

YOUTH LEADERSHIP FOR COASTAL RESILIENCE

Voices and Visions
from the Frontlines of
Coastal Kerala

2023



CLIMATE
VOICES
കേരളം





"India's coasts, a delicate interplay of natural beauty and biodiversity, are now at the forefront of the battle against climate change. Rising sea levels, a direct consequence of global warming, threaten to inundate these regions, causing irreversible damage. Coastal erosion, accelerated by human activities and intensified storm surges, further exacerbates this crisis. The phenomenon of saltwater intrusion not only disrupts delicate ecosystems but also impacts freshwater resources. Moreover, the alarming loss of biodiversity and reduced fish catch, both indicators of the health of marine ecosystems, highlight the urgent need for sustainable practices. The increasing frequency and severity of natural disasters, fueled by a changing climate, pose additional risks. These multifaceted challenges to both coastal communities and coastal ecosystems underscore the urgency of addressing climate change and its ramifications on coastal environments.

Youth are the most affected in the coastal areas, as they face uncertain futures and limited opportunities. At the same time, youth have the power to scale up climate ambition and drive systemic change. Two years ago Sustera Foundation initiated a project at a coastal hamlet in Trivandrum, Kerala, to involve the youth in building coastal resilience. The project involved surveying the youth and the community on various aspects of their livelihoods, waste management, climate awareness, and system support. Based on the survey findings, we organized community-based focus group discussions with different stakeholders, such as the fishers, youth, the church committee, teachers, system officials, and NGO representatives, to identify the most pressing problems and practical solutions possible for the coastal hamlet. This project culminated in the launch of the **2022 Coastal Champions Fellowship Program**, a unique and interdisciplinary initiative to train select youth from coastal regions in engaging with social issues through leadership, innovation, community engagement, system partnerships, policy work, academia, and NGO work.

The program aims to empower the youth to become agents of change and leaders in their communities, and to inspire them to pursue careers and vocations that contribute to coastal resilience and sustainable development. This report presents the details of the fellowship program, highlighting the learnings, challenges, and possibilities. The report is intended to serve as a resource and a guide for policymakers, practitioners, researchers, educators, and anyone interested in promoting youth involvement in coastal resilience. The report is a testimony to the youth's potential and power to make a difference in the world. It is a tribute to the coastal champions who have shown courage, creativity, and commitment in trying to understand and address the coastal challenges. It is a hope for a brighter and better future for the coastal communities and the marine ecosystems.

DEEPA A
DIRECTOR
SUSTERA FOUNDATION



Photo: Kollam Port Beach , Kerala

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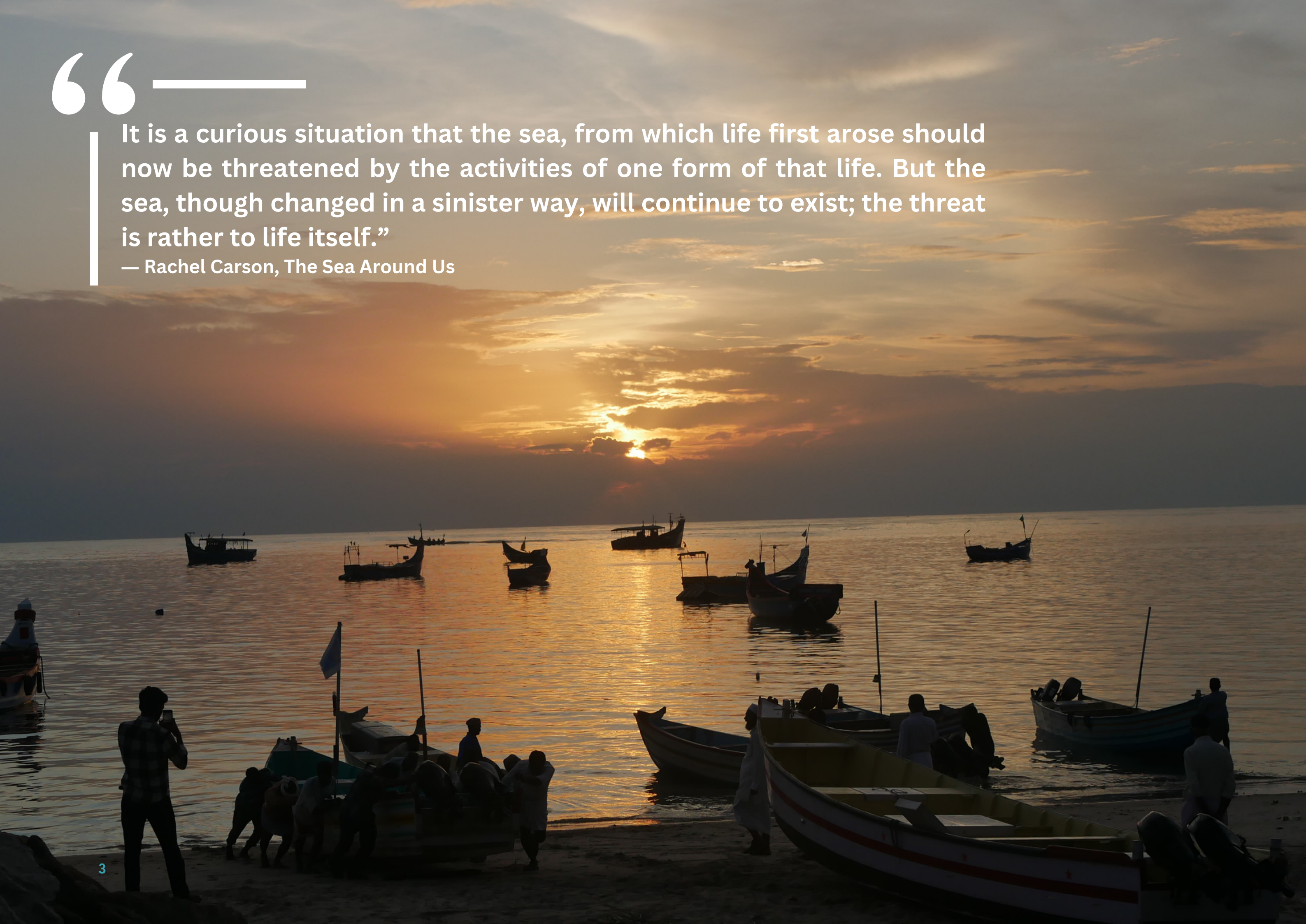
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It is a curious situation that the sea, from which life first arose should now be threatened by the activities of one form of that life. But the sea, though changed in a sinister way, will continue to exist; the threat is rather to life itself.”

— Rachel Carson, *The Sea Around Us*



SETTING THE CONTEXT

In the evolving climate change narrative, the world's coastal regions present a microcosm of our broader environmental challenges. For the last seventy years, relentless urban expansion and industrialization and challenges in governance and political resolve have decisively reshaped coastal regions, predominantly in the Global South. But this situation is frequently misidentified as being solely due to the sea-level rise associated with global warming, which obscures the true scale and nature of coastal vulnerability and results in mitigation strategies that are, at best, inadequate and, at worst, detrimental.

The urgency of this situation is underscored by the plight of those directly affected by climate change: communities ravaged by a succession of natural disasters, each event compounded by the last. Varying precipitation patterns, severe floods, and sea-level rise displace communities, forcing people to leave behind their homes and livelihoods, often dependent on climate-sensitive activities like agriculture and fishing. As sea levels rise, densely populated coastal zones, particularly in developing nations, face an existential threat, with rural areas bearing the brunt of displacement due to inadequate protection measures.

The World Bank's stark projection of over 216 million people to be potentially displaced by 2050 due to slow-onset climate effects is a clarion call for urgent climate action. The paradox of this crisis is that those nations most affected by climate change have contributed the least to global emissions, underscoring the profound issue of climate justice. Developed nations may face significant land loss, but their sparsely populated coastlines do not equate to the massive migrations seen in the densely populated regions of South and Southeast Asia.

This brings us to the case of Kerala, a state whose coastal communities are emblematic of the struggles faced by those in similar predicaments globally. With 350 km of its 593 km coastline threatened by sea surges and erosion, Kerala's coastal population contends with many challenges, from livelihood sustainability to healthcare accessibility.

