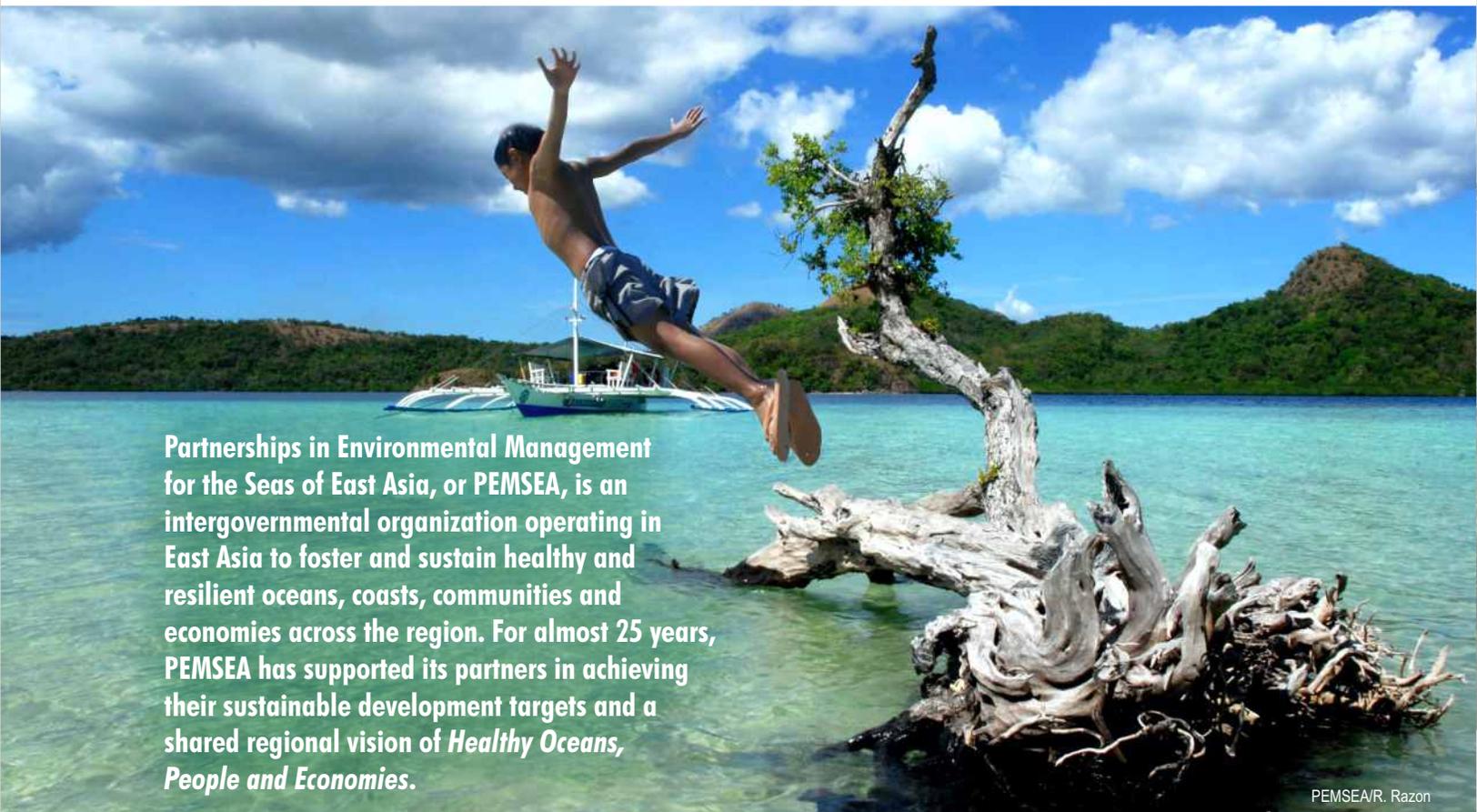


# Solutions for Sustainable Seas



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 almost 25 years, PEMSEA has supported its partners in achieving their sustainable development targets and a shared regional vision of *Healthy Oceans, 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 their respective regional medium-term investment plans using the SDS-SEA framework and PEMSEA as the regional coordinating mechanism.**

