



Tokio Marine Holdings

*To Be a **Good Company***

G20 Global Summit on Financing Energy Efficiency,
Innovation and Clean Technology

Financing Innovative Technologies - from an insurance industry perspective

12 June, 2019

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Talking Points

1. Integrating ESG elements in insurance
2. Insurance and climate risk
3. Case studies: Renewable energy installation and insurance
Low-carbon Japanese Equity Fund
4. The insurance industry and low-carbon technologies

Integrating ESG elements in insurance



A voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practices. (UN PRI)



UNEP
FINANCE
INITIATIVE



PSI
Principles
for Sustainable
Insurance

A voluntary set of principles that embraces fundamental aspirations and turning them into concrete actions, ranging from integrating ESG issues into a company's management and operational DNA, to working together with clients, suppliers and governments to raise awareness of ESG issues, alongside developing new kinds of risk management products and services. (UNEP FI PSI)

Insurance and climate risk

The Paris Agreement has direct reference to insurance

... areas of cooperation and facilitation to enhance understanding, action and support may include;

*(f) **Risk insurance facilities**, **climate risk pooling** and **other insurance solutions**;*

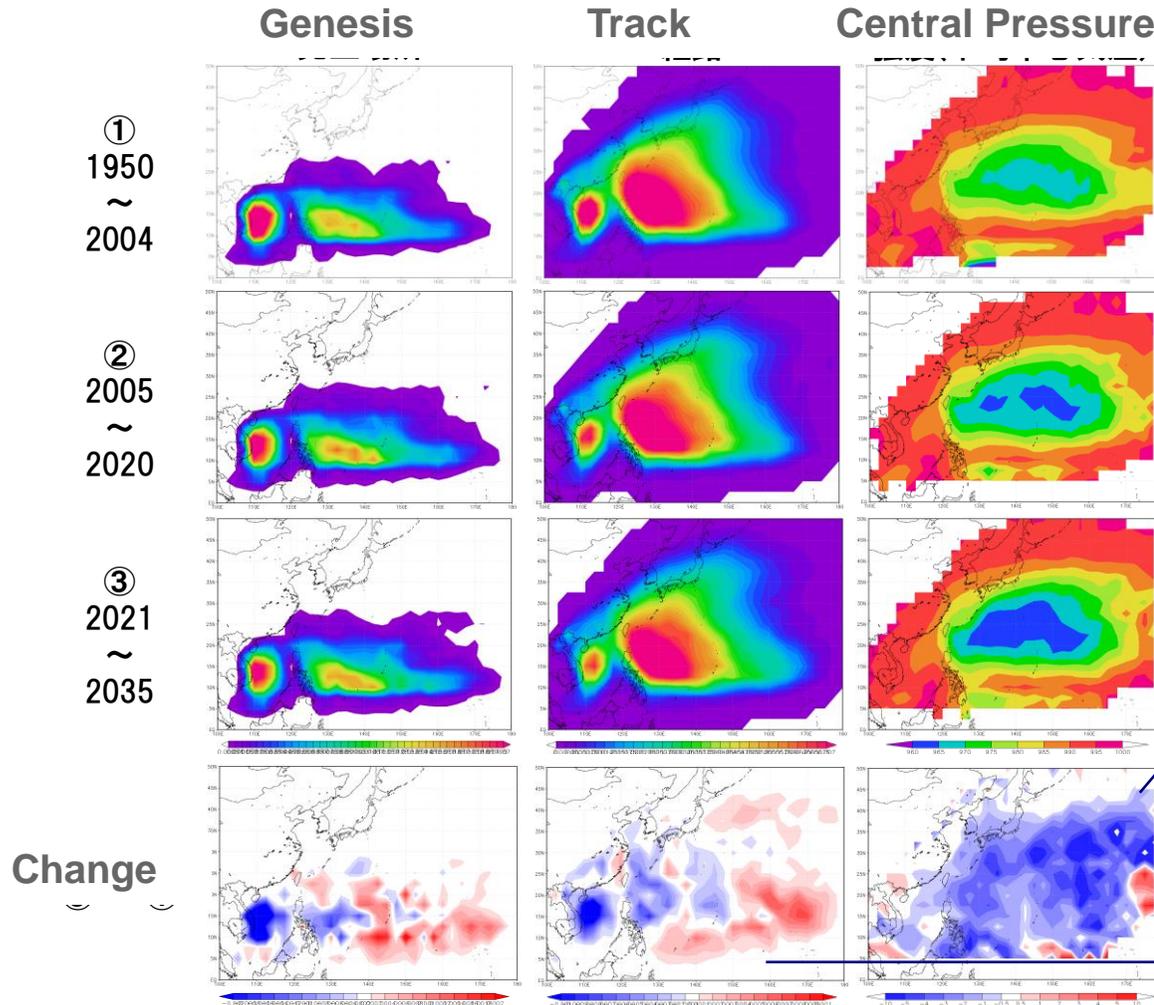
(Paris Agreement Article 8-4)

*... the Warsaw International Mechanism to establish a clearinghouse for risk transfer that serves as a repository for information on **insurance and risk transfer**, in order to facilitate the efforts of Parties to develop and implement comprehensive risk management strategies:*

(COP Decisions para. 49)

Insurance and climate risk

Forecasting future changes in typhoons using climate model data



Estimates based on the typhoon probability model jointly developed with the University of Tokyo.