“About 37 per cent of the world's population lives within 100 km of the coast, at a population density twice the global average” - [UNEP](#)



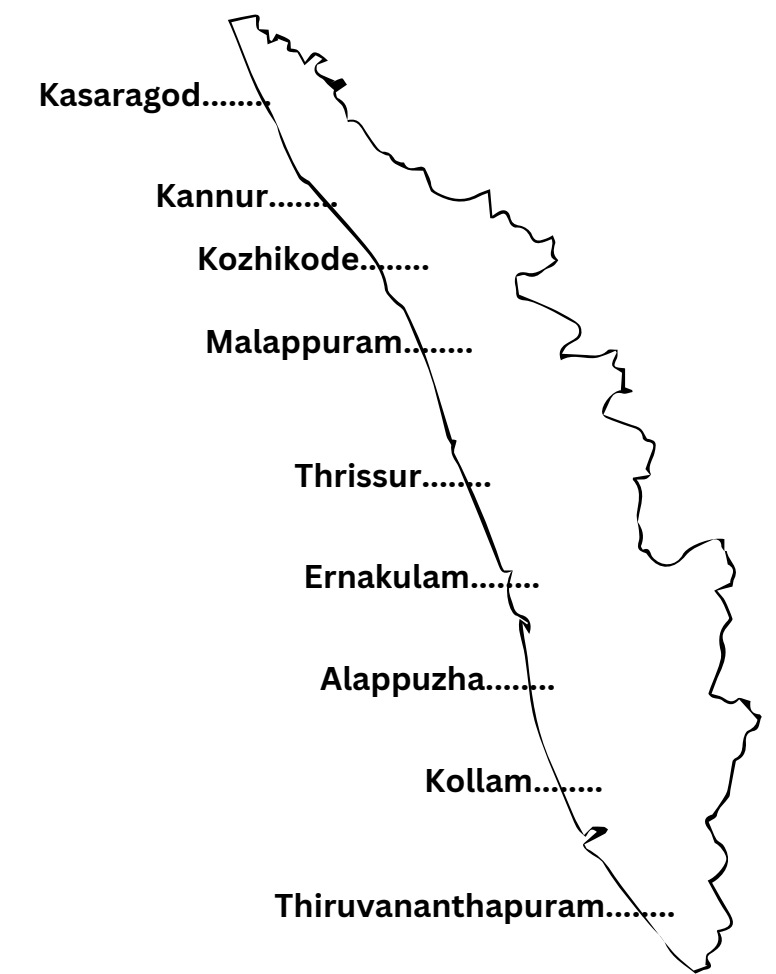
Photo: Kollam Port Beach , Kerala

These stressors, coupled with the loss of resources like fish due to pollution and market dynamics, push residents towards urban areas, escalating urban congestion and stretching resources thin. Climate change poses extreme risks to coastal fisheries in Kerala, with issues like sea level rise, coastal erosion, ocean warming, and acidification affecting the lives and livelihoods of coastal communities.

High vulnerability to the impacts of climate change, such as increased natural disasters and erosion, disrupts their livelihoods and well-being. To address this, the development of sustainable coastal villages equipped with basic amenities for building resilience, the implementation of alternate livelihood programs, and the provision of capacity building for these communities on understanding and responding to climate change impacts, disaster response, and safety measures are essential.

Amidst these shifting sands, the plight of these communities often remains unheard, their stories untold. The urgent need for action to address the implications of climate change, geographic shifts, and food security cannot be overstated. Coastal degradation is not just a loss of land but a loss of culture, economy, and stability.

In this context, the insights of the Coastal Champions Fellowship cohort, hailing from Kerala's coastal districts, are particularly salient. Their firsthand experiences, documented through the coastal youth leadership programme, offer a unique perspective on the realities of life at the climate frontline. As we delve into the findings of these fellows, it is crucial to connect with their narratives, which paint a vivid picture of the resilience and challenges of coastal communities in the face of accelerating global warming and anthropogenic activities. Their voices, representing the vulnerable, demand our attention and action, setting the stage for a deeper exploration and conversation on coastal vulnerability.



IPCC ON RESPONDING TO SEA LEVEL RISE

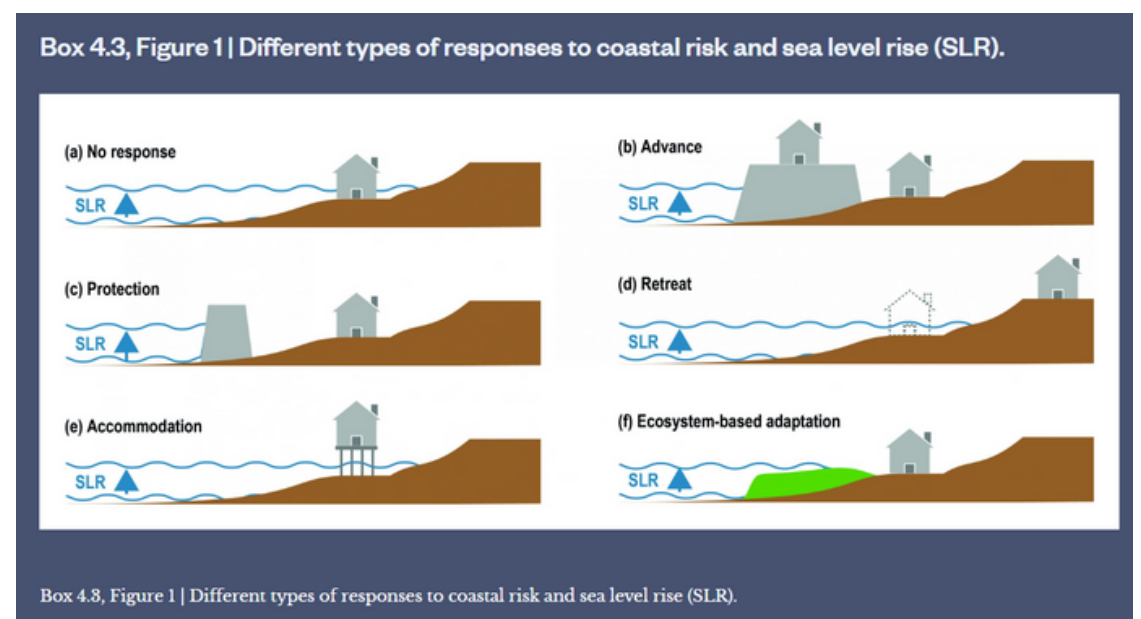


The IPCC Special Report on the Ocean and Cryosphere in a Changing Climate outlines the following strategies for responding to sea level rise:

1. **Protection:** This involves constructing hard structures like dikes, seawalls, breakwaters, barriers, and barrages to guard against flooding, erosion, and saltwater intrusion. Soft structures like beach nourishment and dunes, as well as ecosystem-based adaptations (EbA) like marsh green belts in front of seawalls, are also included.
2. **Accommodation:** This strategy encompasses adapting to the changing environment through building codes, raising houses on stilts, relocating valuables to higher floors, and implementing floating houses. Accommodation for salinity intrusion involves switching to salt-tolerant crops and altering land use.
3. **Advance:** This involves extending land seaward through land reclamation using fill materials, encouraging natural land accretion, and creating polders surrounded by dikes, which often require drainage and pumping systems.
4. **Retreat:** This strategy includes voluntary migration, involuntary displacement due to environmental impacts or unrest, and government-led relocation or managed retreat. It recognizes the complexities in differentiating between voluntary and involuntary movements and highlights the role of incentives in retreat decisions.
- 5.

Ecosystem-Based Adaptation (EbA):

EbA focuses on protecting and advancing the coastline through the conservation and restoration of ecosystems like wetlands and reefs. These ecosystems help in wave attenuation, storm surge flow reduction, sediment trapping, stabilization, and organic matter build-up.



GLOBAL ACTION AND ROLE OF STAKEHOLDERS



Global Goals for Coastal Protection *

- 1.Reducing greenhouse gas emissions from marine sources.
- 2.Enhancing the resilience of coastal and marine ecosystems to climate change.
- 3.Promoting sustainable fishing practices and protecting marine biodiversity.
- 4.Reducing pollution and improving water quality in coastal areas.
- 5.Enhancing the adaptive capacities of coastal communities to climate change.
- 6.Promoting the sustainable development of coastal and marine tourism.
- 7.Encouraging the development and use of renewable ocean energy.
- 8.Implementing marine spatial planning to balance conservation and development.
- 9.Strengthening international cooperation and governance for ocean conservation.
- 10.Integrating coastal protection measures into broader climate change mitigation and adaptation strategies.

Roles of Various Stakeholders in Coastal Protection

- 1.**Governments:** Policy formulation, regulation enforcement, and funding allocation.
- 2.**Local Communities:** Participatory management, local knowledge contribution, and resilience building.
- 3.**NGOs:** Advocacy, research, and community engagement.
- 4.**Academia:** Scientific research, technological innovation, and education.
- 5.**Private Sector:** Investment in sustainable practices, technological development, and corporate responsibility.
- 6.**International Organizations:** Coordination of global efforts, funding, and policy guidance.
- 7.**Media:** Awareness raising and information dissemination.
- 8.**Youth and Civil Society:** Advocacy, community mobilization, and grassroots initiatives.
- 9.**Indigenous Communities:** Traditional knowledge integration and cultural preservation.
- 10.**Financial Institutions:** Funding for sustainable coastal development and conservation projects.

*The Ocean and Coastal Zones Action Table, 2020

WHY PROTECT THE COASTS AND COASTAL COMMUNITIES?



- **Carbon Sequestration:** Oceans are the world's largest carbon sink, playing a critical role in regulating the global climate by absorbing a significant portion of the atmospheric carbon dioxide. The ocean acts as a heat sink, absorbing 90 per cent of excess heat caused by global warming.
- **Waste Recovery:** Coastal communities are uniquely positioned to recover plastic waste from the ocean, which not only helps reduce the presence of microplastics in our diet but also addresses the declining populations of various fish species due to pollution.
- **Biodiversity Conservation:** Protected coastal and marine ecosystems support rich biodiversity, ensuring the survival of several important species, some of which are valuable for maintaining ecological balance.
- **Economic Benefits:** Sustainable development is deeply rooted in the health and resilience of marine and coastal ecosystems, which serve as vital resources for food, energy, minerals, and transportation. By 2030, the ocean economy is projected to reach an impressive \$3 trillion annually, accounting for about 5% of the worldwide gross domestic product (GDP).
- **Cultural Heritage:** Many cultures have deep connections with the sea, and preserving coastal areas helps maintain these traditions and the heritage of indigenous coastal communities.
- **Adaptation to Climate Change:** By protecting coasts, we support the resilience of half the world's population that lives near these areas, safeguarding food, and livelihoods, and reducing climate change risks.
- **Community-Led Conservation:** Supporting coastal communities have the potential to lead conservation efforts effectively as they have a vested interest in the sustainability of their resources.

