20–30 per cent, thereby diversifying the nutrition that is made available to all members of the household. This would also lead to enhanced opportunities for income generation at the household level.

- **Women as agents of change :** Women are more likely to recycle, minimize waste, and produce organic food and save water and energy in the household. This is perhaps most important in an agro-climatic setting of the Thar region, given the fact that resources are extremely scarce and need to be used optimally in order to cater to the needs of all, irrespective of their age, gender and physical ability to contribute to the process of resource utilization. Women have transformed into influencers of change, by leading the processes of optimal resource allocation and utilization. Women have learned how to cope with and adapt to climate change, for example by practicing sustainable agriculture, switching to drought-resistant seeds, employing low-impact or organic soil management, or leading community-based reforestation and restoration efforts. They have also been open to acquiring new skills and capacities that have enabled them to independently manage resources, plan the utilization of the same, while ensuring their sustainability. Domains such as vocational skills, financial literacy, micro-credit and banking have gained importance and have provided a renewed pathway for women to function, stepping out of their physically and mentally strenuous routines. Women, when equipped with the necessary knowledge and skills, can optimally use resources, and generate higher income, thereby strengthening their role, participation and contribution to the well-being of the household and the community they live in. In the process, they also emerge as stronger, more confident, independent, and respected individuals. They contribute to income augmentation in the household, resource generation at the community level and spearhead a positive curve of change that will transcend across generations.

The EOPC Project, like several other initiatives undertaken by GRAVIS, leverages the unique position of women as custodians, changemakers and the backbone of resilience in the climate change context. The project not only seeks to reiterate the roles and value of contribution of older women but also establishes



ways through which their interests, needs and aspirations are safeguarded. The project debunks the myth that older women cannot bring to the table any value to the process of climate action due to their age or physical ability. The project has emerged as a ray of hope for many older women in the Thar region, who, otherwise, were neglected and sidelined in the process of development or climate action.



Chapter 4: Interventions and Impact

60-year-old Chandi Meghwal's happiness knew no bounds when his kharif crop production almost doubled. He said, "I had not expected this miracle to happen. With the newly constructed khadin in my farmland my fate has completely changed. I did not know that an earthen bund would make such a difference"

Every drop of water gained is indeed a huge win for the people of the Thar region. This is primarily because of the fact that each drop of water is fought really hard for, entailing long and arduous treks undertaken by women and young girls. While the amount of water that they may finally have procured has always been unpredictable, the physical and mental drudgery remains. This one task of procuring water for the family has a cascading effect on multiple factors in the household including food and nutrition security, income, health, education, childcare, awareness, participation in household and community level discussions, engagement with community members etc. And this effect is disproportionately borne by women since they are primarily responsible for ensuring that the household has sufficient amounts of water for all necessary purposes. The EOPC Project has helped women and households overcome all these challenges by adopting an integrated approach that weaves each of these components (that is water, food and nutrition, education and health, community participation and engagement). For decades together, women and young girls have been tied down to executing extremely strenuous tasks with absolutely no respite. And today, behind their frail and exhausted frames, somewhere they are hopeful that this drudgery would end. When one interacts with women in this region, the yearning or rather, the desperation to break away from this drudgery is unmistakable. Women's lives have been tied down to a fixed set of responsibilities, predetermined by rigid social and cultural constructs, and fighting against these has not been easy.

The EOPC Project, in many ways, is a ray of hope. It weaves together all the key domains such as water, food and nutrition, education and health, community participation, etc through a well-designed integrated approach. Each of these components have been addressed and strengthened through a carefully curated approach that is deeply embedded in the values of self-reliance and resilience. This chapter discusses some of the key interventions undertaken as part of this integrated approach and how these have transformed the lives of women and their families.

