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Arabian Sea Fisheries Management Coordination Committee
SEA=MC²

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Arabian Sea Fisheries Management Coordination Committee (Sea=MC²)
The Quarterly News Letter

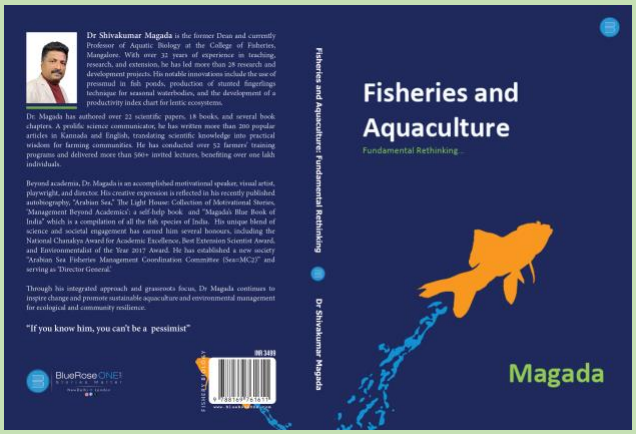
Message from the 'Director General'

As we step into the second year of the Arabian Sea Fisheries Management Coordination Committee (SeaMC²), I am delighted to note that the Society has made significant progress in strengthening its network and expanding its activities. The encouraging response from fisheries stakeholders, industry partners, researchers, and professionals has reinforced our belief that collaborative action is the key to achieving a sustainable and responsible fisheries sector. It is particularly gratifying to see several leading industries and organizations joining SeaMC² as Corporate Members, reflecting their confidence in our vision and commitment to promoting sustainable fisheries and aquaculture.

The geographical footprint of SeaMC² is also expanding. We are in the process of establishing Goa and Maharashtra Chapters under the leadership of dedicated professionals from the respective states. These chapters will facilitate closer interaction with local stakeholders and enable state-specific initiatives while contributing to the larger goal of integrated management of the Arabian Sea fisheries. We also invite more fisheries professionals, entrepreneurs, academic institutions, and industries from the west coast to become part of this growing movement.

From this fisheries calendar year, SeaMC² has shifted its office to a new and more functional workspace housed within the Asian Fisheries Society Indian Branch (AFSIB) premises on the College of Fisheries campus, Mangalore. The new office provides a conducive environment for coordination, stakeholder consultations, technical meetings, and implementation of various outreach programmes.

On the academic front, I am pleased to share the publication of my latest book, "**Fisheries and Aquaculture: Fundamental Rethinking.**" The book presents several unconventional perspectives on fisheries development and sustainable aquaculture, challenging many existing paradigms while proposing practical alternatives. I am deeply honoured that the foreword has been written by **Dr. Stephen David**, International Aquaculture Consultant, USA, whose encouragement and valuable insights have added immense value to this publication.



Another important milestone during the year has been the publication of the practical manual "Clean Handling of Fish: Onboard and On Port" sponsored by **M/s. Blueline Foods (India) Pvt. Ltd., Mangalore**. The manual aims to create awareness among fishermen, fish handlers, processors, and marketing agencies regarding hygienic fish handling practices, quality assurance, and value preservation throughout the post-harvest chain. We hope this publication will

serve as a useful reference for capacity-building programmes across the country.

In collaboration with the College of Fisheries, Mangalore, SeaMC² successfully organized the World Environment Day and World Ocean Day–2026 celebrations on 5 June 2026, bringing together scientists, students, government officials, fishers, and environmentalists to deliberate on the importance of conserving marine ecosystems and promoting responsible utilization of aquatic resources.

Looking ahead, SeaMC² has initiated two flagship demonstration projects that have the potential to create a meaningful impact at the grassroots level. The first is the 'Modern Fish Vending Unit', designed to improve hygienic fish marketing through insulated and refrigerated vending systems. The second is the 'Polyhouse Fish Drying Unit', an innovative model aimed at producing hygienically dried fish under controlled environmental conditions, thereby improving product quality, shelf life, and income opportunities for fisherwomen and micro-enterprises. We are actively seeking sponsorship and strategic partnerships from organizations such as the **Karnataka Fisheries Development Corporation (KFDC), Mangalore**, and other industries operating along the west coast to scale up these initiatives for wider community benefit.

