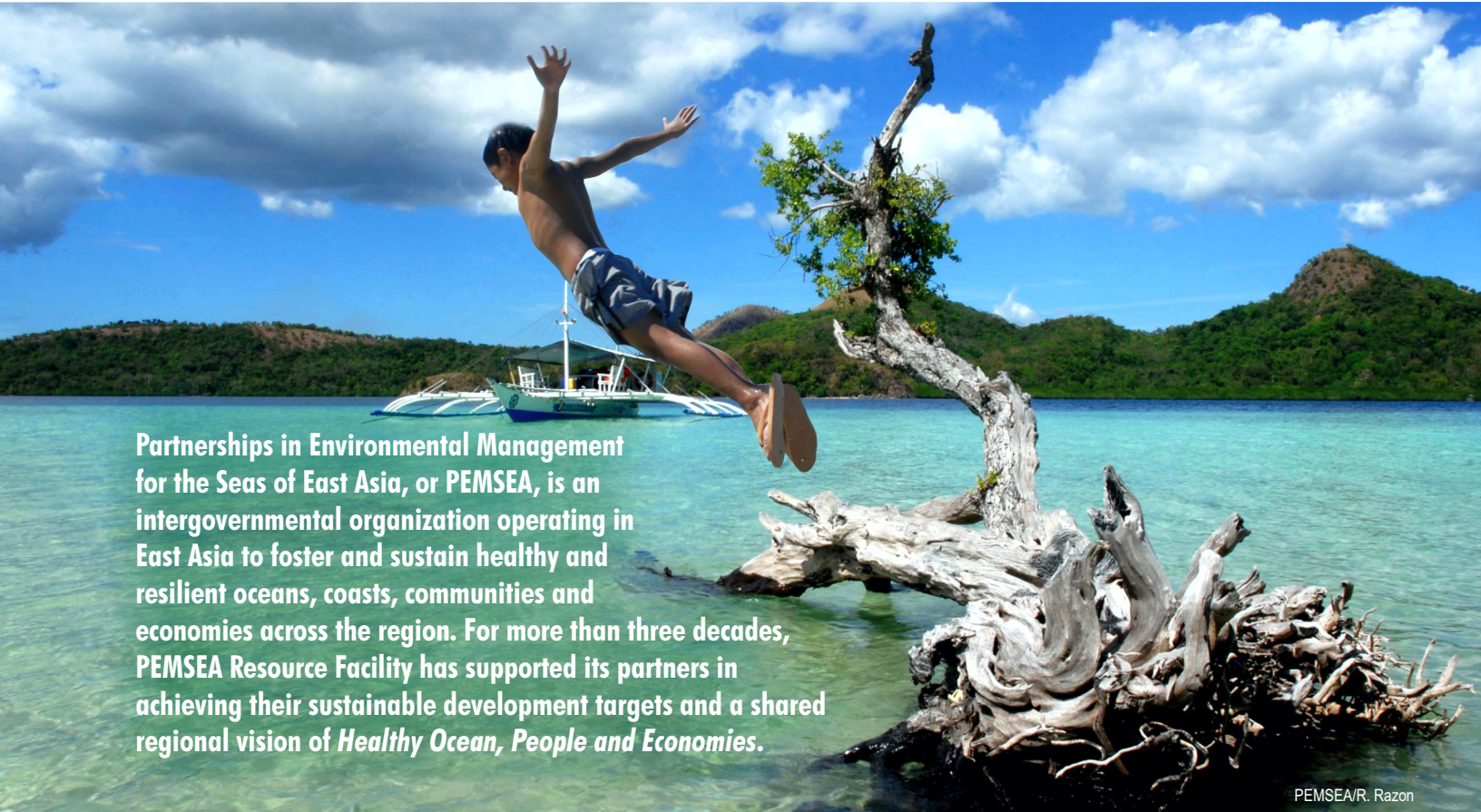


Solutions for Sustainable Seas



Partnerships in Environmental Management for the Seas of East Asia, or PEMSEA, is an intergovernmental organization operating in East Asia to foster and sustain healthy and resilient oceans, coasts, communities and economies across the region. For more than three decades, PEMSEA Resource Facility has supported its partners in achieving their sustainable development targets and a shared regional vision of *Healthy Ocean, People and Economies*.

