



# 企業と大学のSDGs連携 FEアジア事務局の取り組み

谷口真人  
(総合地球環境学研究所)

Future Earth in Asia and Pacific  
**futureearth**

Research Innovation Sustainability

# Regional Centre for Future Earth in Asia

Hosted by RIHN since 2014

- Led by T. Yasunari (Future Earth Advisory Committee member)
- Director: H. Mallee
- 2 staff + colleagues
- Modest funding from RIHN and JST



T. Yasunari



H. Mallee

1. Governance and organization
2. Research agenda development
3. Communication and outreach



Research Institute for Humanity and Nature (RIHN)



# 1. Governance and organization: Regional Advisory Committee

- Established in 2015
- Composed of 9 members
- Chair: Prof. Nordin Hasan, Universiti Kebangsaan, Malaysia



## **2. Research agenda development**

- **Annual Future Earth in Asia Workshops**
- **Knowledge-Action Network on Systems of Sustainable Consumption and Production (SSCP KAN)**
- **Japan Strategic Research Agenda for Future Earth**



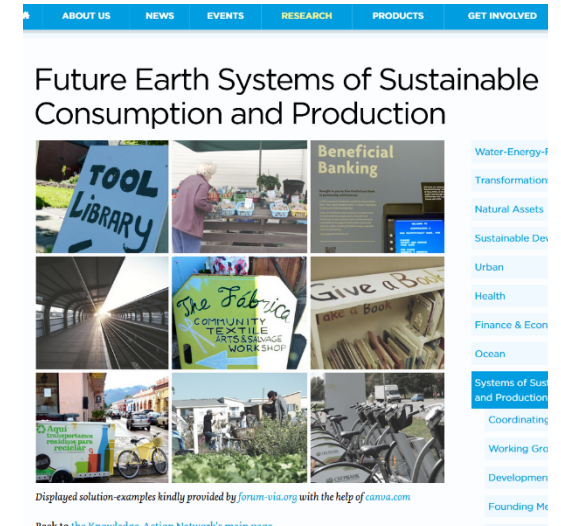
# Future Earth in Asia Workshop



**The 5th International Workshop on Future Earth in Asia: Contributing to an implementation strategy for Future Earth in Asia**  
2017, RIHN, Kyoto

# SSCP KAN: KAN on Systems of Sustainable Consumption and Production

- Address Sustainable Development Goal 12: Ensure sustainable consumption
- Cross-cutting relevance to: health and well-being (**Goal 3**), clean energy (**Goal 7**), decent work and economic growth (**Goal 8**) and sustainable cities and communities (**Goal 11**)





# SSCP KAN

GET INVOLVED

OPEN NETWORK



## NEWS

3 Aug 2018

### Executive Director Speaks at United Nations High-level Political Forum on Sustainable Development

Future Earth Executive Director highlights systems transformation towards sufficiency at the **United Nations High-Level Political Forum at the review of SDG 12**, based on the work of the **Future Earth KAN-SSCP**.

## Collaborating with **business**, decision makers and NPOs



### アジアの持続可能な消費を考える Sustainable Consumption in Asia

アジアの低・中所得諸国において、生態系への影響を抑えつつ、公平で安定した幸福な社会を築くにはどうすればよいか、「持続可能な消費」の観点から議論します。This symposium explores how sustainable consumption can contribute to enhanced, equitable and resilient well-being in low- and middle- income countries in Asia without this development leading to massive ecological overshoot.