International exposure continues to enrich our understanding of emerging fisheries technologies. During my recent visit to **Thailand and Cambodia**, I had the opportunity to visit several pearl culture farms, cage aquaculture operations, and value-added fisheries enterprises. The visit provided valuable insights into innovative farming practices, technology adoption, and entrepreneurship in the fisheries sector. Inspired by these experiences, I have initiated discussions with leading pearl culture enterprises and requested them to visit India to train our farmers, entrepreneurs, and fisheries professionals in modern pearl production techniques. We believe such international collaborations will accelerate technology transfer and open new livelihood opportunities for coastal communities.

As SeaMC² enters its second year, our commitment remains unwavering—to build a fisheries sector that is **scientifically sound, economically viable, socially inclusive, and environmentally responsible**. I express my sincere gratitude to all our members, corporate partners, academic institutions, government agencies, and well-wishers for their continued support. Together, we can transform challenges into opportunities and create a sustainable future for the fisheries and aquaculture sector.

Across India, fisheries continue to support millions of livelihoods and contribute significantly to food and nutritional security. Yet, the sector is increasingly challenged by **overfishing, declining catch per unit effort, habitat destruction, pollution, ghost fishing, indiscriminate gear use, and climate-induced shifts in fish distribution**. Small-scale fishers, who form the backbone of the sector, remain the most vulnerable—often caught between ecological stress and economic uncertainty.

At SeaMC², we strongly believe that **solutions do not lie only in laws and policies, but in mindset, behaviour, and collective will**. Fishers must be partners, not subjects. Youth must be innovators, not passive observers. Institutions must move beyond silos and work in convergence. Above all, science must inform action, and action must respect ecological limits.

As we move into our second year, SeaMC² will continue to strengthen its role as a **neutral coordination platform**, fostering collaboration among researchers, fishers, policymakers, civil society, and industry. Our focus will remain on responsible fisheries, pollution management, capacity building, stakeholder consultations, and science-based advocacy.

Dr Shivakumar Magada
Director General, SeaMC2, India
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The Chairman's Voice

Crab Fattening: A Promising Livelihood Opportunity for Coastal India

Despite India's remarkable achievements in fisheries production, the sector is currently facing several structural challenges. Marine capture fisheries have shown signs of stagnation due to declining fish stocks and increasing fishing pressure. Shrimp aquaculture, though a major export earner, is confronted with recurring disease outbreaks, fluctuating international prices, and rising input costs, reducing profitability for farmers. Freshwater aquaculture, particularly carp farming, continues to experience price instability owing to periodic oversupply and weak market linkages. While seaweed farming has emerged as a promising alternative livelihood, its expansion along the west coast of India is constrained by limited suitable farming sites, high wave energy, and environmental conditions.

Against this backdrop, mud crab fattening has emerged as one of the most attractive livelihood diversification opportunities for coastal communities. India possesses an extensive network of estuaries, mangroves, creeks, backwaters, and coastal wetlands that naturally support populations of mud crabs (*Scylla* spp.). Traditionally, undersized or soft-shelled crabs fetched low prices and were often discarded or sold at nominal rates. Crab fattening transforms these low-value crabs into premium-quality marketable products by holding them under controlled conditions for a short period, generally 15–30 days, until they attain optimum meat content and shell hardness. This simple intervention substantially increases their market value while requiring relatively low capital investment.

During my visits to Sri Lanka, Bahrain, and Saudi Arabia, I had the opportunity to study seafood marketing systems and consumer preferences. These interactions revealed an enormous demand for live and premium-quality mud crabs in international markets, particularly in the United States, European Union, Middle East, and Southeast Asia, where mud crabs are regarded as a high-value seafood delicacy. More importantly, I observed that the domestic Indian market itself offers tremendous potential. Premium restaurants, luxury hotels, seafood chains, and urban consumers are willing to pay significantly higher prices for healthy, well-conditioned live mud crabs throughout the year.

Several progressive farmers in Ratnagiri (Maharashtra), Goa, and coastal Karnataka have already demonstrated the commercial viability of mud crab fattening. By utilizing simple cages, pens, or small tanks and feeding locally available trash fish, molluscs, or other low-cost feed resources, they have generated attractive returns within a short production cycle. Compared with many aquaculture enterprises, crab fattening requires less land, limited freshwater resources, and relatively simple management practices. Since the culture period is short, farmers can complete multiple production cycles annually, resulting in faster cash flow and reduced financial risk.

One of the greatest strengths of crab fattening lies in its suitability for small-scale fisher households, women self-help groups (SHGs), youth entrepreneurs, and coastal cooperatives. The activity can be integrated with existing fishing operations, enabling fishers to utilize undersized or low-value crabs that would otherwise receive poor market prices. It also creates employment opportunities in seed collection, nursery rearing, cage fabrication, feed supply, transportation, live crab marketing, packaging, and export logistics, thereby strengthening the entire coastal value chain.