Securing the lifeline of households through enhanced water security: Water is a crucial lifeline, especially in desert regions like the Thar region where it is scarce, unpredictable, and constantly depleting. Securing clean water for drinking or cooking purposes is a luxury for people dwelling in this region and quite a rare occurrence. People in this region are compelled to consume saline water, contaminated with high fluoride concentration. To overcome these challenges, GRAVIS has leveraged a traditional method of water conservation, called the *taanka*. Taankas are essentially rain-water harvesting structures that can store upto 25,000 litres of rainwater for over six to seven months at a stretch. These underground storage units are equipped with slit catchers to prevent the entry of harmful chemicals into the unit. Furthermore, the inlet and outlet channels are kept separate to ensure that the water is clean and not infested with any



insects. The *taanka*s are also equipped with a lid and a locking mechanism to ensure that the water is stored safely. The members of the communities across the Thar are adept with all the necessary measures that need to be undertaken in order to construct as well as maintain the *taankas* all families have been trained to build *taankas*, thereby empowering them with the necessary skill. Additionally, the community has jointly identified measures that may be useful to maintain the *taanka* sand the entire catchment area in a clean and hygienic manner. This includes removal of footwear before entering the catchment area. Measures such as these have reduced contamination of water resources, thereby reducing the exposure to water borne diseases. The *taankas* are easily accessible as they are located very close to the households, thereby significantly reducing the physical and mental strain endured to procure water. Through this intervention, households are able to save anywhere between INR. 1,200 and INR. 1,500 a month due to the harvesting of water. The time and energy gained through this have been effectively directed towards acquiring vocational skills, income generating activities and self-care. Some of them have invested the savings in livestock and have successfully generated another line of income for the family. This intervention has particularly transformed the lives of women across all age groups. Young girls are able to pursue their education since they no longer have to ensure the physical or mental stress of procuring water from far off distances. Young women have gained substantially in terms of time and productivity. What is unique about this intervention is the fact that the ownership of the *taankas* is in the name of the women of the household and this is a significant step towards acknowledging their role in water conservation and enhancing the water security of their households. This is true not only for younger women but for older women as well. Older women are able to contribute financially to the households by way of engaging in vocational skill development and this is a huge step towards recognising their role and contribution to the betterment of the household. They no longer feel like a burden to the household; instead, they are treasured as a valuable resource. As part of the EOPC Project, 483 families have benefitted from this intervention. The *taankas* have become an extremely important lifeline for the households, held and pursued very strongly by the women of the households.

Table 1: List of beneficiaries of *taankas*

Village Name	Taankas Constructed	Number of beneficiaries (SC/ST/OBC/Minority)	Female Beneficiaries	Total family members benefitting
Ambedkar Nagar	10	10	8	50
Jani Ki Basti	20	20	14	116
Sumar Ki Basti	13	13	12	60
Khariya Rathoda	27	27	20	122
Saklaniyon Ki Basti	11	11	11	60
Chaadi	15	15	9	75
Total	96	96	74	483



Beneficiary of taanka under the EOPC Project

In addition to setting up on *taanka* sat a household level, GRAVIS has also strived to restore the community level water resources such as community ponds or *naadis*. The community ponds are an extremely crucial source of water for the beneficiaries as it provides means to carry out domestic chores. It is also important for the livestock as it provides a basic quantity of water that they need for their survival. Naadis can store anywhere from 700 to 43000 m³ of water for upto eight months in a year, however, if these are not maintained properly, they can become silted and unfit for consumption or use. Leveraging yet another traditional method of water conservation, GRAVIS has undertaken the restoration of two community ponds- Lekhasar *naadi* of Khariya Rathoda village and the Gawai *naadi* of Saklaniyon ki Basti village of Ramsar block, Barmer district. In order to address the issue of siltation, GRAVIS employed a sustainable approach to *naadi* renovation, utilizing short, loose rock structures in the water pathway leading to the *naadi*. These structures act as barriers, preventing gravel, sand, and other debris from entering the pond that cause siltation. The renovation of these two community ponds have rejuvenated the water resources and have strengthened the access and availability of clean water for all. This intervention has impacted the lives of almost 1620 families and 4050 livestock.