PEMSEA/R. Razon

Partnerships

PEMSEA was built on partnerships. It is the regional coordinating institution for the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), a marine strategy adopted by 14 countries that harmonizes international development goals and provides a framework for planning, implementing and monitoring sustainable development of coasts and oceans across the region.

In addition to its Country Partners, PEMSEA works with a network of Non-Country Partners including industry associations, international development organizations, scientific institutions and regional initiatives.

The United Nations Development Program and the World Bank have recognized the effectiveness of PEMSEA and developed regional medium-term investment plans using the SDS-SEA framework and PEMSEA as the regional coordinating mechanism.

Integrated Solutions

PEMSEA pioneered the application of integrated coastal management (ICM) in East Asia. It offers an holistic approach for addressing complex coastal issues by combining governance, management, economics and cross-cutting scientific solutions. ICM offers a proven, practical tool for operationalizing sustainable development and the principles of ecosystem-based management (EBM) of coasts and oceans.

PEMSEA has applied integrated coastal management in dozens of sites across the region, impacting about 40% at 86,283km of the region's coastline in 2020 (from 12 countries) now under ICM.



PEMSEA Services

PEMSEA delivers integrated solutions to its partners through a set of service offerings designed to support the unique needs of local and national government, international development organizations, companies, investors and others operating in the complex coastal environment.

Advisory and Project Services strengthen coastal sustainable development strategy and programs, reducing risks and improving management of coastal and ocean resources.

- **Environmental Management** including risk assessment, stakeholder engagement, program development and implementation, impact assessment, monitoring and reporting
- **International Development** including project design, execution, monitoring and evaluation
- **Marine Economic and Scientific Services** including land- and sea-use zoning/marine spatial planning, economic valuation of ecosystem services, baseline assessments (governance, socioeconomic, environmental) and integrated environmental monitoring

PEMSEA Services focus on addressing three key issues in the coastal zone

Healthy Habitats and Biodiversity including protection, restoration and management of wetlands, mangroves, seagrass beds and coral reefs, supporting healthy fisheries, ecotourism and other sustainable economic activities.

Climate Change and Disaster Risk Reduction including risk/vulnerability assessment, resilience and preparedness systems and adaptation and response to harmful algal blooms, sea level rise, flooding, landslides, extreme weather events and oil and chemical spills.

Clean Water including marine debris and plastics, nutrient loading and eutrophication, waste management systems and water conservation and supply.

Knowledge Services empower local governments and other organizations by building their knowledge, skills and capacity to effectively and sustainably manage coastal and ocean resources.

Supporting its Advisory and Project Services, PEMSEA has developed a comprehensive set of knowledge products and capacity development programs focused on integrated coastal management (ICM) and port safety, health and environmental management (PSHEM).

- Library with an extensive collection of coastal and ocean governance publications, as well as thousands of titles covering integrated coastal management and port safety, health and environmental management
- *Seas of East Asia Knowledge Bank* (www.seaknowledgebank.net), an online platform providing access to best practices, codes and guidelines for governance, management and State of Coasts reporting
- National and regional training workshops on a variety of topics including ICM, coastal-use zoning, marine spatial planning, vulnerability/risk assessment, ecosystem service valuation, ecosystem approach to fisheries management and integrated river basin and coastal area management
- ICM solution case studies from sites around the region providing insights and lessons learned from on-the-ground experiences with successful project implementation
- Internships, fellowships, training-of-trainers and study tour programs

Certification Services based on international standards for guiding coastal management and validating performance excellence.

Through certification, governments, companies and other organizations gain recognition, enhance stakeholder confidence and establish proper governance for reducing risk and encouraging investment.

For organizations looking to institute a recognized standard in coastal management, PEMSEA offers two certification systems, along with a professional certification for ICM practitioners.