From an economic perspective, crab fattening offers a much higher value addition than merely selling freshly harvested crabs. The increase in body weight, improved meat recovery, and better

shell condition translate directly into higher selling prices and greater profitability. Establishment of localized crab collection centres, fattening units, live holding facilities, and export-oriented supply chains can significantly enhance income generation in coastal villages. Such enterprises can also reduce post-harvest losses by ensuring that live crabs are handled and marketed under optimal conditions.

Environmentally, crab fattening is a comparatively sustainable activity because it relies primarily on wild-caught juveniles or sub-marketable crabs without requiring extensive land conversion or high water consumption. With appropriate regulations governing seed collection, broodstock conservation, and habitat protection, the enterprise can be developed responsibly while supporting mangrove conservation and estuarine ecosystem management.

Looking ahead, India has immense potential to emerge as a leading producer and exporter of premium mud crabs, provided investments are made in hatchery development, seed production technologies, farmer training, live transport systems, value chain infrastructure, and international quality certification. Support through government programmes such as the **Pradhan Mantri Matsya Kisan Sampada Saha Yojana (PM-MKSSY)**, establishment of demonstration units, and stronger industry participation can accelerate commercialization and attract private investment. College of Fisheries, Mangalore is one of the centres to facilitate the PM-MKSSY in the states of Karnataka and Goa. I am the nodal officer for the said program. I request the entrepreneurs and the farmers to avail the benefits of these schemes.

Crab fattening represents far more than a niche aquaculture activity—it offers a high-value, low-investment, and climate-resilient livelihood option capable of transforming the socio-economic status of coastal communities. By complementing traditional fishing and aquaculture practices, it can diversify household incomes, empower rural entrepreneurs, generate employment, strengthen seafood exports, and contribute significantly to the sustainable growth of India's blue economy.

Warm regards,

Ramesh M.R

Chairman, Arabian Sea Fisheries Management Coordination Committee (SEA=MC²)

General Information by the "Secretary General"

As part of its commitment to promoting environmental stewardship and sustainable fisheries, the Arabian Sea Fisheries Management Coordination Committee (SeaMC²), in collaboration with the College of Fisheries, Mangalore, organized the **World Environment Day and World Ocean Day–2026** celebrations on **5 June 2026** at the College campus. The programme brought together academicians, government officials, industry representatives, students, and fisheries professionals to reaffirm the collective responsibility of conserving terrestrial and marine ecosystems.

The event was graced by Mr. Ravishankar, Deputy Conservator of Forests, Mangalore; Mr. Shaukat Shoury, Managing Director, Blueline Foods (India) Pvt. Ltd.; Dr. Shivakumar Magada, Director General, SeaMC²; and Dr. M. T. Lakshmipathi, Head, Department of Aquatic Environment Management, College of Fisheries, as Guests of Honour. The programme was presided over by Dr. H. N. Anjaneyappa, Dean (Fisheries), College of

Fisheries, Mangalore. During the inaugural session, the speakers emphasized that **World Environment Day** is not merely an annual observance but a global call to reduce pollution, conserve biodiversity, restore degraded ecosystems, and adopt sustainable lifestyles. They highlighted that healthy terrestrial ecosystems play a vital role in protecting aquatic resources by reducing soil erosion, preventing sedimentation of rivers, and minimizing the inflow of pollutants into estuaries

and coastal waters.

Special attention was also given to the significance of **World Ocean Day**, which reminds humanity of the immense ecological, economic, and cultural importance of the oceans. The speakers stressed that oceans regulate the global climate, produce nearly half of the world's oxygen, support millions of livelihoods, and provide food security for billions of people. However, increasing threats such as marine pollution, overfishing, habitat degradation, climate change, ocean warming, and plastic waste demand immediate and coordinated action from governments, industries, researchers, and coastal communities.

Addressing the gathering, Dr. Shivakumar Magada highlighted the need for adopting ecosystem-based fisheries management, responsible fishing practices, and scientific conservation measures to ensure that marine resources remain productive for future generations. He reiterated SeaMC²'s commitment to promoting sustainable fisheries, clean fish handling, livelihood diversification, and community participation in marine conservation through awareness programmes, research, and stakeholder partnerships.