Diversifying and strengthening nutrition baskets of households: In an arid region, the probability of nutritious fruits, vegetables and greens surviving the wrath of harsh climatic conditions is almost impossible. Exacerbated by acute shortage of rainfall, the chances of families consuming a diverse basket of nutrients as part of all their meals is quite rare. While achieving water security is an arduous task for the people living in this region, food and nutrition security is another interlinked challenge that they have to overcome. The quantum, quality or diversity of crops that can be grown in this region largely depend on the availability of water and moisture that are necessary to sustain agriculture. When these are affected, the utilization and absorption of nutrients amongst the members of the family is automatically impacted. In other words, given the limited source of income and access to natural resources, a household is compelled to make do with whatever little has been produced or procured from their farm. At a deeper level, the



pattern of distribution is also such that the men and children consume first, leaving behind barely anything for the women or elders of the family. Rotational hunger is entrenched in many households in the region and is extremely hard to overcome. The lack of sustained consumption of the requisite amount of nutrition has a direct bearing on the physical mobility, strength, productivity, and health of the individuals; and in most cases, it is the elderly who are deprived the most. Elderly women face multiple levels of deprivation, given the fact that they still bear the burden of sourcing water from far off distances, help with cooking and other household chores, yet are not the first one to be prioritized when it comes to consumption of a diverse or nutritious meal. Cultural and social factors predominantly determine the pattern of consumption within a household, and this is one of the leading causes for deteriorating health conditions among older persons, especially the older women. GRAVIS has leveraged yet another traditional method of water and moisture conservation-Khadin or farming dykes. Khadin is essentially an ingenious construction designed to harvest surface runoff water for agriculture. Its main feature is a very long (100-300 m) earthen embankment built across the lower hill slopes lying below gravelly uplands. Sluices and spillways allow excess water to drain off. Each *khadin* covers 4 to 6 hectares of land in the submerged area during rainfall, enabling retention of moisture in the farmland. Khadins have restored barren lands, thereby reducing the dependence or need for irrigation facilities and have ensured that these lands are now productive. Families have witnessed a significant increase in the quantum of agricultural produce and fodder. Families are able to grow a diverse range of crops including mustard, yellow mustard, radish and turmeric. The cultivation of cash crops has ensured that families have access to higher financial returns, which will further improve their standard of living. 96 *khadin* have been set up during the course of this project, benefitting 516 families. As a long-term impact, the introduction of *khadins* has also fostered a sense of hope among families as they can now cultivate their own crops and do not have to resort to migration in the hope of finding alternative means of livelihood.

In addition to *khadins*, GRAVIS has also introduced two more interventions that are specifically aimed at strengthening food and nutrition security of households. Agro farm forestry units (AFFUs) and Arid Horticulture Units (AHUs) have transformed the landscape of household nutrition by introducing minimal resource dependent and optimal output generation techniques, yielding sustainable and climate resilient solutions. AFFUs are essentially units where varied species of plants have been carefully selected and planted within these AFFUs to serve multiple purposes. Local and climate resilient plants such as *Ziziphus*, *ardu*, *khejri*, lemon, drumstick, *lasoda* etc. are cultivated as they provide fodder for livestock, fruits for consumption or sale and firewood for cooking and heating. Certain other species have been chosen for their potential use in timber production, supporting local furniture-making industries. The introduction of AFFUs is an extremely important intervention as it protects the long-term usage of the land, by way of securing the soil, regulating temperatures and offering protection from extreme climatic events such as windstorms and heatwaves. These AFFUs have been built by bringing together expertise and experience from the field and practitioners, creating an enabling environment for convergence and collaboration. The AFFU is a unique intervention as it works towards protecting the needs of future generations, while ensuring that the current needs are not compromised upon. As part of the project, two such units have been



