

### **IMO Gives Tribute to 10 Years of PEMSEA Effort**

LONDON, U.K. -- “It gives me great pleasure to convey my congratulations to the Regional Programme on Building Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) on the occasion of its 10th year of operation,” said IMO Secretary-General Hon. Efthimios E. Mitropolous, in a letter to PEMSEA Regional Programme Director, Dr. Chua Thia-Eng.

Since its inception in January 1994, PEMSEA has been actively developing means to enable the sustainable use of coastal and marine resources in the region. These efforts have culminated in the endorsement of the Sustainable Development Strategy for the Seas of East Asia and the adoption, by the Programme’s 12 participating countries, of the Putrajaya Declaration of Regional Cooperation for the Sustainable Development of the Seas of East Asia during the East Asian Seas Congress 2003, held in Putrajaya Malaysia last 8-12 December 2003. These achievements were well received by the Secretary-General who likewise expressed his confidence in PEMSEA’s continued endeavors.

Mitropolous offered his best wishes to PEMSEA for its “tireless and conscientious efforts and contribution in respect of capacity building in environmental management and sustainable development in the East Asian Seas region.”

## **Fidel Ramos Pushes for “Daring” in Achieving Sustainable Development**

PUTRAJAYA, MALAYSIA -- “Daring to sacrifice for the common good, daring to take concerted action to make a big difference -- daring to do all these -- would be the supreme test of civic responsibility if we are to achieve a better future and higher quality of life for all,” was what Former Philippine President Fidel V. Ramos stressed in his keynote speech at the opening of the East Asian Seas Congress 2003 on 8 December 2003.

The former president called on the more than 400 international participants of the Congress to take up the values of caring, sharing and daring to enable the attainment of a better future and a higher quality of life for the East Asian region.

Previous efforts of countries and international agencies to arrest environmental degradation in the Seas of East Asia have fallen short of tangible and lasting benefits to the environment and to the quality of life of the people in the region. To address this, the East Asian Seas Congress 2003 aimed at catalyzing regional partnerships and cooperation toward achieving the goal of sustainable development of the Seas of East Asia.

In his speech, Ramos observed that on the balance, globalization can be more of a benefit than a disadvantage to countries in the region if economic and environmental policies can be made to support each other through the “deliberate coordination, convergence and coherence of their inter-related components.”

Ramos called for the region to stand together for development. “Cooperation and partnerships for sustainable development are essential components of the ongoing processes of the emerging East Asia economic alliance. It is a well recognized truth that stability, security and prosperity of each country of the region is interwoven with the health of its coast and oceans, and the many and various services availed from the natural resources therein.”

In this light, the former president called the adoption of the Sustainable Development Strategy for the Seas of East Asia as a landmark occasion for East Asia and the world. “It is a first – for the coastal nations in a shared sea area responding to the WSSD declaration.” The strategy, Ramos stressed, provides the region with a clear direction for national and local governments to address resource management issues and enhances the “synergistic relationships between global, regional and national economic policies and programs and multilateral environmental agreements.” The strategy also creates a platform for partnerships and active participation among governments, the private sector, NGOs, communities and other members of society.

## **Kok Wee Kiat Calls for a Regional Market for Green Products and Services**

PUTRAJAYA, MALAYSIA -- “Green begets green. Environmental sense makes dollar cents,” Malaysia’s Environmental Quality Council Chairman, Dato’ Kok Wee Kiat urged the more than 400 participants of the East Asian Seas Congress 2003 during his keynote address on 8 December 2003.

The Congress brought together concerned government and key individuals, institutions and stakeholders in coastal and ocean management to explore opportunities and solutions to meet the ever-increasing environmental problems and challenges in the region and to address these challenges collectively through intergovernmental and multi-sectoral partnerships.

The event became “a venue for the adoption of a common framework and guide for strengthening collaboration and cooperation among countries and across sectors in the management of the region’s marine and coastal resources,” explained Science, Technology and Environment Malaysia Minister, Dato’ Seri Law Hieng Ding.

Dato’ Kok pointed out that even during the Asian financial crisis, foreign direct investments to the region steadily increased. But the investments were minimally related to environmental projects, an indication that the private sector has not sufficiently been involved in sustainable investment policies, particularly in the coastal and marine area.