The chief guests appreciated the efforts of SeaMC² in integrating environmental conservation with fisheries development. **Mr. Ravishankar** emphasized the importance of conserving mangroves, coastal forests, and other ecologically sensitive habitats that serve as natural barriers against coastal erosion and provide critical breeding and nursery grounds for numerous aquatic species. **Mr. Shaukat Shoury** commended the Society's initiatives in promoting hygienic fish handling and sustainable seafood value chains, expressing the industry's willingness to support similar programmes in the future.

The programme concluded with an interactive session involving students, faculty members, researchers, and fisheries stakeholders, during which ideas on coastal conservation, responsible fisheries, waste management, and public awareness were discussed. Both distinguished guests expressed their appreciation for the Society's vision and conveyed their willingness to

collaborate with SeaMC² in future initiatives related to environmental protection, sustainable fisheries, and community development.

Through such collaborative initiatives, SeaMC² continues to strengthen partnerships that bridge science, industry, government, and society for a cleaner environment and healthier oceans. The

Society also actively participated in Karnataka FIP on "Small Pelagic Purse-seine Fisheries" held on 11.05.26 at Ermal, Udupi

Dr S R Somashekar
Secretary General, SeaMC², India

Community Health, Environmental Stewardship and Outreach Activities

The Arabian Sea Fisheries Management Coordination Committee (SeaMC²) continues to strengthen its commitment towards the welfare of fishing communities by organizing community outreach programmes that integrate health, livelihood, and environmental conservation. Recognizing that the well-being of fishers is fundamental to a sustainable fisheries sector, the Society has been regularly conducting health camps in coastal villages with the support of its partners and stakeholders.

As part of this initiative, the next **Health Camp** has been scheduled at **Gorate village, Bhatkal Taluk, Uttara Kannada District, Karnataka**, on **14 July 2026**. The programme has been strategically combined with the celebration of **National Fish Farmers' Day–2026**, thereby creating a common platform to recognize the contributions of fish farmers while simultaneously addressing the health needs of fishing communities. More than 200 fishers, fish farmers, fisherwomen, and other stakeholders are expected to participate in this event. Besides health screening and medical consultations, the programme will also include awareness sessions on nutrition, occupational health, hygienic fish handling, sustainable fisheries, and various government welfare schemes available to the fisheries sector.

SeaMC² sincerely acknowledges the continued support extended by the **Karnataka Fisheries Improvement Program (KFIP)**, whose partnership has significantly strengthened the Society's

outreach activities across the coastal districts. Such collaborations have enabled the Society to reach grassroots communities and bridge the gap between scientific knowledge, government programmes, and end beneficiaries.

Environmental conservation remains another important focus area of the Society. We are pleased to note that one of our esteemed Corporate Members, M/s. Blueline Foods (India) Pvt. Ltd., Mangalore, has undertaken commendable initiatives in mangrove plantation and coastal ecosystem restoration. Mangroves serve as one of the most productive ecosystems on Earth by protecting coastlines from erosion, acting as nursery grounds for numerous fish and shellfish species, sequestering large quantities of carbon, and supporting biodiversity. Their restoration is therefore critical not only for environmental protection but also for sustaining coastal fisheries and enhancing climate resilience.

Inspired by such initiatives, SeaMC² also proposes to organize mangrove plantation and coastal habitat restoration programmes in different parts of

the west coast in collaboration with government agencies, educational institutions, industries, community organizations, and local volunteers. These activities will complement our broader mission of promoting responsible fisheries, biodiversity conservation, and sustainable management of coastal resources.

However, the environmental challenges confronting our oceans and coastal ecosystems are both **vast and complex**. Climate change, marine pollution, habitat degradation, plastic waste, overexploitation of fisheries resources, and the destruction of coastal ecosystems cannot be addressed by any single institution, organization, or government acting in isolation. These issues demand a **collective movement**, built upon scientific knowledge, policy support, industry participation, community ownership, and sustained public engagement.

SeaMC² firmly believes that environmental conservation is a shared responsibility. Through continuous awareness programmes, capacity building, stakeholder partnerships, and community participation, the Society aims to foster a culture of environmental stewardship among fishers, industries, students, and the general public. Only through long-term collaboration and collective action can we ensure healthy oceans, resilient coastal ecosystems, sustainable fisheries, and secure livelihoods for future generations.

We invite all like-minded organizations, industries, academic institutions, and individuals to join hands with SeaMC² in this mission to build a cleaner environment, healthier oceans, and a more sustainable blue economy for India.

