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**Integrated Coastal  
 Management and  
 Sustainable Development of  
 Coasts and Oceans**

November 2015

# Investment Landscape Mapping in East Asia



Investment Landscape Mapping in East Asia:  
Integrated Coastal Management and Sustainable  
Development of Coasts and Oceans

November 2015

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PEMSEA Resource Facility  
P.O. Box 2502, Quezon City 1165, Philippines  
Tel: (+632) 929-2992 Fax: (+632) 926-9712  
Email: [info@pemsea.org](mailto:info@pemsea.org)  
[www.pemsea.org](http://www.pemsea.org)

## About the Research

This research paper seeks to understand and map current financial funding flows to integrated coastal management (ICM)-related sectors across the grants and investment capital spectrum. The range of funding comprises donors (both bilateral and multilateral), foundations, and corporate social responsibility initiatives at one end, and development finance institutions (DFI), corporations, impact investments and commercial investors, at the other. For recipients of financing, the destination of donor and private sector funding streams spans both coastal and environmental sectors generally, with particular focus on ICM.

The paper also identifies regional and country-level trends in ICM funding across ten related sectors, as recognized by Partnerships in Environmental Management for the Seas of East Asia (PEMSEA). The regional coordinating mechanism for the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), PEMSEA specializes in integrated coastal and ocean governance for the region.

Through a desk review of information and literature available in the public domain, the paper identifies the major funders, programs, areas of investment, types of investors, geographical preferences, and sizes of the investments deployed across ICM-related sectors in select countries of East Asia. The paper also analyzes the requirements, strategies, and expectations of investors and donors — as gleaned from information available in the public domain and Internet sources.

Guiding the research, a series of targeted questions refine the online searches to sharpen data collection and analysis:

- How are ICM initiatives currently funded? By whom and targeted to which countries?
- Which key programs channel resources for ICM? Into which key areas, initiatives, projects, and sectors?
- What criteria do investors and donors use to make funding decisions?
- Who are the major investors and what are the prominent funding vehicles used?

As pioneers and thought leaders in impact investing throughout the South and East Asian region, Impact Investment Shujog (Shujog) and its sister organization, Impact Investment Exchange (IIX), promote market-based mechanisms to complement traditional philanthropy in addressing the world's most pressing social and environmental issues. Shujog/IIX rely on their depth of knowledge and experience in the impact investing space in Asia to identify opportunities to catalyze investment growth for ICM-related sectors.

As part of PEMSEA's regional knowledge management platform, the Seas of East Asia Knowledge Bank, this research forms part of a broader collaboration between PEMSEA and Shujog/IIX to promote innovative financing mechanisms and impact investing to ICM and related sectors of sustainable development of coasts and oceans. A major focus of the regional knowledge management project will be on facilitating investment in ICM and blue economy through the use of specific knowledge products and services.

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## Acronyms

ADB	Asian Development Bank
AFD	Agence Française de Développement
AUM	Assets Under Management
B+WISER	Biodiversity and Watershed Improved for Stronger Economy and Ecosystem Resilience Project
CBO	Community Based Organization
CEPF	China Environmental Protection Fund
CNPC	China National Petroleum Corporation
CSR	Corporate Social Responsibility
DFAT	Department of Foreign Affairs and Trade (Australia)
DFI	Development Finance Institution
FPE	Foundation for the Philippine Environment
ICM	Integrated Coastal Management
IFC	International Finance Corporation
IIX	Impact Investment Exchange
IW	International Waters
GEF	Global Environment Facility
HNWI	High Net Worth Individual
JICA	Japan International Cooperation Agency
MDG	Millennium Development Goal
MPA	Marine Protected Area
PE	Private Equity
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PES	Payment for Ecosystem Services
PPP	Public Private Partnership
PTFCF	Philippine Tropical Forest Conservation Foundation, Inc.
SDS-SEA	Sustainable Development Strategy for the Seas of East Asia
SGP	GEF Small Grants Programme
Shujog	Impact Investment Shujog
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development
USCTIS	U.S. Coral Triangle Initiative Support Program
VC	Venture Capital

## Executive Summary

### Background

The coastal ecosystem across East Asia faces increasing threats that diminish the ecological health, environmental resilience and socioeconomic potential of such areas at the interface of land and sea. Available funds for ecosystem services and biodiversity remain small in comparison to the actual human cost of consuming, restoring, maintaining and managing such global commons. By some estimates, the financing gap exceeds at least US\$ 300 billion per year and may reach into the US\$ trillions.

PEMSEA mobilizes its Country and Non-Country Partners, donors and financial institutions to invest in an emerging blue economy across the seas of East Asia, whose coastal areas attract dense human settlements of over 1.5 billion people. Essential to this marketplace, ICM (which PEMSEA pioneered in the region) helps to address the governance of human activities affecting the sustainable use of goods and services generated by coastal and marine ecosystems. The sustainable growth of a blue economy closely aligns with conservation of ocean ecosystems. New funding options call for investments that balance financial returns with positive social and environmental impact that improves the health of coastal and marine areas.

This research paper aims to provide a high-level, macro landscape mapping of financial investments linked to ICM and sustainable coastal development activities. Investments in this respect refers to financial funding flows, whether through: (i) philanthropic donations given without return considerations; or (ii) capital in the form of debt, equity or its hybrid variations with some expectations of financial benefit. This investment landscape mapping looks to provide relevant partners and governments with a greater understanding of financial flows into ICM-related projects and initiatives, as well as the requirements and expectations of various investors, donor agencies and foundations across the grant and investment spectrum.

### Research Methodology

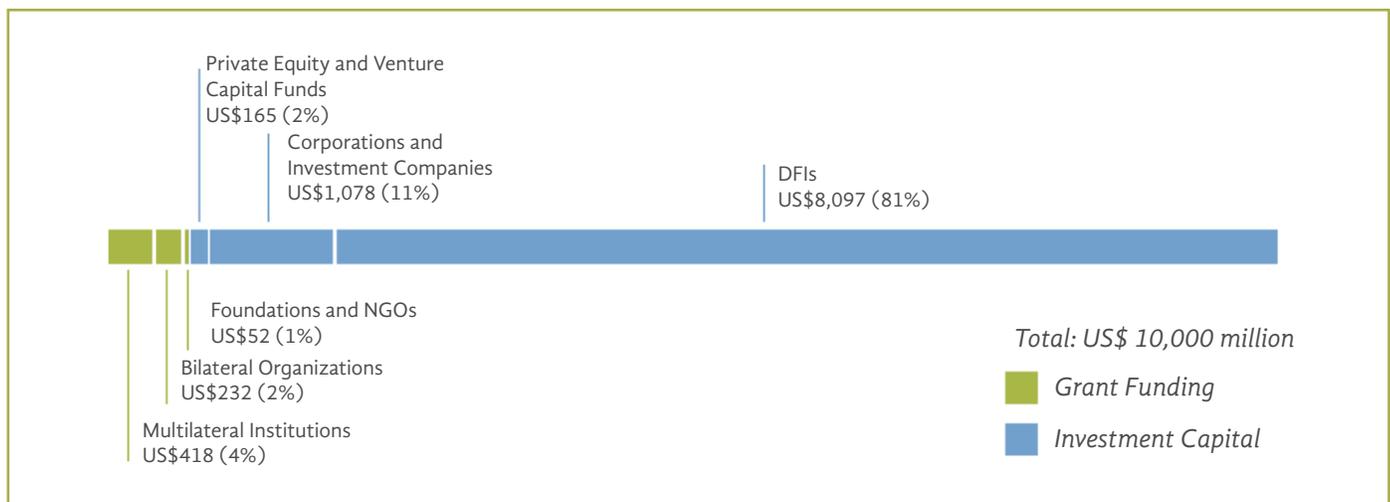
The investment landscape mapping relies on secondary research, with analysis and synthesis of existing reports, studies and other available market data. At one end of the spectrum, traditional philanthropy comprises donor grants derived from bilateral and multilateral sources, foundations, family offices and private corporations. Within the grant funding space, the research examines investment sourced domestically as well. For domestic donors, we focus on entities incorporated and controlled out of their specific countries of origin. At the other end of the spectrum, investments divide into either commercial funding (e.g., DFIs, institutional investors) or impact investments (focused on financial and social returns). The research focuses on eight countries receiving development assistance for scaling up ICM under the GEF/UNDP/PEMSEA project “Scaling up the Implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA),” including Cambodia, PR China, Indonesia, Lao PDR, the Philippines, Thailand, Timor-Leste, and Vietnam. The time-horizon for the study extends over a ten-year period (2005-2015). The year of funding reflects the initial timing of commitments, irrespective of time horizons for actual disbursements.

This paper focuses on charitable grants and financial resources invested in projects and initiatives in ICM-related sectors. To delineate the contours of ICM initiatives, PEMSEA classifies potential investments and donor interventions across ten focus sectors. For the purposes of this report, focus is given on funding flows that directly relate to coastal and marine ecosystems within these ICM-related sectors. The mapping exercise involves an exhaustive Internet search, collection, summary, and synthesis of publicly available information and datasets. Secondary sources derive from various online publications, including previous research reports, newspaper and magazine articles, journal content, press releases, and various websites of governments, donors, investors, foundations, and other funder sources. In total, the research references over 1,000 online sources. There are still gaps in the coverage, but the trends remain relevant.

## Key Findings

- Over the past decade, investments into ICM activities topped an estimated US\$ 10 billion in the countries under review. Across the investment landscape of ICM, investments with expectations of financial returns greatly outpace donor funding.
  - ICM priorities for **donors** include: (i) enterprise and livelihood development; (ii) habitat protection, restoration, and management; (iii) fisheries and food security; and (iv) ICM development and implementation. In terms of investment geography, three individual countries absorb over half of all donor funding identified in the study: Indonesia, Vietnam and the Philippines. Focused on transboundary issues, regional programs across East Asia also receive significant donor funding.
  - Areas of interest for **commercial investors** include: (i) water use and supply management; (ii) pollution reduction and waste management; and (iii) natural and man-made hazard prevention and management. Of the countries under review, ICM-related programs and initiatives benefit predominantly Vietnam, China, Indonesia and the Philippines.

## Grant Funding and Investment Capital to ICM-related Sectors, Select Countries, 2005-2015 By Donor Category, Estimates of Committed Funds (in US\$ million, % of total)

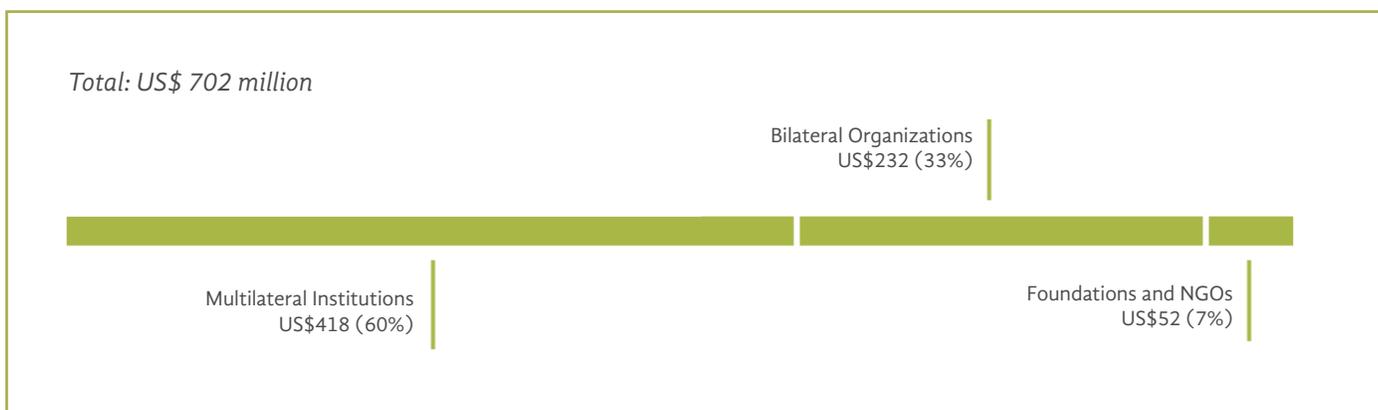


## Grant Funding

- Over the period 2005-2015, the countries studied in this report were home to over 420 donor-funded projects and initiatives from some 30 international donor organizations with grants in excess of US\$ 702 million of financial commitments.
  - From the three donor categories, **multilateral institutions** provided more than half of all ICM-related funding. The size of committed funds from multilaterals amounted to some US\$ 418 million. Major ICM areas of interest include: i) ICM development and implementation; ii) enterprise and livelihood development; iii) pollution reduction and waste management; iv) habitat protection, restoration, and management; and v) natural and man-made hazard prevention and management. By size of committed funding, Global Environment Facility (GEF), the World Bank and the United Nations Development Programme (UNDP) together account for nearly all of this funding. Multilateral grants support regional projects across East Asia, as well as with the individual PEMSEA Country Partners.

- Funding from **bilateral organizations** reached upwards of US\$ 232 million. Sectoral areas of interest encompass: (i) ICM development and implementation; (ii) fisheries and food security; (iii) coastal transport; and (iv) natural and man-made hazard prevention and management. In absolute terms, the U.S. Agency for International Development (USAID) and Australia’s Department of Foreign Affairs and Trade (DFAT) together account for over half of all these bilateral funds channeled to ICM-related sectors. Major destinations for ICM resources include the Philippines, Vietnam, Indonesia and Cambodia.
- **Foundations and NGOs** make up the smallest category of international funders, with a total commitment estimated at US\$ 52 million. Most of this funding is directed towards habitat protection, restoration, and management — close to four-fifths. By funding size, prominent private foundations include: the National Fish and Wildlife Foundation and the MacArthur Foundation.

### International Grants to ICM-related Sectors, Select Countries, by Donor Category, 2005-2015 Estimates of Committed Funds (in US\$ million, % of total)



3. For most countries in this study, limited data and funding levels exist for specific ICM-related programs and initiatives from **domestic charities**. For ICM-related sectors, domestic grant funding remains relatively small, as with much of homegrown philanthropy overall. Nonetheless, the region boasts over 3.3 million high net worth individuals (HNWIs) increasingly linked to growing, individual philanthropic gestures. From available data, China and the Philippines boast arguably the most active domestic forms of charitable giving into ICM-related causes. As such, data on domestic grant funding in much of Asia likely under-reports actual charitable giving. Scalable, market-oriented solutions more and more attract the attention of Asian philanthropists. This approach may also apply to ICM-related sectors.

4. In terms of trends, multilateral institutions commit grants consistently on a yearly basis, with GEF typically the largest component. Across many projects and programs, donors tend to link efforts to strengthen coastal areas with environmental challenges like climate change and biodiversity. Bilateral funding more and more aligns with diplomatic efforts and takes on geopolitical considerations, as evidenced by DFAT absorbing AusAid. Specific bilateral trends in ICM (as with broader foreign assistance) reflect wider geopolitical considerations.

### Investment Capital

5. In the last decade, countries analyzed in this report welcomed an estimated 111 ICM-related investments from 23 investors providing upwards of US\$ 9.3 billion in financial commitments.

- Of the three investor categories, **DFIs** dominate ICM-related funding by a wide margin. Their ICM investments reached an estimated US\$ 8.1 billion. The sectoral interest of DFIs include: (i) water use and supply

management; (ii) pollution reduction and waste management; and (iii) natural and man-made hazard prevention and management. In absolute terms, the World Bank, Asian Development Bank (ADB), and Japan International Cooperation Agency (JICA) together account for almost all of these DFI funds. Major destinations of DFI investments include Vietnam, China and Indonesia.

- Providing some US\$ 1.1 billion of financing, the second ICM investor type consists of **corporations and investment companies** taking equity stakes. Focused on only the Philippines and Vietnam, these investors tend to make one-off investments in ICM projects. Investors committed funds to a variety of private sector enterprises and initiatives in the ICM sphere, including seafood processing companies, desalination and waste treatment technology, ecotourism initiatives and coastal energy projects.
- A nascent investor group in ICM across East Asia, **private equity and venture capital funds** began making initial investments into the sector only within the last five years. Total investments reach an estimated US\$ 165 million for the countries under review. Private equity activity in the ICM sector remains fairly limited so far. Yet, the recent emergence of a number of fund vehicles with a focus on investing in marine ecosystems and aquaculture indicates their interest in playing a more prominent ICM role, going forward.

### Investment Capital to ICM-related Sectors, Select Countries, by Investor Category, 2005-2015 Estimates of Committed Funds (in US\$ million, % of total)



6. Related to ICM sectors (for coastal transport), **port investments** receive large capital infusion and continuous upgrades, particularly for a region heavily reliant on world trade. Individual investments typically exceed US\$ 100 million. Over the past decade for the countries under review, the research identifies 26 projects to have received investment capital in port-related, coastal transport activities. These deals sum to an estimated US\$ 19 billion. In the near future, more port developments will continue to attract private equity investments for capital expansion and facilities upgrades.

### Notable Trends

7. In ICM-related sectors for the countries studied, **impact investing** remains largely unrealized. Impact funds continue to be formed, but the research points to no discernible investment commitments. A very small percentage of such investors have either made investments (or plan to make in the near future) in conservation across East Asia. Investors in conservation largely seek opportunities in North America and Europe. Harnessing the power of entrepreneurship, innovation and capital for public good, impact investing offers new and creative financing options for ICM projects and an ocean-based blue economy at local, national, and regional levels.

8. Impact investors globally are recognizing both the financial and social impact potential of **fisheries**. Realizing this opportunity, several initiatives aim to channel impact investments towards the fisheries sector. Leading donors are playing their part by increasing awareness and calling impact investors to action. The sector is now primed for impact investments with several new funds, as well as traditional impact investors becoming increasingly more involved in the sector.

9. With the increasing attention being paid to the potential of conservation finance and sustainable fisheries and aquaculture, the universe of investors active in ICM is likely to continue growing. **Notably missing from the ICM investment landscape in East Asia, so far, are large institutional investors** (traditionally pension funds, endowments, and insurance companies), family offices and HNWIs. Institutional investors tend to be risk-averse in their investment strategy and their hesitance to commit to ICM projects could possibly be due to the relatively uncharted nature of the East Asian ICM landscape as a destination for private investment.

10. In the ICM sectors, the **public-private partnership** (PPP) financing model has produced mixed results. Experience from PEMSEA points to the following issues: (i) credible and sustainable cost-recovery mechanisms; (ii) procurement process; (iii) tensions in central-local government relations; and (iv) local capacity and public awareness of PPP models. More integrated and comprehensive approaches and studies are needed to package and promote PPP projects in ICM sectors, and a number of barriers still exist to establishing more successful PPPs.

11. Investors frequently cite **difficulties in sourcing high-quality investable deals** as an important factor in preventing them from actively participating in the ICM sectors. This issue confronts the broader impact investing space overall. A lack of track record, few examples of successful investments, capriciousness of local politics, issues of rights and tenure, and untested revenue models have all conspired to limit the potential of ICM, even from the most patient of private capital.

12. The recent emergence of climate investment funds, development impact bonds, debt-for-nature swaps, payments for ecosystem services, biodiversity offsets, and revolving loan funds, among others, point to **creative mechanisms** that can scale initiatives for sustainable coastal and marine ecosystems. To make full use of innovative financial mechanisms, ICM projects and related initiatives look increasingly to adopt market-based approaches to complement existing public resources, philanthropy, and foreign aid. Yet, such a transformation remains at an early stage of development and requires a catalyst to take ICM projects to the next level.

## Recommendations

13. **Awareness building** efforts are needed, targeting both the wider investment community and impact investors in particular. Proponents of coastal and marine projects need to build greater awareness about the potential financial, social, and environment impact of ICM-related investments through established case studies, authoritative research, events and conferences. Investor education around: (i) the urgency and need for ICM investments; (ii) awareness about both the financial returns and social impact, (iii) initiatives that highlight a pipeline of potential deals; and (iv) innovative financing and partnership mechanisms in ICM could help catalyze impact investments in the sector.

14. Many ICM-related projects seeking investment capital in East Asia are at the early stage, with proof of concept still developing. **Incubator and accelerator services** or technical assistance programs helping promising ICM-related enterprises to become investment-ready could also generate a healthy pipeline for investors interested in sustainable development of coasts and oceans. **Investment-readiness support** can strengthen ICM-related projects to meet the expectations of impact investors. Such investment readiness services can provide a point of entry for ICM-related projects to open doors to the wider investor community.

15. A **knowledge management platform** can help identify gaps and barriers to investment in coastal and marine sustainable development. PEMSEA is developing a Seas of East Asia Knowledge Bank, which can facilitate investment in ICM and a blue economy through the use of specific knowledge products and services.

16. The mapping exercise only begins to sketch the broad outlines of the investment landscape for ICM. Large gaps in knowledge and understanding of investor trends remain, requiring strategic use of primary research to

expand upon these initial findings. This paper offers a starting point to explore ways to scale up investments in ICM-related sectors. With **more research**, the knowledge gap in the investment landscape for ICM can narrow, providing meaningful data to inform investment decisions from donors and private investors alike. A research agenda should include in-depth primary data collection, interviews with ICM project proponents and surveys with investors, donors and policymakers on ways to strengthen sustainable development of coasts and oceans.

The paper begins to chart the landscape of investments in ICM and thus deepens the conversation around efforts to scale investments in ICM-related sectors. The first step in this dialogue involves identifying gaps in understanding, which this paper starts to address. But more such efforts are needed. To succeed and scale, ICM-related activities require a broad and detailed landscape of investment flows that connects ICM project proponents with relevant investor networks.



# I. Integrated Coastal Management and the Emerging Blue Economy

This research paper aims to provide a high-level, macro landscape mapping of financial investments linked to ICM and sustainable coastal development activities. Investments in this respect refers to financial funding flows, whether through: (i) philanthropic donations given without return considerations; or (ii) capital in the form of debt, equity or its hybrid variations with some expectations of financial benefit.<sup>1</sup> The paper provides a starting point to deepen the conversation around efforts to scale investments in ICM-related sectors. The first step in this dialogue involves identifying gaps in understanding, which this paper begins to address.

This first section provides background on PEMSEA and its ICM mandate within an emerging blue economy. The next section provides an overview of the research methodology and defines the scope of ICM financing under review. In the third section, the paper delves into the geography of ICM-related grants and donations in select countries across East Asia. The fourth section explores market-based instruments deployed — and currently in development — to support the sustainable growth of coastal economies and marine ecosystems. The paper then analyzes emerging trends around the investment landscape, with the aim of highlighting the general risk appetite of investors, their growing (or declining) interests, opportunities, challenges, and concerns related to greater private financing for ICM-related sectors and sustainable marine ecosystems. Based on the gaps and trends identified in this study, the conclusion then suggests intervention and research areas to explore market-based instruments that can scale sustainable development of coasts and oceans.

## A. PEMSEA and Integrated Coastal Management (ICM)

The coastal ecosystem across East Asia faces increasing threats that diminish the ecological health, environmental resilience and socioeconomic potential of such areas at the interface of land and sea. As an international organization, PEMSEA specializes in integrated coastal and ocean governance for the region. Comprising 11 Country and 20 Non-country partners, PEMSEA's multistakeholder arrangement implements the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) to protect coasts and oceans in the region.

In its commitment to this framework, PEMSEA mobilizes Country and Non-country partners, donors and financial institutions to invest in an emerging blue economy across the Seas of East Asia, whose coastal areas attract dense human settlements of over 1.5 billion people. Essential to this marketplace, ICM (which PEMSEA pioneered in the region) helps to address the governance of human activities affecting the sustainable use of goods and services generated by coastal and marine ecosystems.

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<sup>1</sup> "Investment," as defined for this study, covers a range of potential entities that could provide capital, e.g., foundations, impact investors or development banks. These investments could come in several forms including outright grants, equity investment and debt instruments. Investments could include any number of activities falling under ICM that require input of investment capital to succeed or scale.

Its activities address a wide range of issues, such as biodiversity conservation, natural and man-made hazards, pollution, food security and poverty alleviation, among many others.<sup>2</sup>

Directly linked to human activities, the health of the oceans continues to deteriorate. Mangrove forests have been reduced to 30–50% of their historical coverage.<sup>3</sup> The South China Sea alone harbors 35 pollution hotspots. Globally, 20% of coral reefs have been lost, with 88% of reefs in Southeast Asia under threat. As of 2011, 90% of global fish stocks were overfished or fully fished.<sup>4</sup> To address these issues, financial commitments are insufficient to the tasks at hand. Available funds for ecosystem services and biodiversity remain small in comparison to the actual human cost of consuming, restoring, maintaining and managing such global commons. By conservative estimates, the financing gap exceeds at least US\$ 300 billion per year.<sup>5</sup> Yet, this funding mismatch reveals the socioeconomic contributions of the oceans as grossly undervalued. Specific to coastal and marine conservation, funding for biodiversity and ecosystem services remains inadequate in absolute terms, duration, and mix of revenue streams. Coastal and oceanic environments are valued conservatively at US\$2.5 trillion annually.<sup>6</sup>

As part of its mandate, PEMSEA seeks to realize adequate funding to develop and sustain commitments to the SDS-SEA and ICM scaling up programs. Specific actions include efforts to:

- Strengthen investments in the blue economy that meet the demands of local communities; and
- Apply innovative financial mechanisms and economic incentives to strengthen the protection and management of coastal/marine ecosystems.

By helping to unlock capital for investment in ICM-related sectors, PEMSEA promotes pioneering strategies and approaches to help address the funding gap that emerging financing options such as impact investing can help fill. This investment landscape mapping looks to provide relevant partners and governments with a greater understanding of financial flows into ICM-related projects and initiatives, as well as the requirements and expectations of various investors, donor agencies and foundations across the grant and investment spectrum.

## B. Aspirations of a Blue Economy

As defined by PEMSEA, the blue economy refers to the set of environmentally, socially and economically sustainable commercial activities, products, services and investments dependent on — and impacting — coastal

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<sup>2</sup> Thus far, PEMSEA has applied ICM in over 40 sites across the region, along 31,000 km of coastline, and to the benefit of over 146 million inhabitants living in coastal and watershed areas.

<sup>3</sup> “Blue Economy Paper,” United Nations, <https://sustainabledevelopment.un.org/content/documents/2978BEconcept.pdf>

<sup>4</sup> Food and Agriculture Organization of the United Nations (FAO), “World review of fisheries and aquaculture,” Part 1 in *The state of world fisheries and aquaculture: Opportunities and challenges*. Rome: FAO, 2014,, 7, <http://www.fao.org/3/a-i3720e/i3720e01.pdf>.

<sup>5</sup> See, Bos, M., R.L. Pressey, and N. Stoeckl. *Marine conservation finance: The need for and scope of an emerging field*. 114, *Ocean and Coastal Management*, 2015, 116-28. By other estimates, the annual funding gap in global conservation exceeds US\$7 trillion.