To secure the involvement of the private sector, Dato’ Kok stated the need for the creation of a regional market for environmental products, services and technology. “The new wave is towards ‘natural capitalism.’ Through innovative financial instruments, what used to be ‘non-market’ benefits of protecting and managing the environment can be converted into cash flows, thereby advancing the opportunities for investment in environmental assets.”

His concern is significant. More than a million people in developing countries die each year from diseases stemming from a lack of access to safe drinking water and inadequate sanitation. According to the World Summit on Sustainable Development, an estimated US\$ 80 –180 billion is needed annually to meet its 2015 targets particularly for investment in environmental facilities and services in developing countries. A significant portion of this amount will be needed for wastewater treatment, pollution abatement, nutrient reduction and water re-use and recycling. World Bank estimates reveal that transfers of official development assistance to developing countries averaged only US\$50 billion per year from 1990 through 1997. Meanwhile, during that same period, total global flows of private capital doubled. “Private investment in developing countries exploded from under US\$50 billion to about US\$ 250 billion during the same period, with China, Malaysia, Indonesia and Thailand as the main recipients,” Dato’ Kok Wee Kiat revealed.

Dato’ Kok Wee Kiat also recognized the adoption of the Sustainable Development Strategy for the Seas of East Asia as an opportunity to collectively take steps towards

sustainability. “Through the collaborative framework and platform of actions contained in the Strategy, we clearly see opportunities for investment, partnerships and community participation at the local national and regional scale. But, we should not be only satisfied with the adoption of such Strategy, we need to see the Strategy implemented.”

## **Economy and Environment: Winners from Effective Maritime Industry**

PUTRAJAYA, MALAYSIA -- Both the environment and the economy are best served when maritime industries are operating effectively. This was one of the findings of the Workshop on Maritime Transport, held during the East Asian Seas Congress 2003 in Putrajaya Malaysia from 8-9 December 2003.

Over 100 international experts gathered to examine key issues related to maritime transportation and safety and provide insight into the implementation of related international environmental instruments at national and regional levels. The Maritime Transport Workshop, co-organized by PEMSEA and the International Maritime Organization (IMO), concentrated on how to coordinate the maritime sector and its activities to make shipping both safer and efficient for industries and the countries and lead to a cleaner environment. The workshop findings reveal that when maritime industries are operating effectively, both the environment and the economy will greatly benefit. The workshop also noted that the Sustainable Development Strategy for the Seas of East Asia provides the framework for coordinating regional and global maritime activity

The workshop identified four major areas where the coordination of the maritime administration of ports and shipping and marine authorities prove vital.

Pollution preparedness and response was the first major area identified. The workshop stressed that preparedness and response for incidents like oil spills or ship groundings not only prevents harmful effects to the environment, but also minimizes the finances of shipping companies and ports.

The second area was the environment. The workshop pointed out the importance of particularly sensitive sea areas, such as fish breeding grounds, critical coral reefs or mangrove habitats, all of which are vital to the sustainability of coastal and marine resources. The locations of these sensitive areas have to be identified, and preparedness measures put in place in the event of any ship mishap in such areas.

The issue of ballast water was the third major area. Once established, it is virtually impossible to control invasive marine species. The invasion of harmful aquatic organisms and pathogens to new environments via ship's ballast water has been identified as one of the biggest threats to the world's oceans. Actions are needed to minimize the discharges of exotic organisms. Training, awareness-raising and capacity-building initiatives are needed as well as the signing of IMO's international agreement on ballast water management.

International trade in the Seas of East Asia is estimated to triple in the next 20 years and between 80-90 percent of this trade is expected to be moved by shipping. This significant increase in shipping traffic will be accompanied by a rise in the risk of major oil spill accidents occurring. IMO also estimates that in 1997, international shipping transferred approximately 10 billion tons (annual average) of ballast water around the world annually.

Although necessary for ship safety, ballast water can contain marine organisms that threaten ecosystems and public health. The problem will become more acute as ships get larger and faster and as maritime trade increases.

The fourth major area identified was on the development of the marine electronic highway. Heightening traffic control to minimize the possibility of ship accidents is important for ships, ship companies and the environment. For areas with high shipping activity like the Malacca Straits, the development of a marine electronic highway is a huge step in utilizing new technologies to augment traditional navigational instruments in making shipping navigation safer for the environment.