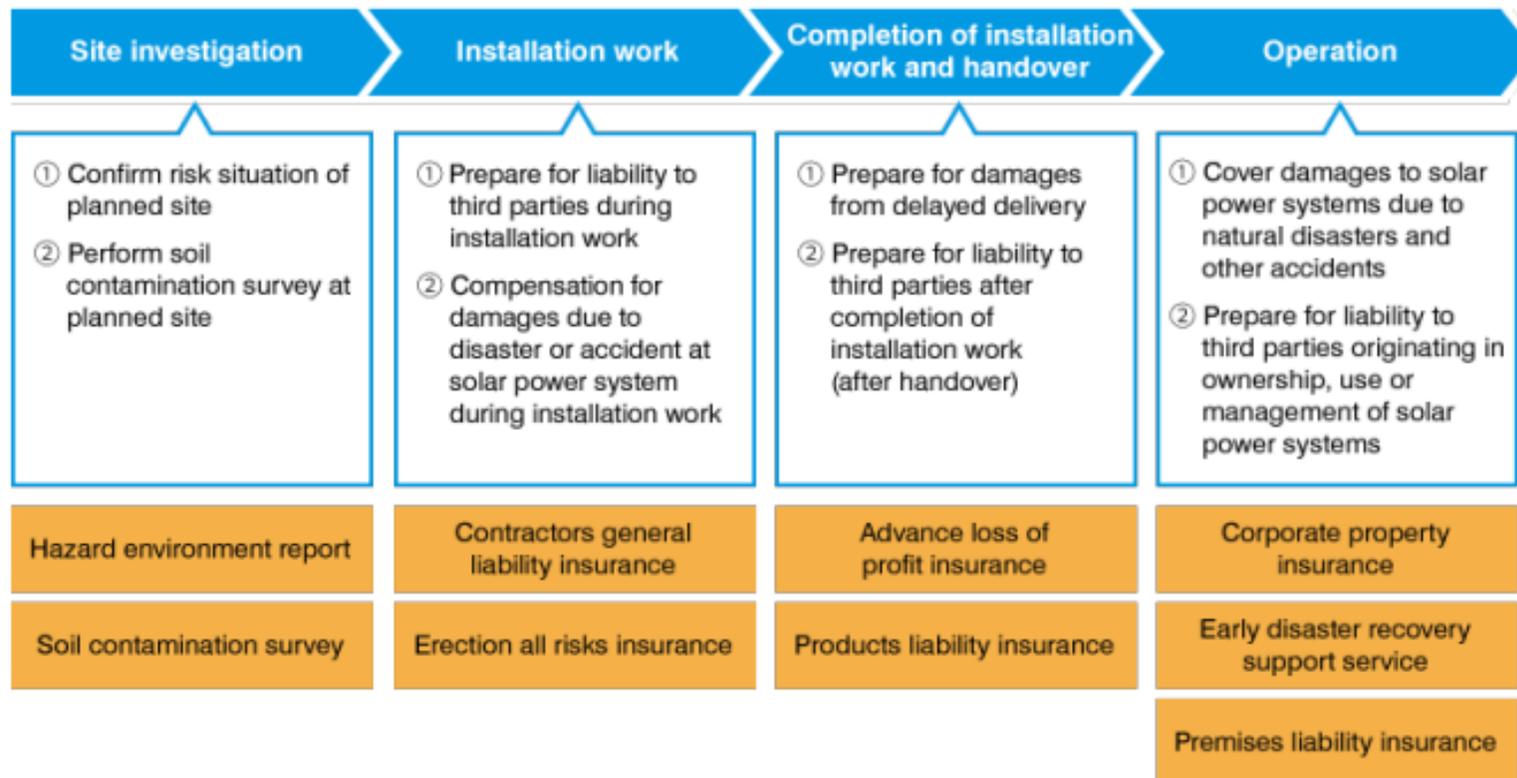
Central atmospheric pressure will decrease. (become stronger)

Genesis and tracks will shift eastward.

Case studies: Renewable energy installation and insurance

Mega-solar project: From installation to operation

- A variety of risks exist at every stage of project management.
- Proper hazard assessment and appropriate insurance coverage is indispensable in attracting quality investments.



Case studies: Renewable energy installation and insurance

Geothermal Power Generation: Containing liability risks

- Again, a variety of risks exist at every stage of project management.
- Typically located in touristic natural settings, liability risk poses a major concern over the course of development and operation.
- Sources of potential liability include decline in the volume or quality of hot springs, resulting in costs accruing from investigation and loss of profit on the part of the “onsen” (hot springs) operator.
- Putting in place a liability insurance policy is important in securing investments.

General flow of geothermal development (model case of 30,000 kw power output)



Source: Prepared using basic data for investigating purchase price in FY2013 issued by Resources and Energy Agency of the Ministry of Economy, Trade and Industry

Case studies: Low-carbon Japanese Equity Fund

～An asset management solution to promote low-carbon society～

<Concept of the Fund>

Contribution to the reduction of CO2 emissions and the creation of a low-carbon society while achieving market performance

- Launch of the Fund in November 2017
- Encourage Japanese companies to reduce their CO2 emissions with the utilization of its asset management function
- Point 1: Universe: Companies reporting the amount of CO2 emissions
- Point 2: “Carbon intensity”: Half the level relative to TOPIX
- Point 3: Performance target: TOPIX (not aiming at excess return)

The insurance industry and low-carbon technologies

“De-risking” energy efficient assets to help attract finance and investments

- Refine its risk assessing capability to address acute & chronic physical risks as well as transition risks that involves low-carbon technology projects and assets.
- Minimize protection gap for critical infrastructure including energy-related.
- Further involvement in public policy-making discussions pertaining to climate change mitigation and adaptation.
- Promote strategic and decision useful climate-related disclosures (TCFD recommendations) to attract quality finance and investments.

Thank you for your kind attention.

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