<sup>6</sup> Hoegh-Guldberg, O. *Reviving the Ocean Economy: The case for action – 2015*. Gland, Switzerland: WWF International, 2015, 60, <https://www.worldwildlife.org/publications/reviving-the-oceans-economy-the-case-for-action-2015>.

and marine resources. The seas of East Asia support over 30% of the world's coral reefs and mangroves;<sup>7</sup> supply over 32 million tons of annual fish catch;<sup>8</sup> produce over 80% of the world's aquaculture; host 9 of the world's 10 busiest container-shipping seaports and boast some of the fastest growing economies.

The goods and services generated by coastal and marine ecosystems contribute appreciably to the economies of East Asia (10-20% of GDP for some countries).<sup>9</sup> Still, the economic contribution of oceans remains vastly undervalued for most countries, especially in the tropics, where many marine conservation activities take place.

As such, an emerging blue economy calls for innovative financing options that not only help fill the funding gap but also promote well-managed ocean and marine ecosystems. The sustainable growth of a blue economy closely aligns with conservation of ocean ecosystems. New funding options call for investments that balance financial returns with positive social and environmental impact that improves the health of coastal and marine areas.

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<sup>7</sup> Chua, T.-E., *The Dynamics of Integrated Coastal Management*. Quezon City, Philippines: PEMSEA, 2006), 42.

<sup>8</sup> Food and Agriculture Organization of the United Nations (FAO), *Challenges to International Waters - Regional Assessments in a Global Perspective*. Rome: FAO, 2014, 223, <http://www.fao.org/3/a-i3720e.pdf>.

<sup>9</sup> See Economist Intelligence Unit. *The Blue Economy: Growth, opportunity and a sustainable ocean economy*. EIU briefing paper for the World Ocean Summit 2015, 2015. In 2014, China's ocean economy accounted for 10% of its GDP. For Indonesia and other low-middle-income countries with sizeable large ocean territories, estimates of their ocean economy reach about 20% of GDP.

## II. Methodology – Desk Review

A desk review provides a reasonable starting point to understand the current landscape of investment flows to ICM-related sectors in East Asia. This research depends on data from secondary sources and is subject to availability of information.

### A. Approach

The investment landscape mapping relies on secondary research, with analysis and synthesis of existing reports, studies and other available market data. The desk review identifies major market participants (such as investors and organizations engaged in ICM activities) and general investment trends across the region. This landscape study includes the whole spectrum of private sector and donor investments in the space — from DFIs, donors, high net worth individuals (HNWIs), institutional investors and impact investing, among others. The systematic review allows for a mapping of major investments and identification of regional funding trends. See Figure 1 for a schematic overview of this spectrum.

Figure 1: Spectrum of Investor Institutions



Source: Adapted from Emerson, 2003

### 1. International Grant Funding

At one end of the spectrum, traditional philanthropy comprises donor grants derived from bilateral and multilateral sources, foundations, family offices and private corporations. In many instances, international donors channel grants to local organizations and foundations. To avoid double counting, domestic grant funding was analyzed separately from international funding. For example, GEF typically supports local organizations that may provide sub-grants to other organizations. In such instances, international grants and domestic ones may present some overlap.

Specific to international grant funding, data by projects were compiled rather than by lump aggregations from various sources. The grant-funding ecosystem is complex, with each stakeholder taking on multiple roles. For instance, the World Bank receives funding from bilateral donors and, in turn, provides funding for GEF. By considering the sources of grant funding in isolation, the paper would have encountered three-forms of double counting: World Bank, bilateral donors and GEF. To ensure a comprehensive set of data, the research applies the

following approach for the desk review on international grant funding (See Table 1).

**Table 1: Approach to Desk Research, International Grant Funding**

Step	Stage	Description
1	Multilateral institution and bilateral organizations	<ul style="list-style-type: none"> <li>Identify a list of key multilateral and bilateral donors active in environment/coastal sectors</li> <li>Conduct research on and filter all relevant projects funded by each donor on its website</li> <li>Apply keywords to perform filter function, including country name, segment name and words, as well as other additional keywords (e.g., coastal, marine, biodiversity, eco, environment, fish, habitat, sea, ocean, hazard, flood, wetland, hydro, pollution, water and route, among others)</li> </ul>
2	Private donors	<ul style="list-style-type: none"> <li>Identify a list of key environment/coastal private donors, including foundations, networks, academic organizations</li> <li>Conduct research on and filter all relevant projects funded by each donor on donor website</li> <li>Apply keywords to perform filter function, as mentioned above</li> </ul>
3	Country	<ul style="list-style-type: none"> <li>Perform country-specific desktop research to identify all relevant projects</li> <li>Filter relevant projects</li> </ul>
4	ICM-related sectors	<ul style="list-style-type: none"> <li>Perform segment-specific desktop research to identify all relevant projects</li> <li>Filter relevant projects</li> </ul>
5	Organization and Clean-up of Data	<ul style="list-style-type: none"> <li>Organize and filter list to remove repeated listings</li> <li>Standardize all displayed currencies to USD</li> <li>Ensure only projects relevant to coastal management are kept</li> <li>Ensure all categorization of projects are appropriate and uniformed across data</li> </ul>

Some funders do not display funded projects on their website (e.g., United Kingdom), while others only provide a subset of funded projects. The United Nations Development Programme (UNDP) only provides available information in 2010-2013.

## 2. Domestic Grant Funding

Within the grant funding space, the research examines investment sourced domestically as well. Most organizations in East Asia working on ICM-related projects and programs represent regional and country offices of international foundations and corporations. These organizations are included in the international funding analysis, even if their local offices manage and disburse the funds within the countries. For domestic donors, we focus on domestic entities incorporated and controlled out of their specific countries of origin. To obtain domestic donor data for each country, the methodological approach outlined in Table 2 was applied.

**Table 2: Approach to Desk Research, Domestic Grant Funding**

Step	Stage	Description
1	Local Government	<ul style="list-style-type: none"> <li>Visit each country's environment departments/ministry and coastal/marine agencies' website.</li> <li>Review programs that are ICM-related and list key environment/coastal project partners.</li> <li>Conduct research to filter all partners who fit the domestic donors category by visiting each partner's website.</li> </ul>
2	News	<ul style="list-style-type: none"> <li>Review each country's national newspaper (online version) and apply keywords to perform filter function, including sector name and keywords such as coastal and marine projects/programs.</li> <li>Filter partners who fit the domestic donors category by visiting each partner's website.</li> </ul>
3	Top Corporations	<ul style="list-style-type: none"> <li>Review top corporations per country, as indicated by Forbes list as of 2015.<sup>10</sup></li> </ul>
4	Domestic Donors	<ul style="list-style-type: none"> <li>Conduct further screening by reviewing their program descriptions, news articles, and sustainability reports.</li> <li>List all relevant projects, including programs/activities supported through cash donations, in-kind support and volunteer support.</li> <li>Collect details on how the donor engages in monitoring and evaluation, as gleaned from available information on their website and sustainability reports.</li> </ul>
5	Organization and Clean-up of Data	<ul style="list-style-type: none"> <li>Organize all data collected per country, per sector — i.e., non-profit organization, corporation or philanthropic arm (or corporate foundation), per ICM program theme, and type of support in the project (i.e., cash donations, in-kind support, and volunteer support).</li> <li>Standardize all displayed currencies to USD</li> <li>Ensure only projects relevant to coastal management are kept.</li> <li>Ensure all categorization of projects are appropriate and uniformed across data.</li> </ul>

This domestic dataset is subject to available information. For the study, domestic donors are defined as corporations: (i) registered either as for-profit or non-profit entities in the focus countries of this research; and (ii) providing charitable giving. Any entity that has a local presence (in the countries under review) but operates in other countries is excluded from the data collection. Data is also subject to online presence and English language limitations. In countries such as China, Indonesia and Thailand, for example, many domestic donors that may operate in ICM-related sectors have limited Internet presence. Some provide sustainability reports but publish only in local languages. Some domestic donors provided in-kind support (e.g., mangrove seedlings/trees, employee volunteers) on ICM projects, rather than its financial support or equivalent. This information was not included in the dataset.

<sup>10</sup> A list of top corporations is only available for countries such as China, Indonesia, Thailand, Philippines, and Vietnam. Cambodia, Timor-Leste and Lao PDR do not list corporations in the Forbes website.

### 3. Investment Capital

At the other end of the spectrum, investments divide into either commercial funding (e.g., DFIs, institutional investors) or impact investments (focused on financial and social returns). In the approach to mapping the ICM investor landscape, this desk review first identifies the major DFIs active in East Asia before proceeding to analyze raw DFI project data to determine which of these institutions engage in ICM-related activities. Some institutions provide both loans and technical assistance (TA) grants associated with those loans. To avoid double counting on the donor side, this study further separated DFI loans and investments from grants and donations. With regard to JICA and the other DFIs, we distinguish grant funding from investment funding by looking at the finance structures for each project. All projects not grant-financed are classified as investments (e.g., debt/equity funded). Similarly with corporations, any non-CSR and non-corporate philanthropy transactions are included in the investment category. From available information, this distinction is noted appropriately along the grant/capital spectrum. Next, a systematic country-specific search identifies domestic investment activity as well as investments from corporations and private equity funds. Rigorous online searches were conducted based on each ICM-related sector in order to capture any funding flows that may have been overlooked. Data collection efforts also include examining industry publications and reports and scrutinizing sector-specific databases. Companies determined as lacking in sustainable practices (e.g., reporting, internal guidelines) are excluded from the dataset and subsequent analysis.

#### B. ICM-related Sectors in Sustainable Development of Coasts and Oceans

Pioneered in East Asia by PEMSEA, ICM involves a systematic process for managing competing issues in coastal and marine areas, including diverse and multiple uses of natural resources. PEMSEA emphasizes effective governance, active partnerships, practical coordinating strategies, sustainable financial resources and strengthened capacities (both technical and institutional). Numerous stakeholders, resources and strategies must align to make ICM effective. This paper focuses on charitable grants and financial resources invested in projects and initiatives in ICM-related sectors. To delineate the contours of ICM initiatives, PEMSEA classifies potential investments and donor interventions across ten focus sectors as shown in Table 3 below. See Appendix E for a detailed list of projects and investments identified as ICM opportunities by PEMSEA partner countries under each related sector.

**Table 3: Categorization of ICM-related Sectors for Research**

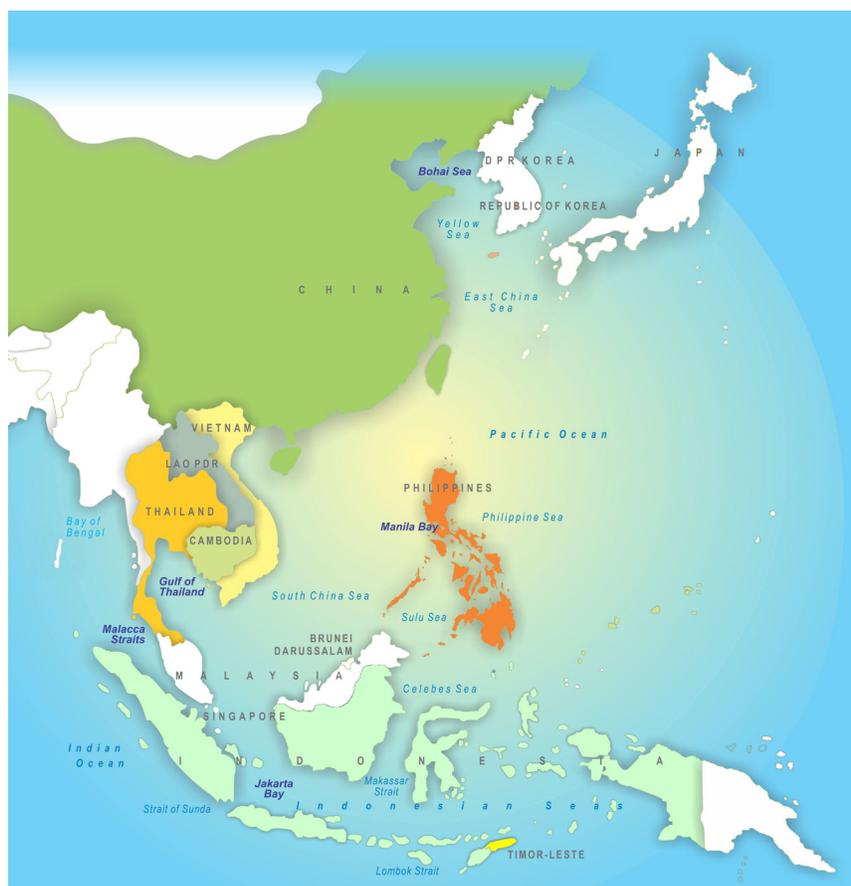
ICM-related Sectors				
Coastal Transport	Energy	Fisheries and Food Security	ICM Development and Implementation	Pollution Reduction and Waste Management
Ecotourism/ Sustainable Tourism	Enterprise and Livelihood Development	Habitat Protection, Restoration, and Management	Natural and Man-made Hazard Prevention and Management	Water Use and Supply Management

For the purposes of this report, focus is made on funding flows that directly relate to coastal and marine ecosystems within these ICM-related sectors. Categorization of projects present challenges in some instances. The research team uses discretion in determining the relevance of projects to ICM causes and sustainable development of coasts and oceans. Some projects incorporate multiple ICM-related sectors. In which case, we designate the most relevant or prominent sector for the project. For example, in the energy sector, the analysis focuses on energy investments in coastal or marine areas. Investments and interventions that may be a part of one of the ten sub-sectors but do not directly affect marine or coastal sustainability are excluded from the study. Under this criteria for the study, hydropower and water irrigation projects are mostly excluded from analysis,

given their focus on inland development. As an organization, PEMSEA does work with inland development that impacts coastal areas downstream. As part of coastal transport, we analyze port investments separately, so as not to skew the data too heavily towards conventional infrastructure development indirectly relevant to ICM or sustainable development of coasts and oceans.

### C. Focus Countries of Report

The investment landscape mapping includes those countries in East Asia where available data exists in the public domain. The research focuses on eight countries receiving development assistance for scaling up ICM under the GEF/UNDP/PEMSEA project “Scaling up the Implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA),” including Cambodia, China, Indonesia, Lao PDR,<sup>11</sup> Philippines, Thailand, Timor-Leste, and Vietnam.



<sup>11</sup> The connection to Lao PDR and ICM occurs through the Mekong River feeding into and affecting coastal and marine areas.

#### D. Period of Study

The time horizon for the study extends over a ten-year period (2005-2015). The year of funding reflects the initial timing of commitments, irrespective of time horizons for actual disbursements. Observations about future and potential investment trends add context and project a forward-looking perspective. If relevant ICM projects do not specify dates of funding commitments, they are excluded from the dataset and ensuing analysis.

#### E. Challenges in Parsing Data

In many instances, DFI and regional donor funding to East Asia present significant challenges to disaggregate funding levels across ICM sectors and countries. If the data lacks granularity, these regional investment and donor commitments are analyzed separately at the regional level only. Funding from APEC (Asia-Pacific Economic Cooperation) is treated separately as a regional East Asia project, given the difficulties of disaggregating information and funding levels at the national level. More challenging still, some regional projects span several countries, some not in Asia. Nor do most regional projects specify the country-allocation of sub-funds. In these instances, the research team makes estimates and judgments of the geography of funding destination.

The mapping exercise involves an exhaustive Internet search, collection, summary, and synthesis of publicly available information and datasets. Secondary sources derive from various online publications, including previous research reports, newspaper and magazine articles, journal content, press releases, and various websites of governments, donors, investors, foundations, and other funder sources. In total, the research references over 1,000 online sources.

The database is limited to listings of projects made available, mentioned, and publicized online, as well as projects where grant sums and important details are listed to determine their relevance to ICM and sustainable development of coasts and oceans. From the desktop research, there may be a bias towards projects that are publicized. Therefore, large and active private donors may have been excluded. For instance, the David and Lucile Packard Foundation appears to support a wide array of socio-environment causes and projects. In particular, for its focus on ocean-related work, the foundation strongly supports marine fisheries worldwide.<sup>12</sup> However, detailed information on grant projects are not available. Therefore, the investment flows into ICM are likely to be higher. And data analysis provides a sense of where flows are coming from and going to — as well as their relative distributions.

Various search engines provide an entry point to analyze and filter the vast amount of online data. A systematic country-specific search identifies domestic investment activity as well as investments from corporations and private equity funds. In addition, we rely on prior research conducted by PEMSEA on ICM initiatives in the region. This desk-based research provides a high-level mapping of potential investment flows for ICM interventions and coastal sustainable development projects throughout the East Asian region. As such, the research excludes investments that are majority owned by government-owned and controlled corporations, parastatal entities, and state-owned enterprises in recipient countries. This exclusion may impact results from Vietnam and China, given their large public sector and its role in the economy.

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<sup>12</sup> “Conservation and Science Program: Marine Fisheries Strategy Brief,” David and Lucile Packard Foundation, 2013, <http://www.packard.org/wp-content/uploads/2014/02/Marine-Fisheries-Strategy-Brief-FINAL.pdf>

# III. Grant Funding

## A. International Donors

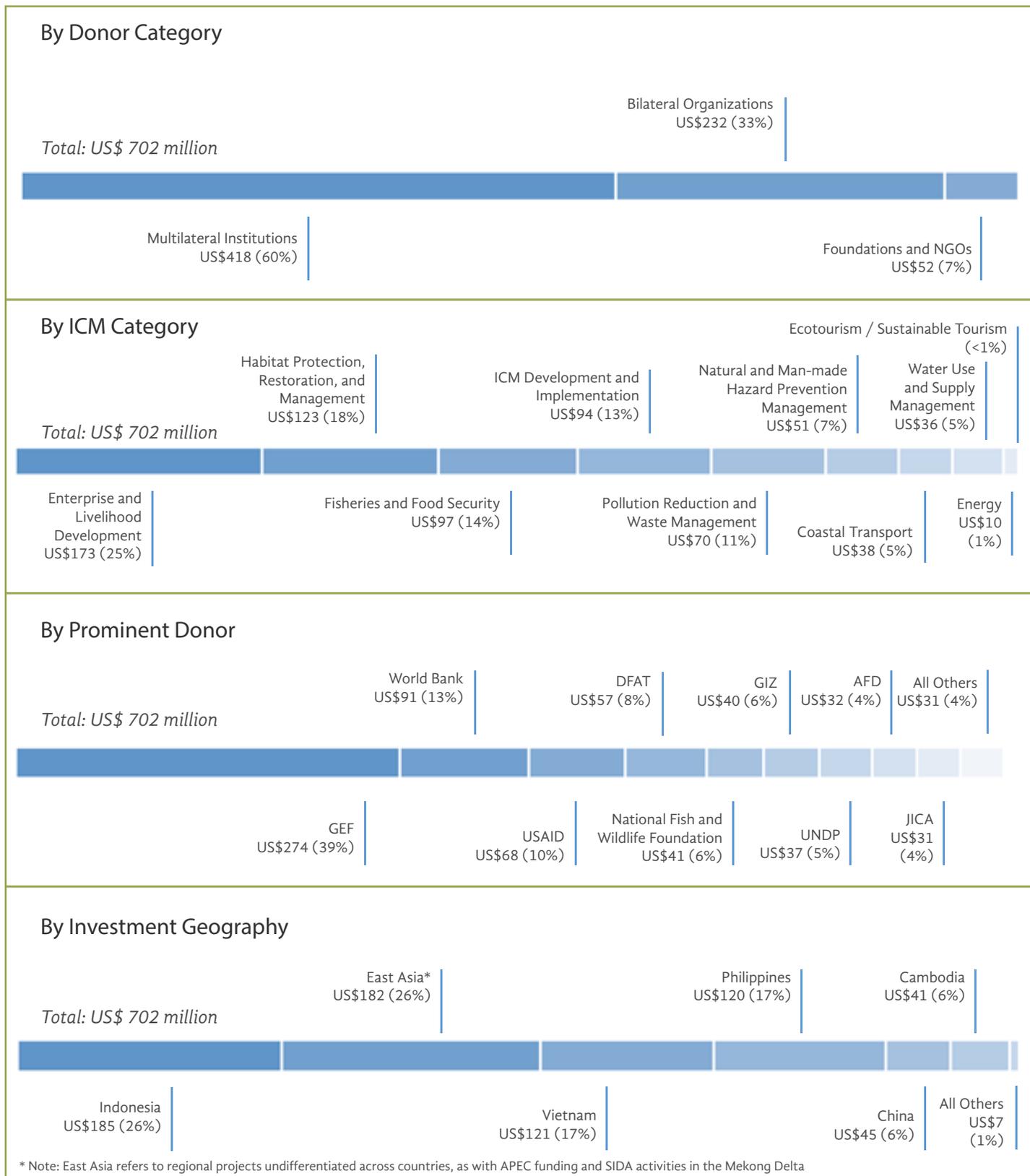
Over the period 2005-2015, the countries studied in this report were home to over 420 donor-funded projects and initiatives from some 30 donor organizations with grants in excess of US\$ 702 million of financial commitments. The following analysis explores this international funding, in terms of leading donors, their priorities for ICM, key areas of investments, major programs and geographic destination. The research examines major donors through the lens of three main categories of international grant-making: (i) multilateral institutions; (ii) bilateral donors; and (iii) private foundations and NGOs. See Table 4 for a list of the main international actors identified in the ICM space.

**Table 4: Major Category and Examples of International Donors, ICM-related Activities, East Asia**

Donor Type	Examples of Donors
Multilateral Institutions	APEC, GEF, Global Facility for Disaster Reduction and Recovery, International Fund for Agricultural Development, UNDP, UN-ESCAP Trust Fund, UNESCO-IHE, World Bank
Bilateral Organizations	Agence Française de Développement (AFD), DFAT-Australia, GIZ, Japan International Cooperation Agency (JICA), Swedish International Development Cooperation (SIDA), USAID, U.S. Fish and Wildlife Service International Affairs
Foundations and NGOs	Coastal Conservation and Education Foundation, Coca-Cola Foundation, Give2Asia (Packard Foundation), Global Green Grant Fund (USA), Goldman Environmental Prize, Gordon and Betty Moore Foundation, MacArthur Foundation, Mangroves for the Future, McKnight Foundation, Nagao Natural Environment Foundation, National Fish and Wildlife Foundation, RARE, Rockefeller Foundation, United Methodist Committee on Relief

Of the three donor categories, multilateral institutions provide more than half of all ICM-related funding (60% of the value of grants identified) in the countries analyzed. Areas of interest for donors include: enterprise and livelihood development (a quarter of all grants); habitat protection, restoration, and management (18%); fisheries and food security (14%) and ICM development and implementation (13%). Dominated by GEF (39%), prominent donors also include the World Bank (13%), USAID (10%), DFAT (8%) and the National Fish and Wildlife Foundation (6%). In terms of investment geography, three individual countries absorb over half of all donor funding identified in the study: Indonesia (26%), Vietnam (17%) and the Philippines (17%). Focused on transboundary issues, regional programs across East Asia also receive significant donor funding (26%) (See Figure 2).

**Figure 2: International Grants to ICM-related Sectors, Select Countries, 2005-2015  
Estimates of Committed Funds (in US\$, and % of total)**



## 1. Multilateral Institutions

Over the period 2005–2015, the study estimates that the size of committed funds from multilateral organizations into ICM-related sectors amounted to some US\$ 418 million for the countries under review. Major ICM areas of interest include enterprise and livelihood development (accounting for 41% of this amount) and pollution reduction and waste management (making up another 19%). By size of committed funding, GEF, the World Bank and the UNDP together account for nearly all of this funding (96%). These multilateral grants support regional projects across East Asia (42% of the total, mostly from APEC and GEF), as well as Indonesia (32%), China (11%), the Philippines (9%) and Vietnam (7%). See Annex for details on funding breakdowns.

### Global Environment Facility

Globally, GEF mainly focuses on six environmental sub-areas, including International Waters (IW). Funding projects are categorized by size, usually ranging from US\$ 50,000 to US\$ 10 million between 1991–2010. GEF has provided US\$ 9.5 billion in grants and generated US\$ 42 billion in co-financing, although these funds are dispersed globally and across various environmental sectors. For IW projects, GEF focuses on four areas: (i) multi-state cooperation; (ii) pollution reduction; (iii) freshwater, coastal and marine ecosystems; and (iv) biodiversity and reduced vulnerability to climate change. GEF conducts regular evaluations on its projects, seeking to understand their impact and effectiveness, while re-assessing and strengthening GEF strategy based on the results of the evaluations. Since 2012, the organization increasingly emphasizes fostering inter-state cooperation on transboundary waters, scaling up projects that have had demonstrable impact and developing groundwater protection and management to tackle droughts. There is additional emphasis on climatic variability as a key transboundary issue. In terms of approach, GEF has been developing more strategic means of interventions, re-evaluating projects based on their overall Theory of Change and consequently streamlining its activities to consider funding activities more strategically.<sup>13</sup>

Within IW, this research pulls information related to ICM in the countries and sectors under review. Providing by far the largest grant funding to ICM initiatives, GEF administers a variety of initiatives across East Asia, as well as the Small Grants Programme (SGP) to civil society and community-based organizations. Reaching an estimated US\$ 274 million over the past decade in the countries under review (from the research data findings), GEF funding tends to focus on two primary categories in its ICM-related work in the region: enterprise and livelihood development (30%) and pollution reduction and waste management (25%), along with ICM development and implementation, habitat restoration and management, and natural and man-made hazard prevention and management. In terms of the geographic distribution of these funds, GEF prioritizes regional programs across East Asia (63% of this funding), China (13%) and Vietnam (10%). Its largest single initiative in East Asia, the US\$ 44 million Scaling up Partnership Investments for Sustainable Development of the Large Marine Ecosystems of East Asia and their Coasts Project works across multiple countries, including China, Indonesia, the Philippines and Vietnam. Meanwhile, SGP typically averages less than US\$ 50,000 per project (of which there may be multiple projects per country).<sup>14</sup>

<sup>13</sup> See for example, “Annual Thematic Evaluations Report 2012,” GEF, < <https://www.thegef.org/gef/ATER%202012>>, January 2013 and “Focal Areas Evaluation – Focal Area Strategies,” GEF, < <https://www.thegef.org/gef/Focal%20Areas%20Evaluation%20-%20Thematic%3A%20Focal%20Area%20Strategies>> January 2013

<sup>14</sup> Launched in 1992, GEF’s Small Grants Programme in partnership with the UNDP supports pro-development environment-related activities implemented by NGOs and Community-based Organizations (CBOs) in developing countries.