The workshop on Maritime Transport was chaired by Dr. Lee Jung Ook, President of the Korea Maritime Institute (KMI), Republic of Korea. Datuk Raja Malik Saripulazan Raja Kamaruzaman, Director General of Malaysia's Marine Department was keynote speaker of the workshop. Panelists included Mr. Matthew Lee, Maritime and Port Authority of Singapore, Ministry of Maritime Affairs and Fisheries of RO Korea Investigator-General Mr. Lim Ki-Tack, and IMO Marine Environment Division Director, Mr. Koji Sekimizu.

## **Funding, Communication and Integrated Management: Keys to Solving Land-Based Pollution**

PUTRAJAYA, MALAYSIA -- Innovative and new funding mechanisms, continuous public awareness communication, and integrated coastal management (ICM); these, international experts conclude, are key solutions to solving land-based pollution in the East Asian Region.

Over a hundred international experts and authorities participated in the Workshop on Land-Based Pollution which delved into issues surrounding the management of industrial, hazardous and domestic wastes and national waste management action programs, and proposed measures to prevent the destruction of coastal habitats especially mangroves, coral reefs and sea grass beds. The workshop was held from 8-9 December 2003 as a part of the East Asian Seas Congress 2003.

The workshop was considered a timely event considering the mounting global problem of land-based pollution. Land-based activities contribute to most of the pollution load in the Seas of East Asia including municipal, industrial and agricultural wastes, run-off and atmospheric deposition. This will be exacerbated by the projected growth in population in the region. With the current level of sewage treatment in the region remaining low, the sewage from increased populations in concentrated areas will accelerate threats to public health at transboundary levels. Studies have shown that more than 500,000 infants in the region die each year as a result of waterborne diseases linked to dirty water. About 60 percent of these deaths are a consequence of the deficit in rural water supplies while another 30 percent are due to a lack of sanitation facilities in urban areas. To add to the problems, by 2015 it is estimated that an additional 665 million people will need access to basic sanitation services. Diverse activities such as agriculture, mining, timbering and land-clearing, and residential and commercial development are also on the rise and are polluting nearshore areas and bays and inlets and may also be affecting the main areas of large marine ecosystems.

The workshop emphasized that innovative and new funding mechanisms such as public-private partnerships are required for investment in environmental facilities and services in the region. According to World Bank figures, transfers of Official Development Assistance to developing countries averaged only US\$50 billion per year from 1990 to 1997 while private investment in developing countries ballooned from US\$50 to US\$250 during the same period. The workshop stressed that there is a big investment opportunity for the private sector in helping the region handle the massive challenges of reducing land-based pollution.

Another solution identified by the workshop lies in human behavior. For land-based pollution to be reduced, behavioral changes have to occur at the local and individual level. This highlights the importance of a continuous and targeted communications effort to make the public aware of pollution-causing practices and the negative effects of pollution to the environment.

The workshop also felt that ICM provides a very effective way for handling land-based pollution activities. ICM is a management framework that provides local government units with a mechanism and process to harmonize both the economic development and environmental management of marine and coastal resources. The workshop looked at PEMSEA's eight ICM demonstration sites and made mention of the sites' positive outcomes in managing land-based pollution.

The workshop was co-organized by PEMSEA and the United Nations Environment Programme-Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (UNEP-GPA) Coordination Office and was chaired by CRC Reef Research Centre Chief Executive Officer, Dr. Russell Reichelt.

## **Experts Conclude: Sustainable Fisheries and Aquaculture Difficult but Attainable**

PUTRAJAYA, MALAYSIA -- Reducing fishing activities, building rights-based and socially just ways of managing fisheries and developing aquaculture within a much enhanced and revised national policy framework is needed if any progress is to be made in sustaining fisheries and aquaculture in the East Asian region. These were the findings of the Workshop on Fisheries and Aquaculture held from 8-9 December 2003 during the East Asian Seas Congress 2003.

Over 100 experts attended the Fisheries and Aquaculture Workshop that examined food security issues, assessed the progress of the implementation of international agreements regarding sustainable fisheries, and looked into national and regional experiences and measures aimed at ensuring the sustainability of fisheries and aquaculture. The workshop recognized that saving fisheries to make them more sustainable to keep up with growing demands is among the greatest challenges in the region and that there were three critical actions that need to be taken.