Reflecting on the universal joy of a beach visit we've all cherished since childhood, it's disheartening to see how our pristine coasts are increasingly bearing the brunt of anthropogenic climate change. This escalating situation calls for global action, emphasizing the urgency to protect our coasts and support the coastal communities that depend on them for their survival and livelihood.

THE KERALA CONTEXT



Photo: Purakkat, Alappuzha



Photo: Kannur Beach , Kerala

- The coastline of Kerala stretches up to 593 kilometres (km), out of which around 350 km are under the constant threat of sea surges, coastal erosion, disasters and other hazards.
- According to SAPCC 23, four out of nine coastal districts are highly vulnerable due to limited aquaculture production and low per capita income
- The living conditions can become further challenging with inadequate health care, proper livelihood opportunities, education or decent living standards. Stressors like pollution, falling market prices, disappearing fish wealth, and exclusion add to the plight of coastal communities.
- The drastic increase in the coastal population has emerged as an indicator to strengthen the efforts to protect the coast.
- The assessment conducted by the National Centre for Coastal Research (NCCR) revealed that 45% of Kerala's coastline is undergoing erosion
- Under such circumstances, capacity building amongst coastal youth, focussing on mitigation and building resilience in coastal communities, is the need of the hour.

The research Paper, Changing Status of Tropical Cyclones Over the North Indian Ocean published in the journal Climate Dynamics has emphasized the problem of increasing frequency and intensity of Tropical Cyclones in the Indian Ocean. The frequent sea surges are impacting livelihood by reducing the number of fishing days thus adding to the pressure. Tropical cyclones and frequent coastal floods are also causing loss to houses, and community buildings, affecting drinking water, and damaging fishing equipment and boats. The increasing number of coastal disasters is causing a large financial burden for people living in the coastal regions as well as for the state government.

THE PROGRAM

The Coastal Champions Fellowship Program (CCFP) is a unique initiative that empowers young individuals to tackle climate change issues in coastal regions. The program emphasizes the importance of dialogue, collaboration, and action among coastal communities, particularly involving the youth, local governance, domain experts, and civil society organizations.

In the 2022 edition of CCFP, we assembled a group of twelve young leaders from Kerala's coastal districts. This group participated in a hybrid interactive learning platform, which included an experiential coastal journey. The primary objective was to gain a deeper understanding of the significant challenges coastal communities face, document these issues for future discussions, and propose practical solutions to the most urgent problems identified by the group.

CCFP aimed to promote meaningful dialogue among youth from diverse coastal, urban, and rural backgrounds, sharing insights into the unique challenges of coastal Kerala. The program provided extensive training in problem-solving and identifying climate adaptation solutions, equipping young leaders with skills in project planning, implementation, and data collection. By connecting these fellows with government and non-governmental agencies for mentorship and collaboration, the initiative sought to amplify their efforts and ensure sustainable, long-term impact. The program awarded fellowships to the selected 12 youths, who were chosen from a competitive pool of over 200 applicants.

We believe that the collective voice of coastal youth can significantly influence narratives and actions concerning climate impacts on coastal communities. The program aimed to provide a platform for diverse youth to collaborate, comprehend coastal challenges, and develop adaptation strategies that contribute to building resilient coastal communities.



Photo: Alappuzha, Kerala

THE PURPOSE

The increasing number of coastal disasters is causing a large financial burden for people living in the coastal regions of Kerala and the state government. At the moment, the state needs a renewed focus on investing and implementing soft and hard landscape-based solutions combined with capacity building to create resilient communities across the coastal belt of Kerala.

Youth voices are pivotal to elevating climate ambition and driving system change in this context. While they are the most impacted by the challenges of climate change and anthropogenic activities, they also hold the power and potential to make a difference.

From contributing towards the UN climate change addresses related to the Paris Agreement, focusing on the national targets for emission control and disaster risk reduction and leading hyper-local engagements in building resilience and mitigation, youth have a great role to play. It is hence crucial to develop leadership programs that enable youth to build their leadership skills, engage with key community stakeholders, learn from the best practitioners, understand and engage in policy development and pursue careers that support coastal resilience and sustainable development.

SUSTERA foundation has been at the forefront of training young minds from across the country to scale up climate action. During our work with the coastal communities in Vettucaud (Kerala), we realized the need to train future youth leaders who can pioneer systemic change for achieving climate justice for the coastal communities in Kerala. This led to the development of a coastal-focused leadership program that can be replicated across regions. We partnered with ‘Climate Voices Kerala’ to develop a curated high-impact fellowship program for twelve selected youth leaders from across the nine coastal districts of Kerala. We also consulted with coastal youth leaders and coastal experts during the curation of the program.



THE APPROACH

The Champions fellowship program is a unique, interdisciplinary fellowship program for young individuals based/engaged in the coastal districts of Kerala with a passion for working in the climate change domain focusing on coastal ecosystems. The fellowship brought together youth from different backgrounds in an immersive learning experience to understand the coastal challenges and work together for solutions.

The call for applications through formal and informal forums saw more than 200 applicants respond. Individuals from coastal regions and varied educational backgrounds or professional domains with strong motivation to work towards addressing climate-related and other coastal challenges applied. A team of subject experts and practitioners helped select the final twelve fellows, ensuring gender and geographic equity. The application was qualitative by nature, with the applicants having to respond through written and video means showcasing their passion for the call.

The three-month fellowship program was hybrid, with initial online sessions, an offline cohort meeting and experiential travel through coastal locations to understand the real-time challenges and possibilities to enhance their learning.

The program was curated such that young leaders could learn from experts, interact with community leaders, create a network across the state and initiate action. The fellowship aimed at opening up platforms for discussing livelihood-related challenges like climate migration and capacitance towards addressing climate justice in all aspects of life.



Photo: Sea Port, Kollam, Kerala



Photo: Sea Port, Kollam, Kerala



Photo: Sea Port, Kollam, Kerala



Photo: Sea Port, Kollam, Kerala

The procedure

- Conducting a primary round of discussion with coastal experts to finalize the objectives of the program.
- Fixing the hybrid timelines for training and experiential learning. We chose 3 months with 14 days of online sessions in the initial month, a one-day meet-up followed by a one-month field experience session and follow-up sessions to record their learnings and suggestions.
- The selected Coastal champions were given training to understand, analyse and address coastal challenges and mentored to propose local solutions for their region. A panel of subject experts, practitioners, policymakers and system officials were the resource persons.
- The online training focussed on the relevant skill sets needed to address the coastal challenges, followed by a one-day offline meet-up to cross-learn from each one's eco-system. Post this, a one-month-long coastal engagement module was started with field immersion and community interactions to identify the tangible impacts of climate on their coasts and propose adaptation strategies. The process and outcomes were recorded and their suggestions were put forth in this report.
- The selected fellows received a stipend towards the fellowship for the duration of the program.
- The program sought to combine skill-based learning with applicatory training in the field.
- The cohort was given activities to assess their Involvement and learnings and engaged in post-fellowship programs in the community.
- The fellows were encouraged to identify the most pressing issues from their ecosystems, analyse them zone wise and then state the top 10 areas that needed focus from their youth perspective, which have been put down in this report.

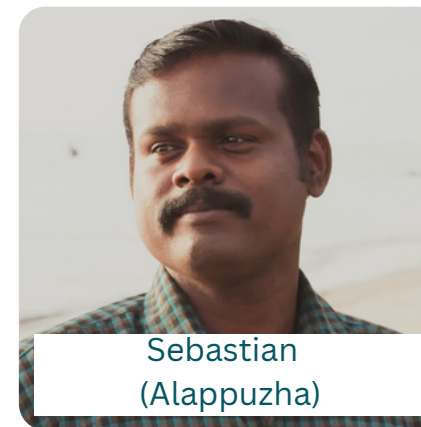
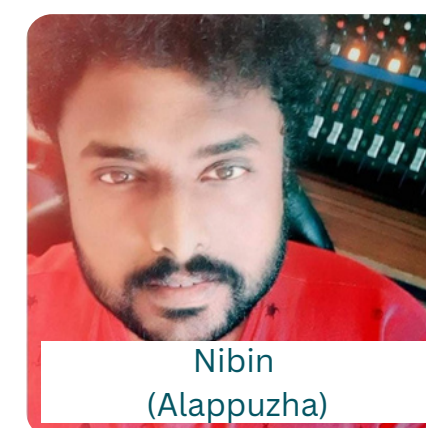
The focus areas of training

- Initiate dialogue between young people from different coastlines, urban, and rural, to share their experiences, perspectives, and suggestions on coastal challenges about existing and needed interventions.
- Train the selected individuals for problem-solving and identifying adaptation-related climate solutions important for coastal Kerala through extensive training and interaction with practitioners.
- Providing Skill development for the selected candidates in areas of project planning and implementation, primary data collection, and other necessary skills required to implement long-term developmental projects.
- Promoting the work of the fellows post the program through mentorship and by connecting the fellows with various government or Non-governmental agencies for linking and scaling up their work.
- Engaging the youth leaders with local government and state government institutions to initiate dialogue.
- Working towards making sure there are no further injustices experienced by people in the coastal regions.
- Build awareness among the vulnerable communities and educate them to emerge as sustainable and resilient model villages
- Engage the youth in micro pilot projects associated with climate adaptation which the participants might be interested in pursuing further.
- Enable the participation of coastal youth leaders in policy-making efforts and governance to ensure a just transition for the vulnerable coastal community especially with a gender focus.
- Address livelihood-related challenges such as climate migration and ensure the fellows build the capacity to view these challenges through the lens of climate justice.

