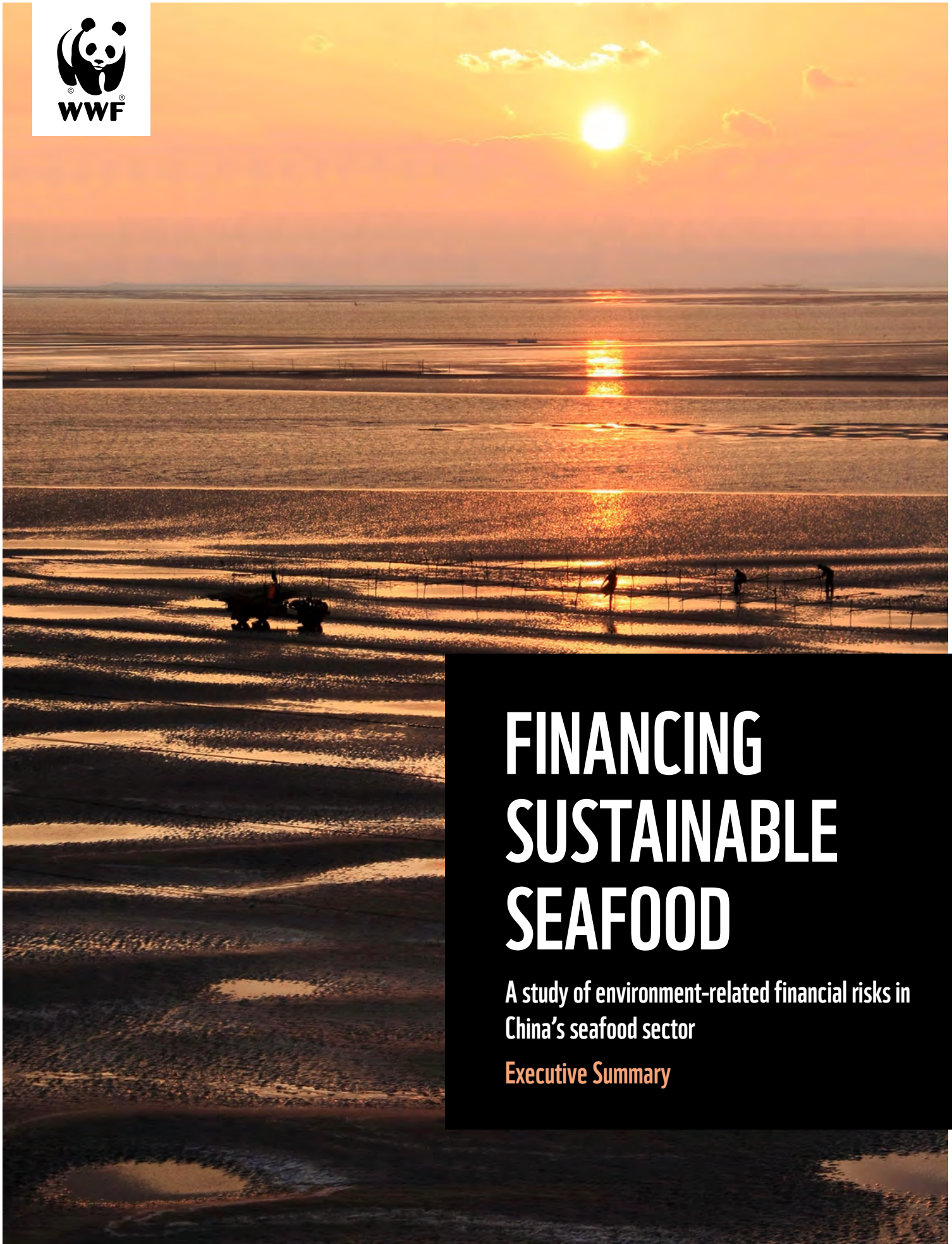

FINANCING SUSTAINABLE SEAFOOD

A study of environment-related financial risks in China's seafood sector

Executive Summary

THIS REPORT HAS BEEN PRODUCED IN COLLABORATION WITH:

IIGF 中央财经大学绿色金融国际研究院 INTERNATIONAL INSTITUTE OF GREEN FINANCE

ONE PLANET 一个地球

Front cover
Fishermen gathering seafood on the beach when the tide is out at Rudong County, Jiangsu Province © He Yonghua

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Published in 22022 by WWF – World Wide Fund For Nature (Formerly World Wildlife Fund), Gland, Switzerland.

Citation of this report: WANG Yao, MAO Qian, CHEN Qianming. et al. 2022. Financing Sustainable Seafood: A study of environment-related financial risks in China's seafood sector, World Wide Fund For Nature

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We would like to thank the following people in particular: CHEN Changping, CHEN Shengwei, CUI He, FAN Binbin, GAN lu, GONG Qingli, HOU Bin, HU Xuedong, LEI Peng, LI Junhua, LI Weidong, LIU Xiaoshu, QIU Shaobin, WANG Songlin, YANG Bin, YANG Lidan YOU Weiwei, YUN Hong, , ZHANG Shujuan, ZHANG Zhe, ZHANG Zhenglin, ZHOU Bin, and ZHUANG Ping (no particular order for the ranking above), and the contributors of the case studies of this report.

We would like to thank Lucy Holmes from **WWF US** for reviewing the English executive summary.

Typesetting and Data Visualization:

We would like to thank Li Jialing for comprehensively coordinating the typesetting and editing. Thanks to Woolful Design Studio for the design.

This report is available at:

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EXECUTIVE SUMMARY

Our livelihood and economic stability is contingent upon the continued provision of ecosystem services by the natural environment. The increasing intensity of environmental problems such as climate change and pollution are threatening the quality of our living conditions, and also systemically impacting our economic activities and financial systems. Financial institutions face financial risks, which are induced by environmental risks including both physical and transition risks.Environmental risks are usually transmitted through macro-economic channels or household and industries. Investigating these financial risks can help financial institutions incorporate environment-related factors into financial risk management frameworks. This can guide financial resources toward environmental-friendly investments, and also directly or indirectly improve sustainability of economic activities, which ultimately contributes to the sustainable development of society.

This report focuses on the seafood[1] industry given its close inter-relationship with the natural environment, and the environment-related financial risks of the industry. Seafood is an important source of protein for humans, and, it is one of the top agricultural export products of China. Thus, the seafood industry has high strategic significance for food security and economic development. At the same time, the industry is both highly impactful to, and dependent on, the natural environment. On one hand, the high dependence on natural resources makes the seafood industry particularly sensitive to environmental risks and increasingly vulnerable to climate change impacts. For example, due to climate change, more frequent natural disasters are threatening normal seafood production, and environmental-related policy changes also affect the operation of fishery businesses. These uncertainties are transmitted to financial institutions, causing environment-related financial risks. On the other hand, seafood production can have profound impacts on the natural environment, which then becomes a source of environmental risks themselves. Therefore, it is crucial to investigate the environment-related financial risks arising from fishery production and find the appropriate methods to manage these risks.

Specifically, this report further focuses on the environmental-related financial risks that the insurance and banking institutions may face as a result of providing financial services to the primary industry in the seafood sector (capture fishery and aquaculture). Through a literature review, data collection, expert seminars, and stakeholder interviews, it aims to: analyze the sources and transmission mechanisms of potential risks faced by financial institutions with a stake in seafood-related industries; describe the current risk management practices of relevant financial institutions; identify challenges; and provide recommendations.

Overview of Seafood Sector and Financial Landscape in China

China's seafood industry is still mainly comprised of small-scale entities that are "small and scattered". Small-scale entities and the medium and large enterprises play different roles in the industry chain. Most of the primary industries are undertaken by small-scale entities, while medium and large enterprises are mainly involved in the more industrialized production activities on the industrial chain, including feed production, equipment supply, processing, etc.