The first critical action is to reduce fishing activities to achieve sustainability. The experts felt that while there are many ways to achieve reduction, none of them are easy. These measures include eliminating illegal fishing, cross-border fishing and unlicensed fishing – a difficult task given their political nature.

Building rights-based and socially just ways of managing fisheries was the second critical action recommended by the workshop. Fishing communities are often among the poorest in the region, and is often an overlooked sector given its marginal nature. The workshop called for building a much stronger advocacy for fisheries in the national agendas of countries in the region. If fishers are to be moved out of fishing to lessen fishing capacity, then it is only critical that feasible and locally sustainable alternative livelihoods be made available to them.

Thirdly, aquaculture should be done within a much enhanced and revised national policy framework. Aquaculture, often seen as the solution to all fisheries problems, is in itself facing numerous challenges. Coastal communities are the most affected by the negative effects of aquaculture development such as blocked access to coastal resources, pollution, privatization of public lands and water ways, fisheries decline, food insecurity, rural unemployment and urban migration. The participation of local stakeholders and governments in aquaculture operations is important in mitigating these negative effects. The workshop also stressed the need to integrate aquaculture into coastal zoning mechanisms to enhance management. The experts also revealed the need for governments to provide legal and organizational support for the aquaculture industry, an industry whose developments are moving very fast and ahead of government action.

The workshop was co-organized by the WorldFish Center and PEMSEA. The workshop was chaired by Former Philippine Senator, Dr. Leticia R. Shahani and co-chaired by Universiti Putra Malaysia Professor, Dato' Dr. Mohamed Shariff Mohamed Din. Former FAO Fishery Resources Officer, Dr. Purwito Martosubroto served as keynote speaker

during the workshop. Serving as panelists for the workshop were SEAFDEC Research Division Head Dr. Clarissa L. Marte, Director General of Malaysia's Department of Fisheries, Mr. Junaidi bin Che Ayub, FAO Aquaculture Officer Dr. Simon J. Funge-Smith, and WorldFish Center Program Leader for Coastal and Marine Resources Research, Dr. Johann D. Bell.

## **Lack of Funding and Leadership Threatens Biodiversity of East Asian Seas**

PUTRAJAYA, MALAYSIA -- Finding ways to fund conservation and having countries take the lead in marine biodiversity conservation are among the most important actions needed to prevent biodiversity loss in the East Asian Seas region. These are among the findings of the Workshop on Biodiversity held from 8-9 December 2003 as part of the East Asian Seas Congress 2003.

Over 100 international experts attended the workshop that aimed to provide insight into the value of marine biodiversity in the region as well as the national and regional efforts put forth thus far to protect its resources.

East Asia is considered the center of global marine biodiversity. Its coral, seagrass and mangrove ecosystems in particular, support a high diversity of associated species of plants and animals many of which provide a major food source for the people in the region and consequently, contribute significantly to the region's social and economic development. For instance, it is estimated that one-fourth of the world's marine fish production is contributed by East Asia.

But the region's biodiversity is in the red. Coral reefs are at risk from destructive fishing practices, pollution, the endangered species trade, and overfishing. Mangroves are disappearing due to deforestation, pollution and conversion for coastal development, and the same can be said for what ails the region's seagrass beds.

The Biodiversity Workshop felt that one of the most important conservation efforts is to actually find ways to fund conservation. The experts noted that for too long the conservation movement has seen economic activity as the enemy rather than as potentially part of the solution to being able to afford conservation. The workshop recognized emerging examples in innovative economic instruments such as diver's fees and conservation charges for use of parks. Funds gained from such instruments can then be used for conservation activities.

Another action that the workshop felt should be taken up in the region is to actually have the countries in the region take a strong lead in marine biodiversity conservation. Using the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) as a model for regional cooperation, the workshop recommended that East Asian countries take a leadership role in supporting the marine program of work proposed through the Convention on Biological Diversity, and the recommendations from the World Parks Congress related to Marine Protected Areas. The Biodiversity Workshop urged ministers of participating countries, to recommend the Seventh Conference of Parties for the Convention on Biological Diversity (CBD COP7) to mainstream the biodiversity elements of the SDS-SEA into CBD COP7 decisions.