established, facilitating the distribution of more than 500 plants. The AHUs are another important intervention that is crucial in securing the household level nutritional security. By identifying older women as custodians of this intervention, GRAVIS has worked extensively on empowering them with the capacities and skills to grow nutrient rich crops, actively participate in distribution of the same at the household and community level and anchor the process of improving the nutritional security of every member of the family. The AHU gardens measure 65'x80' and were properly fenced using barbed metal wire, hooks, stone slabs, and chains (jali) provided by GRAVIS under the EOPC Project. Every AHU planted a variety of plant crops, including 8 *Gunda* plants (Lasoda), 8 *Ber* plants (Desert plum), 1 drumstick plant (*Moringa oleifera*), 1 lemon plant (citrus lemon) and 2 *Karonda* plants (*Carissa carandas*). The planting process involved digging pits, filling them with pond sand clay, farmyard compost, neem cake and bone meal. Women also planted various local seasonal vegetables such as cauliflower, spinach, *sarson* (mustard), dhaniya (coriander), radish, carrot, garlic, onion, potato and green chili between the plants. The AHU offers multiple gains including additional fodder for animals, firewood, shelter during extremely high temperatures and above all, an added source of income for the family. 96 AHUs have been established during the course of this project, enhancing the food and nutritional security of almost 495 beneficiaries. In order to secure the use of local variety of seeds that are essentially climate resilient and the best fit for arid regions like the Thar, GRAVIS has promoted the setting up community seed banks. Over 400 kilograms of seeds, including pearl millets (bajri), green gram (mung bean), Moth bean, cluster bean, and sesame, were distributed to 76 farmers, of which 50% are female farmers. The CSBs promotes a collective approach to climate change, by setting up a seamless mechanism by which farmers can contribute or source local varieties of seeds on a cyclical basis. This not only benefits the household but also fosters a sense of collective effort at the community level to combat climate change. Families are able to enjoy their right to adequate, accessible, culturally appropriate and sustainable diets, thanks to the reliance on traditional and indigenous methods of cultivation.



Improved crop production due to the setting up of Khadins



Beneficiary of AHU under the EOPC Project

Addressing health concerns among older persons: Older people in the Thar region are confronted with multiple challenges that deeply impact their physical and mental health, however, these are often the least of concerns of priorities in a household given the fact that they are fighting a bigger battle for survival. Limited access to resources, lack of qualitatively and quantitatively adequate food, and above all, the lack of spaces to seek or demand for basic necessities puts older persons at the lowest pedestal. Despite the importance of the traditional knowledge, information and skills they possess, older persons are always last in the line when it comes to accessing benefits or services. And in majority of the cases, they are compelled to make do with what is provided to them and in some cases, perhaps even let go of what they have for the sake of other members in the household. GRAVIS's role in improving the health and wellness of older persons in the Thar region has been very critical. By organising outreach medical camps and self-care training sessions, GRAVIS has become a crucial bridge to strengthen the availability of diagnostic and curative health services for older persons. The outreach medical camps, organised in some of the most remote villages, are extremely useful in timely identification of ailments, referral and treatment. Beyond treatment, these camps also serve as educational platforms, generating awareness about various diseases and health issues prevalent in the community. Patients not only receive symptomatic treatment but also free medication, ensuring access to healthcare irrespective of financial and outreach constraints. By addressing both immediate health needs and promoting health literacy, these camps contribute significantly to the well-being of the community, paving the way for healthier, more informed lives and decisions. Through the course of this project, GRAVIS has organised twelve medical camps across six villages, benefitting almost 400 persons. The self-care training sessions, which are essentially designed to generate awareness amongst older persons on key themes such as personal health and hygiene, nutrition and health, have reinstilled hope and confidence among persons. As part of the project, 436 members have benefitted from this intervention, including 245 women.



The installation of bio-sand filters is yet another important intervention as part of the health domain. A Bio-Sand Water Filter (BSWF) is essentially a structure that maintains purity of water and makes it potable for consumption. It is a low-cost technology to improve the quality of drinking water through the process of filtration. This technology has been adapted from traditional slow sand filters. It contributes to reducing waterborne diseases in communities, especially older people whose immunity has weakened because of age-related complications. The filter removes heavy metals, bacteria, pathogens and suspended solids from water through different layers of rock and sands. These filters have contributed significantly to the reduction of waterborne diseases by almost seventy percent. As part of the project, 96 BSWF have been installed and benefitted a significant number of people in the project areas.