THE COASTAL CHAMPIONS 2022 COHORT

Kerala, with its 593 km long coastline known as the Malabar Coast, ranks fifth in India for its extensive coastal line. This coast begins from the southwestern part of Maharashtra, passes through Goa's coastal region, covers the entire western coast of Karnataka and Kerala, and culminates at Kanyakumari.

The Sustera Team embarked on a journey across nine coastal districts in Kerala to promote their Fellowship program. We received an overwhelming response, with around 200 applications pouring in from various coastal districts. After a rigorous selection process, 12 participants were chosen for the fellowship program. The selected fellowship cohort was notably diverse, encompassing teaching professionals, members of the fishing community, researchers, and social workers, all residing within a 5 km radius of the coast. To ensure extensive participation, special outreach initiatives were launched in all coastal regions. To enhance accessibility, communication materials and questionnaires were also made available in Malayalam, catering to the local population.



ONLINE ACTIVITY

The Coastal Champions Fellowship Program featured an array of distinguished speakers and experts. KA Shaji, a developmental journalist and creator of 'Stolen Shorelines,' highlighted the crucial role of media in grassroots development. Sreeram, as the District Coordinator at KILA, shared insights on local disaster management. Fahad Marzook, a Hazard Analyst, contributed his expertise in Climate Governance. Gopinath Parayil, founder of Blue Yonder and co-founder of Chekutty dolls, discussed responsible tourism and post-disaster community resilience.

Additionally, the program included training by Sanju Soman on campaign tools, individual mentorship by the core SUSTERA team, interactions with waste management experts, guidance from Renjan Mathews of WWF on marine conservation, and insights from local practitioners in coastal areas. These diverse contributions enriched the learning experience and enhanced the fellows' understanding of various environmental and social issues.

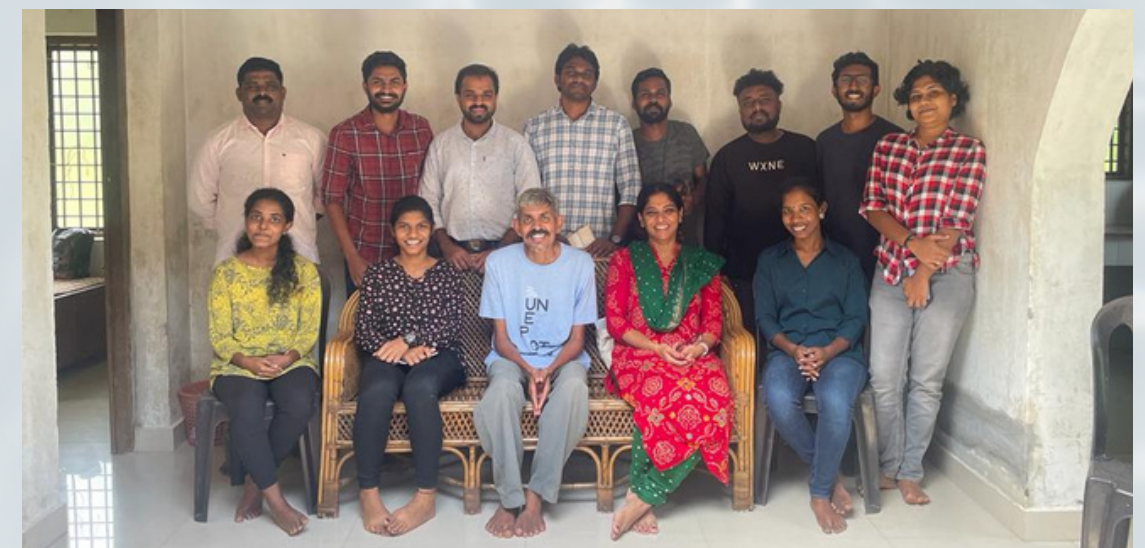
These sessions provided valuable insights and knowledge to the participants. The speakers' diverse backgrounds and expertise created a rich and engaging learning experience.

OFFLINE EVENT

The offline event featured Manoj Kumar, an engineer and environmentalist, who underscored ecological restoration's role in flood mitigation, highlighting his work on mangrove plantations in Kochi. Dr. Madhusoodhanan of EQUINOCT imparted insights on natural resource inter-linkages in the context of human interventions and climate change. Sreeja KG, EQUINOCT's Director of Research, shared her expertise on transforming tropical agriculture and integrated river basin management.

Deepa Ananthapadmanabhan from Sustera interacted with the cohort on the importance of educating youth about climate action and the possibilities of networking and collaborations in scaling up impact.

The offline activities during the two-day event were very enriching. Participants enjoyed carbon-neutral food, interacted with local community farmers in Ernakulam, engaged in team-building exercises, and watched documentaries. This physical interaction was crucial for fostering a stronger bond among cohort members, enhancing the program's collaborative spirit.



FIELD ACTIVITY

Communities from different strata of society experience the impacts of Climate Change differently. This unfair distribution of environmental stressors among class, caste, and regional backgrounds needs to be addressed within the concept of Climate Justice. Ensuring environmental and social justice while proposing mega developmental projects or designing disaster management plans is the challenge that governments globally need to address.

In Kerala, we have seen striking examples of how events like cyclones, coastal erosion, and floods have had more severe negative impacts on the lives and livelihoods of those from a less privileged caste or class. To understand this, the cohort was led through an immersive coastal visit. The coastal belt of Kerala was divided into three zones for data collection. In each of the zones, members from the zones along with SUSTERA team conducted a field study to interact and learn about the issues and document them.



North Zone
Kasargod
Kannur
Kozhikode



Mid Zone
Malappuram
Thrissur
Ernakulam



South Zone
Alappuzha
Kollam
Thiruvananthapuram

FIELD STUDY DETAILS

The coastal fellows set out on a field immersion component where they travelled through the 3 zones, interacting with the communities and gathering narratives specific to the region. The Kerala coastal communities are greatly impacted by various reasons some of which are socio-economic, cultural, geographical and political by nature. From the offline discussions and initial community engagement, the cohort and team reached a consensus of taking up 4 crucial factors - **Land Acquisition, Migration, Infrastructure and Health** under each zone for data collection and reporting. The information received through these conversations led to their suggesting the top 10 solutions as an outcome of this program. In an attempt to understand the different livelihood opportunities and challenges that are faced by the coastal communities, information regarding the major sources of income for the community impacts on fishing and the aspirations of youngsters from the coastal communities were collected. A semi-structured questionnaire to understand the socio-economic variables was employed. Primary data was collected from the field visits, travelling through the 3 coastal zones of Kerala.



Photo: Alappuzha, Kerala



Photo: Sea port coast, Kollam, Kerala



Migration – Climate migration can encompass many environmental, economic and cultural indicators that act as reasons that force people to move from their regions. The interactions captured the challenges/opportunities in each region.



Land Acquisition – The coastal belt commonly showcased scenarios of conflict with government institutions and a violation of the Coastal Regulation Zone (CRZ) rules. The narratives of conflict from each region were collected through interactions and validating data.



Health – The narratives on health that were collected are the popular observations by the public and points that emerged out of discussions with fellows and experts. Studies that can validate these observations need to be taken up.



Infrastructure – Interventions by government institutions as structures that claim to mitigate the impacts of coastal erosion and other threats are often pursued differently. The opinions of local people are documented and reflect their lived experience in these fragile spaces.

NORTH ZONE



LAND ACQUISITION

From the interactions in the coastal belt of Kasargod, a major concern voiced was regarding the accumulation of coastal land by private owners to run commercial properties like resorts and hotels.



MIGRATION

Climate impacts due to environmental, economic and cultural stressors are forcing people to move from their regions.



INFRASTRUCTURE

The popular opinion among the coastal communities, especially in the north and mid zones is that the harbors have been instrumental in improving their livelihoods



HEALTH

A health survey by the Naval Academy indicated the adverse impacts of ship-breaking activities on the environment and health of coastal communities.



AVIKKAL, VELLAYIL - SEWAGE TREATMENT PLANT

At Avikkal Thodu, Vellayil Beach, Kozhikode agitations sparked over the commissioning of a sewage treatment plant, a project under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme. The proposed project plan has two Minimum Liquid Discharge (MLD) plants at Avikkal Thode and Kothi under the scheme. The plant aims to process the waste from apartments, restaurants and hospitals in the neighbouring wards in this region. The treated water will cut through the area which is thickly populated by the coastal communities to merge with the sea.



MID ZONE



LAND ACQUISITION

In some regions protests were conducted by the fisherfolk and the local residents but they failed to take down the norms laid by powerful authorities.



MIGRATION

People from the coastal communities, who were previously absorbed in the construction sectors had returned to fishing as it ensured a seemingly decent employment



INFRASTRUCTURE

Sea erosion and widespread destruction are frequent in this area. Ponnani has demanded the construction of a sea wall to mitigate the impacts of erosion and a breakwater to protect the port infrastructure



HEALTH

The coastal regions of Malappuram have reported a rise in the number of cases of Kidney failure.



PUTHUVYPE COASTAL AREA

The coastal area is acquired by Cochin Port Trust and is declared as a Special Economic Zone (SEZ) that runs a multi-user liquid terminal (MULT), LPG Jetty etc. The Panchayat administration does not possess any authority over decisions. The port trust has laid strict restrictions on local people in accessing these areas. The coastline is a concentrated hub for major economic activities but the local communities are denied work in these areas. According to the locals, the Puthuvype region possesses great potential to be developed into a tourist destination which will then present many new livelihood opportunities for the coastal communities.