Lastly, the workshop stressed the importance of selecting appropriate indicators to track and measure what is actually happening with the region's biodiversity. It recommended important indicators to monitor the overall progress of biodiversity conservation efforts

such as the use of migratory species like marine turtles and water birds as flagship indicators, as well as other key species such as coral, fish, seagrasses and mangroves.

The workshop was co-organized by the United Nations Development Programme-Global Environment Facility (UNDP-GEF) Regional Service Center Asia Pacific in Kuala Lumpur and PEMSEA.

GEF Regional Coordinator, Mr. Tim Clairs chaired the workshop and IUCN Regional Biodiversity Programme Asia Head, Dr. Balakrishna Pisupati served as keynote speaker. Serving as panelists for the workshop were ASEAN Secretariat Assistant Director, Dr. Raman Letchumanan, WWF Interim Ecoregion Coordinator, Dr. Jose A. Ingles and UNDP Jakarta Programme Officer, for Biodiversity/Ocean and Coastal Management, Mr. Raphael Bille.

## **Local Governments Practicing ICM Share Experiences on Sustainable Coastal Development**

PUTRAJAYA, MALAYSIA -- The Third Forum of the Regional Network of Local Governments Implementing Integrated Coastal Management (RNLG), was held on 9 December 2003, where representatives of local governments in PEMSEA integrated coastal management (ICM) national demonstration and parallel sites met to discuss key challenges and issues pertaining to sustainable coastal development, particularly in relation to the implementation of Agenda 21 and the World Summit on Sustainable Development Plan of Implementation. The State Government of Selangor, Malaysia, and the Port Klang ICM National Demonstration Project hosted the Forum, held as a side event of the East Asian Seas Congress 2003.

The RNLG Forum saw local government leaders share information, expertise, experiences and lessons learned in ICM application. It also identified feasible options for securing the long-term sustainability of the RNLG network's operation.

The conduct of study tours for knowledge sharing was a highlight of discussion during the forum. DPR Korea's General Bureau for Cooperation with International Organizations Senior Programme Manager, Mr. Ri Jun Ho stressed that organizing study tours for policy and decision makers to witness the benefit of ICM in successful areas can facilitate the implementation of ICM in other countries.

Xiamen University Professor, Dr. Huasheng Hong narrated the experience of Xiamen and the role of the International Training Center for Coastal Sustainable Development in educating decision-makers and ICM practitioners not only in PR China, but also throughout the region, via training courses and study tours. In this light, Selangor State Executive Counselor and Standing Committee for Housing, Local Government, Environment and Squatters Chairman, Dato' Haji Mohd Mokhtar bin Haji Ahmad Dahlan shared his experiences during the study tour in Xiamen and how he applied the lessons learned in Selangor. The Forum also suggested that a directory of ICM practitioners and experts be included in the PEMSEA website to facilitate communication among the network.

With regard to RNLG operations and sustainability, the Forum discussed options to strengthen and expand the network and ensure its continuity by establishing a good communications system using websites and e-groups, and promoting the sharing of experiences and capacity-building. Case studies were also seen as helpful in providing inputs for strategic policy options for governance and management of the seas. Indonesia Ministry of Environment Assistant Deputy to the Minister, Mr. Sodariyono stressed that securing strong support from national governments was important for an ICM project to succeed. He proposed that representatives from legislative/parliamentary branches of government be invited during RNLG Forums. He also read the official statement of Indonesia offering to be the host of the next RNLG Forum.

A field trip was conducted to Port Klang to share the experiences of the Port Klang ICM Demonstration Project. The trip included visits to Pulau Ketam, the West Port of Port Klang, Star Cruises Terminal and Putrajaya.

The RNLG was formally established by ten local governments implementing ICM in March 2001 in Seoul, RO Korea. Since then, each government has made progress and accumulated valuable experiences. Eminent examples include the development and adoption of coastal strategies, the conduct of environmental risk assessments, the strengthening of political support and leadership and the widening of public awareness and participation.

Current members of the network include the local governments of Bali, Indonesia; Batangas and Bataan, Philippines; Chonburi, Thailand; Danang, Vietnam; Klang, Malaysia; Nampo, DPR Korea; Sihanoukville, Cambodia; Shihwa, RO Korea; and Xiamen, PR China.