Bolstering capacities of communities in the Thar : Given GRAVIS's central goal of achieving self-sufficiency and empowering the most vulnerable and marginalized communities, capacity building, awareness generation and information dissemination is crucial. This is to ensure that the communities are at the forefront of combating climate change, and are equipped with all the necessary information, knowledge and capacities to steer the same. GRAVIS, in all its interventions, seeks to make the community the torchbearers and custodians of climate action and this remains central to the approaches and strategies devised as part of the EOPC Project as well. The project has strived continuously to build capacities amidst community level committees, functionaries, beneficiaries on a wide gamut of themes such as natural resource management, nutrition and health. These training sessions entailed elaborate discussions on the challenges faced by the community and how these can be addressed collectively by leveraging traditional methods. The training sessions served as an important platform for older persons to share their concerns and draw attention to some of the challenges/issues faced by them. Six training sessions on natural resource management, seven leadership training sessions for village older person associations and seven training sessions on health and nutrition have been conducted and have been quite insightful for over 600 participants. These training sessions have reiterated the significance of all the interventions undertaken towards achieving health, food, water, nutrition, and income security and have further emphasized the importance of an integrated approach. Furthermore, the community representatives of VOPA were trained on various aspects of project management including collaboration, team building, skill development, progress tracking and monitoring. In order to ensure that the team members and villagers fulfil their roles effectively, they were equipped with necessary skills and knowledge on topics including stakeholder management, risk management and communication strategies through this training session. The information, knowledge and capacities gained through these sessions have certainly bolstered the confidence of beneficiaries, especially older persons. They have begun to feel valued in the process of promoting traditional and indigenous methods; they are urged to participate and share their expertise in crucial decisions associated with the household and the communities; they feel productive and respected. In addition to training sessions, the project has also facilitated OPA conventions. These conventions are essentially platforms where older community members come together as a support network and exchange experiences. They act as forums and a safe space for advocacy and empowerment granting the elderly a stage not only to discuss issues impacting their lives such as social services, healthcare and economic



opportunities but also work towards solutions for positive changes within their communities. These conventions are attended by a diverse group of stakeholders including local authorities, representatives of non-governmental organizations community-based organizations and beneficiaries.

Fostering dialogue with the Government: Climate action involves the participation of multiple stakeholders, the primary role being undertaken by the Government. The government is an important decision maker and an ally of civil society organizations in their pursuit of strengthening implementation of interventions and given the need to foster stronger channels of communication and coordination between the government and the community, GRAVIS has carefully integrated advocacy as a component of the project. The project has facilitated two such meetings between older persons and government representatives. These must be considered as an important breakthrough as it opens the doors for transparent discussions, building the necessary trust in institutional responses to climate action. The dialogues have helped bring to fore some of the core problems that are being faced by older persons. It has in fact served as a platform for mutual sharing of ideas, experiences, advice and expertise. These participatory discussions and consultative processes have shaped policies concerning older persons in this region, bringing to fore intersectional issues including gender, social vulnerabilities, customs and practices, all of which impede the realization of benefits and services. This intervention is certainly transformative as it brings coherence amongst vertical and horizontal linkages of governance. It also promotes the importance of community centric management of resources and action.



Chapter 5: Effective strategies

The EOPC Project combines a plethora of practices that have steered the progress and helped realize the objectives that were envisaged, quite effectively. The integrated approach, consisting of well-designed interventions have contributed to strengthening the water, food, nutrition, health and income security of thousands of people living in Barmer District, Rajasthan. It has brought to fore the importance of gender sensitive and gender specific approaches, thrusting older women at the helm of progress. Older women are stakeholders, custodians and leaders of the climate action progress and the EOPC Project is a befitting tribute to their competence, contribution and expertise.

Some of the most effective strategies that have been embedded in this project are discussed hereunder.

Well-oriented and sensitized project team: The project's success is largely contingent upon the perspectives, experience, expertise and approach adopted by the project team. It is these factors that sustain the impact of any intervention, even after the project has been concluded. One of the biggest strengths of this project is the well-rounded composition of the project team, that is equipped with sufficient understanding of the context in which the project is situated. Interactions with the project staff reflect a deep understanding of the challenges faced by beneficiaries and the multiple levels through which they have navigated including socio-economic, cultural, geographical and political factors. The staff resonate with the issues, concerns and interests expressed by the community and are sensitised to these. The team's interactions, conversations and impressions of the lives that project beneficiaries lead is firmly grounded in the present-day context, and they have been pivotal to bringing about change; in building trust about the importance of interventions and instilling confidence amongst the beneficiaries to boldly step forward and steer the progress. Women and older persons have significantly benefited from this process and have emerged as strong voices in the transformative processes. A strong, well oriented, and well capacitated team is crucial from the point of view of implementing interventions and demonstrating the change or the progress that has been achieved. The case documentation, progress reports, focus group discussions conducted as part of developing this project publication have been quite insightful and impactful.