Going forward, two documents shed light on GEF's strategic direction for the period 2014-2018: the GEF6 Programming Directions<sup>15</sup> and the GEF Programming Strategy to Adaptation to Climate Change.<sup>16</sup> With regards to programming directions for IW, GEF focuses on efforts to: (1) Catalyze sustainable management of transboundary water systems by supporting multi-state cooperation through foundational capacity building, targeted research and portfolio learning (US\$ 100 million); (2) Catalyze investments to balance competing water uses in the management of transboundary surface and groundwater and to enhance multi-state cooperation (US\$ 145 million); and (3) Enhance multi-state cooperation and catalyze investments to foster sustainable fisheries, restore and protect coastal habitats and reduce pollution for coasts and Large Marine Ecosystems (US\$ 211 million). For its programming strategy on adaptation to climate change, GEF looks to mobilize the Least Developed Countries Fund (applicable to Lao and Cambodia) and the Special Climate Change Fund. GEF will continue to target "the people most at risk from climate change-induced coastal hazards by strengthening early-warning systems and promoting diversified and resilient livelihoods." GEF will also "play a catalytic role in climate-resilient coastal development, supporting the integration of relevant knowledge and adaptation measures into coastal settlement planning and infrastructure investments." Finally, GEF will seek to scale up private-sector engagement to climate-proof infrastructure.

### World Bank

As the second largest source of multilateral funds for ICM-related causes to the countries in this study, the World Bank provides support mostly through block grants (US\$ 85 million) directed at the Community-based Settlement, Reconstruction, and Rehabilitation for Nanggroe Aceh Darussalam and Nias Project in Indonesia. This activity alone accounts for 93% of all the World Bank's ICM funding in East Asia for the countries under review. Through a multi-donor trust fund, this effort supports coastal communities affected by the earthquake and tsunami that struck the project area in December 2004. Otherwise, the World Bank has a relatively limited footprint related to ICM activities, except for the natural resources management component of the Mindanao Rural Development Program for the Philippines. The World Bank typically co-finances coastal-related projects through a loan mechanism together with GEF. However, in a few instances, the World Bank funds related projects separately, as with the block grants to Indonesia noted earlier.

### United Nations Development Programme

Accounting for an estimated 9% (or US\$ 37 million) of all multilateral grants to ICM activities in this study, the UNDP focuses primarily on: (i) habitat protection, restoration and management (close to half its funding); and (ii) pollution reduction and waste management (making up another third). As for investment geography, the UN body channels its ICM resources mostly to Indonesia (57%) and China (26%). Accounting for almost a third of its committed funds, the Tsunami Recovery Waste Management Project in Indonesia boasts its largest ICM initiative in the region. Other notable activities include the EU-China Biodiversity Initiative Programme and the Strengthening Community Based Forest and Watershed project, both in Indonesia.

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The SGP global portfolio contains the following breakdown by focus areas: 60% to biodiversity; 20% to climate change; 6% to IW and 14% to multi-focal issues. Over the period 1992-2015, GEF's SGP total funding sums to an estimated US\$ 450 million. Average SGP grants range from US\$ 25,000 to US\$ 50,000 per project. NGOs and CBOs receive this funding for project implementation. Since its establishment, SGP has funded 1,768 (approximately 9% of total) projects in the targeted eight countries of this research, out of a global total of 19,762. In the ICM-related sectors for the countries under review, SGP has supported 68 projects amounting to US\$ 2.6 million.

<sup>15</sup> "GEF-6 Programming Directions," GEF, [https://www.thegef.org/gef/sites/thegef.org/files/webpage\\_attached/GEF6\\_programming\\_directions\\_final\\_0.pdf](https://www.thegef.org/gef/sites/thegef.org/files/webpage_attached/GEF6_programming_directions_final_0.pdf).

<sup>16</sup> "GEF Programming Strategy on Adaptation to Climate Change for the LDCF and Special Climate Change Fund," GEF, [https://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.LDCF\\_.SCCF\\_.16.03.%20Programming%20Strategy%20on%20Adaptation%20to%20Climate%20Change%20for%20the%20LDCF%20and%20the%20SCCF,%205-20-14.pdf](https://www.thegef.org/gef/sites/thegef.org/files/documents/GEF.LDCF_.SCCF_.16.03.%20Programming%20Strategy%20on%20Adaptation%20to%20Climate%20Change%20for%20the%20LDCF%20and%20the%20SCCF,%205-20-14.pdf).

UNDP's work closely adheres to the UN's MDGs (Millennium Development Goals) commitments, which conclude this year. With relevance to coastal management, MDG 7 targets environmental policy and biodiversity. In addition, UNDP acts as a GEF Implementing Agency, supporting countries to secure GEF resources and to meet global environmental obligations. UNDP focuses on the country level and integrates issues of climate, disaster risk and energy. The UN body funds projects to build resilience and ensure developments are risk-informed and sustainable. Moving forward, the post-2015 UN development agenda incorporates Sustainable Development Goals relevant to ICM activities, including:

- Ensuring availability and sustainable management of water and sanitation for all;
- Taking urgent action to combat climate change and its impacts; and
- Conserving and sustainably using the oceans, seas and marine resources for sustainable development.<sup>17</sup>

## 2. Bilateral Organizations

Funding from bilateral organizations into ICM activities for the countries of this study reached upwards of US\$ 232 million in 2005-2015. Sectoral areas of interest encompass: ICM development and implementation (25% of this funding amount), fisheries and food security (23%), coastal transport (16%) and natural and man-made hazard prevention and management (14%). In absolute terms, USAID and DFAT together account for over half of all these bilateral funds channeled to ICM-related sectors. Major destinations for ICM resources include the Philippines (accounting for 36% of all these grants), Vietnam (22%), Indonesia (21%), and Cambodia (17%).

### U.S. Agency for International Development

Committing some US\$ 68 million to ICM activities over the last decade, USAID works across many of the PEMSEA countries; but most of its ICM funds target the Philippines, which absorbs an estimated 80% of these related program resources. Funding in Indonesia (at US\$ 10 million) comes a distant second, accounting for roughly 14% of USAID grant funding to ICM causes. The bilateral agency focuses close to half of this funding (48%) towards natural and man-made hazard prevention and management. Other areas of coastal and oceans priority include: (i) habitat protection, restoration and management (estimated at 20%) and (ii) fisheries and food security (15%). As noted earlier, major ICM activities of USAID focus on the Philippines, such as the Biodiversity and Watershed Improved for Stronger Economy and Ecosystem Resilience Project (B+WISER) Project,<sup>18</sup> U.S. Coral Triangle Initiative Support Program (also with Indonesia), Abuan Integrated Watershed Management Program and ECOFISH.

The environmental focus of USAID includes:

- Supporting land tenure policies and resource rights, giving people the right to own and manage natural resources responsibly;
- Fighting deforestation and planting trees, so that forests continue to provide clean water and air, improve agricultural productivity, slow the rate of climate change, counter desertification, and support economic growth;
- Protecting biodiversity, so that people don't lose essential goods and services generated by intact and functional ecosystems, and species aren't lost to extinction; and
- Mitigating and adapting to the effects of climate change, so countries can grow without harming the environment while strengthening their resilience to warmer temperatures and weather shocks.

<sup>17</sup> "Open Working Group proposal for Sustainable Development Goals," United Nations Department of Economic and Social Affairs, <https://sustainabledevelopment.un.org/sdgsproposal>.

<sup>18</sup> Even though the B+WISER Project focuses predominantly on inland areas, a mangrove component was later added.

USAID's four priority areas of environmental interventions intersect with coastal management support. The bilateral agency has a mandate to protect biodiversity as well as to mitigate and adapt to climate change.<sup>19</sup>

### Department of Foreign Affairs and Trade – Australia

The recently re-organized DFAT has directed about US\$ 57 million to ICM projects over the last decade. Over half of this funding has gone to coastal transport activities in Cambodia. Other programmatic areas of interest include: ICM development and implementation (23%) and energy (17%). In terms of geography, DFAT focuses mainly on Cambodia (two-thirds of this funding), with Vietnam a distant second priority (taking up another quarter). Besides the coastal project in Cambodia, other major programs for funding include the Integrated Coastal Eco-System Management Project in Vietnam (with co-financing from GIZ). DFAT prioritizes its funding for its immediate, neighboring Indo-Pacific region. Most PEMSEA countries of this study receive DFAT aid, with the exception of Thailand and China. DFAT focuses on sustainable economic growth and poverty reduction and places some emphasis on environmental aid and coastal activities as well. In particular, some priority sectors include: (1) agriculture, fisheries and water, and (2) building resilience: humanitarian assistance, disaster risk reduction and social protection.<sup>20</sup>

### Other Donors

Other notable international donors working in ICM-related activities include GIZ, AFD and JICA, who together account for an estimated 44% of all bilateral funds identified in this research.<sup>21</sup> GIZ partners with DFAT on the US\$ 35 million Integrated Coastal Eco-System Management Project in Vietnam and also works in the Philippines on a US\$5 million conservation and coastal rehabilitation project linked to the Coral Triangle. AFD makes one big splash in ICM with the US\$ 32 million INDESOP Project to support marine biodiversity in Indonesia, with a particular focus on fisheries management. Working across Cambodia, Indonesia and the Philippines, JICA commits US\$ 31 million to water supply, flood protection, coastal and marine, and fisheries activities, among others.

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<sup>19</sup> "What We Do: Environmental and Global Climate Change," USAID Webpage, <<https://www.usaid.gov/what-we-do/environment-and-global-climate-change>>

<sup>20</sup> "Aid", DFAT Webpage, <<http://dfat.gov.au/aid/Pages/australias-aid-program.aspx>>

<sup>21</sup> In the future, JICA has been in talks with the Philippine Climate Adaptation Project about funding some coastal livelihoods work.

### 3. Private Foundations and NGOs

Accounting for roughly 7% of all ICM grant funding to the countries under review, foundations and NGOs make up the smallest category of international funders, with a total commitment estimated at US\$ 52 million over the past decade. Most of this funding is directed towards habitat protection, restoration and management — close to four-fifths. By funding size, prominent private foundations include: the National Fish and Wildlife Foundation (78% of this total funding) and the MacArthur Foundation (10%). The National Fish and Wildlife Foundation boasts a large program in Vietnam (at US\$ 40 million) to improve coral reef management. Otherwise, its grant-making remains small across East Asia, with individual disbursements mostly under US\$ 100,000. Likewise, the MacArthur Foundation provides small grants (reaching about US\$ 5 million in total disbursements).

#### B. Domestic Charities

For most countries in this study, limited data and funding levels exist for specific ICM-related programs and initiatives from domestic charitable entities. Given the limitations on data, the analysis is mostly qualitative in nature but highlights findings from the desk review, in terms of prominent funders, their priorities for ICM, key areas of investments and major programs. From the research, two main categories of domestic grant-making emerge: (i) corporations, mainly through their CSR efforts; and (ii) private foundations, NGOs and universities. See Table 5 for a list of some prominent domestic actors in the ICM space from the countries in this study.

Asia exhibits a long and venerable tradition of charity — mostly anonymous and informal. However, the concept of philanthropy (as large, structured, and organized donations of societal value) appears relatively new and novel to much of the region. The broader region is home to over 3,300 HNWI's. As such, data on domestic grant funding in much of Asia likely under-reports actual charitable giving.<sup>22</sup>

From available data, China and the Philippines boast arguably the most actively domestic forms of charitable giving into ICM-related causes. This desktop research suggests that Thai companies generally tend to contribute to coastal reforestation and disaster risk mitigation activities. In Lao, the domestic NGO sector remains largely nascent and strictly controlled by the communist government. Private corporations (many from the mining sector) contribute to the Lao government's Support to Environment Protection Fund, which includes an ICM component. Elsewhere, corporate philanthropy remains underdeveloped in Cambodia, Vietnam and Timor-Leste.

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<sup>22</sup> Economist Intelligence Unit. Something's Gotta Give: The State of Philanthropy in Asia (Economist Intelligence Unit, 2011), <http://www.economistinsights.com/countries-trade-investment/analysis/somethings-gotta-give>.

**Table 5: Category and Examples of Domestic Charities, ICM-related Activities, Select Countries**

<b>Funder Type</b> <b>Country</b>	<b>Corporations and Philanthropic Arms</b>	<b>Foundations and NGOs</b>
Cambodia	Forte Insurance Cambodia	Partnership for Development in Kampuchea
China	China Gezhouba, Baosteel Group Corporation	China Mangrove Conservation Network, China Youth Development Foundation, Shangri-la Institute for Sustainable Communities, China Environmental Protection Fund, China Green Carbon Foundation, China Democratic National Construction Association, Shangri-la Institute for Sustainable Communities, University of Hong Kong
Indonesia	Telekom Indonesia, Semen Indonesia, Bank Mandiri, Danamon Bank	N/A
Lao PDR	Private companies (mostly in mining) <sup>23</sup>	N/A
Philippines	Aboitiz Foundation, ABS-CBN Foundation, Ayala Group, Ayala Foundation, MERALCO, Petron Corporation, Pilipinas Shell Foundation, PLDT (Philippine Long Distance Telephone Company), San Miguel - San Miguel Foundation, SM Investments Corporation	Foundation for the Philippine Environment, Philippine Tropical Forest Conservation Foundation, Philippine Disaster Recovery Foundation
Thailand	Bangkok Bank, Bank of Ayudha, Kasikorn Bank, Charoen Pokphand Foods, Krung Thai Bank, PTT Global Chemical, Siam Cement/Siam Foundation, Siam Commercial Bank, Thai Beverage	N/A
Timor-Leste	N/A	Haburas (Friends of the Earth East Timor)
Vietnam	N/A	N/A

<sup>23</sup> Examples of these corporations in Lao include: Rio Tinto Minerals Development Company, Mitsui Co, Vientiane Melt and Mining Co, Vinacomin Salt Chemistry Laos Co, Phosy Mining Co, Chakaphan Mining Group, Lao Lidu Mining, Souhua Mining Co, Cavico Vietnam Co, Sichuan Above Advantage Loman Mining, Viengphoukha (Coal Mine), Quang Trung Investment Lao Co, Sinohydro Mining, Oudomxay Salt Co, Sojitz Corporation Mining Co, JSC Neyland Mining Co, Oudomxay Sheng cang Mining Co, Mitthaphap Lead Mining, Vinacomin Lao Co.

## Case Study 1: Bloomberg Philanthropy's Vibrant Oceans Initiative

Integrating policy reform, community engagement and impact investing



In 2014, Bloomberg Philanthropies launched the Vibrant Oceans Initiative with the goal of reversing declining fish stocks. A five-year, US\$ 53 million grant commitment, the program seeks to promote reforms to boost fish populations in Brazil, Chile and the Philippines. Three U.S.-based organizations implement the program's integrated strategy to curb overfishing through reform of small-scale (local) and industry fishing methods, while also providing financial strategies to transition to more sustainable practices.

- With a mission to protect oceans, Oceana focuses on industry-wide advocacy with national governments to: (i) set and enforce science-based catch-limits; and (ii) reduce the amount of sea life unintentionally caught/discarded from traditional fishing practices.
- Through on-the-ground engagement, Rare collaborates with local governments and coastal communities to implement management systems that encompass exclusive fishing rights for coastal fisherfolks, in exchange for creating protected areas that allow fishing stocks to replenish.
- A specialized investment and advisory firm, Encourage Capital looks to develop investment blueprints where private capital creates financial incentives and rewards for fisherfolks who transition to more sustainable fishing practices. Encourage plans to identify fisheries opportunities for impact investing across a spectrum of risk, return and impact.

Naturally renewing, fisheries can provide income, livelihoods and health benefits to local communities — if properly managed. The initiative boasts the largest philanthropic commitment for international reform of fisheries management. And for the first time, such a fisheries reform effort incorporates a private capital financing strategy.

## IV. Investment Capital

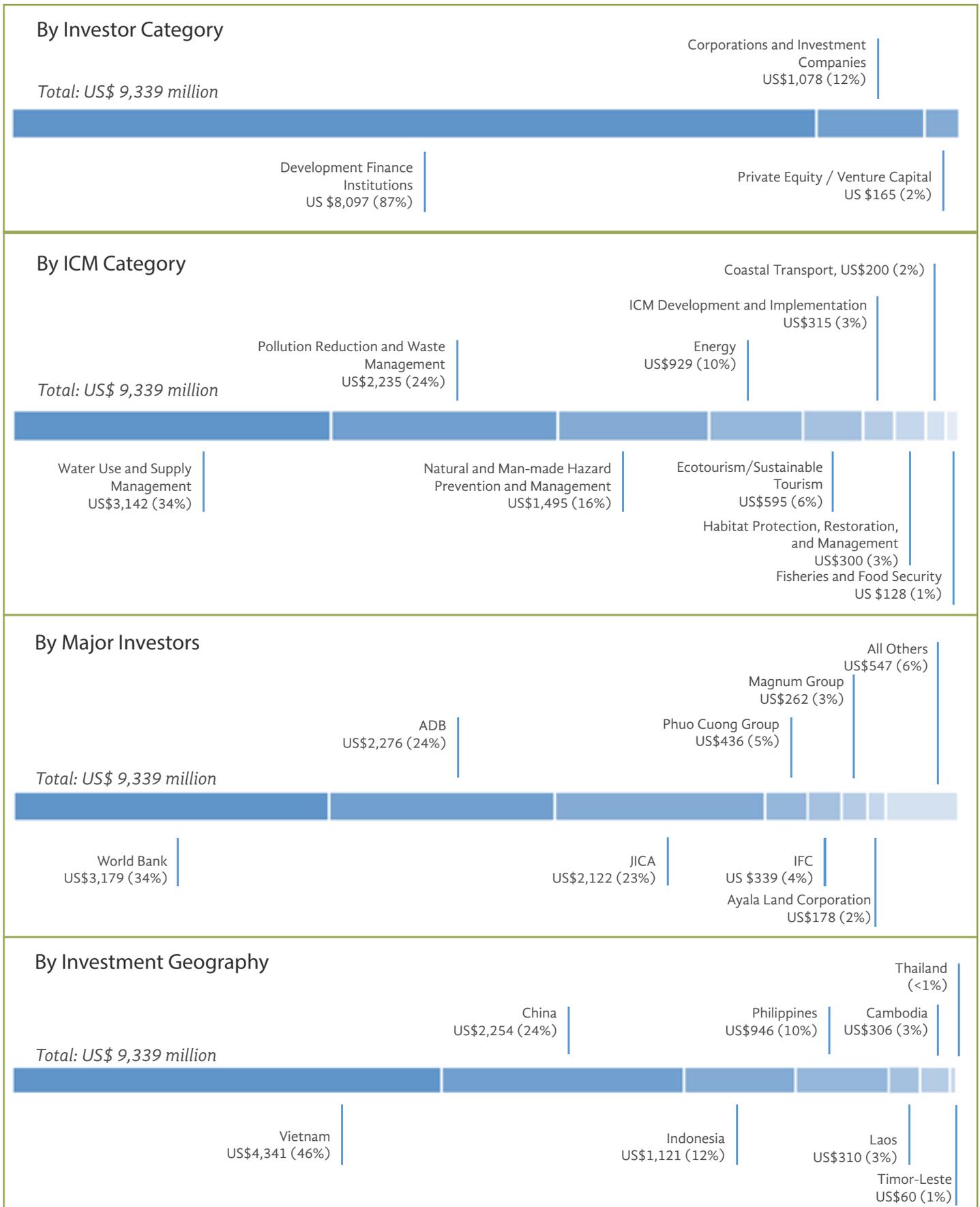
Over the period 2005-2015, countries analyzed in this report welcomed an estimated 111 ICM-related investments from 23 investors providing upwards of US\$ 9.3 billion in financial commitments. The following review unpacks this investment capital, in terms of leading investors, their priorities for ICM, key areas of investments, major projects and geographic destination. The research divides major funders into three main categories of investment capital: (i) development finance institutions; (ii) corporations and investment companies; and (iii) private equity and venture capital funds. See Table 6 for a list of the main investors in the ICM space. Port investments are examined separately, given its large size and tangential linkages to sustainable development of coasts and oceans. The section concludes with a discussion of impact investing.

**Table 6: Category and List of Investors, ICM-related Activities, East Asia**

Investor Type	Examples of Prominent Investors
Development Finance Institutions	Asian Development Bank (ADB), European Investment Bank, International Finance Corporation (IFC), JICA, U.S. Overseas Private Investment Corporation, World Bank
Corporations and Investment Companies	Ayala Land Corporation, Gia Hong Company, Hung Duy Trading Import Export Transportation Company, Magnum Group, MPM Construction Investment and Development Company, Phuoc Cuong Group, SM Investment Company, Temasek Holdings
Private Equity and Venture Capital Funds	BioCarbon, Carlyle Group, CLSA Capital Partners, Global Environment Fund, I Squared Capital, KKR, Leopard Capital, Livelihoods Fund, LGT Venture Partners, WM Capital

Of the three investor categories, DFIs dominate ICM-related funding (87% of the total for this investment capital) by a wide margin for the countries in this study. Areas of interest for investors include: water use and supply management (34% of these investments); pollution reduction and waste management (24%) and natural and man-made hazard prevention and management (16%). Together, the World Bank, the ADB and JICA provide upwards of four-fifths of all these ICM investments. Of the countries under review, ICM-related programs and initiatives benefit predominantly Vietnam, China, Indonesia and the Philippines, which absorb an estimated 93% of all investments. See Figure 3 below and Annex F for detailed breakdowns.

**Figure 3: Investment Capital to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$, % of total)**



## A. Development Finance Institutions

As specialized development banks, DFIs display a long history of supporting private sector growth in developing countries. Over the past decade, DFIs have provided financing of about US\$ 8.1 billion to ICM-related projects and initiatives in the countries under review. Their sectoral areas of interest include: water use and supply management (accounting for 39% of this investment total); pollution reduction and waste management (26%) and natural and man-made hazard prevention and management (18%). In absolute terms, the World Bank, the ADB, and JICA together account for 94% of all DFI funds channeled to ICM-related sectors for the countries under review. Major destinations of DFI investments identified in this study include: Vietnam (44% of the total DFI investments), China (26%) and Indonesia (at 14%). See Table 7 for some indicative projects funded by DFIs.

**Table 7: Top Three ICM-related Sectors for DFI Investments, Select Countries, 2005-2015**

<b>Water Use and Supply Management</b>
Example: In 2010, the World Bank invested US\$65 million to finance a project aimed at improving rural water supply and sanitation in the Red River Delta in Vietnam.
<b>Pollution Reduction and Waste Management</b>
Example: In 2006, the ADB provided US\$80 million of financing in development loans to control water pollution and improve environmental management in the coastal province of Shandong in China.
<b>Natural and Man-made Hazard Prevention and Management</b>
Example: JICA invested approximately US\$140 million to improve flood management infrastructure in Semarang in Indonesia in 2006.

DFIs invest primarily with a view to aid and foster economic and social development in investee countries — typically extending financing to projects that have positive environmental, health or livelihood impacts. Among the earliest investors in the space, DFIs provide the most significant amount of investment capital for ICM projects in East Asia. In general, DFIs extend financing to ICM projects through debt instruments. The majority of the ICM funding flowed into public sector projects through sovereign debt extended by DFIs. These funds were subsequently channeled to the relevant government agencies, municipal boards or specialist organizations that were responsible for implementing the projects. In 2006, for example, the ADB extended US\$33 million in sovereign financing to Indonesia for a project for sustainable development of aquaculture to improve food security and alleviate poverty. The Indonesian General Directorate for Aquaculture carries out the project.

The type and terms of the investment loan are determined by the income-level of the borrowing country. More vulnerable economies are offered loans with lower interest rates and longer maturity periods. While the ADB extends project loans with 25 to 32 year maturity periods and 1%-1.5% interest rates to low-income borrowing countries, for example, the DFI offers LIBOR-based debt instruments to middle-income economies. Certain DFIs like the IFC also acquire equity stakes in projects with ICM impacts. For example, of the US\$150 million IFC invested in Chinese wastewater treatment company China Everbright Water in 2015, equity investments comprised US\$70 million. All DFIs institute environmental safeguards into their due diligence process.

### World Bank

Of its US\$ 3.2 billion investments into ICM-related sectors, the World Bank prioritizes China (44% of its total investments), Vietnam (28%), Indonesia (11%) and the Philippines (10%). Its ICM-related programs focus on water use and supply management (32% of these investments); pollution reduction and waste management

(30%); and natural and man-made hazard prevention and management (18%). Of its 47 project investments identified in this study, the World Bank has no single exposure greater than 10% of its entire ICM portfolio. Its ICM investments typically fall in the broad range of US\$1 million – \$275 million in the last decade, with a median investment of US\$ 50 million. At one extreme, the Metro Manila Wastewater Management Project receives its largest financing at US\$ 275 million. Both the Huai River Basin Flood Management and Drainage Improvement (China) and the Urban Water Supply and Waste Water (Vietnam) projects each benefit from US\$ 200 million of investments.

The World Bank requires that its investments promote sustainable development in the region, country or community in which they operate. Investments cut across an array of sectors but with a special focus on infrastructure, education, health, agriculture and environmental and natural resource management. This DFI tends to consider longer-term projects (those with an implementation horizon in the range of 5-10 years).

### Asian Development Bank

The ADB provides both public sector project financing as well as direct financial assistance to private sector enterprises. In 2005-2015, its ICM investments summed to an estimated US\$ 2.3 billion for the countries under review, mostly directed toward Vietnam (53% of total), Indonesia (18%), China (17%) and Cambodia (9%). Priority sectors linked to ICM include: water use and supply management (64%); natural and man-made hazard prevention and management (14%); energy (10%); and habitat protection, restoration, and management (6%). Notable from its ICM portfolio, the multi-tranche financing facility for the Water Sector Investment Program in Vietnam takes up 44% (US\$ 1.0 billion) of the total. Otherwise, the median investment size is about US\$ 75 million.

The ADB finances private sector projects that operate in the following sectors — energy, transport, telecommunications, water and urban infrastructure. Its strategic goals for the year 2020 shape its public sector lending. According to these targets, 80% of the ADB's public financing will be streamlined to focus on five key sectors: (i) infrastructure (including for the ICM areas of water supply, energy and sanitation); (ii) environment; (iii) regional cooperation and integration; (iv) finance sector development; and (v) education. The ADB's evaluation criteria for private sector investments require the potential projects to be socially, economically and financially viable, with clear development impacts beyond a financial rate of return. The ADB also prefers to play a catalytic role in the financing and development of the project. Additionally, this DFI considers whether the project objectives and targeted outcomes are aligned with the ADB's overarching strategy in the region, country or sector in which the project looks to operate.

### Japan International Cooperation Agency

JICA provides financial assistance to projects through concessionary loans. Of its US\$ 2.1 billion investments towards ICM activities identified in this study, two-thirds were channeled to Vietnam. Indonesia and the Philippines also receive meaningful amounts of its investments, at 13% and 12% of the total, respectively. Over the past decade, JICA financed three main ICM-related areas: pollution reduction and waste management (43% of investments); water use and supply management (30%) and natural and man-made hazard prevention and management (27%). Accounting for 30% of its ICM investments, the Dong Nai Province Water Infrastructure Construction Project in Vietnam supports the construction and maintenance of water supply facilities. Other large investments also center on Vietnam, including: the Southern Binh Duong Province Water Environment Improvement Project (11% of total) and the Hue City Water Environment Improvement Project (10%).