Insurance and loans are the two main financial services provided to the industry. The status of financial services for the seafood industry mainly presents the following characteristics. Banks (including Rural Credit Cooperatives) currently have limited overall engagement, and the services are mainly provided to larger enterprises and are very limited for small-scale entities. Insurance institutions, including the Fisheries Mutual Insurance Association (which is planned to later become a formal financial institution) and commercial insurance institutions currently provide insurance services which fall short of coherent and comprehensive coverage. In particular, insurance services for aquaculture production risks and market risks are limited lacking. The coverage is also relatively higher for larger enterprises, while small-scale entities, especially small-scale aquaculture farmers, have limited access to insurance services. However, because financial services provided to the industry are heavily influenced by policy, the coverage and engagement with the industry will further increase in response to relevant future policies and shifting demand from industry players.

1. Special Note: There are significant differences between the term "fishery" in Chinese and English. The term "fishery" in the Chinese context includes "capture fishery, aquaculture (salt and freshwater), and processing fishing, and aquatic processing", while the term "fishery" usually refers to " capture fishery " in the English context. According to Turning the Tide: How to Finance a Sustainable Ocean Recovery developed by UNEP FI, the seafood sector includes "the production, processing, distribution and retail of fish, crusta-ceans, molluscs and other aquatic animals". So in this executive summary, we use "seafood finance" and "seafood industry" to generally describe the sector "capture fishery, aquaculture (salt and freshwater), and processing fishing, and aquatic processing".

Summary of Key Environment-related Financial Risks

This report identifies and analyzes various sources of environmental risk within the seafood industry ,ultimately inducing environment-related financial risks faced by financial institutions.

- **Firstly, production activities that cause negative environmental impacts lead to physical risks.** Relevant environmental impacts caused by seafood production include the decline in fishery resources, habitat destruction, ecosystem degradation, pollution and associated aquatic animal diseases and eutrophication, further leading to public health hazards, etc. These impacts can lead to decreased harvest and sales, as well as decreased quality in products. In addition, increasingly severe weather events and other climatic change effects can enhance asset loss and damage.

- **Secondly, transition risks can arise from policy changes.** Domestic and international policies, industrial standards and their enforcement are tightening in response to environmental degradation posing transition risks.

- **Thirdly, transition risks also arise from shifts in markets.** In many export markets abroad, the bar of market access is increasing its environmental requirements towards the production of aquatic products. Consumer demand for food safety, product quality, and environmental aspects of production in the domestic market have been growing accordingly. Against the backdrop of the "dual circulation" [2]development strategy, shifts in domestic and international markets are becoming fundamental sources of transition risks.

These negative environmental impacts of production and resulting environmental risks can turn into financial risks either through negatively impacting the industry operation entities or by directly affecting financial assets. In particular, banks are mainly exposed to credit risks and insurance institutions are mainly exposed to underwriting risks.

Credit risks are transmitted through two channels.

- **Firstly, the operations of the seafood entities can be affected by environmental risks, resulting in failure to fulfill payment duties of loans, and triggering credit risks.** Credit risks can be caused by both physical and transition risks: physical risks include loss for the industry players incurred by climate and environmental disasters and degradation, such as fish diseases and red tides, or long-term deterioration of fishery resources. Policy-induced transition risks can lead to extra costs required for technological upgrading to meet the new policy requirements, or costs related to penalties such as fines or forced closures. On the other hand, transition risks caused by market shifts can decrease sales and limited market accessibility for producers with poor environmental performance. The impact of environmental risks can be passed on to processing companies or other relevant downstream producers (through increased raw material costs, increased food safety hazards, etc.). These further increase credit risks to the banks providing loans for larger enterprises in relevant business.