## Integrated Solutions

PEMSEA pioneered 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 more than 42,000 km, or 17%, of the region's coastline and over 146 million people living in coastal and watershed areas.**



## 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*, 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** provide an internationally recognized standard to guide coastal management and validate 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 almost 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

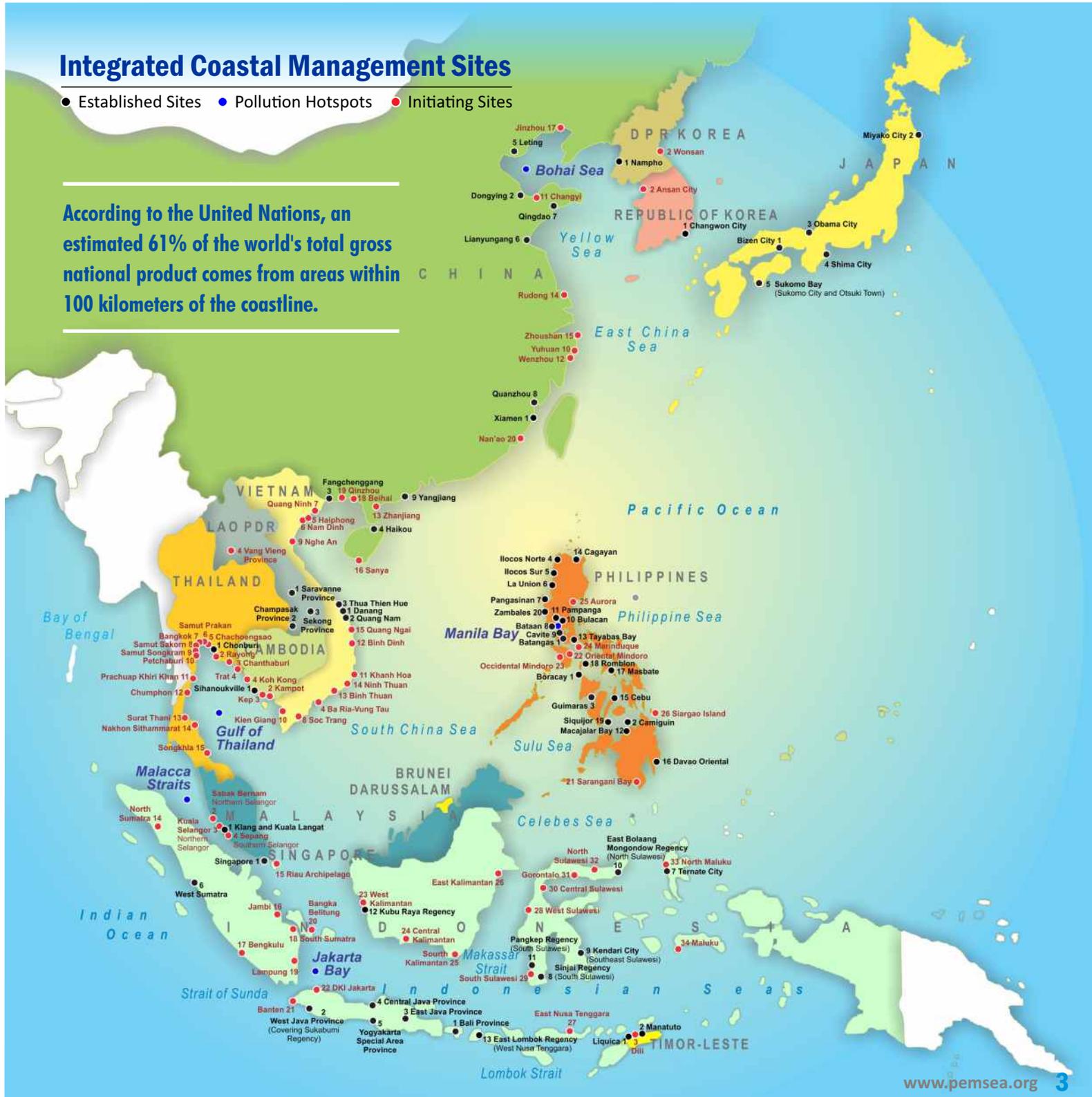
## Countries that have adopted the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA)