Interested stakeholders may join the society and work with us. Please visit the website at www.http://seamc2.com and be a part of the noble cause of serving the community and the environment. Write to us…

Dr Manjulesh Pai, Organising Secretary, SeaMC2, College of Fisheries, Mangalore 575002, India/seamc2india@gmail.com

The "**Magada's Blue Book of India (MBBI)**", published by the Arabian Sea Fisheries Management Coordination Committee (SeaMC²), is a comprehensive reference that documents **over 2,200 fish species recorded from India**. The species are systematically arranged in alphabetical order and colour-coded according to their respective habitats (marine, freshwater, brackish water, and others), making the book highly user-friendly for researchers, students, fisheries professionals, and biodiversity enthusiasts. The publication serves as a valuable reference for fish identification, taxonomy, and aquatic biodiversity studies. The book is available through major e-commerce platforms, and interested readers and institutions are encouraged to place their orders.

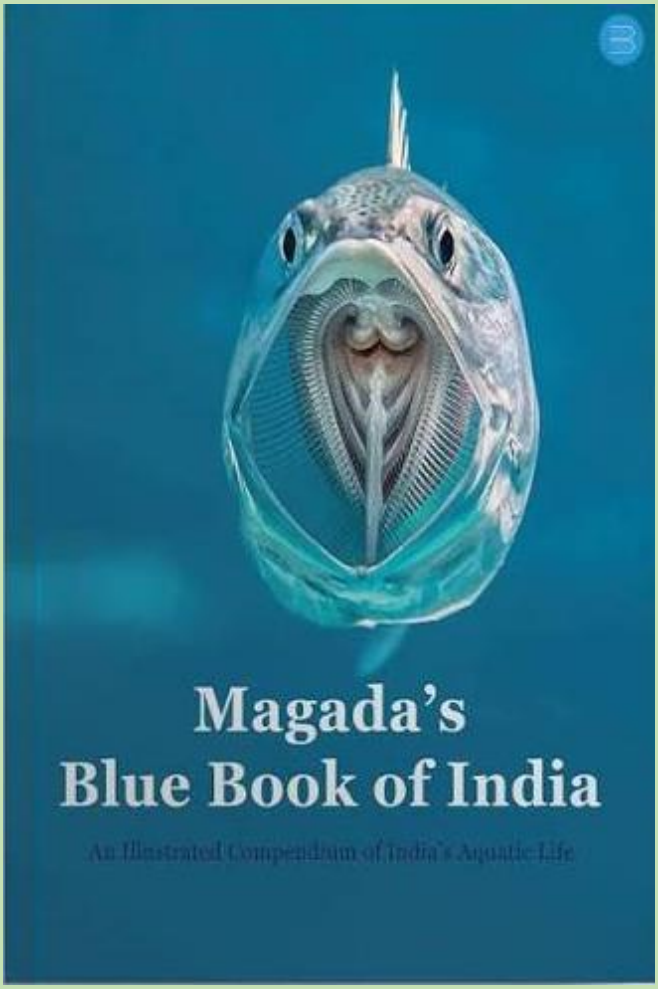


Photo Gallery

A skit on “Plastic Pollution” in the coast

Symbolically distributed Aprons and Caps to the KFDC staff

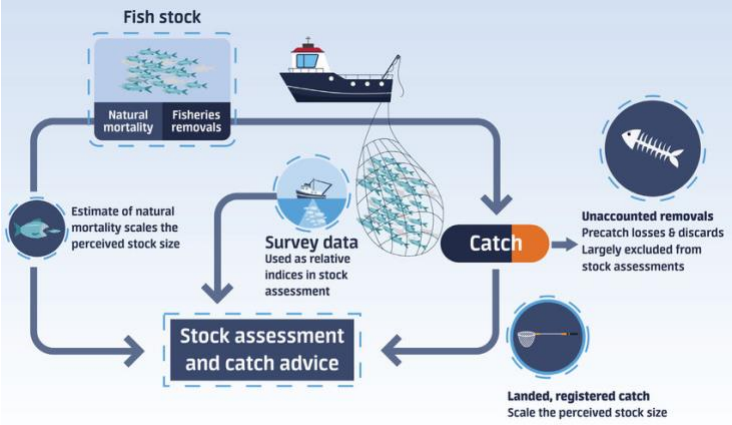
Pearl Farm in Phuket, Thailand

The society participated in the FIP stakeholders meeting on 11.05.26

Mangrove plantation at Mangalore by the Blueline team

The advanatages of working with Sea=MC^2 are

Stock Assessment



Supply Chain

Branding

Institutional Network

Micro Financing

ERP Solutions

Digitization

Community Service

Blue Bank: for Inclusive Economic Growth

Knowledge Support

Boat Certification