- **Secondly, when failure to re-paying loans occurs, the depreciation of collateral value can further exacerbate credit risks and increases losses for banks.** Policy change, environmental deterioration can drive the depreciation in the value of fuel subsidies, production equipment, etc., which are common components of collateral. **Insurance agencies would face underwriting risk due to unexpected changes in the value of the subject of insurance caused by environmental risks.** Insurance institutions are mainly exposed to risks caused by changes in the value of fixed assets (including boats, factories, equipment, etc.) arising from physical risks. Due to future policy shifts and expansion in demand for financial services, seafood insurance will increase its coverage, and the impact of environment-related underwriting risks will increase correspondingly.

Recommendations

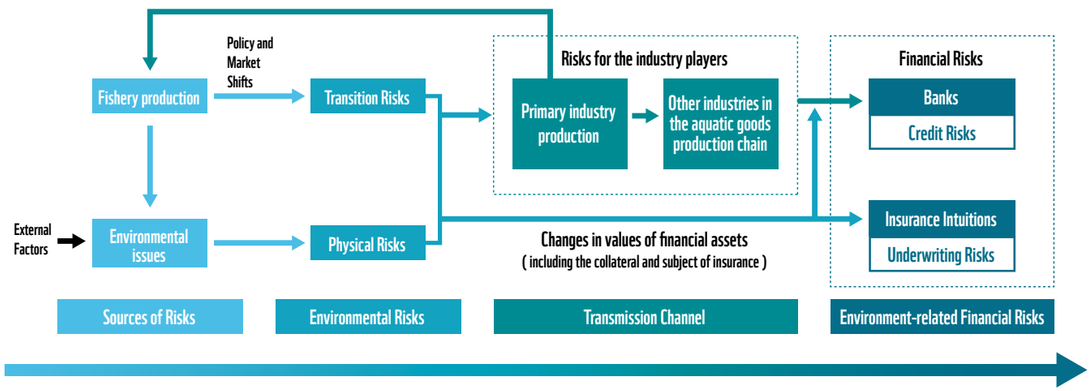
It is necessary for financial institutions to conduct environment-related financial risk management and take environmental risks into account when providing financial services. However, based on this research, it is clear that financial institutions are currently taking limited actions in managing environment-related financial risks in the seafood sector. This is because: firstly, the endogenous characteristics of seafood production substantially increase the cost of environmental risk management for financial institutions; secondly, the internal governance of most financial institutions does not enable or facilitate sufficient understanding of the seafood industry by the financial institutions, and, specifically, there is also a lack of environmental risk management awareness and expertise to enable the identification of relevant risks; thirdly, the lack of relevant risk-management tools, including technical indicators, detailed taxonomies etc., is also an important underlying factor.

In response to these challenges, this report proposes several measures to be taken. Firstly, it is necessary to strengthen the level of coordination and organization of "small-and-scattered" entities, and to promote the process of digitalization, to increase the availability and accessibility

2. Domestic-international dual circulation is a strategy to reorient China's economy by prioritizing domestic consumption ("internal circulation") while remaining open to international trade and investment ("external circulation").

of seafood production data and other market information, in order to help financial institutions better understand the relevant risk points. Secondly, financial institutions need to increase their understanding of the seafood industry by increasing investment in capacity building and promoting exchanges and cooperation with relevant civil society organizations. Thirdly, policymakers should develop and apply supporting policy tools, including constructing and completing the technical industry standards, introducing guidance documents for financial risk management, or providing catalogs, list-based tools, etc. Fourthly, financial institutions need to develop industry-specific environment-related financial risk management frameworks, which include environmental risk identification, monitoring and identifying potential risk sources and transmission mechanisms, development of industry-specific assessment frameworks for different customer groups and production methods, establishment of environmental performance-related access thresholds, conducting continuous monitoring and control of environmental performance of industry players of different types, and other methods.

Transmission mechanism of environment-related financial risks



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