Into the future, the organization seeks to invest in projects that fall within its prioritized thematic areas. Four of these categories directly align with ICM enterprises — fisheries, water resources and disaster management, natural environmental conservation and environmental management. Within fisheries, JICA is specifically

interested in projects that promote vitality in local fishing communities, the effective utilization and appropriate preservation and management of fisheries resources, as well as research programs into sustainable aquaculture technology and practices. In terms of water resources and disaster management, JICA assists development projects concerned with integrated water resource management, implementation of flood control measures, urban and rural water supply, as well as conservation and monitoring of watershed, river and marine environments. Through its natural environment conservation platform, JICA provides financing to projects that operate in the following areas — sustainable climate change measures, sustainable utilization of natural resources for improving the livelihoods of vulnerable communities, and the conservation of biodiversity through the management of protected areas and buffer zones. Under its environmental management umbrella, JICA looks to support projects involved with the mitigation of pollution in rivers, wetlands and oceans, the development of waste treatment technologies, the construction of sewage systems and other contamination countermeasures.

## B. Corporations and Investment Companies

Providing some US\$ 1.1 billion of financing, the second ICM investor type consists of corporations and investment companies taking equity stakes, including Philippines-based SM Investment Company and property developer Ayala Land Corporation (both in ecotourism),<sup>24</sup> Vietnamese food processing company Phuo Cuong Group (renewable energy),<sup>25</sup> Dubai's Magnum Group (ecotourism) and Singapore-based Temasek Holdings (fisheries).<sup>26</sup> Focused on only the Philippines and Vietnam, these investors tend to make one-off investments in ICM projects. Operating predominantly in their local home market, SM, Ayala and Phuo Cuong invest in projects usually directly related to their line of work or to the region/community in which they operate. A sovereign wealth fund of the Singaporean government, Temasek works across a wider spectrum of sectors, including some relevant to ICM sectors (real estate, energy, resources).

Over the past decade, investors committed funds to a variety of private sector enterprises and initiatives in the ICM sphere including seafood processing companies, desalination and waste treatment technology, ecotourism initiatives and coastal energy projects. The size of private investee companies ranged from large-scale established companies like Indonesian shrimp processor PT. Centralpertiwi Bahari to smaller enterprises like Thailand-based coral reef preservation and awareness initiative New Heaven Partnership.

## C. Private Equity and Venture Capital Funds

Private equity (PE) firms take equity positions in operating companies and seek financial returns through exit strategies (e.g., initial public offerings, mergers and acquisition or recapitalization) that maximize the value of their investments. Such firms typically make long-term investment decisions in sectors and investment areas where they possess expertise. Venture capital (VC) funds provide financing for early-stage and emerging companies that exhibit novel or innovative business models, especially in the technology sectors. VC may provide an attractive financing option for many new companies, given their limited track record and operating history essential for bank lending. A nascent investor group in ICM across East Asia, PE and VC funds began

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<sup>24</sup> SM Investments Corporation invested US\$128 million to develop a multi-purpose ecotourism project on the Hamilo Coast in the Philippines in 2007. Ayala Land Corporation in the Philippines has invested in two marine ecotourism projects — the property developer invested US\$45 million in Ten Knots Resorts in 2010 and US\$133 million in 2014 to develop a sustainable tourism estate in the El Nido Managed Resource Protected Area.

<sup>25</sup> In 2014, Vietnamese seafood processing company Phuo Cuong Group invested US\$436 million in a coastal wind energy project in the Mekong Delta.

<sup>26</sup> In 2007, Singapore-based investment company Temasek Holdings invested US\$47 million in Vietnamese fisheries company Minh Phu Seafood.

making initial investments into the sector only within the last five years. Total investments reach an estimated US\$ 165 million for the countries under review. These funds include established international players like the Carlyle Group and KKR, as well as domestic investors such as CLSA Capital Partners (Hong Kong) and Cambodia-based fund manager Leopard Capital. China attracts the most PE and VC interest. There, KKR supported United Envirotech for pollution reduction and waste management through a combination of equity (in 2013) and convertible bonds (2011), together reaching US\$ 154 million. Certain investors utilize hybrid financial structures that combine warrants or convertible bonds with equity stakes. For instance, investment management firm WM Capital financed Vietnam-based sustainable aquaculture farm Australis through a US\$ 3 million convertible note in 2008 before acquiring the company outright in 2009.

PE activity in the ICM sector remains fairly limited so far. Many PE/VC investors currently lack the comfort level, familiarity and industry expertise in ICM-related sectors. Yet, the recent emergence of a number of fund vehicles (e.g., NatureVest and Bloomberg's Vibrant Oceans Initiative) with a focus on investing in marine ecosystems and aquaculture indicates that this investor class looks to play a more prominent role in support of sustainable development of coasts and oceans, going forward.

#### D. Port Investments

Related to ICM sectors (for coastal transport), port investments receive large capital infusion and continuous upgrades, particularly for a region heavily reliant on world trade. Individual investments typically exceed US\$ 100 million. Over the past decade for the countries under review, the research identifies 26 projects to have received investment capital in port-related, coastal transport activities. These deals sum to an estimated US\$ 19 billion, with half from the China Railway Group channeled to a port and rail link project at Cambodia's Koh Kong Island. Other notable port projects exceeding US\$ 1 billion include:

- Port of Nanjing in China (8% of total) through equity infusion from the Qingjiang Company;
- New Priok Port Development Project with the Indonesia Port Corporation (7%);
- ICTSI (International Container Terminal Services, Inc.) in Manila, Philippines (6%) through equity, internal investments, and syndicated loans; and
- The Zhoushan Jintangdao Container Port Expansion via a Chinese joint-venture (5%).

These projects provide a fair glimpse of the continuing capital expenditure needs of East Asia's ports, which can expect to see continued development with the region's growing importance in international trade. Together with Cambodia, three other countries (China, Indonesia and the Philippines) account for almost all the investment inflows towards port infrastructure. Corporations (62% of the total) make up the primary group of investors into East Asian ports; their funding reaches US\$11.9 billion. With a portfolio size of US\$ 4.5 billion, private equity funds also show significant interest in port projects (24%).<sup>27</sup>

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<sup>27</sup> PEMSEA implements the Port Safety, Health and Environmental Management System (PSHEMS) guidelines and certification to provide port authorities and operators with a tool to assess and improve their operational procedures consistent with international standards for port safety, health and environmental management. See [www.pemsea.org/publications/port-safety-health-and-environmental-management-system-pshems-development-and-implement](http://www.pemsea.org/publications/port-safety-health-and-environmental-management-system-pshems-development-and-implement).

## Case Study 2: Blueyou and Meliomar, Philippines

### Growing Investments in Sustainable Fishing Practices and Traceability

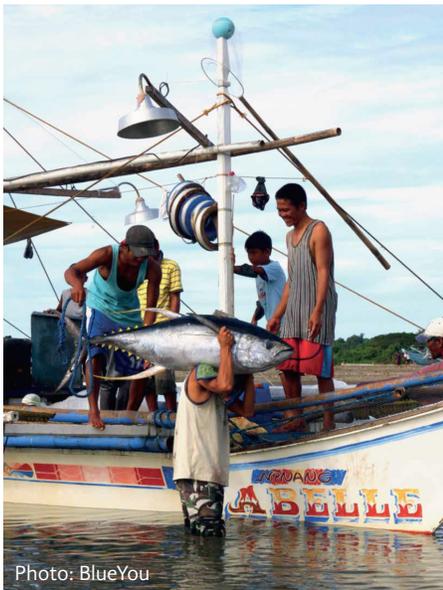


Photo: BlueYou

Owned by its Swiss parent company Blueyou, Meliomar Inc. operates buying stations in its fishery project areas across the Philippines, facilitates domestic logistics, and manufactures premium quality tuna products in two processing facilities in Metro Manila. The company exports tuna and mahi-mahi products under the Artesmar® brand and fishery improvement scheme worldwide. With 90% of its production output (by value and volume) sold to export markets, Meliomar boasts international clients from Europe, North America, South Africa, and Singapore.

In the Philippines, overfishing and poor fisheries management continue to stress local stocks, with consumers increasingly dependent on — and attracted to — higher quality, imported seafood. Through the Artesmar Fisheries Improvement Project (FIP), Meliomar promotes sustainably caught tuna from local, small-scale fisheries. Industrial tuna fleets plying the South China Seas and Western Central Pacific have increasingly marginalized traditional, artisanal small-scale fisheries. These commercial fleets not only impact the sustainability of tuna stocks but also deploy fishing gear that indiscriminately harvest vulnerable species and juvenile tuna. Mandating environmental safeguards (such as curbing bycatch from selective fishing gear), Artesmar creates greater awareness of

implementing more sustainable fishing practices to rebuild the country's depleting fishstocks.

Championing change across the sector, Meliomar makes significant investments into its traceability system and FIP, which bring together the national government, local municipalities, industry players, civil society, and fisherfolk to support efforts of returning Philippines marine resources back to productive levels. The process focuses on awareness creation and capacity building of fishery stakeholders to develop co-management models encompassing municipal fisheries in the Philippines. Providing a functional framework for stepwise fishery improvement, the FIP engages with coastal fishing communities in 10 different provinces. Key areas of improvement include: (i) registration and licensing of vessels; (ii) implementation of a catch documentation scheme; (iii) technical coaching and training for improved tuna handling and food safety practices; and (iv) data collection to: (a) establish resource access rights; and (b) inform fishery management decisions. These efforts help strengthen sustainable value chain for tuna, with consistent quality products and value for participating seafood businesses. Coastal fishing communities secure stronger livelihoods from better tuna catching practices, efficient post-harvest management, and increased resources generated by transparent licensing of access rights. Meliomar also uses a unique traceability system that tags each individual tuna upon landing. This process allows the company to trace all tuna products directly and reliably from their origin. Thus far, Artesmar FIP has worked with over 3,000 small fishing boats and reached over 8,000 fisherfolks across the Philippine archipelago.

Blueyou operates a B2B sourcing solution, supplying either private label or consumer facing branded goods. For these services, the company charges a premium for its traceable and sustainable fish products. Profits are reinvested back into the company and used to pay fisherfolk suppliers with living wages. Blueyou set up its own processing plant (Meliomar) in the Philippines with a US\$ 1.5 million investment. In 2015, Meliomar projects outputs of finished goods to reach 400 tons. By 2020, the company's growth plans include a new, modern facility with a capacity for output reaching 1,500 tons. This stage of expansion will entail investments in the range of US\$ 6-8 million. The companies aspire to incorporate the country's entire handling industry into the Artesmar FIP and reach over 30,000 fisherfolks.

## E. Impact Investing

Impact investing refers to an emerging investment approach that continues to garner increasing popularity and interest as an alternative to traditional philanthropy and profit-maximizing investing. Harnessing the power of entrepreneurship, innovation and capital for public good, impact investing offers new and creative financing options for ICM projects and an ocean-based blue economy at local, national, and regional levels. While talk about the potential of impact investments for ICM started around 2011-2012, initiatives have largely focused on the U.S. and Europe. A recent study points to rapidly growing interest among impact investors for the conservation investment market, which includes marine and coastal conservation.<sup>28</sup> Nonetheless, a very small percentage of such investors have either made investments (or plan to make in the near future) in conservation across East Asia. This trend broadly applies to most of the ICM-related sectors, with the exception of energy and fisheries, which enjoy relatively more interest from impact investors.

A conservative estimate places assets under management (AUM) for impact investments at US\$ 26.7 billion globally.<sup>29</sup> In ICM-related sectors for the countries under review, impact investing remains largely unrealized. Impact funds continue to be formed, but the research points to no discernible investment commitments.

Channeling investment capital to companies, organizations and funds, impact investing seeks to generate measurable and beneficial social/environmental impact alongside financial returns.<sup>30</sup> While investors, market participants and donors continue to pilot innovative financial instruments, a majority of impact investments still revert towards traditional private debt or equity instruments. Managed funds account for a large portion of the impact investing AUM. However, the sector is seeing increasing participation from institutional investors such as banks, insurance companies, and pension funds. That said, in East Asia, impact investments still make up a small percentage of the global AUM. Estimates of impact investments into ICM-related sectors remain difficult to gauge. In investor surveys, investments in ICM may overlap with energy, food and agriculture, information and communication technologies, microfinance, water and sanitation, and “other” investments.

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<sup>28</sup> See EKO Asset Management Partners. “Investing in Conservation: A landscape assessment of an emerging market.” November 2014.

<sup>29</sup> A survey by the Global Impact Investment Network suggests that AUM reaches about US\$ 46 billion. See J.P.Morgan. “Spotlight on the Market: The Impact Investor Survey.” May 2014. However, this estimate includes investments by DFIs, which are treated separately in the report.

<sup>30</sup> While DFIs also invest in projects with positive environmental, health, or livelihood impacts, impact investments typically refer to non-governmental entities.

# V. Trends in Funding for ICM-Related Sectors

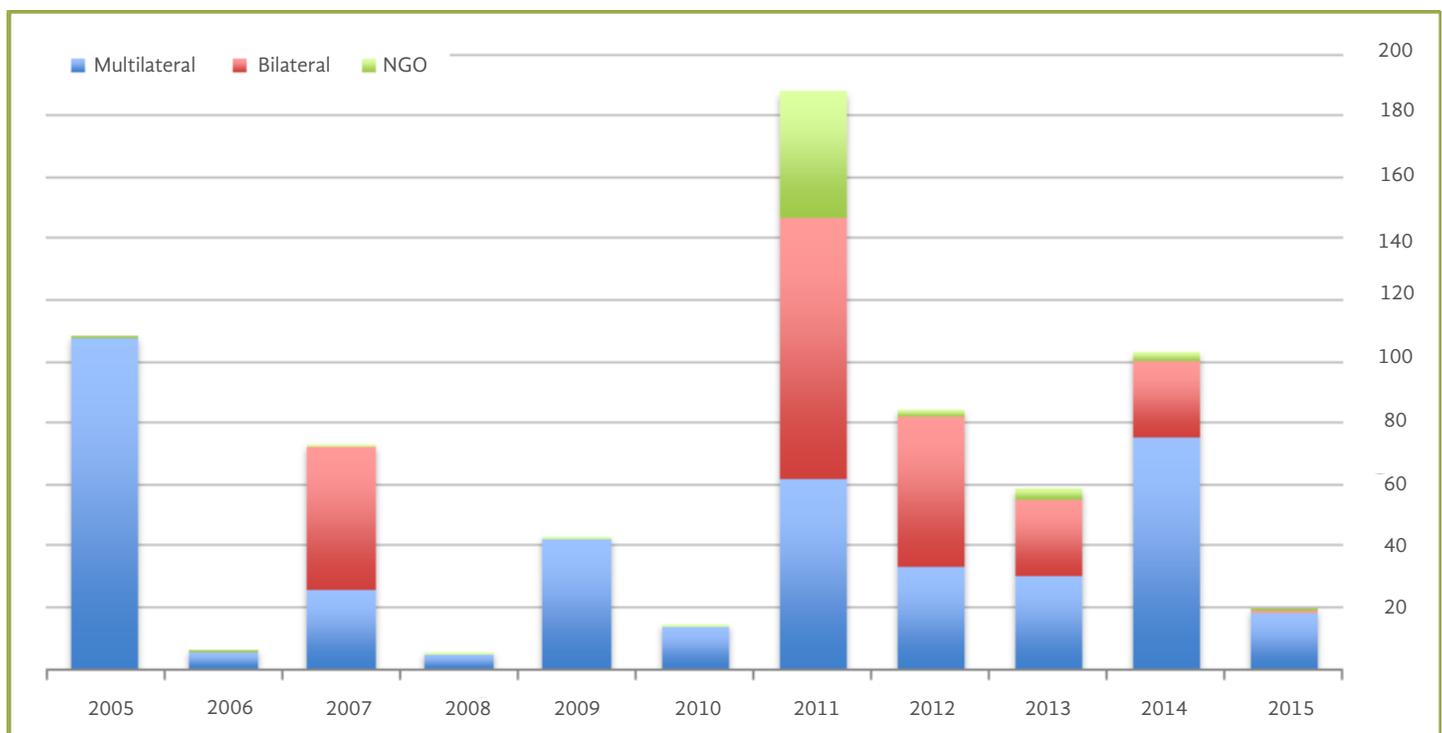
This section explores funding trends for donor grants and investment capital across time, sectoral focus and geography. The paper then highlights some salient features of funding trends, growing (or declining) interests of funders and opportunities related to greater private financing for ICM-related sectors, particularly with regards to impact investing.

## A. Grant Funding

### Multilateral Institutions and GEF Dominate International Grant Funding

Overall, multilateral institutions provide the vast majority of ICM-related funding over the last decade for countries in this report, with GEF as the largest single source of grants. Across all donor categories, the totals for yearly funding commitments typically fall below US\$ 100 million, except for a large spike in 2011, when bilaterals and foundations made significant contributions.<sup>31</sup> See Figure 4.

**Figure 4: International Grant Funding to ICM-related Sectors (committed US\$ million), by Select East Asian Geography, by Donor Category, 2005-2015**



Note: 2015 data identified as of August

<sup>31</sup> This research identifies no specific trends to account for the funding commitments in 2011.

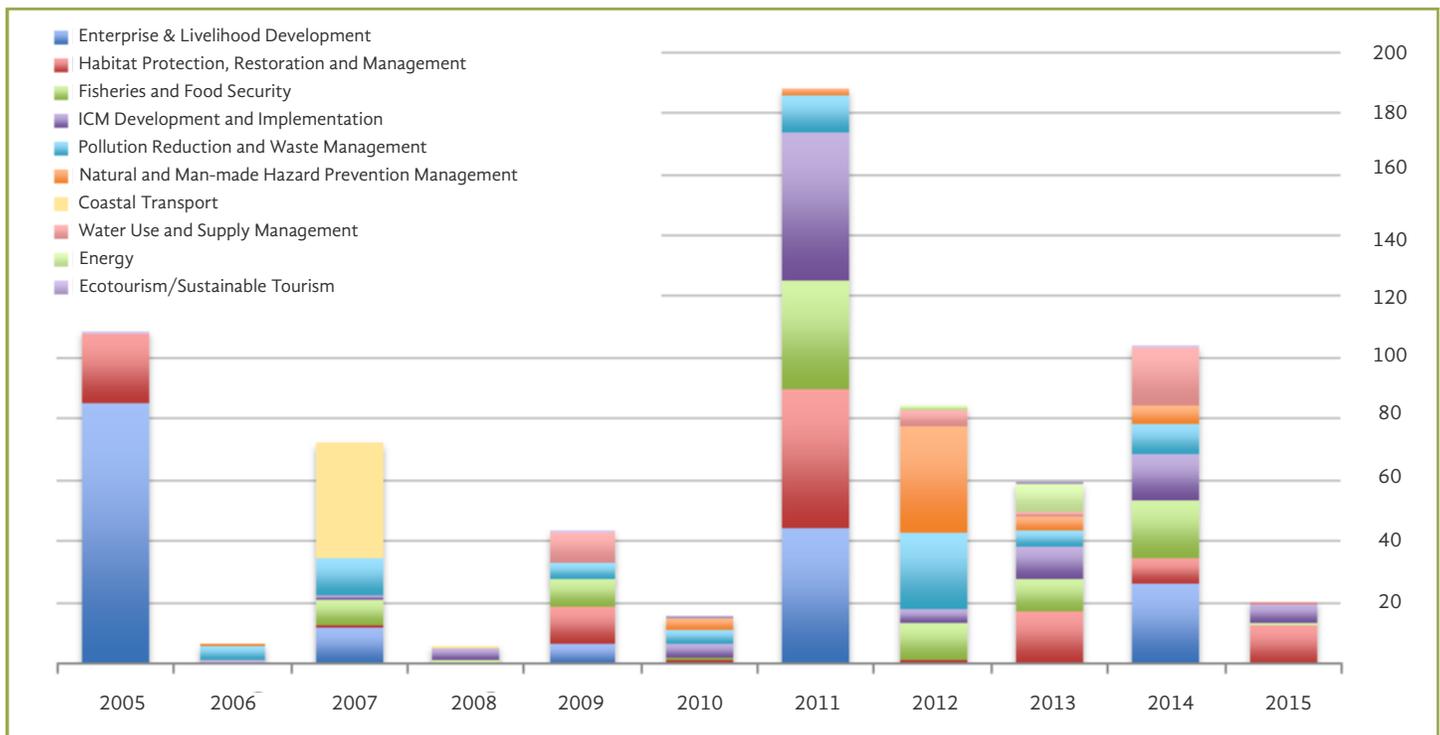
## Multilateral Priorities Extend to Livelihood Development, Pollution Reduction, Fisheries and Habitat Protection

In terms of trends, multilateral institutions commit grants consistently on a yearly basis, with GEF typically the largest component. Multilateral and GEF priorities include: transboundary water pollution; overextraction of groundwater resources; unsustainable exploitation of fisheries; protection of fisheries habitats; invasive species and balancing competing uses of water resources. In terms of ICM categories, GEF works across livelihood development, pollution reduction, fisheries and habitat protection. See Figure 5.

## International Donors Exhibit Sectoral and Geographic Diversity in Grant-making

Except for 2005 when the enterprise and livelihood development sector received a large donor commitment (from the World Bank in Indonesia), most years witness a sectoral mix of donor funding. See Figures 5 and 6.

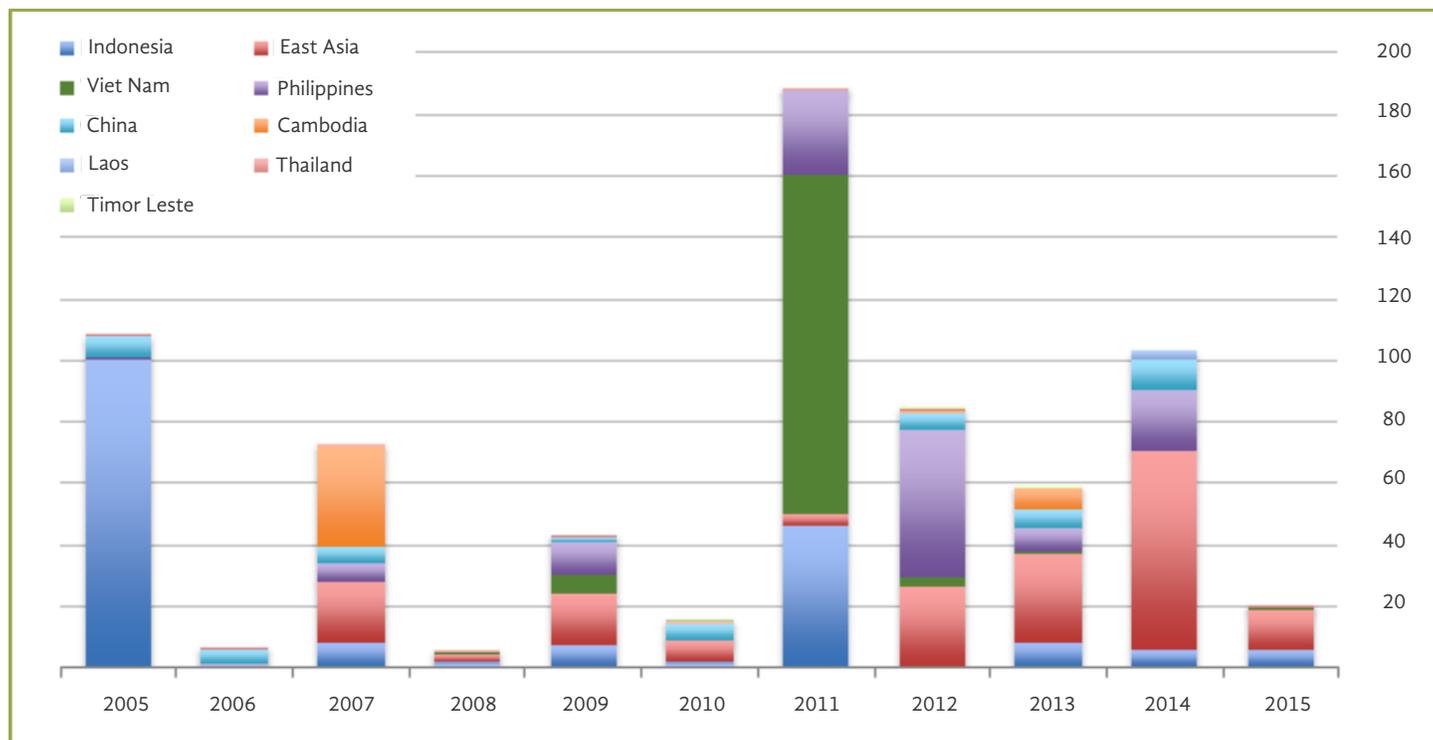
**Figure 5: International Grants to ICM-related Sectors (committed US\$ million), by Select East Asian Geography, by Sectoral Categories, 2005-2015**



Note: 2015 data identified as of August

While a few countries receive the bulk of donor funding (such as Indonesia, Vietnam and the Philippines), regional issues across East Asia also receive noticeable attention, especially with the transboundary nature of coasts and oceans. On a yearly basis, funding for ICM causes reflects the geographic dispersion of donor interests. Funding to ICM activities stand out in Vietnam (2011) and Indonesia (2005). See Figure 6.

**Figure 6: International Grant Funding to ICM-related Sectors (committed US\$ million), by Select East Asian Geography, 2005-2015**



Note: East Asia refers to regional projects undifferentiated across countries; 2015 data identified as of August

### ICM Grants Align Closely with Climate-resilience and Biodiversity Funding

Across many projects and programs, donors tend to link efforts to strengthen coastal areas with environmental challenges like climate change and biodiversity. Indicative of many large projects, the Integrated Coastal Ecosystem Management Program in Vietnam promotes sustainable development of large marine and coastal ecosystems of the East Asia and the Pacific Region. Co-funded by GIZ (US\$35 million) and DFAT (US\$ 13 million), the project started in 2011 and is expected to last until 2017. Activities aim to improve livelihoods of local populations by reducing pollution and promoting sustainable marine fisheries, ICM and ecosystem-based management. Anecdotal evidence suggests that GEF funding currently looks to prioritize biodiversity conservation, marine protected areas and climate change issues.