SOUTH ZONE



LAND ACQUISITION

The Thottapally region in Alappuzha has witnessed year long protests against the black sand mining.



MIGRATION

In Alappuzha and Kollam regions, the fishermen are forced to migrate from the coastal regions due to livelihood challenges, climate issues and other anthropogenic factors.



INFRASTRUCTURE

The coastal communities in Trivandrum have demanded the termination of the deep water port and container transshipment terminal as it would adversely affect their livelihoods.



HEALTH

The Travancore Titanium Products Limited that operates in Vettukad, Trivandrum has been reported to be emitting high levels of pollutants causing a number of health issues among the locals.



THOTTAPALLY SPILLWAY

The mineral and sand mining in these regions with the permit from the government has adversely affected the livelihoods of the community in the region. The 17 KM stretch owned by the state from Valiyazhikal to Thottapally was leased out to KREML. The fishermen continue to protest as they cannot dock the boats in rocky areas and a sand bed is important to preserve their only source of livelihood. The mining has also resulted in the depletion of fish wealth. Many fish species use the estuaries for their breeding. Their life cycles are interrupted due to the mining.



LEARNING OUTCOMES

The Coastal Champions' journey is a vivid illustration of dedicated and informed leadership transforming challenges into opportunities for positive change. Their initial efforts were rooted in a deep collaborative process, where they engaged with various stakeholders to understand the pressing issues facing coastal communities. Through a mix of online and offline discussions with experts, they delved into the complexities of these challenges, setting a foundation for informed action.

The real transformative experience came when the champions ventured into the field. Here, they interacted directly with the people most affected by coastal issues. This hands-on approach, equipped with survey questionnaires and a desire to learn, allowed them to connect with the realities on the ground. This interaction was not just about gathering data; it was about understanding the human stories behind the statistics. It instilled in them a profound sense of empathy and a nuanced grasp of the issues at hand.

Their findings, categorised under themes like land acquisition, migration, infrastructure, and health, reflect a comprehensive understanding of the coastal predicaments. This depth of knowledge, combined with their journey of learning and empathy, naturally led to the development of innovative and practical solutions. Though not explicitly mentioned, these solutions are inherently linked to their journey. They are informed by the champions' in-depth engagement with the issues, their first-hand experiences, and their discussions with experts and community members.

The Coastal Champions' journey, centred on enhancing their understanding of coastal issues, also aimed to contribute to broader research and knowledge. By placing their findings and initial analyses in the public domain, the goal was to encourage further study by researchers. This step is vital to ensure that policy solutions developed are well-informed and effectively address the nuances of the challenges faced by coastal communities.



The entire process exemplifies the power of youth leadership and community engagement in tackling environmental challenges. The Coastal Champions' journey from identifying problems to proposing solutions is a testament to their commitment to understanding the complexities of coastal issues and actively seeking to address them. Their approach – combining field experience with collaborative learning – paves the way for future initiatives aiming to create sustainable and impactful change in coastal communities. This journey highlights the importance of empathetic leadership, informed action, and community involvement in addressing environmental and social challenges, serving as a blueprint for others to follow.

The Coastal Champions' journey, marked by a deep understanding and empathetic engagement with coastal communities, culminated in robust solutions. These top ten solutions, carefully crafted and honed through their experiences and insights, stand as a beacon of their commitment and innovation. They represent answers to the challenges and a vision for a sustainable and resilient future for coastal communities. While not detailed here, these solutions embody the Champions' journey, their learning, and their unwavering dedication to making a tangible difference in the lives of those living in coastal regions. They are a testament to what can be achieved when passionate, informed youth take the lead in addressing complex environmental and societal issues.



TOP 10 SOLUTIONS PRESENTED BY THE FELLOWS

AMEERALI

Faith Influence in Climate Action

AMRUTHA

Challenges of fishing community livelihood and depleting fish wealth

JAISON

Separate Ministry for Fisheries and coastal protection

JAYALAKSHMI

Climate Resilient Infrastructure for Coastal Communities

JONATHAN

Protection of Marine Biodiversity

KEVIN

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REHNA

Effective implementation of CRZ Rules

VAISHNA

Indigenous knowledge in weather prediction

VISHNU

Education and training for coastal youth for increased employability



AMEERALI

Founder & Director, Initiative for Development Research & Practice (IDRP) MSW (Youth & Community Development), Rajiv Gandhi National Institute of Youth Development (RGNIYD).



FAITH INFLUENCE IN CLIMATE ACTION

“

People in Kerala are feeling the effects of climate change, but most don't see that it's because of what we're doing to our environment. You know, things like our coastlines eroding, fish disappearing, and even folks losing their homes and properties. It's all happening because of constant meddling by the people in power and private companies along the coast.”

”



SCAN HERE TO WATCH THE SOLUTION

- A study conducted across Kerala identified 10 hotspots across the state where coastal erosion is severe.
- Among the hotspots, Chellanam of Ernakulam district has been given priority and the Kerala government announced a project worth Rs 344 crore to prevent coastal erosion at the village.
- According to the Water Resources and Irrigation Ministry, the projects aim to bring an end to the situation where the villagers have to be rehabilitated during the next monsoon season.
- Along with tetrapods, geotubes are also used to protect the coasts of Chellanam. Local communities are discouraged from engaging in framing locality-based climate-resilient models and movements. Instead, various agenda-driven projects are carried out in ecologically fragile areas.
- Therefore, climate literacy must be promoted in the state development policies and programs encouraging a shift from a knowledge economy to a climate economy.
- Since faith communities constitute a significant percentage of the state population, exerting climate narratives in indigenous and religious communities will make climate communication hassle-free.
- The philosophies of religious moralities, in other ways, ensure justice in climate initiatives as well.
- In the whole, a participatory approach including the people, especially the most affected ones in planning is a mandatory element to avoid further destruction.



AMRUTHA



Amrutha is a filmmaker residing in a coastal village, with a deep-seated desire to use her talents to make a difference in coastal regions. Her exceptional work in her diploma film earned her a spot in the competition category at the International Documentary and Short Film Festival of Kerala (IDSFKK). As an artist, she is deeply moved by the stark realities faced by coastal communities and is driven by her passion to bring about change.

ADDRESS THE CHALLENGES OF FISHING COMMUNITY LIVELIHOODS AND DEPLETING FISH WEALTH

- Livelihood Challenges for the fishing community and depleting fish wealth is a major coastal issue. Climate change may seem far off in the future to some people, but for many who work in fisheries, it's definitely here and it's already having a big effect.
- The depleting nature of fish wealth over the years is a growing concern impacting coastal livelihoods.
- Climate Change, loss of habitat, marine litter, and unsustainable levels of fishing are some of the key stressors that directly impact livelihoods. It would cost around 20,000 INR per day for fishing boats to go trolling and the depletion of fish wealth puts them at severe loss.
- Fishing communities today are grappling with multiple crises. Extreme climate events have devastated their habitats and livelihoods, the economic and health crisis from the COVID-19 pandemic and a recent slew of pro-corporate neoliberal policies at the domestic and international levels.
- Additionally, the central government has reduced the subsidy on kerosene putting the fishing communities in misery. It is important to fix a minimum purchase price for the fish so they can make a decent living out of it.
- The development of sustainable coastal livelihoods is critical in supporting the affected fishing communities to move out of poverty and to achieve broader economic, social and environmental goals.
- Small-scale fisheries (SSF) make critical contributions to the livelihoods, food and nutritional security, and well-being of predominantly coastal households around the world.
- By creating more marine protected areas, promoting worldwide catch shares and developing smart consumer choices we can overcome the scenario of depleting fish wealth and associated economic impoverishment.

“

The central government had reduced the subsidy on kerosene putting the fishing communities in misery. It is important to fix a minimum purchase price for the fish so they can make a decent living out of it.

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JAISON

Jaison is the founder and president of the Coastal Students Cultural Forum (CSCF), an NGO dedicated to improving the lives of students along the Thiruvananthapuram coast.



SEPARATE MINISTRY FOR FISHERIES

“Fishing patterns and the way of life for our fishing communities are changing over time. We need our state and central governments to step up and come up with plans that tackle today’s challenges head-on. We need a dedicated Ministry of Fisheries at the national level to ensure all these efforts are in sync.”

- Fisherfolk, crucial to Kerala's community, remain marginalized despite the state's socio-economic advancements.
- Discrimination and social exclusion are common challenges faced by Kerala's fishing communities.
- Kerala ranks eighth among India's fourteen coastal states in terms of its fisherfolk population.
- The significant decline in fish catch severely impacts the livelihood of the state's fishing community.
- Local fishing nets are often damaged by passing vessels, leading to loss of gear and catch.
- The aggressive trawling practices of foreign fishing vessels adversely affect local fishermen's lives.
- The Indian Government's Department of Fisheries is implementing the Pradhan Mantri Matsya Sampadan Yojana, aimed at sustainable and responsible fisheries sector development.
- Key goals of this scheme include sustainable fisheries exploitation and establishing a robust fisheries management and regulatory framework, promoting sustainable development.
- Collaborative efforts and initiatives by governing bodies are essential for integrating the fishing community into mainstream society.
- There is an urgent need for a separate ministry for fisheries in Kerala to address the specific challenges and needs of the fishing community more effectively. This dedicated ministry would ensure focused attention and resources for the sustainable development of this vital sector.



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JONATHAN

Jonathan graduated with Masters in Wildlife Studies from Kerala Veterinary and Animal Sciences University. His research focuses on the nesting status of Olive Ridley sea turtles along the northern coast of Kerala, a project he's undertaking with the support of the Kerala Forest Department. He's also a proud member of the Global Youth Biodiversity Network of the Convention on Biological Diversity, under the United Nations.