- Port safety, health and environmental management (PSHEM) system certification
- Integrated coastal management (ICM) system certification
- Integrated coastal management (ICM) professional certification

The Seas of East Asia

- Support 30% of the world's coral reefs
- Supply 40 million tons of annual fish catch
- Produce over 80% of the world's aquaculture
- Host 9 of the world's 10 busiest container-shipping seaports
- Home to some of the fastest growing economies in the world

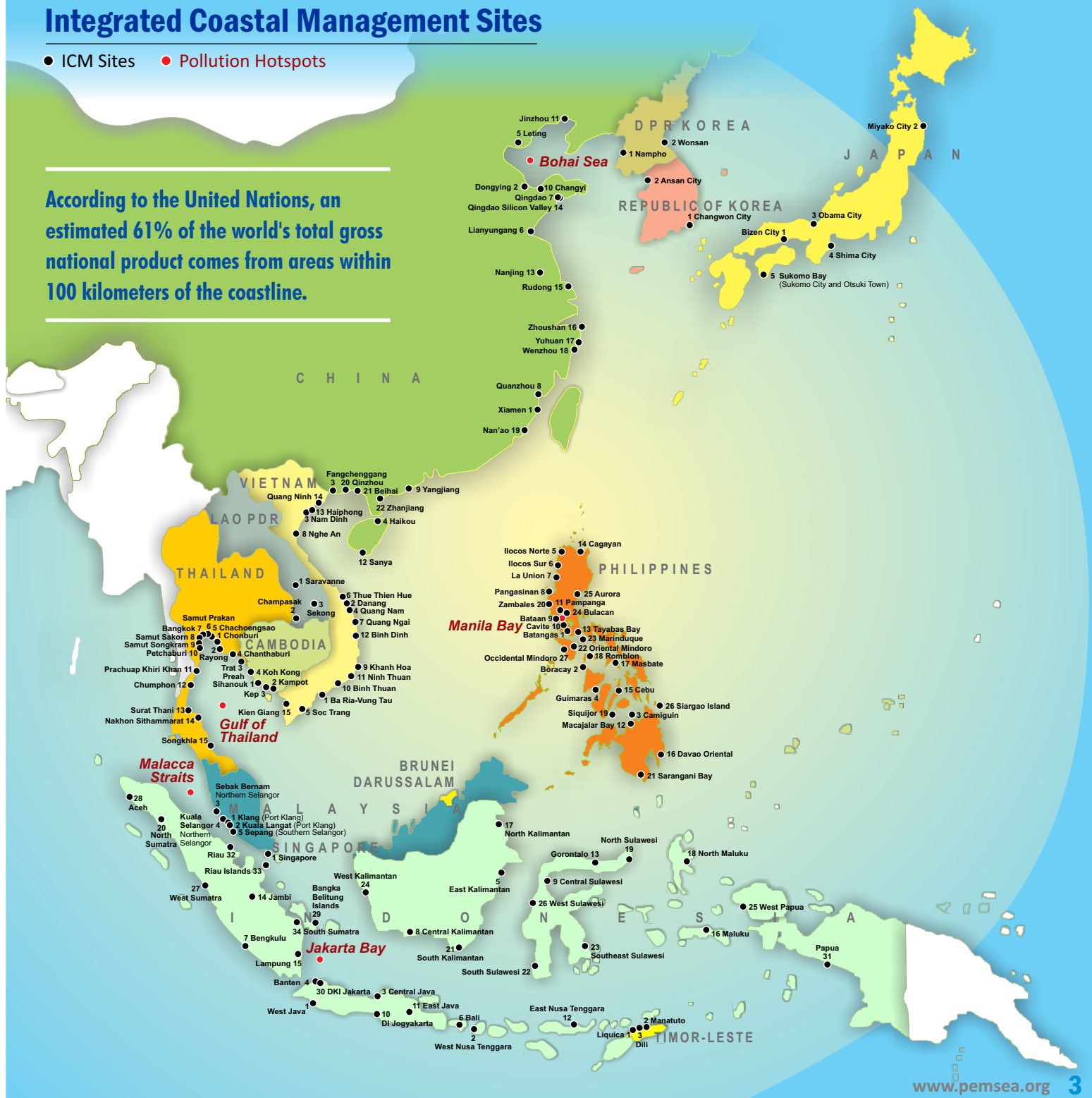
Countries that have adopted the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)