### Bilateral Funding Increasingly Take on Geopolitical Considerations

Bilateral funding more and more aligns with diplomatic efforts and takes on geopolitical considerations, as evidenced by DFAT absorbing AusAid. Specific bilateral trends in ICM (as with broader foreign assistance) reflect wider geopolitical considerations. In August 2015, U.S. Secretary of State John Kerry announced USAID's commitment of US\$4.3 million to the Asia Pacific region to combat illegal, unreported and unregulated (IUU) fishing. In particular, USAID is interested to improve the documentation and traceability systems in recognition of conserving the region's unique, marine resources.<sup>32</sup> Elsewhere, USAID looks to invest in clean energy,

<sup>32</sup> "Secretary Kerry Announces USAID's Oceans And Fisheries Partnership To Promote Sustainable Fisheries," USAID, 6 August 2015 <<https://www.usaid.gov/news-information/press-releases/aug-6-2015-secretary-kerry-announces-usaids-oceans-and-fisheries-partnership>>

sustainable landscapes, and adaptation through the Global Climate Change Initiative for its FY2016 budget request. The U.S. Government's slow but continuing rebalance to Asia creates opening to direct climate change resources towards ICM initiatives that link directly to broader objectives of a healthy global environment, climate-smart growth, and improved resilience to climate change for the most vulnerable countries. On the whole, most bilateral agencies generally under-fund international development programs, often falling victim to the vagaries of domestic politics of their home country.

### Strategic Philanthropy Emerges in Asia

Charitable giving has a long history in many parts of Asia. Most of these donations occur anonymously and informally. For ICM-related sectors, grant funding remains relatively small, as with much of homegrown philanthropy overall. Nonetheless, the region boasts over 3.3 million HNWI's increasingly linked to growing, individual philanthropic gestures. Yet, leading Asia philanthropists take an entrepreneurial approach to philanthropy. Not inclined simply to dole out grants for a good cause, these influence-makers take a more strategic approach to philanthropy, setting specific and measurable goals in their efforts to address particular social causes. Scalable, market-oriented solutions more and more attract the attention of Asian philanthropists.<sup>33</sup> This trend may also apply to ICM-related sectors.

Trends in domestic philanthropy are worthwhile to highlight for ICM-related sectors. In Indonesia, corporations working in natural resource-intensive industries are required to donate 2% of profits to CSR initiatives. The country has also witnessed a recent growth of family philanthropies. Individual giving is focused on 'zakat' (Islamic philanthropy). Thailand boasts a strong NGO sector (domestic and international), as well as a growing number of HNWI's. While priority is given to religious causes, Thai philanthropy also focuses on health, environment and advocacy. Vietnam and Timor-Leste exhibit minimal activity in domestic philanthropy. In the Philippines, NGOs are under greater scrutiny to improve transparency, with many exploring new and innovative forms of partnerships. Debt-for-nature swaps have created publicly endowed and NGO-managed foundations, such as the Foundation for the Philippine Environment and the Foundation for Sustainable Societies. Both give to environmental causes.

## B. Investment Capital

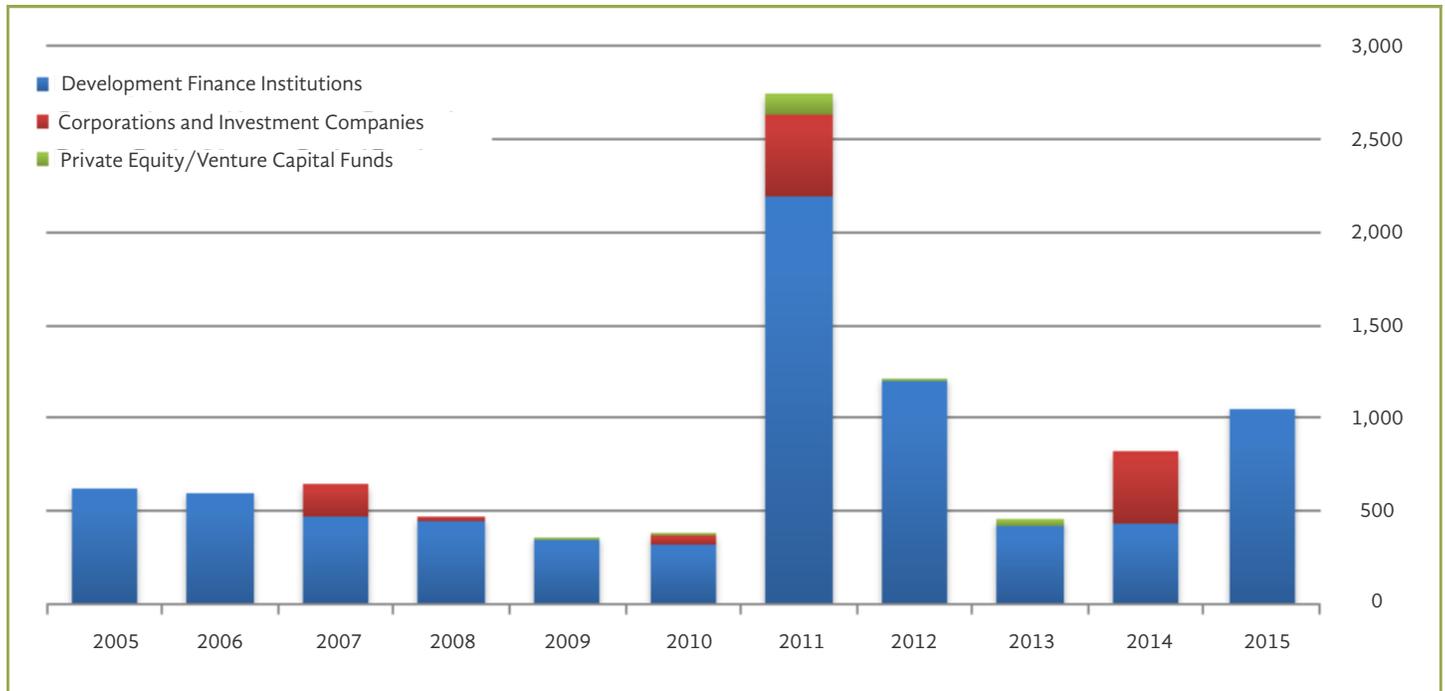
### DFIs Provide Most of the Investments into ICM-related Activities

Having contributed over US\$8 billion to the space over the last 10 years, DFIs constitute by far the largest and most active investors in ICM projects across East Asia. Except for major investments in 2011, funding typically falls below US\$ 1.0 billion on a yearly basis. Investments by corporations and investment companies stand out in 2007, 2011, and 2014. Meanwhile, private equity and venture capital funds show little presence, except in 2010-11. From the research, overall investments peaked in 2011 and declined through 2013 before picking up again. See Figure 7.

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<sup>33</sup> See Economist Intelligence Unit, 2011.

**Figure 7: Investments in ICM-related Sectors (US\$ million), Select East Asian Countries, by Investor Category, 2005-2015**

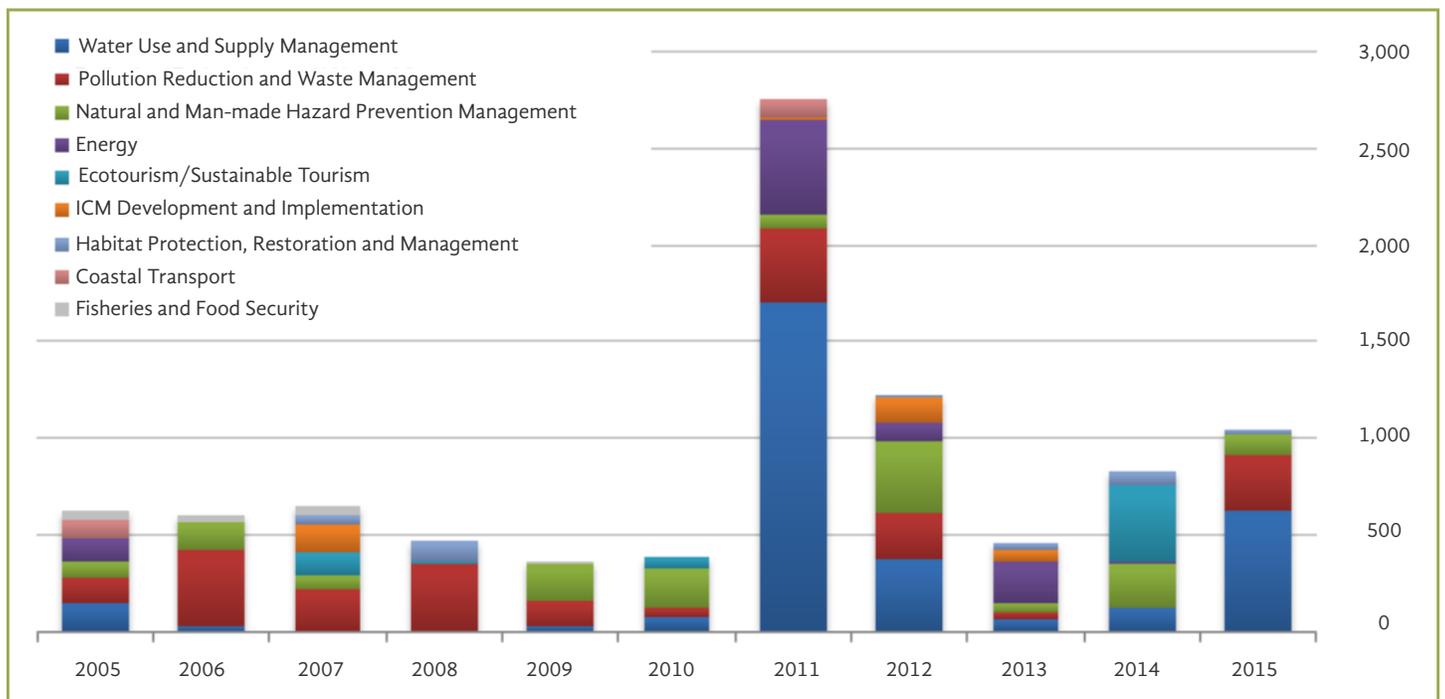


Note: 2015 data identified as of August

**With Few Exceptions, ICM Investments Exhibit Sectoral and Geographic Diversity**

Areas of investor interest vary greatly from year to year. Notably, water use and supply management benefited from large investments in 2011 and again in early 2015. See Figure 8.

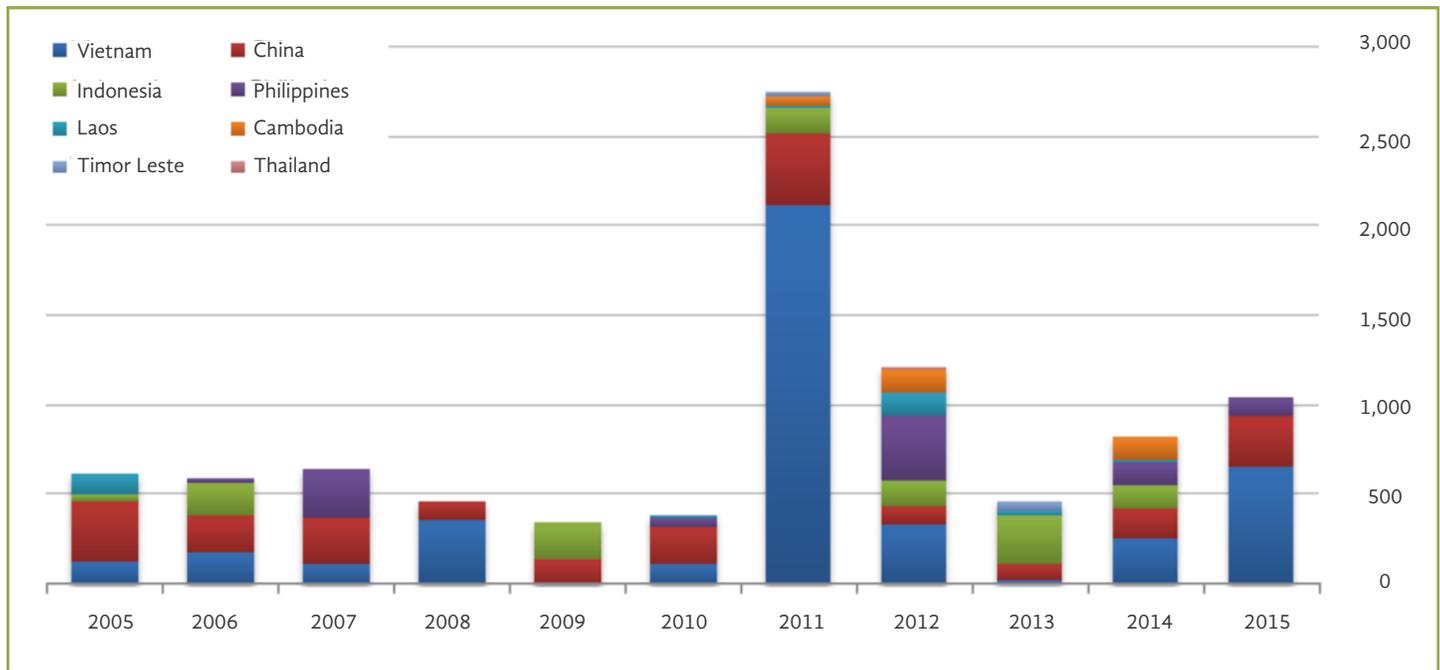
**Figure 8: Investments in ICM-related Sectors (US\$ million), Select East Asia Countries, by Sectoral Categories, 2005-2015**



Note: 2015 data identified as of August

While ICM-related programs and initiatives benefit predominantly four countries over the last decade (Vietnam, China, Indonesia and the Philippines), geographic focus varies greatly on a yearly basis. Investments over US\$ 2.1 billion in Vietnam stand out in 2011, however. See Figure 9.

**Figure 9: Investments in ICM-related Sectors (US\$ millions), by Select Country, 2005-2015**



Note: 2015 data identified as of August

### Debt Financing from DFIs Provide Most of the Investment Capital Options into ICM-related Sectors

The vast majority of ICM funding flowed into public sector projects through sovereign debt extended by DFIs. These funds were subsequently channeled to the relevant government agencies, municipal boards or specialist organizations that were responsible for the implementation of the projects.

### ICM-related Sectors are Likely to Attract Growing Investor Interest

With the increasing attention being paid to the potential of conservation finance and sustainable fisheries and aquaculture, the universe of investors active in ICM is likely to continue growing. For example, in 2012, the World Bank invested \$100 million to strengthen the sustainable management of coastal fisheries in Vietnam. The project involved solidifying institutional capacity, supporting good aquaculture practices, improving environmental management of near-shore capture fisheries, as well as the rehabilitation of fishing ports and landing sites. In 2007, the ADB invested approximately US\$23 million towards the sustainable management and conservation of coastal resources and improved incomes and livelihoods for coastal communities in the Philippines.

### There is a Conspicuous Absence of Major Categories of Investors

Notably missing from the ICM investment landscape in East Asia, so far, are large institutional investors (traditionally pension funds, endowments, and insurance companies), family offices and HNWIs. Institutional investors tend to be risk-averse in their investment strategy and their hesitance to commit to ICM projects could possibly be due to the relatively uncharted nature of the East Asian ICM landscape as a destination for private investment.

## Sea Ports Continue to Witness Growth, Expansion and Upgrade

In the near future, more port developments expect to attract more private equity investments for capital expansion and facilities upgrades. These projects include the US\$ 417.0 million, 30-year concession for the Davao Sasa Port on the Island of Mindanao; US\$ 7.0 billion investments into Indonesian ports; and US\$ 4 billion sought for the Thinh Long Sea Port in Vietnam. Of particular note, the Philippine port traffic expects to benefit from the recently amended Cabotage Law (Foreign Ships Co-Loading Act), which allows international vessels carrying imported cargoes and cargoes to be exported out of the country to dock in multiple ports. This easing of restrictions on coastal transport will impact shipping competition, by reducing inter-island transport costs across the Philippine Archipelago, improving the country's import and export system, and injecting more investor interest in the country's seaports.

## PPP Financing Arrangements for ICM Encounter Barriers to Successful Implementation

Public-private partnerships (PPPs) harness the expertise and efficiencies of the private sector in delivering certain facilities and services traditionally procured and delivered by the public sector. In such schemes, private companies assume substantial financial, technical and operational risk in delivering a public service — in exchange for a guaranteed revenue stream generated by the project. In the ICM sectors, the PPP model has produced mixed results.

Through ICM, PEMSEA has facilitated and supported the PPP model through extensive consultations with local communities, surveys of service fee structures, feasibility studies, environmental assessments, investor roundtables, public education campaigns and trainings on regulatory frameworks to implement PPP arrangements. More integrated and comprehensive approaches and studies are needed to package and promote PPP projects in ICM sectors, and a number of barriers still exist to establishing successful PPPs:

- Credible and sustainable cost-recovery mechanisms are needed to attract the interest of private investors.
- Procurement process lacks transparency, clearly defined legal frameworks, or familiarity with engagement of the private sector.
- Tensions in central-local government relations and unclear lines of authority for innovative financing schemes can hamper private sector involvement.
- Capacity building and public awareness raising for PPP arrangements are needed to strengthen community buy-in.

These issues apply to other emerging innovative financing models for ICM and sustainable development of coasts and oceans as well. The process of incorporating more market-based approaches to service delivery requires sufficient time and resources to produce meaningful results.<sup>34</sup> The ICM process continues to build local coalitions in support of innovative financing solutions involving the private sector.

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<sup>34</sup> See Soriano, Ma. Cecilia G. Terminal Evaluation Report: Development and Implementation of Public-Private Partnerships in Environmental Investments. PEMSEA, March 2011.

### Case Study 3: Exploring Innovative Financing for a Sewerage Facility, Puerto Galera, Philippines

#### The Potential for Public-Private Partnerships in Integrated Coastal Management



Photo: PEMSEA

The municipality of Puerto Galera in the Philippines initiated the Sabang Sewerage Collection and Treatment System to address growing concerns of uncontrolled sewage discharge into its coastal waters. This issue resonated strongly with the local community, whose economy relies heavily on tourism, so far attracting over one million visitors annually. Fears of bacteriological contamination of its beaches risked undermining the main source of income for residents and a major source of revenues for the local government. Moreover, environmental groups raised concerns about sewage discharge from the coastal region, given its close proximity to the Verde Island Passage, a highly sensitive marine biodiversity area.

The proposed project covered three coastal areas identified by the Philippine Department of Environment and Natural Resources as prone to contamination with fecal coliform and related waterborne pathogenic diseases. The plan envisioned collecting wastewater directly from households and commercial establishments and pumping it to a sewage treatment plant for processing prior to coastal discharge or recycled use. Benefiting the interests of individual residents, resort owners, the wider public, and environmental interests, the sewerage project carried a high upfront capital expense (US\$ 2.2 million) and continuing costs for operations and maintenance (US\$ 1.1 million) when first proposed in 2006. The municipality's limited resources and central government transfers together reached only US\$1.6 million per annum. To implement the project, the local government required an innovative and sustainable financing mechanism in partnership with the private sector. Its lack of track record with investments of such scale precluded the use of pure debt financing or joint-venture arrangements. Instead, the Puerto Galera government chose to pursue the design, construction, financing, and commissioning of the sewerage system through a PPP arrangement under a Build-Operate-Transfer scheme. The concessionaire would then turn over the facility to the municipality for operation over a 10-15 year period.

For this project, PEMSEA facilitated a pre-feasibility study, the development of the sewerage and wastewater treatment plan, a willingness-to-pay survey, and policy reforms related to drafting of ordinances and other legal requirements. The organization also supported capacity building efforts of the local government in project structuring, procurement process, and partnership development for lasting sustainability. To pay for the sewage project, PEMSEA proposed the establishment of an environmental management fund, with revenues raised from the collection of environmental user fees from tourists. Despite the groundwork laid for successful partnership, to date, a number of challenges have prevented the project from materializing including: application of the financing and cost-recovery mechanism; right-of-way acquisition for project sites; local government commitment and accountability; legal and institutional frameworks; and regulatory capacity. The experience of the Sabang Sewerage Collection and Treatment project offers important lessons for further improving future PPP projects.

## Emergence of Innovative Financing Options

In addition to the traditional funding vehicles above, innovative finance mechanisms specifically targeted at conservation and ecosystem preservation continue to emerge. Primary among these approaches are debt-for-nature swaps — arrangements by which sovereign debt is forgiven or purchased in exchange for local investment in sustainable conservation measures. In 2015 for example, NatureVest, an impact investment initiative of the Nature Conservancy, mobilized a US\$ 78 million debt swap with the government of the Seychelles in exchange for a commitment to fund climate adaptation and marine conservation measures.

Payment for ecosystem services (PES) mechanisms involve the exchange of something of economic value for the maintenance of an ecological service or conservation measure. This system is being employed to facilitate mangrove habitat preservation in the Philippines through Community-based Mangrove Forest Management Agreements where 10% of foresters' profits are channeled towards mangrove reforestation and conservation efforts. In Vietnam, the legal framework for mangroves PES law holds the promise of encouraging sustainable development in sensitive areas, particularly when linked to storm and flood protection, aquaculture support and carbon sequestration.

Biodiversity offsets, primarily used for infrastructure development, require that projects implement mitigation or conservation measures in order to offset any loss to biodiversity they may cause. There are no examples in East Asia of such offset schemes, but implementation elsewhere point to emerging trends overall. In 2008, the Port of Rotterdam offset marine environmental damage caused by a port expansion project by establishing a seabed protection area and preserving protected bird habitats.

Revolving Loan Funds are financial structures that consist of a pool of loan funds that recycle money back into the fund as debts are repaid. Preservation organization Flora and Fauna International established a US\$ 60,000 revolving loan fund on Sabang Island in Indonesia that provides short-term, low-interest loans to local enterprises that have a positive impact on the marine environment.

## Case Study 4: Climate Bond Initiative to Grow the Green Bond Market

### Mobilizing Debt Capital Markets for Climate Change Solutions



The green bond market has grown rapidly in recent years, reaching US\$ 36.6 billion issued in 2014 (triple that for 2013). The large demand for these bonds derives from a wide range of investors, including: mainstream Institutional investors (Aviva, BlackRock, State Street); specialist ESG (Environmental, Social, Governance) and Responsible Investors (Natixis, Mirova, ACTIAM); corporate treasury (Barclays, Apple); sovereign and municipal governments (Central Bank of Peru, California State Treasurer) and retail investors (World Bank issues for retail investors through Merrill Lynch Wealth Managers and Morgan Stanley Wealth Managers). However impressive, the green bond market remains relatively small in comparison to its potential within the US\$ 100 trillion bond market. So far, multilateral and national development banks account for green bond issuances.

The Climate Bonds Initiative seeks to mobilize the broader bond market for climate change solutions, including those related to ICM. Its Ten Point Plan promotes the transition to a low-carbon economy through a public sector agenda for stimulating private market development in green bonds. Focused on the issuer base, investors and market structure, the plan includes the following areas of focus:

1. Strategic issuance from public entities;
2. Strengthening planning and pipeline transparency of green projects;
3. Improving the risk-return profile of green bonds: credit enhancement;
4. Tax incentives;
5. Boosting demand: domestic fund mandates;
6. Boosting demand and convening power: central banks;
7. Market integrity: supporting standards development;
8. Market creation and development: aggregation of small-scale green assets;
9. Financial regulatory measures are important and
10. International financial cooperation.

The initiative aims to facilitate greens bonds as a way to bring investments for climate change solutions, while also promoting a green bond standards and certification scheme. Current standards available or under development include: solar; wind; low carbon buildings; low carbon transport; bioenergy; water; agriculture, forestry and other land use; and geothermal. Some experts have suggested a similar “blue bond” concept for investments focused on sustainable development of coastal and marine areas.

### C. Impact Investing Trends in ICM

ICM reflects a relatively new area of interest for impact investors, who traditionally look to microfinance, financial inclusion, energy, healthcare, agriculture, livelihoods and education. Evidence of interest from impact investors in ICM-related investments started surfacing in the form of articles and opinion pieces only in 2012. That year, a handful of leading conservation organizations and international donors including the Rockefeller Foundation<sup>35</sup> and David and Lucille Packard Foundation<sup>36</sup> started making a case for impact investments in sustainable coasts and oceans. Since then, several major players in impact investing, such as JP Morgan Chase & Co<sup>37</sup> have committed to investing in marine ecosystems. This section highlights some of the major trends in ICM-focused activities among impact investors.

#### Fisheries Present a Major Area of Growing Interest

Sustainable fisheries span major impact categories such as food security, marine livelihood protection, economic development of coastal communities and conservation. While impact investors have traditionally invested in agriculture and livestock ventures as a means to achieving food security, investments in fisheries have lagged — partly due to lack of awareness about the sector among investors. Impact investors globally are recognizing both the financial and social impact potential of fisheries. Globally, over a billion people rely on seafood as a main source of protein.<sup>38</sup> Asia accounts for the majority of this demand — a significant percentage from poor and underserved coastal communities. In addition, livelihoods of over 12% of the world's population depend directly or indirectly on fisheries and aquaculture.<sup>39</sup> The marine capture fisheries market alone accounted for US\$ 80 billion - US\$ 85 billion in revenues annually in 2000-2010.<sup>40</sup>

Realizing this opportunity with fisheries, several initiatives such as Fish 2.0,<sup>41</sup> Future of Fish,<sup>42</sup> Vibrant Oceans Initiative<sup>43</sup> and WorldFish Incubator<sup>44</sup> aim to channel impact investments towards the fisheries sector. Leading donors such as Bloomberg Philanthropies, Conservation International, David and Lucille Packard Foundation, and Rockefeller Foundation are playing their part by increasing awareness and calling impact investors to action. The sector is now primed for impact investments with several new funds such as NatureVest focusing on sustainable fisheries, as well as traditional impact investors like Encourage Capital becoming increasingly more involved in the sector.

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<sup>35</sup> "Oceans and Fisheries," The Rockefeller Foundation, <https://www.rockefellerfoundation.org/our-work/initiatives/oceans-fisheries>.

<sup>36</sup> "Marine Fisheries," The David and Lucille Packard Foundation, <http://www.packard.org/what-we-fund/conservation-and-science/oceans/marine-fisheries>.

<sup>37</sup> "Companies We Work With," The Nature Conservancy, <http://www.nature.org/about-us/working-with-companies/companies-we-work-with/jp-morgan-chase-co.xml>

<sup>38</sup> "Fish as Food," Marine Stewardship Council, <https://www.msc.org/healthy-oceans/the-oceans-today/fish-as-food>

<sup>39</sup> "Fisheries and aquaculture – enabling a vital sector to contribute more," FAO, last modified July 9, 2012, <http://www.fao.org/news/story/en/item/150839/icode/>.

<sup>40</sup> Andrew Dyck and U. Rashid Sumaila, *Marine Fisheries and the World Economy* (Washington, DC: The Pew Environment Group, 2010), <http://www.pewtrusts.org/~media/legacy/uploadedfiles/peg/publications/report/PewOSSWorldEconomy.pdf>.