## **Experts Identify Scientific Support for Sustainable Development in East Asia**

PUTRAJAYA, MALAYSIA -- More than 30 scientists and international experts explored the best use of science in supporting sustainable development efforts during the Meeting of Experts to Identify Requirements for Scientific Support for the Seas of East Asia, held on 11 December 2003 during the East Asian Seas Congress 2003.

The scientists and experts endeavored to identify requirements for scientific and technical support for regional cooperation within the framework of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA). The meeting provided a valuable opportunity for them to exchange views on how science can be best utilized in the region particularly in the implementation of the SDS-SEA.

The experts identified ways and means to strengthen regional scientific and technical support for the Seas of East Asia. Among the strategies identified include setting up a roster of experts and directory of institutions; enhancing linkages between virtual campuses for distance learning; encourage the interest of the youth in scientific research; forming a committee of eminent scientists to stimulate, promote and advance science in the region; and establishing centers of excellence (i.e., academic and research institutions in the region that can take up specialized research, provide training, as well as expert advice to the region).

The meeting also explored mechanisms to enhance partnership-building among national and regional research institutions with government agencies and officials. The experts stressed the need to bridge the gap between science and policy explaining any scientific study that has management implications cannot fully attain its objectives in the absence of policy. The experts identified a number of measures to bridge the gap and enhance partnership-building. Among those measures are using integrated coastal management demonstration and parallel sites to catalyze partnership, cooperation and consultation among key stakeholders; exposing scientists to policy development and implementation process; policy makers and managers indicating short- and long-term scientific information needs, the resources available to support data collection and analysis and when the data is needed; and providing assistance to representatives of print, radio, and television media in disseminating the results of policy-relevant scientific research.

## **Media Practitioners Commit to Sustainable Development of the Seas of East Asia**

PUTRAJAYA, MALAYSIA -- Media practitioners in the Asian region adopted, on 11 December 2003, the Putrajaya Statement of Media Commitment on Sustainable Development of the Seas of East Asia, opening new opportunities for the media to enhance awareness, disseminate scientific and traditional knowledge and practices, and take the lead in organizing initiatives to support the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA).

The adoption of the Putrajaya Statement was a culmination of the Media Forum on Partnerships in Environmental Communication, a side event of the East Asian Seas Congress 2003. Over 24 journalists, broadcasters and communicators, representatives of international organizations and PEMSEA officers attended the Forum which provided a venue for exploring how media can do its part in the implementation of the SDS-SEA. The Media Forum was co-organized by the Asia Pacific Forum of Environmental Journalists (APFEJ) and PEMSEA.

The Forum revealed an information gap between local stakeholders and policy makers and scientists regarding coastal and marine environmental issues. It was agreed that media practitioners can play the role of “laymanizing” the technical aspects of integrated coastal management (ICM) and presenting them in a form most stakeholders would understand. This cannot happen effectively unless media capacity is enhanced. To this end, it was recommended that media practitioners participate in PEMSEA ICM study tours and that a manual on ICM be developed for journalists. It was also recommended that media practitioners visit their respective national PEMSEA ICM demonstration sites and work with the site’s technical staff to gain a better understanding of ICM.

The Forum also recommended that PEMSEA’s Website be further enhanced to provide information to media practitioners and that an E-group on ICM for journalists be created. This would enable journalists with ready and convenient access to information as well as serve as a venue for knowledge sharing between journalists from all PEMSEA participating countries.

Another recommendation that came out of the Forum was the development of a media strategy that can be implemented over a time frame. A media strategy can also serve to monitor the accomplishments of the media in terms of supporting the objectives of the SDS-SEA.

The Putrajaya Statement called for the media to:

- Enhance environmental awareness and dissemination of scientific as well as traditional knowledge and practices to mobilize stakeholders towards appropriate decisions and choices that would improve ocean governance in East Asia;
- Organize programs, projects, activities and events to deepen understanding and strengthen support for the implementation of the SDS-SEA; and

- Contribute, through APFEJ, in helping achieving measurable goals and outcomes that will serve as indicators of sustainable development and management of coastal and ocean resources.

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