Women as the focal point of interventions: As discussed in some of the previous chapters of this publication, women are levers of change. Particularly in the context of climate action, women's role in terms of traditional knowledge dissemination, restoration and promotion of indigenous practices and models of natural resource management. The EOPC Project is strongly focused on harnessing the capacities of women to lead climate action and empower them as active participants in the climate change process. All interventions are positioned around empowering the older women of the family so that they are encouraged to share the traditional knowledge and information they possess and mobilize women across age groups to effectively demand for relevant changes in the community. The EOPC Project has fostered strong partnerships with women and older women at the forefront, anchoring interventions that benefit



their households as well as the community at large. From passive voices in the climate action process, women have become active participants, establishing themselves as changemakers in the community.

Dialogue with government: Any intervention associated with development mandates the active role and participation of the government, without which, achieving long term and sustainable impact is unlikely. A very important component of the EOPC is the dialogue between government representatives and older persons. It has facilitated a two-way communication, which essentially translates to combining the top down and bottom up approaches to bringing about change. A systemic engagement would certainly pave the way for robust mechanisms, processes, monitoring and follow up of issues. This is crucial to ensuring timely action and sustained progress. While these interactions have helped sensitize the government officials to the problems and challenges faced by older persons and the community in general, it has also helped devise specific decisions that can be aimed at empowering different groups of stakeholders. For instance, the dialogue has enabled faster dissemination of information about schemes designed for older persons; it has brought to notice issues and concerns faced by older persons; it has helped appreciate the value of traditional methods for climate action, etc. This platform has emerged as an important medium to foster positive, timely and resilient action.

The EOPC demonstrates the fact that climate action can be localized, with minimal resources by leveraging traditional knowledge and indigenous methods. It also demonstrates the power of women centric, and women led initiatives, bolstered by the inputs, participation and ownership of older women. Embedding the above discussed strategies can prove effective in scaling up interventions across similar agro-climatic settings. It is hoped that the EOPC's impact will permeate to a wider range of beneficiaries in the future and achieve greater impact.

Case studies

Case Study 1: Enhancing Water Security through *taanka*

Ms. Thakari, a 61-year-old woman, who resides in Jani ki Basti, a rural village in Barmer, Rajasthan. She lives with her husband, who works as a farmer, and two of her daughters. The family faced significant challenges due to the absence of a reliable water source, compelling Ms. Thakari to undertake arduous journeys to fetch water, affecting both her physical and mental well-being.

Ms. Thakari learned about the EOPC Project of GRAVIS, aimed at supporting elderly individuals in need, during a Village Development Committee (VDC) meeting. Recognizing her struggles, she advocated for the construction of a *taanka*, a rainwater harvesting structure, to alleviate the water scarcity. With unanimous approval, the VDC committee initiated the construction process, completing the *taanka* at Mrs. Thakari's residence in 2023. The construction of the *taanka* brought transformative changes to Ms. Thakari's life. Her family no longer endures physical hardship to obtain water, saving time and reducing mental stress. Consequently, her daughters began to attend school punctually. She actively participates in farming activities alongside her husband. The *taanka* ensures water availability throughout the year, as she can store rain water for six to eight months and store water sourced from nearby ponds during remaining months. It enables her savings on water tanker expenses i.e INR. 700 tanker and promotes clean drinking water. Thus, it helps in improving health and hygiene standards of her and her family. Mrs. Thakari now takes pride in owning the *taanka* and expresses her gratitude to GRAVIS for their support and urging continued assistance to vulnerable individuals like herself.





Case Study 2: Enhancing water security for Ameer and his family through a *taanka*

Mr. Ameer, a 64-year-old man, who works as a farmer, resides in Jani ki Basti, a rural village in Barmer, Rajasthan. He lives with his grandchildren and three daughters. The family faced significant challenges due to the absence of a reliable water source, compelling Mr. Ameer and his daughters to undertake arduous journeys to fetch water, affecting his physical and mental well-being.

The EOPC Project of GRAVIS, aimed at supporting elderly individuals in need, during a VDC Committee meeting. Mr. Ameer shared his struggles during the meeting, and the VOPA recognized them, advocating for the construction of a *taanka*, a rainwater harvesting structure, to alleviate their water scarcity struggles. With unanimous approval, the VDC committee initiated the construction process, completing the *taanka* at Mr. Ameer's residence in 2023-24.