<sup>41</sup> "Fish 2.0," Fish 2.0, <http://www.fish20.org>

<sup>42</sup> "Future of Fish," Future of Fish, <http://www.futureoffish.org/>.

<sup>43</sup> "Vibrant Oceans," Bloomberg.org Group, <http://www.bloomberg.org/program/environment/vibrant-oceans/>.

<sup>44</sup> "WorldFish Incubator," WorldFish, <http://worldfishcenter.org/incubator>.

## Limited Pool of Investable and Bankable Projects

Difficulty in sourcing high-quality investable deals is an important factor cited by investors in holding back from actively participating in the ICM sector. This issue confronts the broader impact investing space overall.<sup>45</sup> To strengthen efforts for achieving coastal and marine sustainability through strategic financing, impact investment promises to play a key role in advancing ICM-related sectors. But ICM investment faces some strong headwinds. There is no shortage of investment capital available. There is, however, a shortage of quality investment opportunities. Moreover, the capacity of ICM projects to absorb investment capital remains challenging for a number of reasons. A lack of track record, few examples of successful investments, capriciousness of local politics, issues of land tenure, and untested revenue models have all conspired to limit the potential of ICM, even from the most patient of private capital.

## Innovative Financial Instruments are Crucial to Catalyzing Impact Investments

As discussed earlier, impact investors have thus far been slow to invest in ICM-related sectors. This reluctance could reflect a lack of awareness about the potential social and environmental impact of ICM or lack of familiarity with metrics and measurement in the sector. In a recent report, EKO Asset Management (now Encourage Capital) identified three impact-investing strategies that have the potential to help transition fisheries to sustainability:

- A microfinance/SME route-to-market vehicle that finances: (a) low-cost improvements to processing activities including icing, packaging, and cold storage; (b) distribution logistics such as trucks and interim storage depots; and (c) marketing capacity to manage sales efforts to higher-value buyers of fish products. Importantly, the vehicle could be structured to allocate an ownership stake to fishers directly, so that they may benefit from the profitability of the enterprise and have an incentive to make it successful through ongoing sustainability practices and commercial activities;
- A public-private partnership vehicle that utilizes new technologies and systems to enhance enforcement of fisheries regulations and provide jobs that benefit local communities; and
- A fisheries impact vehicle that would work with the broader fisheries supply chain to structure long-term purchasing commitments that can in turn be used to finance a transition to a more sustainable fishery.<sup>46</sup>

Innovative financial instruments that bring transparency to ICM-related investments through clearly defined impact metrics could help catalyze impact investments. For example, financial instruments that rely on certain impact outcomes for payments — such as results-based impact bonds — could encourage investors deeply committed to achieving certain impact milestones to invest. In addition, such instruments could encourage large institutional investors (e.g., banks, pension funds, insurance companies) that look to make impact investments to consider ICM as one of the focus sectors.

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<sup>45</sup> See for example, Koh, Harvey, Ashish Karamchandani, and Robert Katz. “From Blueprint to Scale: the Case for Philanthropy in Impact Investing.” *Monitor*, April 2012.

<sup>46</sup> EKO Asset Management Partners, *Sustainable Fisheries Financing Strategies: Save the Oceans Feed the World Project* (EKO Asset Management Partners, 2014), <http://ekoamp.com/wp-content/uploads/2014/03/sustainable-fisheries-report-8g.pdf>.

## VI. A Sea of Possibilities



The investment landscape for ICM in East Asia can expect to evolve with private financing options playing a larger role, particularly as donor funding faces constrained budget environments across the globe. The potential for innovative financing to promote ICM initiatives shows promising trends. The recent emergence of climate investment funds, development impact bonds, debt-for-nature swaps, payments for ecosystem services, biodiversity offsets, and revolving loan funds, among others, point to creative mechanisms that can scale initiatives for sustainable coastal and marine ecosystems. Impact investing is still a new field, with few results to demonstrate in the region, particularly in the coastal and marine environment.

To make full use of innovative financial mechanisms, ICM projects and related initiatives look increasingly to adopt market-based approaches to complement existing public resources, philanthropy, and foreign aid. Institutional investors, family offices and HNWIs continue to express a desire to invest in entities that offer social and environment impact with reasonable expectations of financial returns. As such, ICM-related projects transformed into investible social enterprises (with promising and predictable revenue models) can expect to attract growing interest from impact investors. Facilitating investment requires a blend of resources (grants and investment capital) and demonstration of successful investments. Yet, such a transformation remains at an early stage of development and requires a catalyst to take ICM projects to the next level.

### Awareness and Advocacy to Drive Impact Investments in ICM

Awareness building efforts are needed, targeting both the wider investment community and impact investors in particular.

- Proponents of coastal and marine projects need to build greater awareness about the potential financial, social, and environment impact of ICM-related investments through established case studies, authoritative research, events and conferences. It is essential to discuss and debate both the opportunities that the sector holds and to highlight relevant issues facing the sector. Such efforts could help encourage participation from both impact investors and other stakeholders interested in addressing the challenges facing ICM through multistakeholder public-private partnerships and interventions.
- Investors in Asia tend to have limited exposure in sustainable development investments. Investors in the West have long championed such causes, but a lack of familiarity with ICM activities in East Asia can hinder investment. We believe that investor education around: (i) the urgency and need for ICM investments; (ii) awareness about both the financial returns and social impact; (iii) initiatives that highlight the pipeline of potential deals; and (iv) innovative financing and partnership mechanisms in ICM could help catalyze impact investments in the sector.

Efforts to raise awareness of high-quality and investable projects in ICM may also help pique interest in the sector. Competitions such as Fish 2.0, with a focus on Pacific fisheries, have helped to highlight such enterprises in the fisheries sector in the U.S. Similar competitions that focus on ICM enterprises in East Asia could help identify the most valuable enterprises in coastal and marine sectors.

## Investment-readiness Technical Assistance to Catalyze Interest of Investors

Many ICM-related projects seeking investment capital in East Asia are at the early stage, with proof of concept still developing. Incubator and accelerator services or technical assistance programs helping promising ICM-related enterprises to become investment-ready could also generate a healthy pipeline for investors interested in sustainable development of coasts and oceans. An important part of the enterprise development ecosystem, incubators and accelerators vary in design and service offerings. But at their core, they seek to help early-stage enterprises achieve scale, financial stability and investment readiness. Particularly helpful for first-time entrepreneurs and those with limited professional networks, these programs can provide focused support and professional mentors that help refine business ideas, and make introductions to appropriate investors.

Investment-readiness support can strengthen ICM-related projects to meet the expectations of impact investors. Components of such assistance may include:

- Developing a robust business plan to demonstrate proof of concept;
- Fine-tuning a financial model that accurately captures relevant information (e.g., historical projections of profit/loss, cash flow streams and balance sheet) demonstrating capacity of sustaining an ICM project as a going concern;
- Honing an investor pitch that succinctly highlights notable selling points; and
- Identifying the appropriate legal approach to facilitating investment (with respect to the ICM project's deal structure).

Such investment readiness services can provide a point of entry for ICM-related projects to open doors to the wider investor community.

## Knowledge Management to Scale Investments

A knowledge management platform can help identify gaps and barriers to investment in coastal and marine sustainable development. Through the development of a knowledge management platform, PEMSEA seeks to facilitate investment in ICM and a blue economy through the use of specific knowledge products and services. The platform will address challenges and barriers to investment through two areas for scaling up investment: Investment Preparation and Investment Opportunities.

- The Investment Preparation component of the platform will include five steps enabling development projects, local governments and others to generate projects that are investment-ready.
- One of the primary objectives of the platform is to ultimately provide a known, reliable destination for investors looking for quality investment opportunities in sustainable development of coastal and marine areas. These opportunities will be generated by the Investment Preparation component of the platform.

In general, international development projects struggle to build in the longer-term financial sustainability of project investments beyond the life of the project. The platform will thus seek to help projects incubate investible activities earlier in the project cycle.

## More Research to Identify Investment Opportunities in ICM

This mapping exercise only begins to sketch the broad outlines of the investment landscape for ICM. Large gaps in knowledge and understanding of investor trends remain. The research offers a starting point to explore ways to scale up investments in ICM-related sectors. As a point of entry in this dialogue, the paper provides a high-level overview of investment trends, with the understanding that available investment information may be limited. With more research, the knowledge gap in the investment landscape for ICM can narrow, providing meaningful data to inform investment decisions from donors and private investors alike. A research agenda

should include in-depth primary data collection, interviews with ICM project proponents and surveys with investors, donors and policy makers on ways to strengthen sustainable development of coasts and oceans.

This mapping exercise touches upon evolving trends that point to instances where well-managed ocean wealth can attract responsible investments and drive broad-based, inclusive growth. From sustainable fisheries in the Philippines to ecotourism in Vietnam, investment capital can play an important role in promoting sustainable and well-managed ocean ecosystems. Yet more research is needed to tease out the granularity and evolving trends in ICM-related investments across East Asia. More research is also needed to explore the potential of impact investing and other innovative financing options to promote ICM initiatives in East Asia. To succeed and scale, ICM-related activities require a broad and detailed landscape of investment flows that connects ICM project proponents with relevant investor networks.

As part of PEMSEA's work with The World Bank in building the Seas of East Asia Knowledge Bank, this research forms part of a broader collaboration between PEMSEA and Shujog/IIX to promote innovative financing mechanisms and impact investing to ICM and related sectors of sustainable development of coasts and oceans. A major focus of the regional knowledge management project will look to facilitate investment in ICM and blue economy through the use of specific knowledge products and services. In efforts to understand the current landscape of ICM investments, this research paper maps financial funding flows across the grants and investment capital spectrum. Over the past decade, investments into ICM activities topped an estimated US\$ 10 billion in the countries under review. Across the investment landscape of ICM, investments with expectations of financial returns greatly outpace donor funding. However, a sustained role for philanthropic support to propel ICM remains crucial to identifying opportunities that catalyze investment growth for ICM-related sectors. Given the scale of the issues, challenges involved and the funding gap, innovative business and financing models for ICM demand resources across the grant and investment capital spectrum into the foreseeable future.

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## B. PEMSEA Overview

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) is an intergovernmental organization operating in East Asia to foster and sustain healthy and resilient oceans, coasts, communities and economies across the region. Through integrated coastal management solutions and partnerships, PEMSEA works with local and national governments, international development organizations, companies, investors and research institutions towards sustainable development of coasts and oceans in East Asia.

### Integrated Coastal Management (ICM)

PEMSEA pioneered ICM in East Asia over 20 years ago, offering an holistic approach for addressing complex coastal management issues by combining governance, management, economics and crosscutting scientific solutions. ICM is a powerful, practical tool for operationalizing sustainable development and the principles of ecosystem-based management (EBM) in coastal and marine areas. PEMSEA has applied ICM in dozens of sites impacting more than 31,000 km of coastline and over 146 million people living in coastal and watershed areas.

### Partnerships

PEMSEA 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.

PEMSEA delivers integrated solutions to its partners and customers through a set of service offerings designed to support the unique needs of governments, companies and other organizations operating in the coastal and marine environment.

### Advisory and Project Services

Strategic planning, policy development and project implementation covering key coastal and marine issues including environmental management; food security and livelihoods; pollution reduction and waste management; freshwater use and supply; habitat protection and restoration; and natural and man-made hazard prevention and management.

### Knowledge Services

Comprehensive knowledge products and capacity development programs focused on integrated coastal management and port safety, health and environmental management.

### Certification Services

Certification systems for organizations looking to institute a recognized standard in ICM and port management, along with a professional certification for ICM practitioners.

### Facilitation and Secretariat Services

PEMSEA's experience developing and convening partnerships extends into a set of services for bringing together stakeholders for workshops, conferences and other events to share insights and generate new opportunities for research, collaboration, partnership and investment.

## C. Shujog's Company Profile

### 1. Overview

A registered charity incorporated in Singapore, Shujog deploys additional staff in Bangladesh, India, China and the Philippines. Shujog's mission is to strengthen, deepen and expand the impact that SEs and other inclusive organizations create in their communities. Activities aim to magnify the impact of SEs; scale the quantity of successful Asian SEs moving into the expansion stage; and broaden the knowledge base of the SE and Impact Investing space. Shujog offers a number of programs to transform the niche sector to a more mainstream industry for both investors and enterprises.

### 2. Core Services and Expertise

Selected services highlighting Shujog's expertise are outlined below:



Shujog operates the ACTS (Assistance for Capacity building and Technical Services) program – a technical assistance program that delivers investment readiness services to SEs.



Shujog Assessment is one of Shujog's prime services that provides organizations with tools to better measure and manage their social or environmental impact, and is a verification process aimed to validate the impact created by the organization. Shujog has completed over 60 impact assessments.



With courses ranging from impact measurement to organizational strategies and inclusive growth, Impact Academy exposes participants to the various ways they can create a sustainable social and environmental impact and contribute to building vibrant social capital markets.



Shujog Research publishes reports that build the knowledge base surrounding the Asian SE landscape and impact investing space. To date, Shujog has written over 20 research reports, including a study of impact investor preferences, and an analysis of SEs and market intermediaries in Asia. For a list of Shujog's research projects, please see below.

### 3. Shujog Research

Shujog Research is targeted at impact investors, Social Enterprises (SEs), policymakers and any practitioners interested in the SE space in Asia. To date, Shujog has written over 20 research reports, including "Impact Investors in Asia" and "Market Intermediaries" for the ADB, a comprehensive mapping study and strategy "Opportunities for both Impact Investing and Philanthropy" for the Omidyar Network and "SE Landscape Mapping" for the British Council.

Shujog expertise is in market research and impact assessments. Shujog has conducted investment mapping studies in the education, food security and water/sanitation sectors in Indonesia, Cambodia, and the Philippines. Its research has also explored the SE landscape in Myanmar, India, Indonesia, and Thailand.

This extensive industry knowledge will enable Shujog to map the field for the purposes of this Project by creating a typology of ICM solutions and a landscape of actors working to evaluate and/or advance these solutions. This Project will benefit from Shujog’s ability to leverage its deep relationships with impact investors, SEs, and the broader SE ecosystem to ensure relevance and actionable outcomes from the research. More information about project experience can be found on the Shujog website, <http://shujog.org/research>.

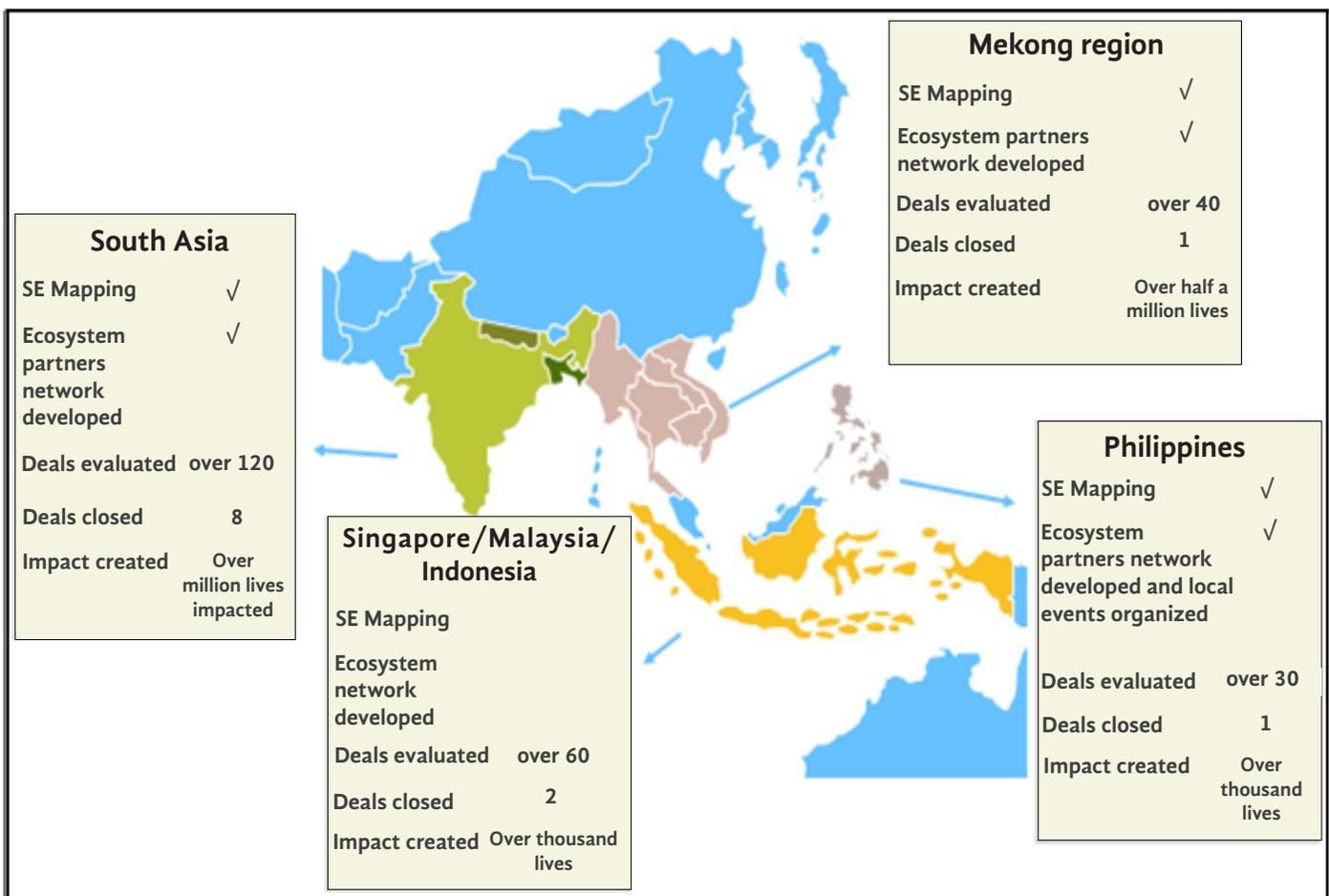
#### 4. Impact

To date, Shujog’s programs have benefitted over 1.4 million underserved people by creating social value, introduced over 26,000 impact investment professionals to the ecosystem through training and education, and exposed over 300,000 people to Social Enterprises and Impact Investing.

#### 5. Geographic Reach

Working with its sister organization, Impact Investment Exchange Asia (IIX), Shujog is at the forefront of expanding the broader ecosystem of impact investing in the Asia Pacific region. Although both Shujog and IIX are headquartered in Singapore, Shujog has additional staff in China, India, Viet Nam, Bangladesh and the Philippines, while IIX has additional staff in India and Viet Nam. IIX’s operations are regional covering Asia, with particular focus on South and South East Asia. See Figure 10 below.

**Figure 10: Geographic Reach and Impact, Shujog and IIX**



## D. IIX's Company Profile

IIX has extensive experience with catalyzing market-based solutions in Asia that effectively unlock private capital to address development challenges. IIX has leveraged its expertise to facilitate over US\$11 million across 25 deals impacting over 8.3 million people across Asia. IIX has conducted end-to-end technical assistance to over 20 Social Enterprises (SEs).

IIX provides financial and operational advisory services to assist SEs in achieving investment readiness. Once the investment-related materials have been developed, IIX lists the high-potential social enterprises on Impact Partners, Asia's first private placement platforms, to raise capital from a network of about **400** impact investors that IIX works closely with.

IIX's innovative market-based approach to capital raising for SEs has unlocked access to finance and enable these organizations to further drive change and scale impact. To date, the technical assistance projects and closed deals carried out by IIX have benefitted over 1.4 million underserved individuals across Asia.

In addition, IIX's three investment platforms leverage our strong investor network and cultivate new partnerships that can collectively advance development solutions more strategically. Our investment platforms include:

### IMPACT ACCELERATOR™

Impact Accelerator: an intensive acceleration program that provides SEs with tailored mentorship and seed capital, IIX has developed a strong understanding of the needs of SEs across Asia in terms of becoming investment ready and creating scalable impact.

### IMPACT PARTNERS™

Impact Partners: IIX's private placement platform connects growth-stage SEs to accredited investors. IIX has a network of +400 Impact Investors and a sound comprehension of investor preferences both in terms of financial returns and social impact.

### IMPACT EXCHANGE™

Impact Exchange: the world's first Social Stock Exchange - operated in collaboration with the Stock Exchange of Mauritius and created with the support of the Rockefeller Foundation - will provide IIX with a platform to potentially list innovative mechanisms such as the Women's Livelihood Bond, a \$20 million debt structure that will raise capital for SEs and microfinance institutions to empower over half a million women in Asia.

IIX has worked with corporates under various initiatives advising on SE growth strategies, identifying SE investment opportunities, and evaluating suitable impact investing funds for corporate investment streams. In addition, IIX has also advised multilateral development banks and conducted investment mapping for large multinational Foundations. IIX currently runs various impact advisory programs aimed as supporting SE/SME development and investment along value chains of corporates and for financial institutions to enhance positive social and environmental impact of their investments.

This experience positions IIX to effectively evaluate and how best to both assess and transform innovative ideas into scalable, high-impact businesses that create holistic value.

## E. Examples of ICM Investment Opportunities Identified by PEMSEA Partner Countries

Category	Investment / Project
Coastal Transport	Safe, reliable transportation services (e.g., safe and secure ferry service, piers, roads)
	Route-to-market roads
	Large-scale port development (including health, safety and environmental management program)
	Port Safety, Health and Environmental Management (PSHEM) System Certification
Ecotourism/Sustainable Tourism	Marine sanctuary programs and facilities (e.g., watching/touring of birds, turtles, mangroves, dolphins, whales, sharks, rays, etc.)
	Recreational programs and facilities (e.g., surfing, sailing, mountain climbing, snorkeling/SCUBA, cave trekking, fishing, historical, etc.)
	Ecotourism services skills development (e.g., boat operators, hospitality services, hygiene and sanitation standards)
	Business development and marketing of ecotourism options
	Tourism certification (e.g., sustainable tourism, ecotourism)
	Facilities for agro-tourism (e.g., organic farming, leisure plantation)
	Lodging for tourists
Enterprise and Livelihood Development	Enterprise development programs (e.g., business training, market studies, cooperative management, packaging/marketing products)
	Financial products/services for low-income coastal residents (e.g., loan programs for cooperatives, revolving fund for fisheries, flexible collateral)
	Sustainable local enterprises (e.g., salt farming, banana chips, fish paste, basketmaking, handmade paper, cloth, bags, etc.)
Fisheries and Food Security	Sustainable aquaculture, (e.g., for grouper, lobster, abalone, sea cucumber, green mussel, seaweed, sea urchin, oysters, scallops, mussels, tilapia, milkfish, mudcrabs, shrimp, etc.)
	Upgrades for sustainable fisheries production (e.g., vessel tracking, gear switching)
	Fisheries certification systems (e.g., MSC, Fisheries Improvement Protocol)
	Integrated fisheries management/co-management
	Scientific and market research (e.g., catch data, bio-economic modeling)
	Upgraded fish landing facilities for cleanliness, safety and efficiency
	Post-harvest seafood processing facilities (e.g., with proper bio/food safety)
	Upgraded fish landing facilities for cleanliness, safety and efficiency
Habitat Protection, Restoration and Management	Coral reef rehabilitation, maintenance and protection (e.g., capacity building, stakeholder engagement, assessment including resource valuation, planting/transplanting)

Category	Investment / Project
	Seagrass rehabilitation, maintenance and protection (e.g., capacity building, stakeholder engagement, assessment including resource valuation, planting/transplanting)
	Marine species conservation programs through adoption, tagging, etc.
	Wetlands restoration and management
	Artificial reef construction
	Riverbank rehabilitation/stabilization and upland reforestation (e.g., bamboo plantation)
	Watershed area reforestation
ICM Development and Implementation	ICM System Certification
	Development of a coastal strategy and implementation plan, including mainstreaming into local development plans
	ICM baseline assessments (e.g., strategy, status of coasts, fisheries, socioeconomic conditions, livelihoods)
	ICM capacity building, stakeholder engagement and coordination
	Spatial zoning activities, integrating land and sea use zoning into local development planning
	Integrated river basin management including assessment, stakeholder engagement and capacity building
	Integrated Information Management System for coastal and marine environments
	Coastal monitoring and surveillance activities
	State of Coasts reporting
Natural and Man-made Hazard Prevention and Management	Development and adoption of climate change adaptation and disaster risk reduction plans in coastal areas for flooding, storm surge, typhoons, landslides, etc.
	Disaster risk/vulnerability assessment for coastal areas (e.g., infrastructure systems, resilience of marine and coastal habitats, hazard mapping)
	Supporting infrastructure for vulnerable coastal areas (e.g., dredging works, multi-functional buildings to serve as refuge/shelter)
	Data management and early warning systems for disasters
	Public awareness campaigns for disaster risk reduction and management (e.g., safe zones, evacuation routes, preparedness, etc.)
Pollution Reduction and Waste Management Pollution Reduction and Waste Management	Marine pollution management systems (e.g., oil spills contingencies and shoreline cleanup)
	Carbon emissions monitoring and reduction programs
	Integrated solid waste management system (including reduction, reuse, recycling and recovery, collection and disposal facilities and public information campaigns)

Category	Investment / Project
	Industrial, commercial, agricultural and institutional waste management systems (covering hazardous and non-hazardous wastes and toxic substances)
	Centralized wastewater collection and treatment systems serving urban/peri-urban areas
	Decentralized wastewater treatments facilities for households and small scale facilities (esp. on islands and beaches)
	Facilities and programs for environmental monitoring and surveillance of water and air
	Sanitary landfill/controlled dumpsite
	Solid waste recycling/recovery and reuse facilities Industrial, commercial, agricultural and institutional wastewater treatment systems
Water Use and Supply Management	Integrated surface and ground water management and supply system (including water conservation and recycling)
	Water resource assessment, modeling and use forecasting
	Construction / improvement of freshwater reservoirs and pipes
	Sea water desalinization