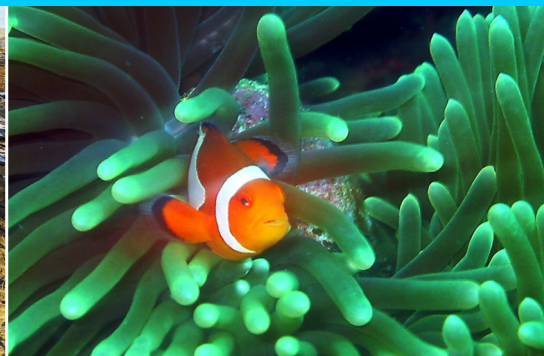
Brunei Darussalam	Japan	Singapore
Cambodia	Lao DPR	Thailand
China	Malaysia	Timor-Leste
DPR Korea	Philippines	Vietnam
Indonesia	RO Korea	

Integrated Coastal Management Sites

● ICM Sites ● Pollution Hotspots

According to the United Nations, an estimated 61% of the world's total gross national product comes from areas within 100 kilometers of the coastline.





A Strong Regional Network

PEMSEA Network of Local Governments (PNLG)

A network of over 53 local governments and 4 associate members from across East Asia, the PNLG is designed to enhance the capacity of local governments to plan, develop and manage their coastal and ocean resources for sustainable use. The PNLG promotes the use and benefits of ICM and facilitates links to technical institutions, companies and investors for scaling up sustainable development. The 2016 Ansan Declaration, signed by PNLG members, signifies their commitment to the UN Sustainable Development Goals.

PEMSEA Network of Learning Centers (PNLC)

The PNLC is a network of universities and scientific institutes across the East Asian Seas Region providing technical advice and assistance to national and local governments, ICM project sites, non-governmental organizations, local communities and the private sector through studies and projects on coastal and ocean management, monitoring and reporting on trends and mentoring and training of practitioners.

Regional Centers of Excellence

- Center for Marine Environmental Research and Innovative Technology (Hong Kong)
- Marine Science Institute of the University of the Philippines (Philippines)
- Institute for Global Environmental Strategies (Japan)
- Coastal and Ocean Management Institute (COMI), Xiamen University (PR China)

Learning Centers

- | | |
|-------------------------------------------------------------------------|-----------------------------------------------------|
| • Center for Coastal and Marine Resources of IPB University (Indonesia) | • Prince of Songkla University (Thailand) |
| • Burapha University (Thailand) | • Royal University of Phnom Penh (Cambodia) |
| • Catanduanes State University (Philippines) | • Oriental University of Timor-Leste |
| • Cavite State University (Philippines) | • Udayana University (Indonesia) |
| • De La Salle Lipa (Philippines) | • University of Danang (Vietnam) |
| • De La Salle University - Dasmariñas (Philippines) | • Universidade Nacional Timor Lorosa'e |
| • Diponegoro University (Indonesia) | • University of the Philippines Visayas |
| • Kim Il Sung University (DPR Korea) | • Xavier University-Ateneo de Cagayan (Philippines) |
| | • Zhejiang University (PR China) |

PEMSEA Non-Country Partners

Along with its government partners, PEMSEA's network includes 22 non-governmental organizations — scientific institutions, industry associations and regional programs — all working together to support the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)

- ASEAN Centre for Biodiversity
- Coastal Management Center
- Conservation International Philippines
- International Center for Environmental Management of Enclosed Coastal Seas Center
- International Ocean Institute
- Intergovernmental Oceanographic Commission - Subcommission for the Western Pacific
- International Petroleum Industry Environmental Conservation Association
- International Union for Conservation of Nature - Asia Regional Office
- Korea Environment Institute
- Korea Maritime Institute
- Korea Marine Environment Management Corporation
- Korea Institute of Ocean Science and Technology
- Marine Biodiversity Institute of Korea
- National Marine Hazard Mitigation Service, China
- Norwegian Institute for Water Research
- Northwest Pacific Action Plan
- Ocean Policy and Research Institute, Sasakawa Peace Foundation
- Oil Spill Response Limited
- Plymouth Marine Laboratory
- PEMSEA Network of Local Governments
- UNDP/GEF Small Grants Programme
- UNEP Global Programme of Action

Youth Program

PEMSEA's Youth Program engages and empowers youth leaders across the region to take ownership of the health of coasts and oceans in East Asia. Young leaders build the skills to become effective ICM practitioners through action projects, stay connected through social media and online learning opportunities and join together every three years to share experiences and success stories at their marquee event, the East Asian Seas Youth Forum.