- Humans depend on the teeming waters of the oceans for comfort and survival, which churn a kaleidoscope of life.
- But overfishing and global warming threaten to leave the ocean barren. Human activities affect nearly all parts of the ocean.
- Lost and discarded fishing nets continue to lethally snare fish, seabirds, and marine mammals as they drift.
- An increase in amounts of carbon dioxide in the atmosphere leads to more acidification of the ocean and depletion of coral reefs; a critical ecosystem for marine life.
- We should stick to sustainable fishing practices to ensure a viable population of fish. Practices like "eliminating bycatch, using lead-free fishing gear, adhering to the good fish guide" etc will help keep the fisheries industry stable.
- Indigenous plants such as mangroves and associates should be restored in the coastal area to prevent erosion and sea level rise and also to encourage the growth of flora and fauna.
- Regulatory measures for mangrove protection are implemented through the Coastal Regulation Zone (CRZ) Notification (2019) under the Environment (Protection) Act, 1986; the Wild Life (Protection) Act, 1972; the Indian Forest Act, 1927; the Biological Diversity Act, 2002; and rules under these acts as amended from time to time.
- Concerns have also been raised by agencies like the Mangrove Society of India (MSI), which in its 2019 report stated that when it comes to destroying mangroves in the name of some development work, there is never an alternative or any plan made to compensate for it.
- The local and executive agencies need to ensure that the regulatory measures are implemented successfully. Our garbage—particularly plastic—chokes the seas, creating vast "garbage patches" such as the Great Pacific Garbage Patch.
- Adopting the methods of sustainable development and inspiring others to follow the same can mark a step forward in protecting the marine environment.

PROTECTION OF MARINE BIODIVERSITY

“According to the Living Planet Report, wildlife around the world, including in the ocean, has been dramatically affected by humans. Even in deep ocean trenches, we find waste and marine litter. When we fish too much, using methods like trawling harms life at the bottom of the ocean and means fewer fish for fishermen. Plus, with more carbon dioxide in the air, the oceans become more acidic, which isn't good for corals.”



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JAYALAKSHMI

Jayalakshmi is a postgraduate in Environmental Engineering from the College of Engineering in Trivandrum. She's currently focused on studying groundwater modelling using MODFLOW. With five years of experience under her belt, she's skilled in GIS-based land use and land cover mapping using ArcGIS.



CLIMATE RESILIENT INFRASTRUCTURE FOR COASTAL COMMUNITIES

“*Designing and Implementing infrastructures that can adjust, adapt and quickly recover from the impacts of climate change can build resilience among coastal communities.*”



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- Resilient models that can identify the potential threats and prepare to adapt can be crucial in mitigating the impacts of Climate change.
- Four major factors often threatening coastal landscapes are
 - The high force of water and sea surges.
 - Tidal waves.
 - Soil Erosion in coastal regions due to the force of waves
 - Coastal winds caused by large storm systems moving onshore.
- Stationary structures, like the houses in the path of a roaring wave, can resist the force of waves. The coastal landscape can, to an extent, control the path through which the water can enter.
- The height of the coastal structures can, to an extent, mitigate the impacts of tidal waves.
- Adopting mitigative measures to weaken the impacts of these factors will improve the habitability in these regions.
- We need to explore climate hazards, assess associated vulnerabilities and risks, investigate options, and prioritize our actions.
- Projects similar to the Coastal Climate Resilient Infrastructure Project must be implemented in the state. The Coastal Climate Resilient Infrastructure Project is rooted in a particular situation in Bangladesh.
- In addition to addressing climate change effects, the Coastal Climate Resilient Infrastructure Project will also address the needs of rural producers, impoverished and small producers, who suffer from constraints that limit the development of their livelihoods.
- Improving the foundation strength of the buildings to withstand soil erosion, conserving the natural landscapes like rocks and reefs as they act as buffers, installing pressure-absorbing conductors in the region, etc., could be significant steps towards transforming coastal structures into more resilient ones.



KEVIN

Works at the Trivandrum Social Service Society (TSSS), Vellayambalam. Kevin is a professional social worker from the coastal hamlet of Vettucaud, Trivandrum. His work experiences are also focused on the integral development of coastal regions.



CLIMATE MIGRATION AND INTERNAL DISPLACEMENT

Coming from the coastal village of Vettucaud and working with TSSS, I've seen how tough things have gotten. Folks from the hills to the coast are packing up and leaving because disasters just keep hitting us and there's not much help from those in charge. Places like Kuttanad, once full of life, are now ghost towns. It's heartbreaking to see our own nature, which used to be our pride, turning against us because we've pushed it too far.

- Climate migration and displacement is emerging as a major challenge among the many other impacts of Climate Change in Kerala.
- In Kerala, the population from the fragile mountains to the coast are forced to migrate as the region is becoming largely inhabitable due to rising disasters/catastrophic events and anthropogenic interventions.
- Kuttanad, widely known as the "rice bowl of Kerala", is now seeing an exodus as many local people, unable to withstand the effects of climate change, over-exploitation and other anthropogenic factors, are abandoning the land.
- Building resilience among coastal communities to adapt to the changing ways of the environment, implementing effective mitigation measures by adopting climate-resilient infrastructure and imbibing scientific and traditional knowledge in planning will improve the standard of living in the coastal belt.
- An integrated approach towards mitigation focusing on disaster preparedness, better adaptive strategies, climate-resilient livelihoods, better healthcare services and ecosystem-based planning and implementation by coastal governance and management teams will help address this issue to a large extent.
- Capacity building amongst youth to lead coastal resilience movements and gender inclusivity in all addresses need to be scaled up.
- The use of indigenous knowledge in building coastal resilience needs to be highlighted and the coastal communities need to be made part of planning and implementation.



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NIBIN

Nibin works as a Radio Jockey and Sound Engineer at Global Radio 92.1 FM, where he discusses coastal issues and provides weather updates to fishermen at sea. He left his corporate job in Ernakulam and now is pursuing his passion of working as a Radio Jockey.



CLIMATE CHANGE NEWS ON MAIN STREAM MEDIAS

I work with Global Radio 91.2 at Alappuzha as an RJ. The coastal communities from this region rely majorly on community radio networks to communicate effectively. Issues regarding sea surges, coastal erosion, and other natural disasters are brought out through these community radio networks to the general public.



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- Issues regarding sea surges, coastal erosion and other natural disasters are brought out through community radio networks to the general public in many coastal regions.
- Strengthening and Developing these platforms with the support of the local governing bodies as a reliable portal for the dissemination of authentic information can become an effective tool in building resilience among coastal communities.
- Radio Benziger established by Bishop Benziger Hospital on Nov. 7, 2010, in Kollam, a city lying along the coasts of the Arabian Sea in Kerala is a notable example.
- It broadcasts 15 hrs a day on FM 107.8 MHz and the signal reaches up to a radius of 15 Km in and around the densely populated city catering to a large number of listeners who comprise mostly people belonging to the coastal areas.
- Marine weather forecasts, Warnings, Information regarding schemes and benefits etc can be effectively communicated through such a platform and is a boon to the fishermen at sea.
- The Government of India has approved a Central Sector Scheme namely “Supporting Community Radio Movement in India” for a period from 2021-22 to 2025-26 with an outlay of Rs.50 Crores to promote the growth of Community Radio Services (CRS) in coastal regions, disaster-prone regions, North-Eastern Regions and aspirational districts. It will also strengthen new and existing CRS with resources, capacity and technology so that they can provide access and voice to marginalized communities.
- These stations are most effective in times of natural calamity/ disaster for the coastal people.



REHNA

Rehna is a Geology postgraduate from the Central University of Kerala. She spent six months as a project fellow at the Institute of Land and Disaster Management, a government institution in Thiruvananthapuram, Kerala. Her research focused on reviewing data from over 300 landslide incidents that occurred in India in recent years.



EFFECTIVE IMPLEMENTATION OF CRZ RULES

Raising awareness about the CRZ rules among the general public through schools and colleges in the coastal region, Introducing diploma courses that cover CRZ rules, Forming a wing under the PWD department for strict monitoring of any CRZ violations while commissioning newer infrastructures, Organizing periodical training programs to improve their efficiency are ways in which the state governments can ensure effective implementation of CRZ rules.



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- With more than 7000 kilometres of coastline, India ranks 20 in the world among the countries with the longest coastline.
- The government of India, Ministry of Environment and Forests (MoEF) in 1991 issued a notification under the Environment Protection Act in the coastal area to conserve the fragile ecosystem and promote sustainable development.
- Though the CRZ rules are issued by the central government, the effective implementation of them through coastal management authorities comes under the purview of the state government.
- It is imperative to enforce strict laws under CRZ rules against illegal encroachment in these areas. Training the coastal management authorities in this capacity can be crucial in ensuring effective implementation of the same.
- It is also important to ensure transparency in these processes from the registration of a project through due diligence in the construction phase. Through the construction of a livelihood support centre for fishermen by the Kumbalam panchayat on the banks of Vembanad Lake, Kerala is in the eye of a storm.
- People have approached the Kerala Coastal Zone Management Authority (KCZMA) pointing out that the construction is in outright violation of the CRZ and Ramsar site norms.
- Inadequate governance measures, rapid economic reforms, lack of scientific forecast and undue favours in coastal infrastructure development are some of the foreseen threats that can occur to the system.