F. Details of Data Metrics

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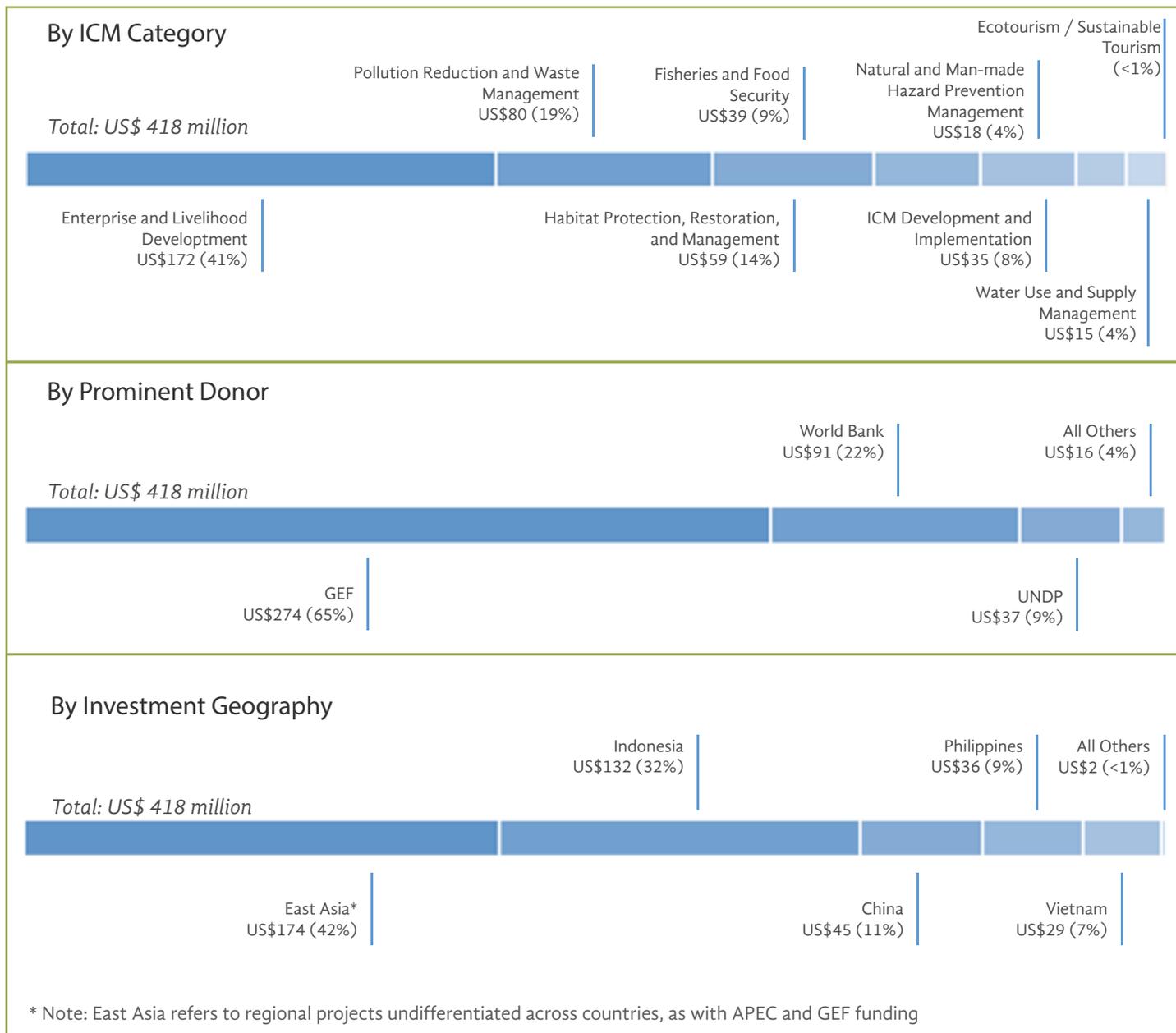
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## International Grant Funding

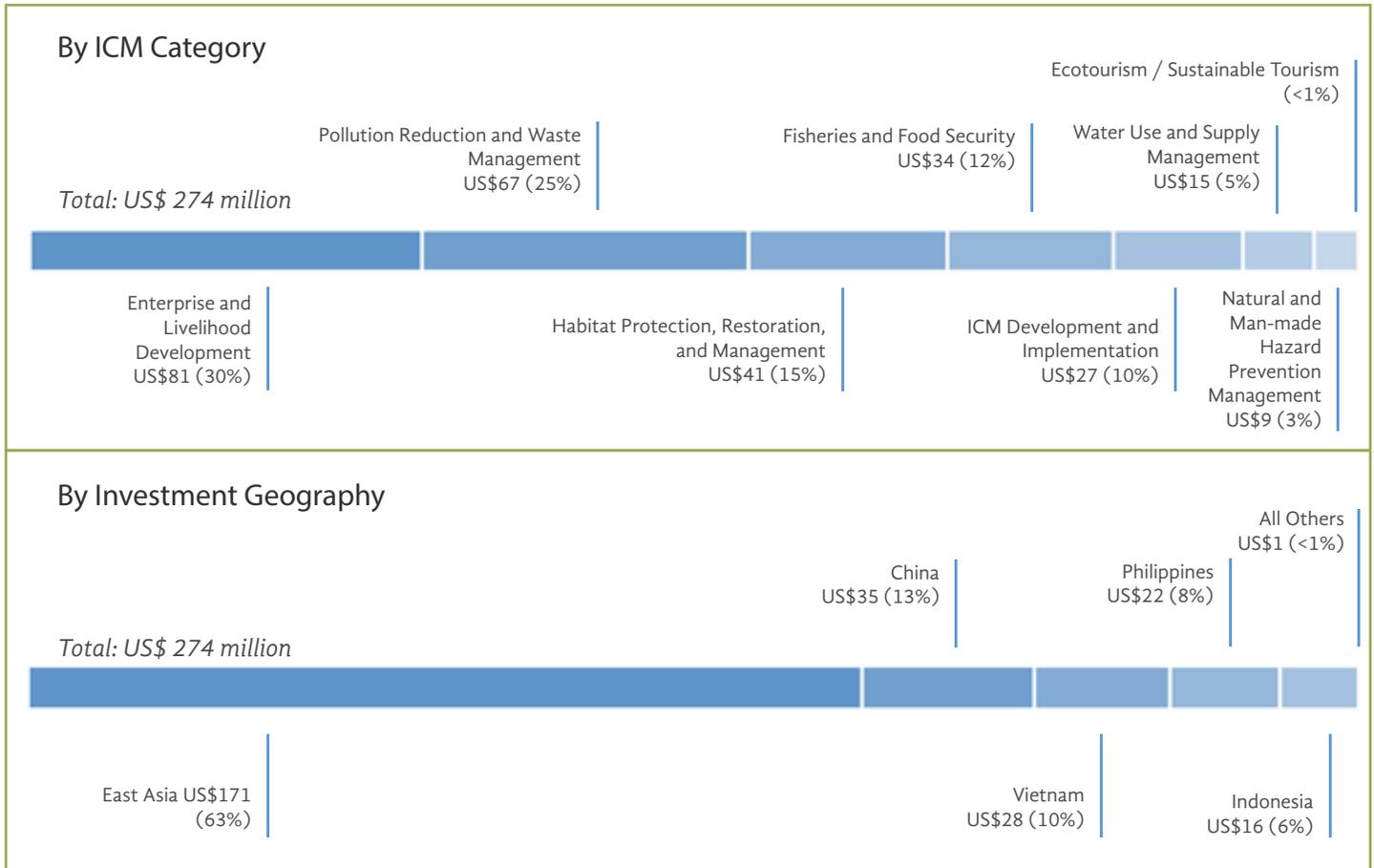
### 1. Multilateral Institutions

#### Multilateral Grants to ICM-related Sectors, Select Countries, 2005-2015 Estimates of Committed Funds (in US\$ million, % of total)



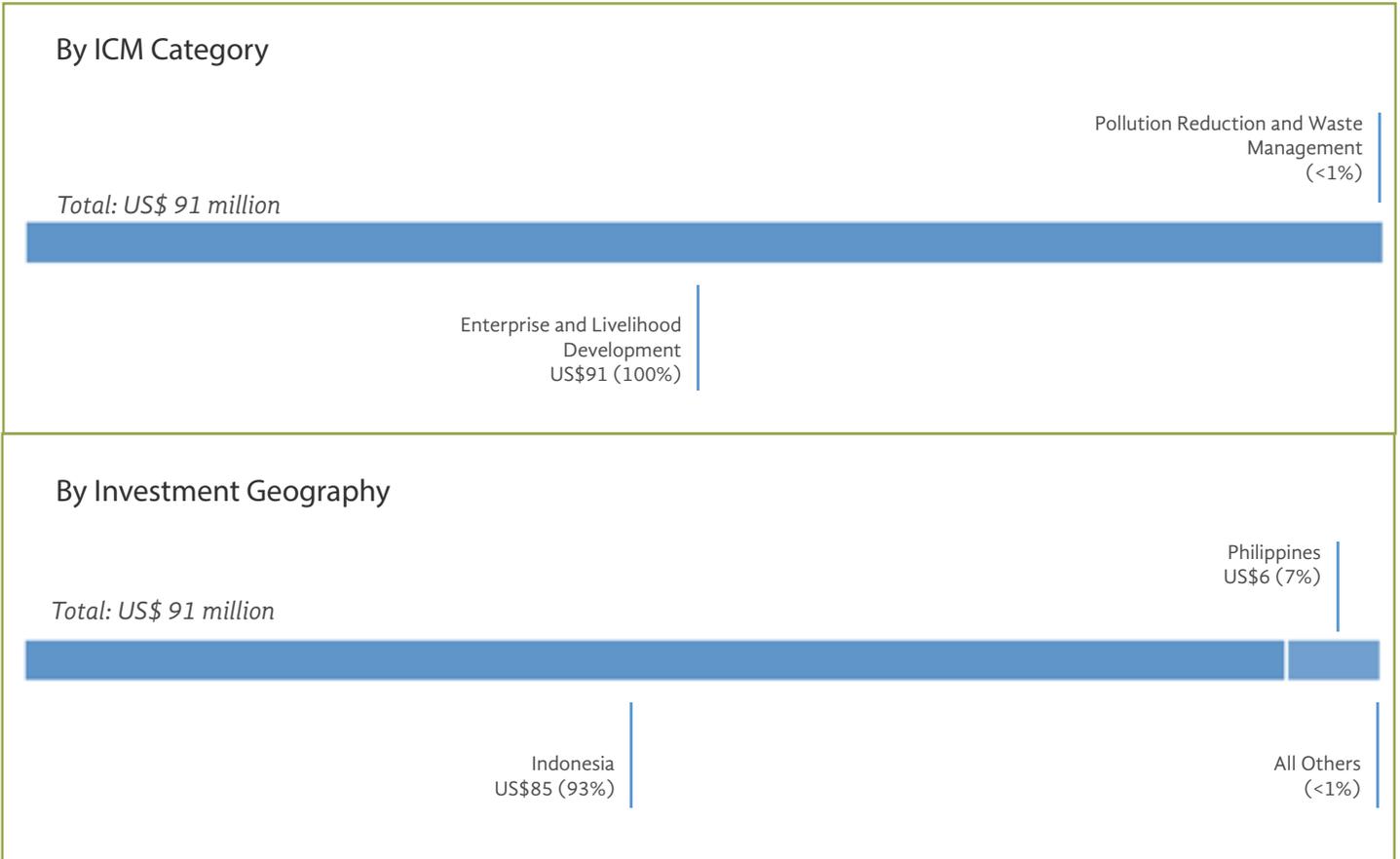
(a) Global Environment Facility

**GEF Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



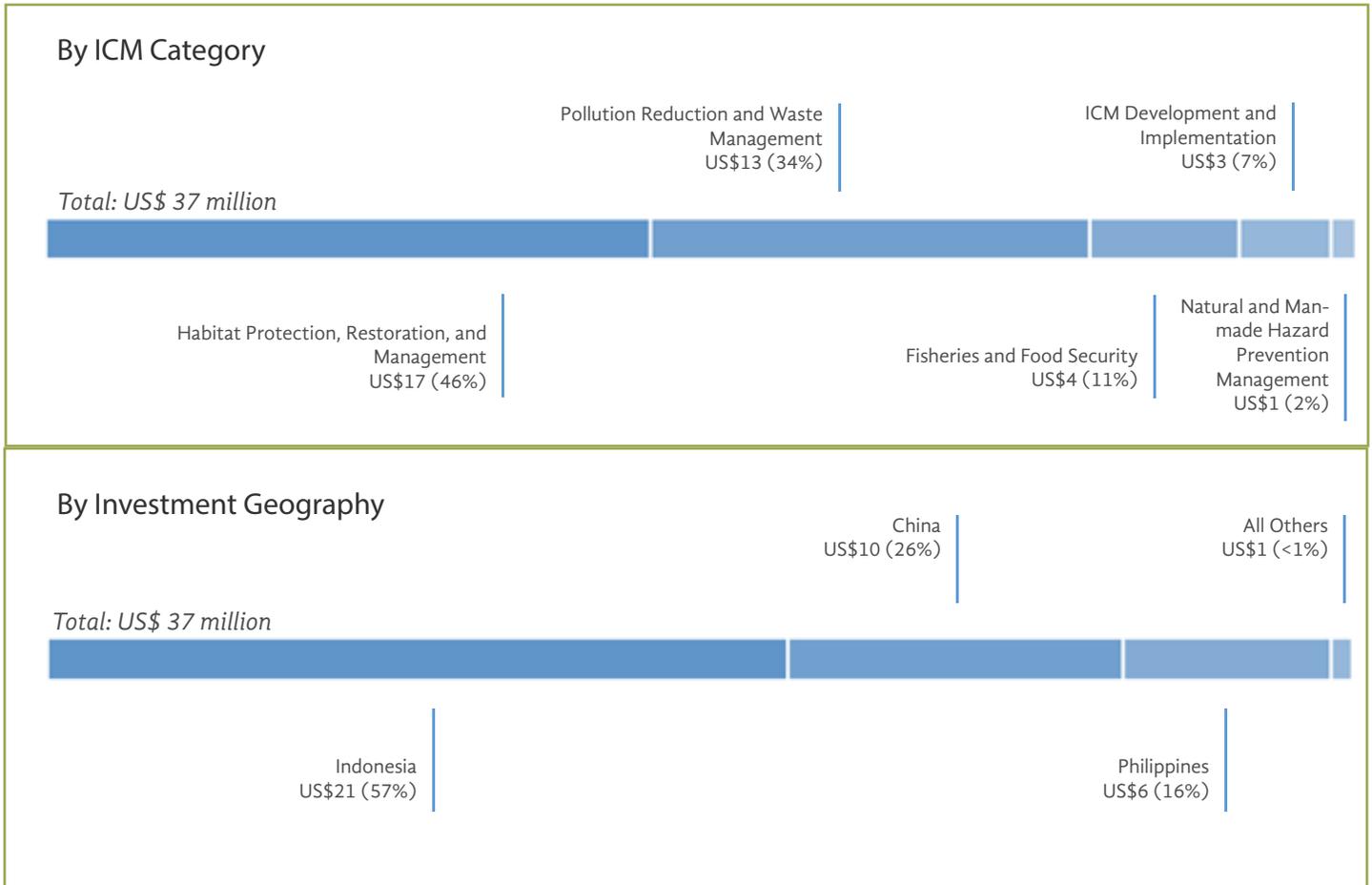
(b) World Bank

**World Bank Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



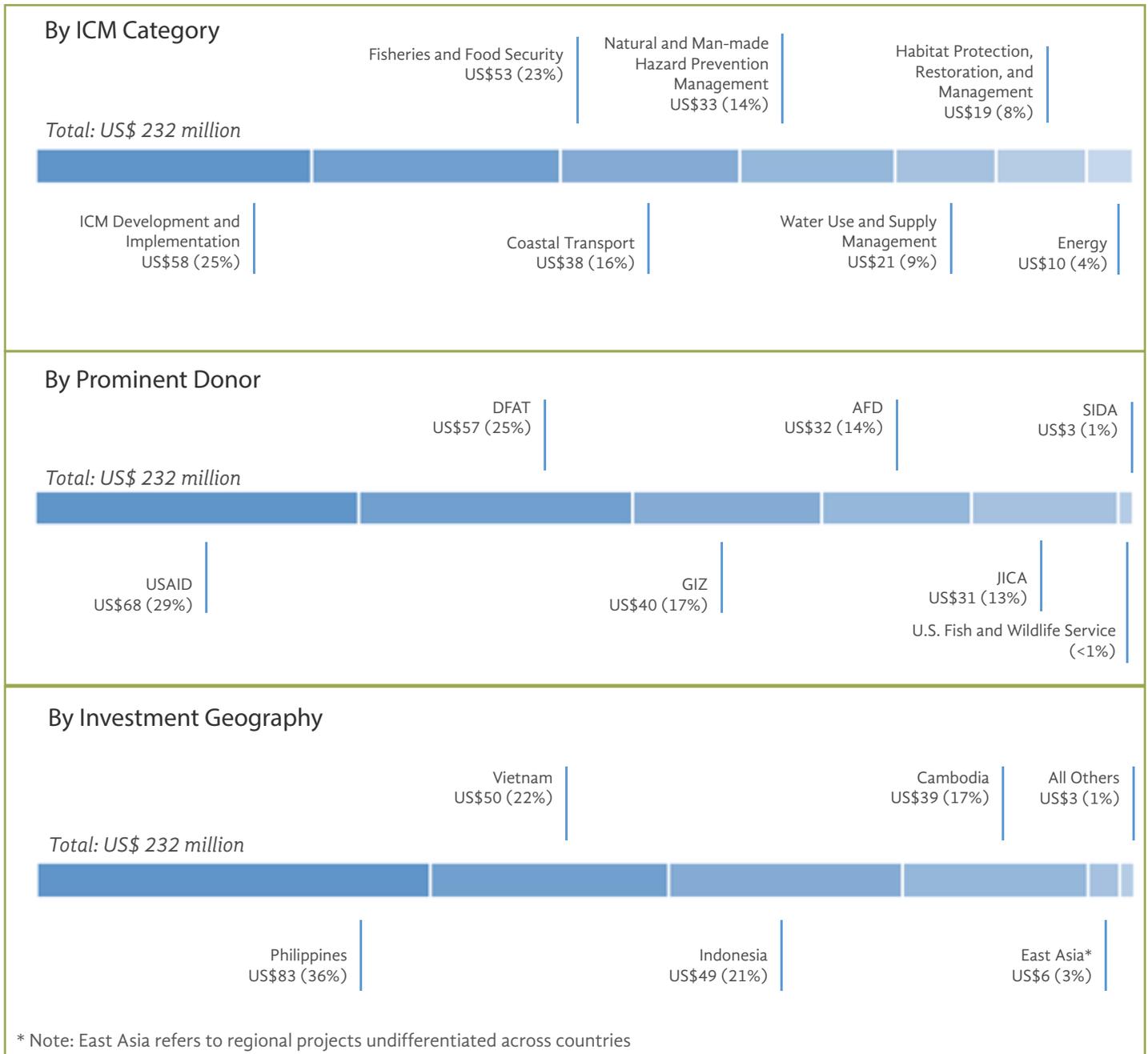
(c) United Nations Development Programme

**UNDP Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



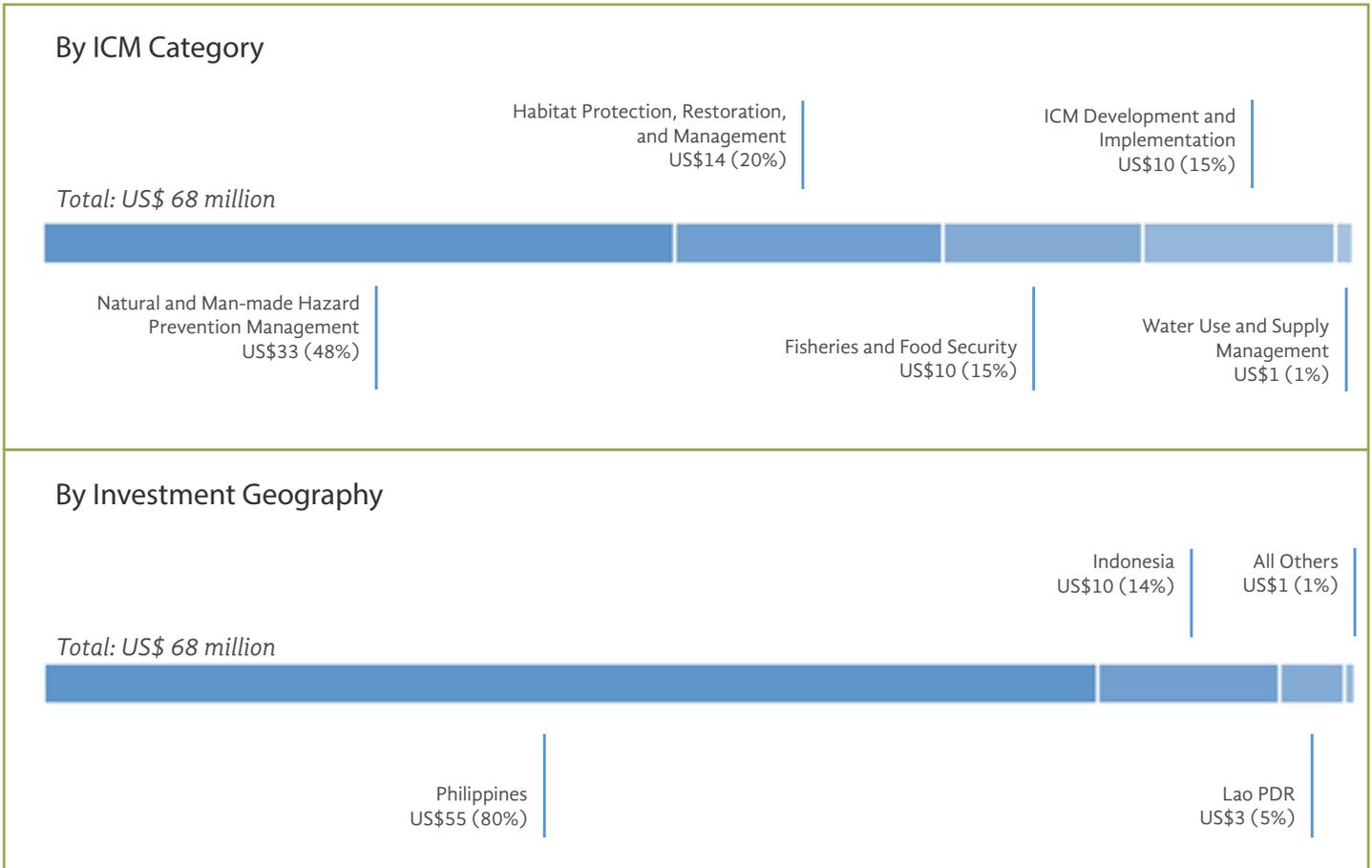
2. Bilateral Organizations

**Bilateral Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



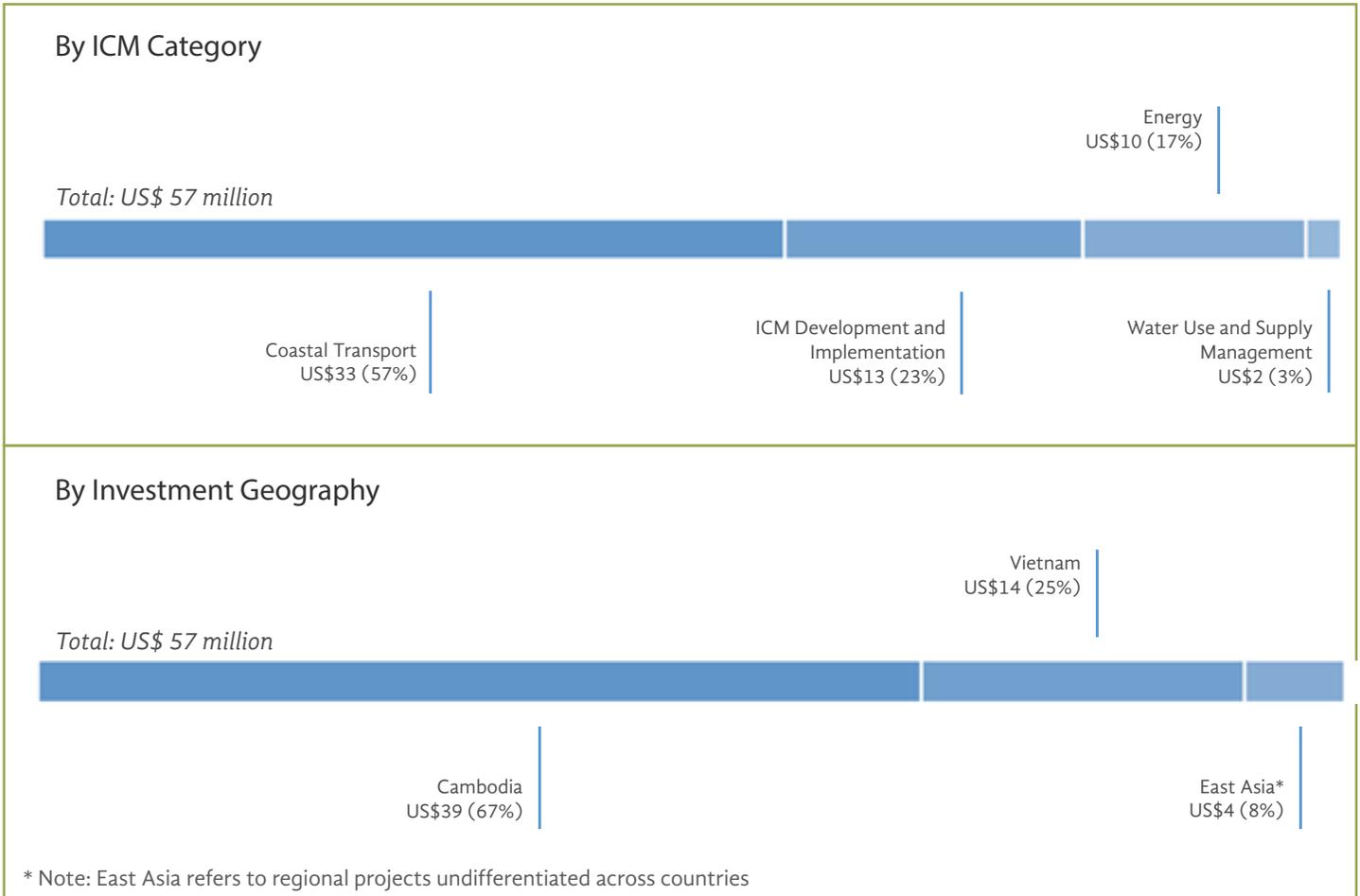
(a) U.S. Agency for International Development