Contributing to the United Nations Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) include 17 goals with 169 targets guiding actions in key areas where government, business and communities must work together to transform economies and prosper within the social and ecological boundaries of the planet.

The Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) serves as a platform for cooperation and action among 14 governments and other partner organizations for the coordinated management of the shared Seas of East Asia. The SDS-SEA addresses the changing context in ocean governance, incorporating significant international and regional agreements, including the UNFCCC, the Sendai Framework for Disaster Risk Reduction and Rio+20 “The Future We Want”, as well as the UN SDGs.

The SDS-SEA contains seven strategies that include objectives and action programs for sustainable development of coasts and oceans in the region:

- **DEVELOP**, for emerging development policies and investment strategies
- **SUSTAIN** and **PRESERVE**, for biodiversity protection, conservation and sustainable fisheries
- **PROTECT**, for pollution reduction and waste management
- **IMPLEMENT**, for compliance with international conventions and agreements



The SDS-SEA strategies align with the UN SDGs, in particular SDG 14: Life Below Water, SDG 6: Clean Water and Sanitation, SDG 11: Sustainable Cities and Communities, SDG13: Climate Actions and SDG 17: Partnerships for the Goals.

- **ADAPT**, for climate change adaptation and disaster risk reduction
- **COMMUNICATE**, for information, knowledge sharing and mobilization

State of Oceans and Coasts: Blue Economy Growth in the EAS Region

The State of Oceans and Coasts (SOC) Reports capture the initial estimates of the ocean economies of countries in the EAS region, and presents key developments in emerging industries and innovations that see the EAS region transition away from a conventional economy in the ocean to a sustainable, inclusive and resilient blue economy. The SOC reports are a valuable monitoring tool that recognize the efforts made by countries at the regional and national levels to assess and manage their coastal and ocean resources.

East Asian Seas Congress

The triennial East Asian Seas (EAS) Congress has established its reputation as the premiere regional event for coasts and oceans. It provides an ocean-focused forum for knowledge sharing, collaborative action and partnership building. Drawing over 1000 participants including national and local government officials, policymakers, scientists, NGOs, donor agencies, companies, investors and academia, the EAS Congress consists of a Ministerial Forum, International Conference, Environmental Exhibition, Youth Forum and field visits to learn about sustainable coastal management firsthand.

Case Study: Integrated Coastal Management in Xiamen, China



Wu Yuan Bay before and after.



The ocean city of Xiamen in southeastern China is home to 3.67 million people. Surrounded by 226 km of coastline and hosting one of the largest deepwater ports in the world, over 12% of the local GDP is estimated to come from the marine economy. Several years of strong economic growth in the late 1980s and early 1990s left Xiamen severely affected by pollution and sea use conflicts. Poor urban infrastructure, shortage of financial capacity and lack of scientific knowledge led to a number of problems including discharge of untreated wastewater from domestic sewerage and local industry. These activities threatened not only the local ecosystems, including mangroves and Chinese White Dolphins, but it also put the economic gains of the previous years at risk.

In 1994, Xiamen became a demonstration site for integrated coastal management (ICM). The effort focused on construction of wastewater collection and treatment systems and expanding the coastal lagoon area. At the same time, a Marine Functional Zoning Scheme was developed to address sea use conflicts.

Ultimately, Xiamen's success was based on its integrated approach through public participation, innovative legislation, institutional arrangements, science-based decision-making and joint law enforcement across agencies.

The Xiamen waterfront now serves as a model for ecological and economic success, providing opportunities for leisure and tourism, residential real estate, a venue for industries and a home for rich biodiversity.

According to one study on ICM in Xiamen, every dollar invested at the time returned 7 dollars in economic benefits.

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