2018.1.15 Mon  
10:00-17:30

京都大学百周年記念館  
国際交流ホールI  
Clock Tower Centennial Hall I  
Kyoto University

- Keynote 1** 新・持続可能な消費：アジアの社会イノベーションとウェルビーイング  
**Sustainable Consumption 2.0: Fostering Social Innovation and Enhancing Well-being in Asia**  
モーリー・コーヘン Maurie Cohen  
ニュージャージー工科大学教授/Professor, New Jersey Institute of Technology
- Keynote 2** インドの消費行動 - 急増するインド中産階級の消費パターンと持続可能性  
**A Commentary on Consumption - How Unsustainable Is the Consumption Pattern of the Burgeoning Middle Class in India?**  
チャンドラ・ビュシャン Chandra Bhushan  
センターフォーウィズネスアンドムンディアルコメント 副代表 インド Deputy Director General Centre for Environment, India
- Session 1** リーフロッグ型発展の可能性と課題  
**Leapfrogging Development - Its Challenges and Opportunities**
- Session 2** 日本の「持続可能な消費」に向けた取組  
**Approaches and Experiences from Japan**

参加無料・申込要 日英同時通訳あり  
Admission Free English/Japanese  
Booking required simultaneous translation  
主催：総合地球環境学研究所・Future Earth アジア地域センター  
共催：京都大学 Future Earth 研究推進ユニット  
Organizer: Regional Centre for Future Earth in Asia/  
Research Institute for Humanity and Nature  
Co-organizer: Future Earth Research Unit, Kyoto University



The 6<sup>th</sup> Workshop on Future Earth in Asia: Sustainable Consumption in Asia  
Co-organized with Kyoto University Future Earth Unit