VISHNU

Vishnu is the co-founder of the Covet learning platform. He holds a Mechanical Engineering and History degree and is pursuing postgraduate studies in History. Vishnu firmly believes in progress and technological advancement but also emphasizes the importance of preserving heritage, nature, and the climate.



EDUCATION AND TRAINING FOR COASTAL YOUTH FOCUSING ON EMPLOYABILITY

“Apart from various coastal issues like coastal erosion, climate change, aquatic pollution, lack of financial and marketing support, high fishing costs, threat to biodiversity, lack and under utilization of processing plants etc. there are few other issues with far threatening potential.”



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- The inclusion of coastal youth in Government jobs through active participation is crucial for coastal resilience building. Young people should be empowered to play a vital role in their development as well as in that of their communities by helping them to learn vital life skills, develop knowledge on human rights and citizenship and promote positive civic action.
- The general backwardness of coastal communities, exploitation by middlemen in business, aversion of youth towards the traditional fishing occupation, meagre representation in Government jobs, lack of financial security, and minimal access to medical care and amenities mirror the exclusion of coastal communities from the mainstream society.
- The need for proper guidance amongst the youth is crucial to raise awareness about their rights and opportunities, and to equip them with the expertise from the experience of the older generation, incorporating technical know-how.
- The practical solution is to sensitize the youth via a 'forum', which conducts meetings, seminars, workshops, counselling and guidance sessions periodically.
- The forum should address the coastal issues, mobilize aid, and intervene through volunteers, provide guidance about the existing government job opportunities and can be changed into a platform for combined study and coaching support to form an intensive study centre.
- Securing govt jobs will create the inclusion of coastal youth in administrative-level decision-making. This would enable coastal-friendly decisions and policies.
- Schemes such as "Scheme for National Youth Corps", "PradhanMantri Kaushal Vikas Yojana" etc pave the way for youth to enhance their skills and come to the forefront.
- Through the relentless efforts of coastal youth forums, remarkable changes can be made in the coastal community, thereby bringing the outliers of the well-proclaimed Kerala model to the mainstream.



VAISHNA

Vaishna is a student at Sree Sankaracharya Sanskrit University. She has contributed to environmental magazines, publishing articles on the social impacts of the Azhikkal ship-breaking unit. Vaishna advocates for more scientific assessments of coastal encroachments and pollution.



INDIGENOUS KNOWLEDGE IN CLIMATE PREDICTION & NATURE BASED SOLUTIONS

“

Co-creating a democratic model with community partners and government agencies at the panchayat level to protect the Mangrove environments and preserving the traditional knowledge towards identifying the suitable species can improve conservation efforts through the coastal stretches.

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- The role of indigenous knowledge and natural solutions is most important in climate prediction and action. In the fight to slow climate change, natural agents indeed act as a powerful weapon.
- Nature-based solutions, such as conserving forests, mangroves, wetlands and coral reefs, can help communities prepare for, cope with, and recover from disasters, including slow-onset events such as drought.
- The role of mangroves in mitigating disasters by acting as a shield, and reducing the impact of water and wind by breaking its velocity has been popularly researched.
- The case of Pichavaram mangrove forests significantly reducing the impact of the Tsunami that hit in 2004 and thus protecting the Cuddalore district is one notable example. Mangroves are great sources of carbon sequestration as they exhibit large biomass making their net primary productivity high and lower soil respirations.
- Also, several aquatic species use mangrove forests as their breeding grounds. Mangrove cultivation can tap several co-benefits like increased fish wealth, opportunities to scale up the tourism potential of the area, livelihood generation in terms of planting and maintenance of saplings, flood mitigation etc.
- The immense potential of Mangroves in boosting tourism, improving fish wealth and biodiversity, livelihood generation, disaster mitigation, and carbon sequestration are some of the many co-benefits that can be tapped by undertaking substantial efforts in the restoration of mangroves.
- Co-creating a democratic model with community partners and government agencies at the panchayat level to protect the natural environments and preserve the traditional knowledge towards identifying suitable species can improve conservation efforts through the coastal stretches.

POST FELLOWSHIP ENGAGEMENTS



After the 2022 Coastal Fellowship Program, the fellows worked in their districts to help coastal communities.

This is a summary of the work conducted.

- Fellows engaged in dialogue with local communities to comprehend their challenges.
- There were interactive sessions with women's community groups, namely "Kudumbasree" and "Ayalkootam".
- Fellows visited locations grappling with sea erosion and associated problems.
- Awareness classes were organized for the "Kudumbasree" and "Ayalkootam" groups in the coastal communities.
- Fellows lent their support to various social initiatives.
- Campaigns were organized to address specific issues.
- Educational sessions were conducted in five coastal schools to raise awareness among students.

These efforts underscore the fellows' dedication to enhancing the quality of life in coastal communities.

CLIMATE TALK SERIES

The Coastal Champions were part of CLIMATE TALK - a series of online discussions focusing on climate issues, impacts and solutions.

How can we Reduce the Risk of Disasters in Coastal Regions - KEVIN STELLUS

"WASTE" - types, issues, impacts and management. - JAYALEKSHMI

Environmental Considerations in watershed development projects - REHNA

Coastal community representation in policy making and implementation - VISHNU

How climate change affects wild life - JONATHAN

A Radio RJ's climate action journey in Kerala - NIBIN

How can we develop resilient housing for coastal communities - HARIS

Community based modelling and natural solutions for coastal erosion - VAISHNA

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TO WATCH THE VIDEOS



SUSTHEERAM KADHAKAL VIDEO AND PHOTO CONTEST

A storytelling contest for young passionate individuals/groups to narrate and propose environmental and justice-based solutions to the coastal challenges in the form of photo story or short documentary/story. This initiative was part of the coastal champions fellowship program 2022 that we hosted.



One of the Coastal Champions, Amrutha from Kozhikode participated in the Contest and won Second Prize.

AVIKKALTHODU - AMRUTHA

Avikkalthod is a place near Vellayil harbour in Kozhikode corporation. This place is a highly populated area. People here depend on the sea. Their job is fishing and sailing.

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VIDEO RELEASE



One of our Coastal Champions, Nibin, released a documentary about coastal issues.



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HASHTAG CAMPAIGN

CHANGING COASTS, CHANGING LIVES !



During the COP27 event time, Kerala's Coastal Champions initiated a campaign to increase understanding of our evolving coastlines by sharing stories about beaches. They requested the viewers to share stories, thoughts or experiences of their favourite beach and how it had changed over time. The campaign uses the hashtags #COP27 and #ClimateVoicesKerala. The campaign focused on addressing the impact beaches have on us and why it's essential to take action now.



**PEOPLE FROM
DIFFERENT
COUNTRIES, &
STUDENTS
FROM
COASTAL
SCHOOLS,
IN THE
HASHTAG
CAMPAIGN**

About SUSTERA


Sustera Foundation was established in 2017 with a vision premised on addressing the climate urgency in India. Sustera drives collective action through capacity-building training, campaigns, and policy dialogues to equip communities to adapt better to climate change and build resilience.


We collaborate with governments, civil society organizations, and the private sector to envision solutions for climate challenges that have the potential to be scaled up and replicated.


In the last seven years, we have worked extensively towards handholding stakeholders in co-creating Climate Resilient and responsible Communities and scaling up climate solutions.


The Sustera Foundation initiated this transformative program to foster dialogue among young individuals from various coastal, urban, and rural regions, sharing insights on the challenges faced by coastal Kerala.


By educating vulnerable communities and supporting the creation of model sustainable and resilient villages, along with involving youth in climate adaptation micro-projects, the foundation has laid a robust groundwork. The success and significance of the Coastal Champions program have underscored the importance of scaling such initiatives to empower youth across all vulnerable coastal regions in India.


**Related video content!**





15 solutions for Climate Change in Kerala




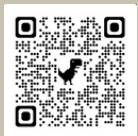
Ecological restoration through mangrove conservation and wetland reclamation.