The construction of the *taanka* brought transformative changes in Mr. Ameer's life. His family no longer endures physical hardship to obtain water, saving time and reducing mental stress. Consequently, his grandchildren attend school punctually. His family members are actively participating in farming activities. The *taanka* ensures water availability throughout the year, as it can store rainwater for six to eight months as well as store water sourced from nearby ponds during the remaining months. It also helps him save on water tanker expenses i.e. INR .800 per tanker and promotes clean water consumption practices.

"I do not know how to express the relief I feel for my daughters," quips Ameer with tears of joy in his eyes. "They will be able to rest a bit, thanks to the taanka that has been built just outside our home to store rainwater. We will have clean water to drink, bathe every day and for other domestic needs. More than anything we will be healthy."

Mr. Ameer now takes pride in owning the *taanka*, expressing gratitude to HelpAge International and GRAVIS for their support and urging continued assistance for vulnerable individuals like himself.



Case study 3: Ray of hope for Bheekhi Devi in the Thar Desert

Mrs. Bheekhi, a 62-year-old woman residing in Ambedker Nagar village, Tehsil Chohtan, District Barmer, Rajasthan, embodies resilience amidst modest means. All her children are married and live with her. Their livelihood hinges on agriculture and livestock, with 38 bighas of land and 2 cows, 8 goats and sheep. Seeking avenues for livelihood improvement, Mrs. Bheekhi once participated in a village development committee and VOPA meeting. The interventions for the EOPC Projects were discussed in the meeting. Upon learning about the intervention, she proposed establishing an Arid Horticulture Unit at her house, emphasizing her family's hard work and financial situation. The VOPA/VDC committee, aligning with GRAVIS's criteria, approved her request, paving the way for the establishment of a fruit orchard through the EOPC Project. In 2023-24, Mrs. Bheekhi's AHU materialized, with the planting of various fruit-bearing plants viz. 8 *Gunda*, 8 desert Plum, 2 Lemon, 1 Drumstick, 1 *karonda* plants. Trained by GRAVIS, she embraced the opportunity not only for employment but also for financial empowerment.

During her interaction with one of GRAVIS' field team members she mentioned, "I am looking forward to the coming years of my life as I want to see my efforts getting converted to a bountiful harvest. I want to sell surplus fruits in the market, start a small business of mine and improve the financial condition of my family."

With heartfelt gratitude, she acknowledges Help Age International and GRAVIS's support, which has reignited hope for a brighter future. Mrs. Bheekhi's story underscores the transformative impact of grassroots initiatives.





Acronyms

AFFU - Agro Forestry Farm Unit

AHU - Arid Horticulture Unit

BSWF - Bio-Sand water filter

CSB - Community Seed Banks

EOPC - The Expending Older People Led Climate Action

GRAVIS - Gramin Vikas Vigyan Samiti

OBC - Other backward class

OPA - Older people's association

SC - Scheduled Caste

ST - Scheduled Tribe

VDC- Village Development Committee



Glossary

Taanka - A *taanka* is a traditional rainwater harvesting technique that involves a covered, underground cistern that collects rainwater from rooftops, courtyards, or other catchments:

Khadin - A *khadin* is a traditional water harvesting system that uses an earthen embankment to collect surface runoff water for agriculture

Naadi - A *naadi* is a rainwater harvesting pond that is open for use by the whole community.

Sarvodaya - Sarvodaya is a Sanskrit word that means "progress of all" or "universal uplift"

Swarajya - The term is derived from the Sanskrit words *sva* meaning "self" and *raj* meaning "rule"

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GRAVIS is a leading Non-Governmental Organization working in rural India in the States of Rajasthan, Uttarakhand, and the Bundelkhand region of Uttar Pradesh. Since its inception in 1983. GRAVIS has worked in over 2,000 villages reaching a population of over 2.5 million and has established over 4,000 Community Based Organizations (CBOs). GRAVIS believes in participatory community development that blends traditional knowledge and modern sciences and promotes equality.

GRAVIS is registered under Rajasthan Societies Registration Act and under section 80 (G) and 12A of IT Act, 1961 of Government of India with tax exemption status.