**USAID Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



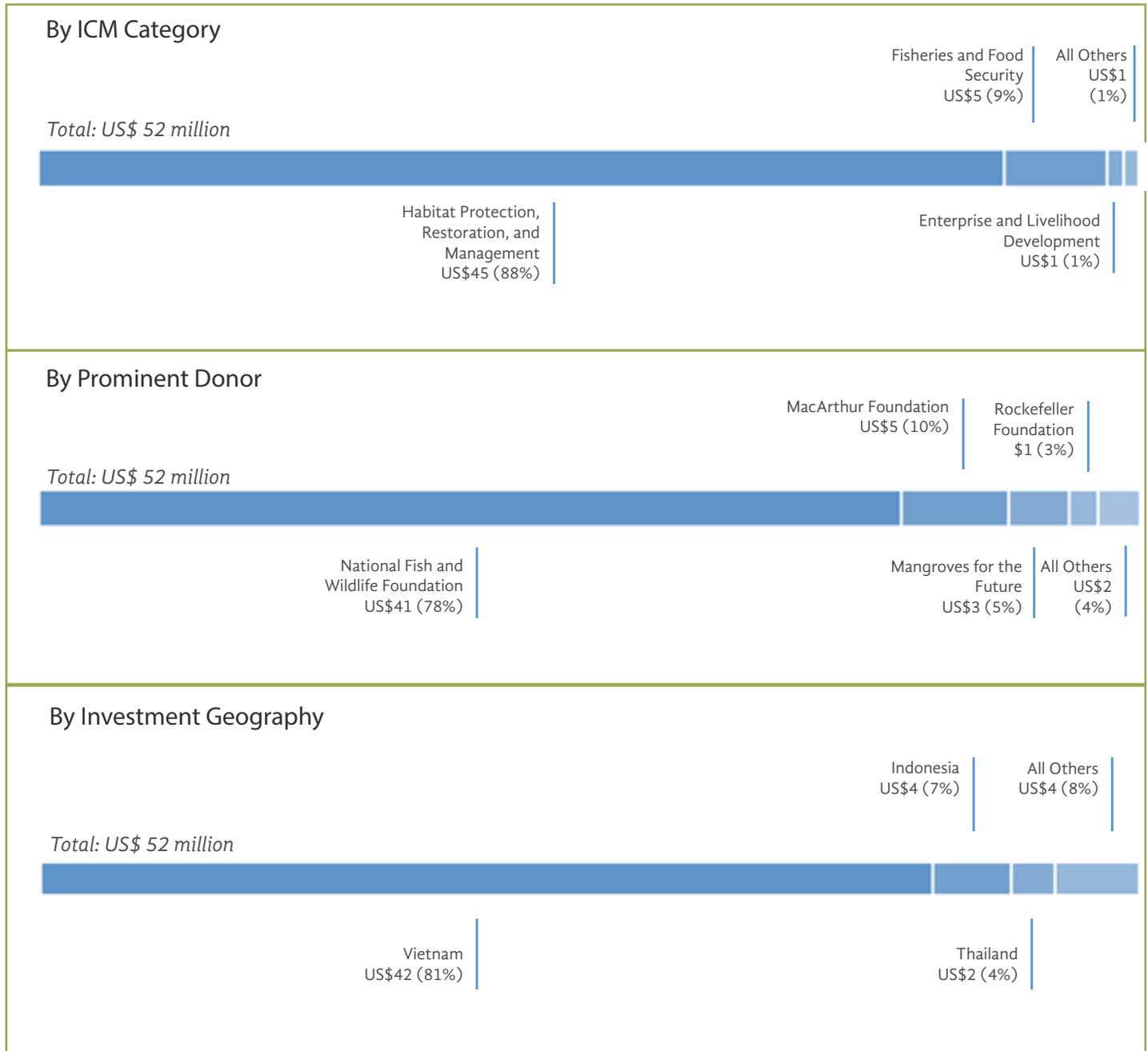
(b) Department of Foreign Affairs and Trade – Australia

**DFAT Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



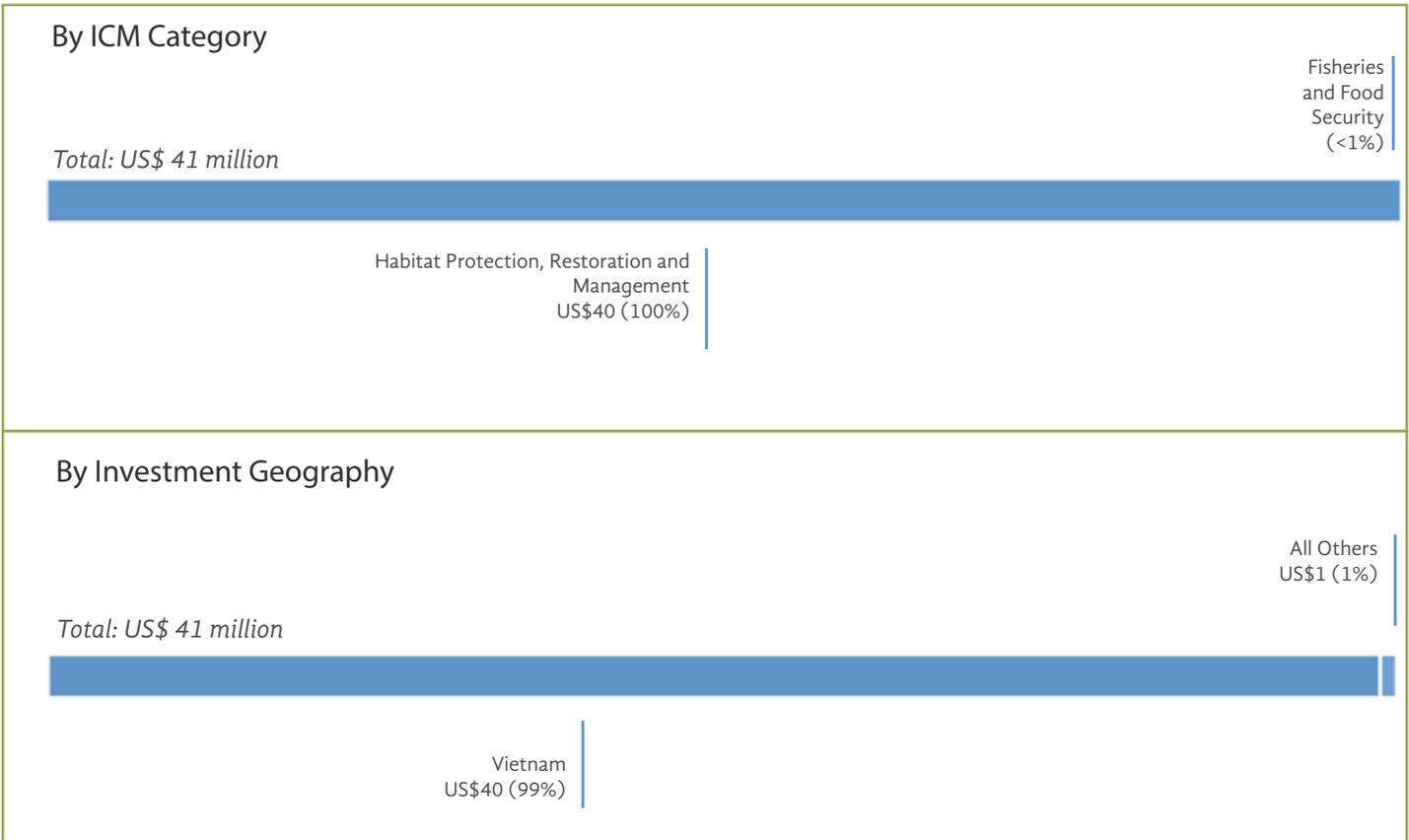
3. Foundations and NGOs

**Foundation and NGO Grants to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



(a) National Fish and Wildlife Foundation

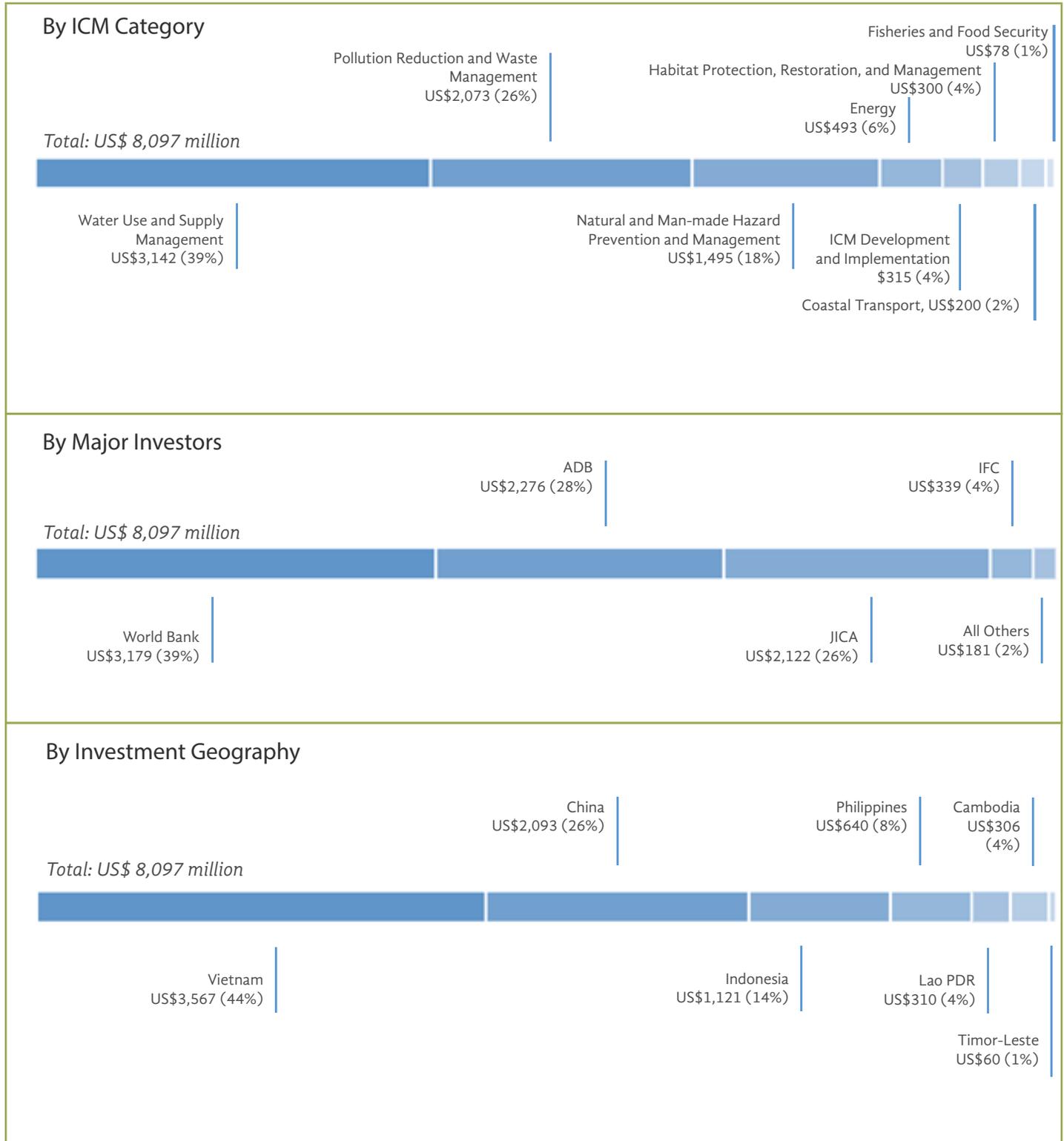
**National Fish and Wildlife Foundation Grants to ICM-related Sectors, Select Countries, 2005-2015  
Estimates of Committed Funds, (in US\$ million, % of total)**



## Investment Capital

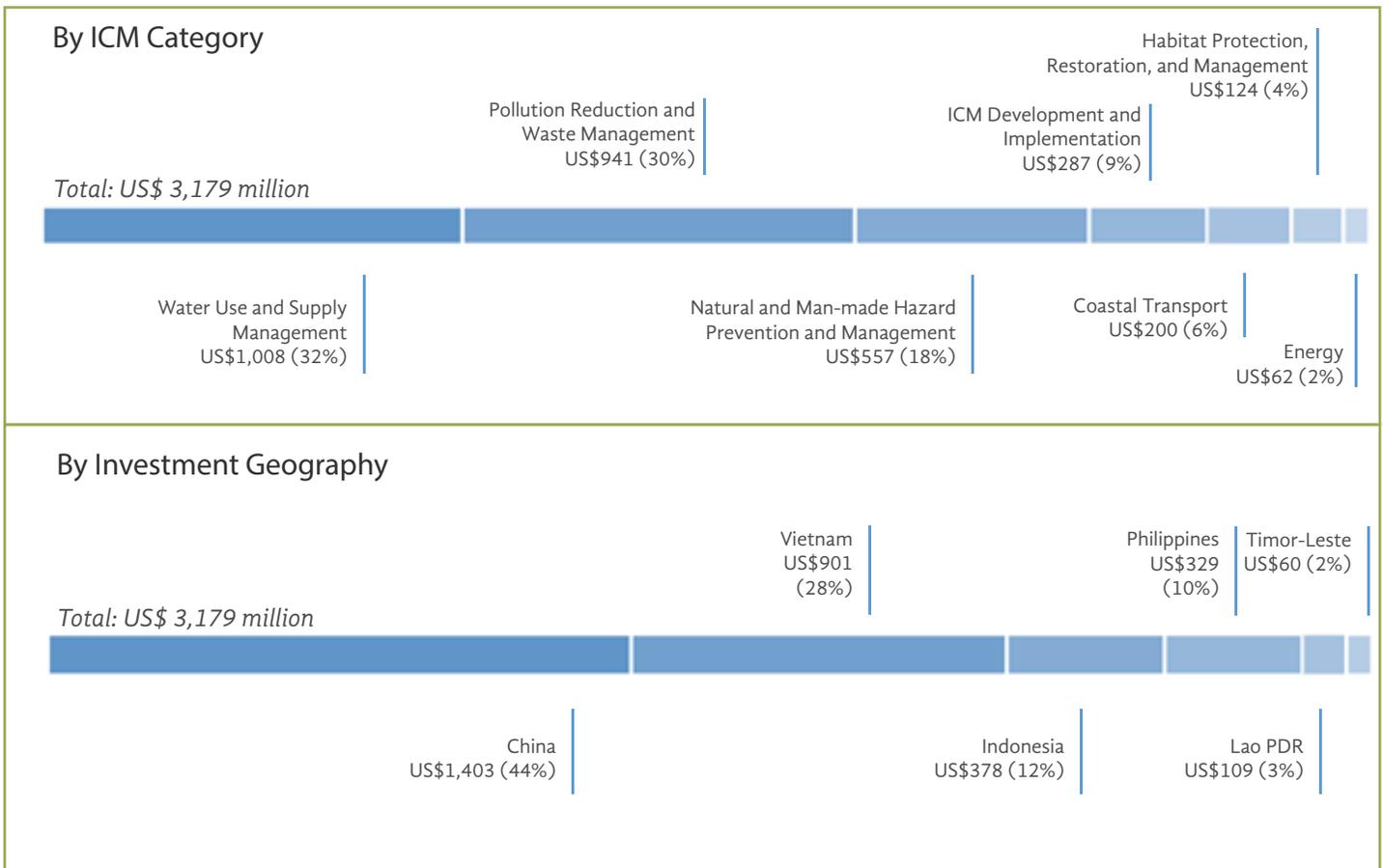
### 1. Development Finance Institutions

#### DFI Investments to ICM-related Sectors, Select Countries, 2005-2015 Estimates of Committed Funds (in US\$ million, % of total)



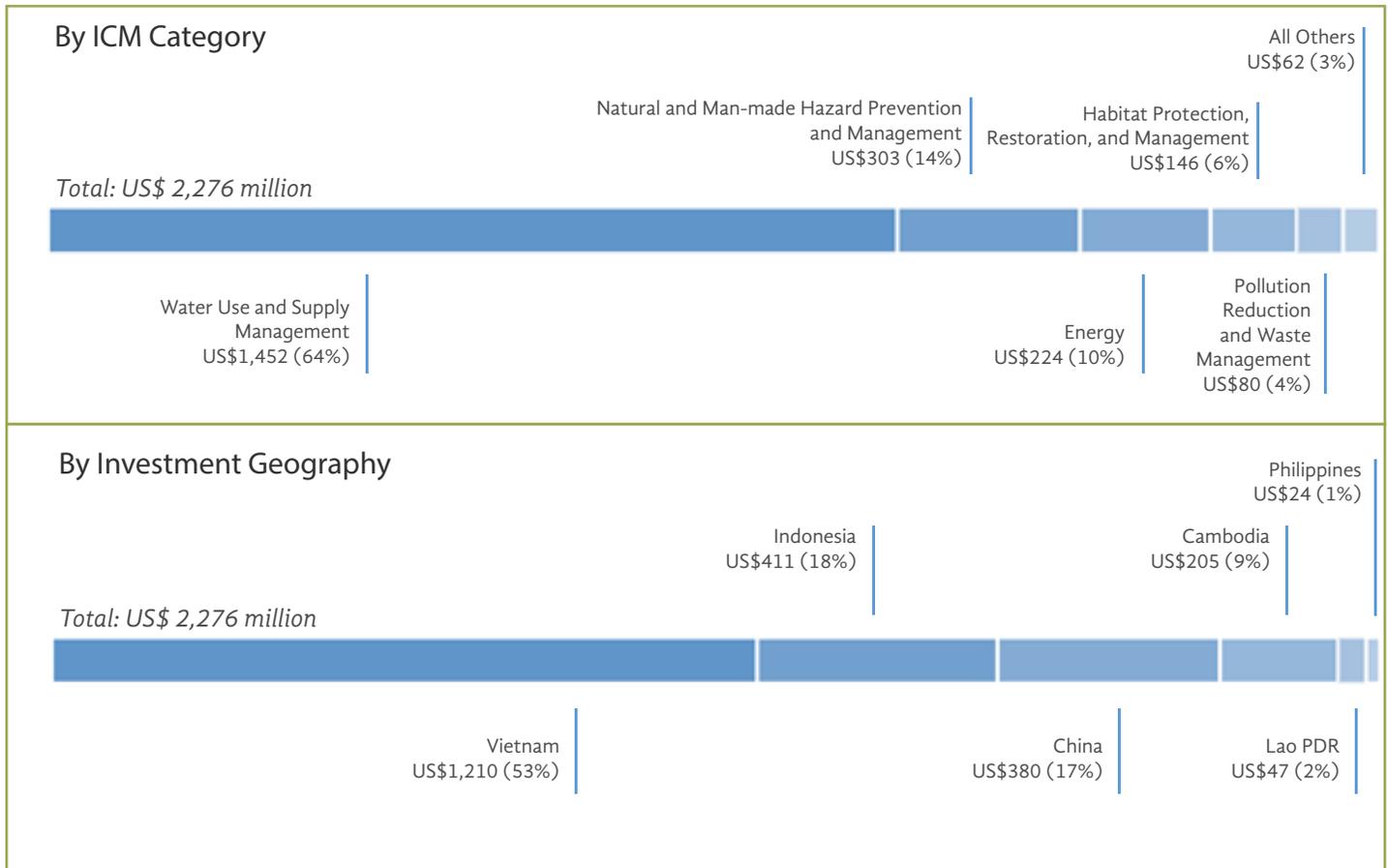
(a) World Bank

**World Bank Investments to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



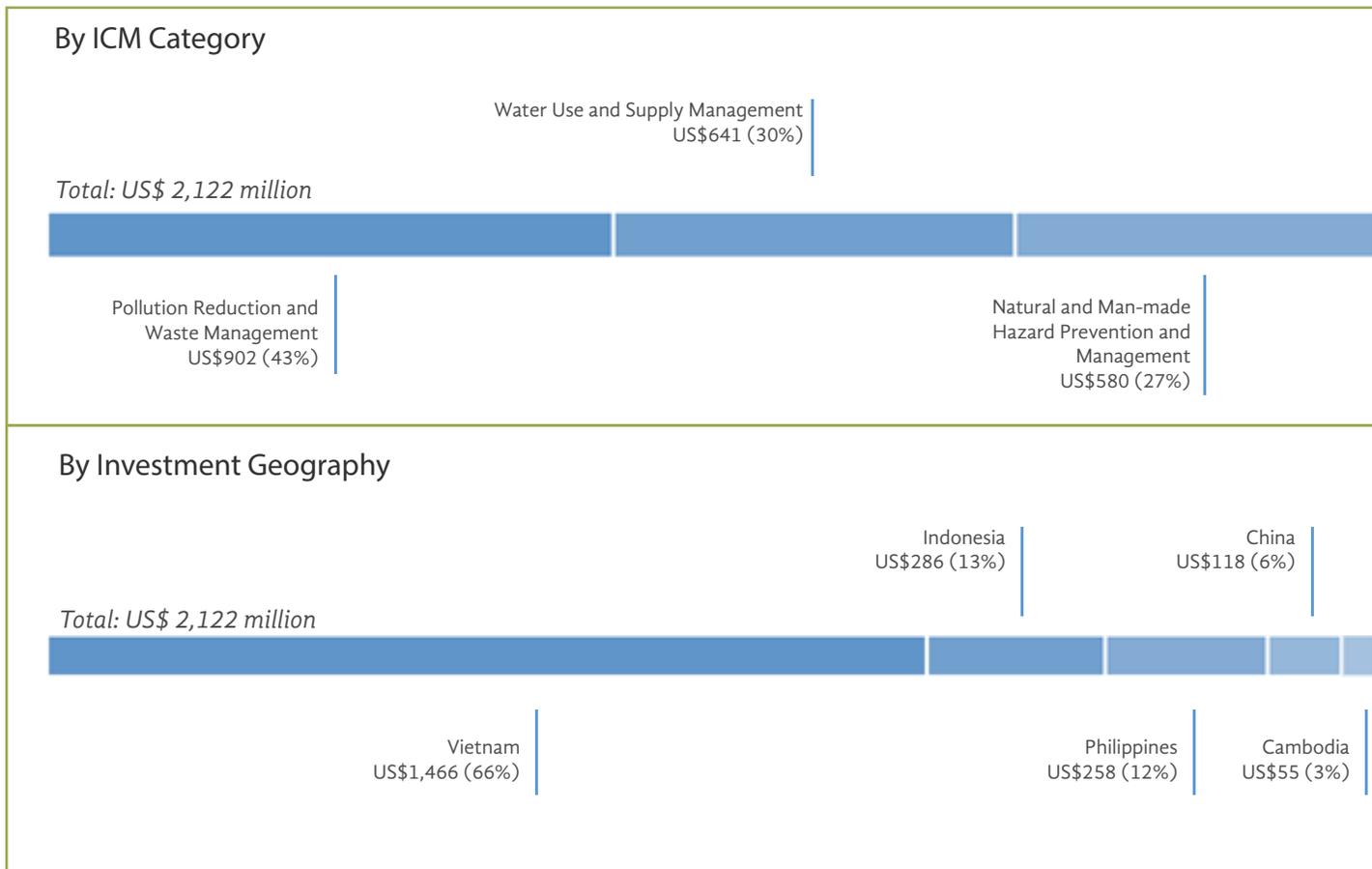
(b) The Asian Development Bank

**ADB Investments to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



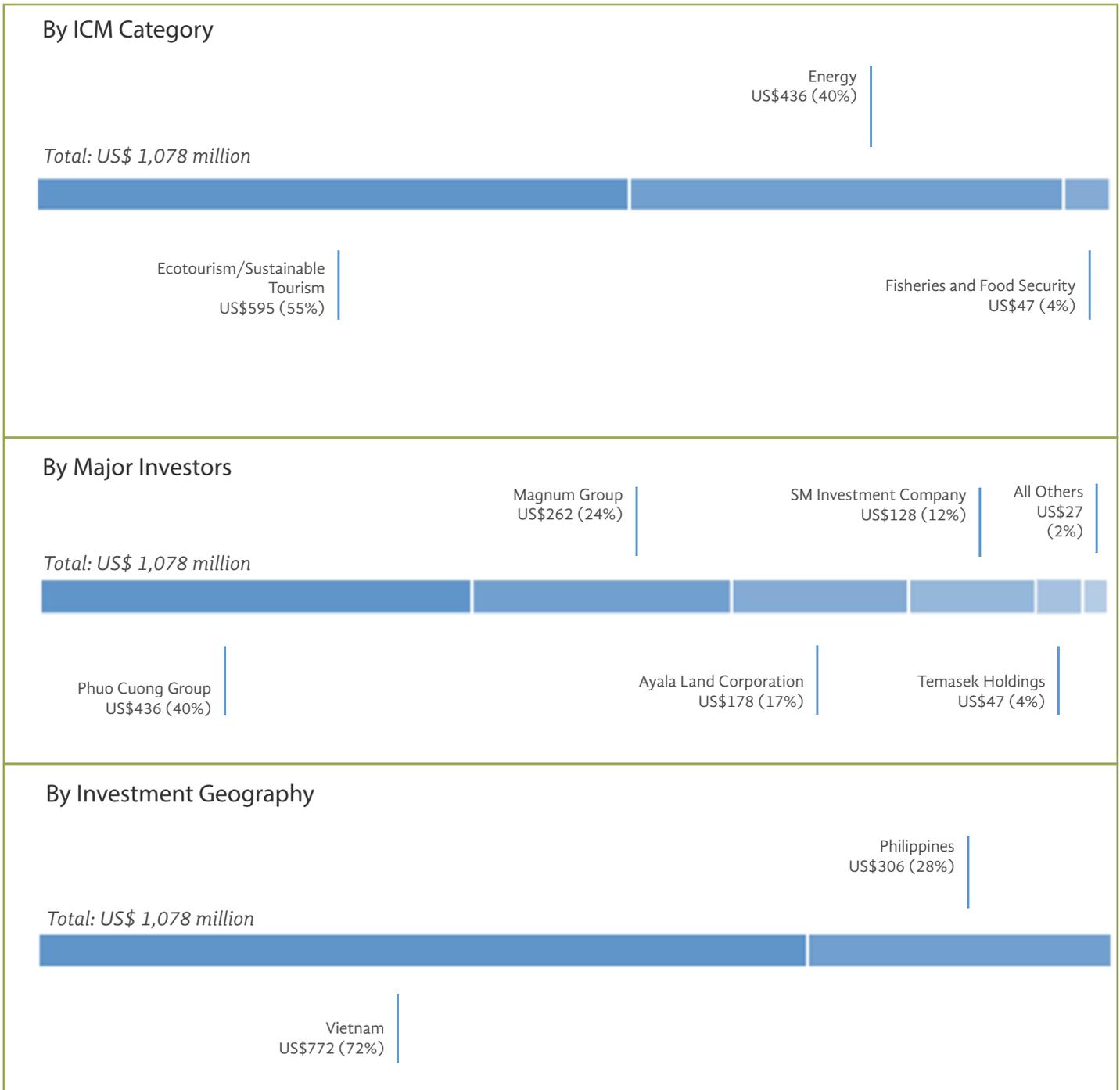
(c) Japanese International Cooperation Agency

**JICA Investments to ICM-related Sectors, Select Countries, 2005-2015**  
**Estimates of Committed Funds (in US\$ million, % of total)**



2. Corporations and Investment Companies

**Investments by Corporations and Investment Companies to ICM-related Sectors, 2005-2015**  
**Select Countries, Estimates of Committed Funds (in US\$ million, % of total)**



3. Private Equity and Venture Capital Firms

**Investments by Private Equity and Venture Capital Firms to ICM-related Sectors, 2005-2015**  
**Select Countries, Estimates of Committed Funds (in US\$ million, % of total)**