Eco-restoration for a Climate-Resilient Kerala

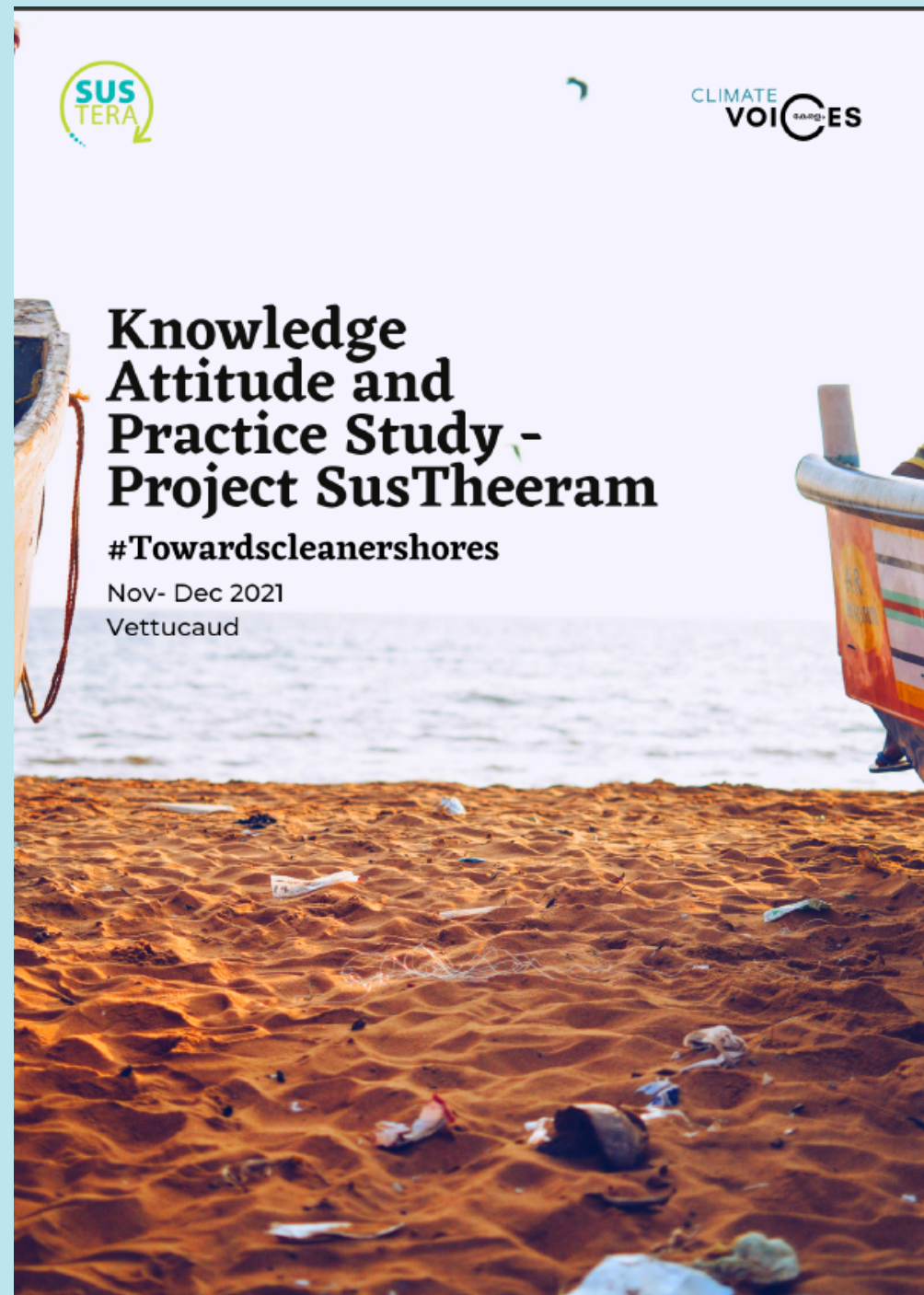


Ecosystem Services- malayalam explanatory video



The role of Bioremediation in the wake of Climate Change





SUSTERA Foundation released a report on the climate change impacts in the Vettucaud community, Kerala, providing a detailed analysis of the local knowledge, attitudes, and practices regarding climate change. The major outcomes of the report include:

- Identification of climate change impacts like changing weather patterns, sea-level rise, and reduced fish stocks.
- The community's limited understanding of broader climate change implications.
- Identified barriers to climate action, such as lack of awareness, motivation, and information.
- Notable community actions in areas like waste management and reforestation.
- Recommendations for enhancing community engagement and merging traditional knowledge with scientific approaches.
- The need for further research and community-based initiatives for effective policy and climate action implementation.

Key findings:

- The community is significantly affected by climate change, facing changing weather patterns, sea-level rise, and a decrease in fish stocks.
- There's a limited comprehensive understanding of climate change among community members.
- Major barriers to climate action include a lack of awareness, motivation, and information.
- The community has undertaken actions like waste management, reforestation, and awareness campaigns.
- Recommendations include enhancing community engagement and integrating traditional knowledge with scientific approaches.
- The study suggests the need for further research and community-based initiatives for effective policy implementation and climate action.

Coastal efforts

Sustera Foundation has been working in the coastal regions of Kerala, especially Trivandrum focusing on waste management, awareness campaigns, youth and community engagement, policy advocacy and capacity building. Some of our activities include:

- Beach clean ups at prime beaches in Trivandrum partnering with the Corporation, DoECC and GIZ as a tool of awareness and community action.
- Mangrove planting for shore resilience.
- Round tables on marine litter issues and circular solutions.
- Capacity building for youth in climate action.
- Engaging with coastal stakeholders in better waste management during festivals, tourist events etc.
- Working with forums like TSSS in spreading awareness on coastal waste management.



Coastal Conservation and Development Organizations in Kerala

Name of Organisation	Place	Summary
Costal Students Cultural Forum (CSCF)	Poovar	Coastal NGO initiating development programs for students, promoting culture and ocean literacy.
Cheru Resmi	Valiyathura to Poonthura	Works for Women and Children, organizes awareness and training programs (church-based).
Trivandrum Social Service Society	TVM	Church-based NGO working on sustainable development and support for society's weaker sections.
Sakhi	Vanchiyoor	Focuses on fish vending women in Trivandrum.
Friends of Marine Life	TVM	Volunteer organization in marine studies and coastal ecosystem research.
WWF	Kerala	Collaborates with WWF in Chavakkad for various activities.
Green habitat	Thrissur	Engages in research, training, and empowerment for fishermen and women.
MCMITRA Kozhikkode	Malabar	Aims to uplift the weaker sections of society, works with QSSS (church-based).
Quilon Social service society	Kollam	Empowers coastal communities through education and innovative strategies.
I-Lab kozhikode	Kozhikode	Works statewide in faith-based organization for rehabilitation, capacity building, etc.
Kerala social service forum	Kerala	Club working with WWF in turtle protection in Chavakkad.
Mahathma kala kayika samskharika veedhi	Chavakkad Thrissur	Focuses on turtle conservation and coastal afforestation in Kozhikode.
Fighters club	Blangad Beach Chavakkad	Turtle conservation in Kasargod with WWF.
Surya kala kayika samrakshana veedhi	Puthenkadapuram Chavakkad Thrissur	Fishermen welfare, insurance, savings, credit provision, boat building, safety, etc.
Theeram prakirthe samrakshana samidhi	Kolavipalam Kozhikode	
Naithal	Neeleswaram Kasargod	
South Indian Federation of Fishermen Societies (SIFFS)	Kerala	
Green Roots Nature Conservation Forum	Thottappally Alappuzha	Facebook community for coastal protection, migratory birds, and turtle protection with WWF.
KSMTF - Kerala Swatantra Matsya Thozhilali Federation	Vypin Ernakulam	Trade union of small-scale fishers in Kerala, South India.
Grassroutes	Vyping	Bio fencing with mangroves, raising awareness against plastic waste, mapping coasts.
Wildlife Trust of India	Kerala	Kannur kandal restoration and whale shark conservation along Kerala coast.

CONCLUSION

Kerala's coastal communities encounter many challenges and stressors, extending from natural calamities to socio-economic exclusion. It is crucial to discern these communities' livelihood opportunities and aspirations to formulate effective policies and initiatives aimed at coastal protection and enhancing the quality of life for coastal residents. Due to the diverse geographical conditions, communities, and livelihood practices present in each area, it is essential to develop place-based soft and hard solutions to address the challenges the coastal region faces effectively. Hard solutions refer to infrastructure measures that require using materials like rock, steel, and concrete to build physical structures like sea walls, dykes, and other barriers that would absorb wave energy and prevent coastal erosion or flooding. Soft solutions, on the other hand, are natural approaches that can be integrated at different scales and use ecological ideas and practices, having less of an effect on the environment. Implementing place-based solutions enhances adaptive capacity and preparedness in coastal communities. By incorporating climate considerations into development plans, communities can better anticipate and respond to climate risks, reducing vulnerabilities and enhancing overall resilience.

Implementing place-based solutions creates opportunities for sustainable livelihoods in coastal areas. Restoration projects like mangrove rehabilitation and coral reef conservation support fisheries, ecotourism, and other nature-based enterprises, providing economic benefits to local communities. It can help preserve and revive traditional practices, local knowledge, and cultural heritage associated with coastal ecosystems and livelihoods.

This document furnishes a significant exploration of narratives from Kerala's coasts, accentuating the experiences and insights of coastal communities. The fellows' efforts in bridging the information from the field to the theories and agendas of policymakers and development organisations have provided insightful reflections. These efforts can significantly contribute to crafting policies that more accurately embody the needs and experiences of these communities.

The documentation of inputs from coastal communities unveils a unique vantage point on the challenges and opportunities before these communities, proposing a spectrum of solutions instrumental for progress. The data collection exercise, segmented into three zones, illuminates each region's distinct challenges, underscoring the necessity for tailored solutions.

The recommendations proffered by the coastal champions, who have navigated through these experiences and circumstances, underscore the most pressing enhancements requisite in coastal management. Therefore, this document emphasises the vital importance of incorporating the lived experiences of coastal communities into the policy-making discourse. It exemplifies converging diverse perspectives to engender more effective and equitable policies.



Note - The coastal fellowship is a unique piece of work that was attempted in the state by the Sustera Foundation with the support of Purpose Climate Lab India. Bringing together the youth leaders from the coastal districts of Kerala and facilitating them in actively engaging with their communities was an enriching experience for the Sustera Team as much as it was for the fellows. The narratives that emerged out of the many discussions, mapping activities and offline events have great potential to strengthen the policies and plans for these regions. Post our efforts in mobilizing youth in the Vettucaud region through climate messaging and narrative building, this was a great leap in widening the scope to the entire coastal belt. The 3-month long fellowship offered online sessions with experts in the area of local administration, disaster management and development. The offline event at the Moozhikulam Sala, Ernakulam enabled a co-learning space for the fellows where they mapped the challenges and features of their respective areas. The coastal fellows developed 10 solutions that they think are instrumental in protecting the coasts of Kerala. They published it through a social media campaign to raise awareness of the significant coastal challenges. The fellowship emerged as a space to connect with youngsters across Kerala and discuss coastal challenges and a practical way forward.

* If you wish to replicate the program in your state, you may reach out to admin@sustera.org.

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