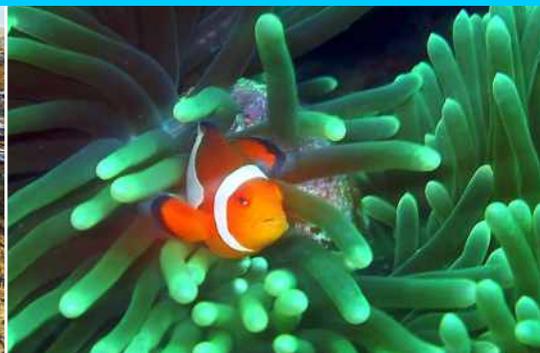
Brunei Darussalam	Japan	Singapore
Cambodia	Lao DPR	Thailand
China	Malaysia	Timor-Leste
DPR Korea	Philippines	Vietnam
Indonesia	RO Korea	

## Integrated Coastal Management Sites

- Established Sites
- Pollution Hotspots
- Initiating Sites

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 45 local governments 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)

Launched at the EAS Congress 2015, 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)

#### ICM Learning Centers

- Royal University of Phnom Penh (Cambodia)
- Kim Il Sung University (DPR Korea)
- Bogor Agricultural University (Indonesia)
- Zhejiang University and Xiamen University (PR China)
- De La Salle Lipa, University of the Philippines Visayas and Xavier University-Ateneo de Cagayan (Philippines)
- Burapha University and Prince of Songkla University (Thailand)
- Oriental University of Timor Leste and National University of Timor Leste (Timor Leste)
- University of Danang (Vietnam)

### PEMSEA Non-Country Partners

Along with its government partners, PEMSEA's network includes 21 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 Environmental Management of Enclosed Coastal Seas Center
- International Oceans Institute
- Intergovernmental Oceanographic Commission - Subcommission for the Western Pacific
- IPIECA, the global oil and gas industry association for environmental and social issues
- 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
- Northwest Pacific Action Plan
- Ocean Policy and Research Institute, Sasakawa Peace Foundation (OPRI)
- Oil Spill Response
- Plymouth Marine Laboratory
- PEMSEA Network of Local Governments
- Swedish Environmental Secretariat for Asia
- UNDP/GEF Small Grants Programme
- UNEP Global Programme of Action
- UNEP/GEF Yellow Sea LME Project

### 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 Sustainable Development Goals

The Sustainable Development Goals (SDGs), adopted by the UN in September 2015, provide 17 Goals and 169 targets to guide actions globally in key areas where government, the private sector and citizens will have to invest to transform economies and prosper within the social and ecological boundaries of the planet.

Since 2003, the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) has served as a platform for cooperation and coordinated action among Country and Non-Country partners and other collaborators. In 2015, the SDS-SEA was updated to address the changing context in ocean governance, considering new or amended international and regional agreements, including the UNFCCC, the Sendai Framework for Disaster Risk Reduction, Rio+20 “The Future We Want” and the UN Sustainable Development Goals or SDGs.

The SDS-SEA 2015 contains seven strategies with related objectives and action programs for sustainable development of coasts and oceans: DEVELOP, SUSTAIN, PRESERVE, PROTECT, IMPLEMENT, ADAPT, COMMUNICATE.



There are several synergies between the SDGs and the implementation of the SDS-SEA, 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.

## Blue Economy and Sustainable Ocean Investment

Blue economy offers a practical, ocean-based economic model for protecting our coasts and oceans while enhancing economic development. PEMSEA seeks to promote blue economy growth in the region through research and programs focused on better understanding blue economy, including development of a common regional framework for the assessment of blue economy and valuation of coastal and ocean ecosystems. Efforts are underway to catalyze sustainable investment through establishment of vehicles for identifying, developing and financing a pipeline of bankable, sustainable investment projects across a range of coastal and ocean sectors.

PEMSEA's East Asian Seas Sustainable Business Network is a community of forward-thinking companies focused on building a blue economy in East Asia through the conservation and sustainable use of coasts and oceans. It provides a forum for

business leaders to engage with peers and link to science and best practices for managing coastal resources, reducing risks and supporting sustainable blue economy growth aligned with the latest ocean policy.

## 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 well 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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