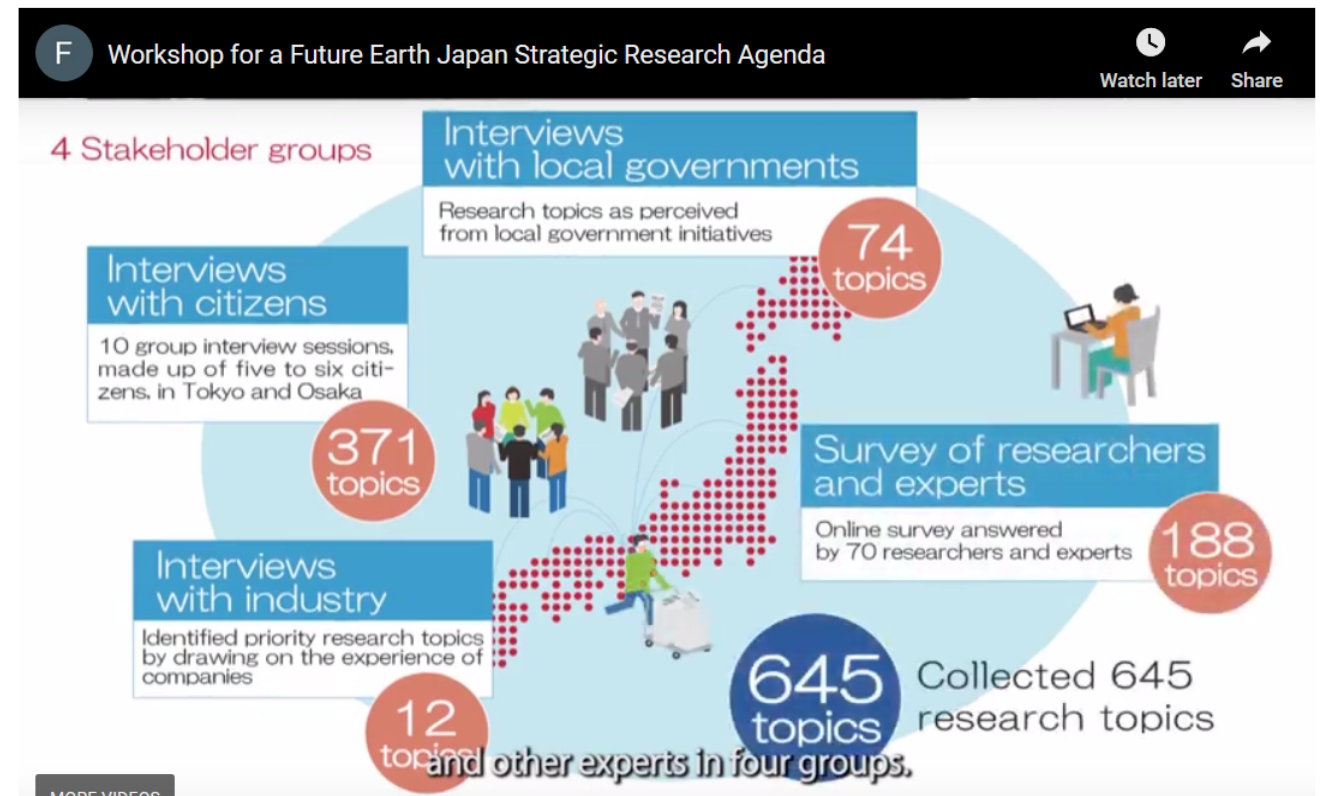


# Japan Strategic Research Agenda

40 participants from governments, **industry**, NPOs, and researchers gathered to examine 645 candidate research topics collected through prior questionnaires and interviews, and identify priority research themes for Japan for a sustainable future.



[www.futureearth.org/asiacentre/workshop-future-earth-japan-strategic-research-agenda](http://www.futureearth.org/asiacentre/workshop-future-earth-japan-strategic-research-agenda)



# Future Earth Research Programs in Asia & Pacific



**SIMSEA**  
Sustainability Initiative in the  
Marginal Seas of South and East Asia

ICSU REGIONAL OFFICE FOR ASIA AND THE PACIFIC

In collaboration with



The Marine Science Institute  
University of the Philippines, Diliman  
Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

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SCIENCE STEERING COMMITTEE

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## Sustainability Initiative in the Marginal Seas of South and East Asia (SIMSEA)

A project developed in Asia to meet the requirement for transform  
towards global sustainability

Meeting of Scientific Steering Committee for  
Monsoon Asia Integrated Research on Sustainability



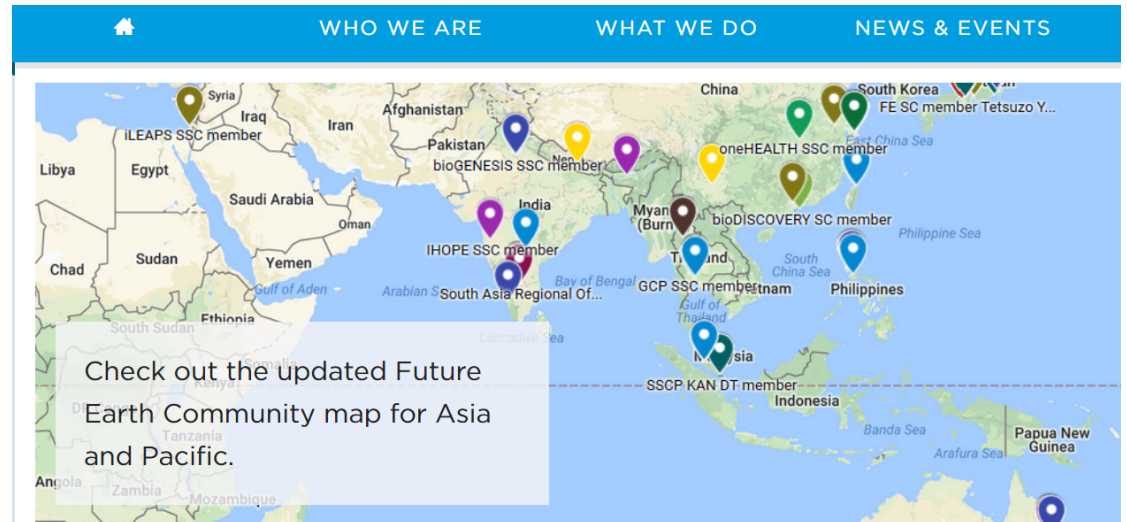


# 3. Communication and outreach

- Presence at conferences (e.g. Science Council of Asia)
- Website, Facebook, Open Network



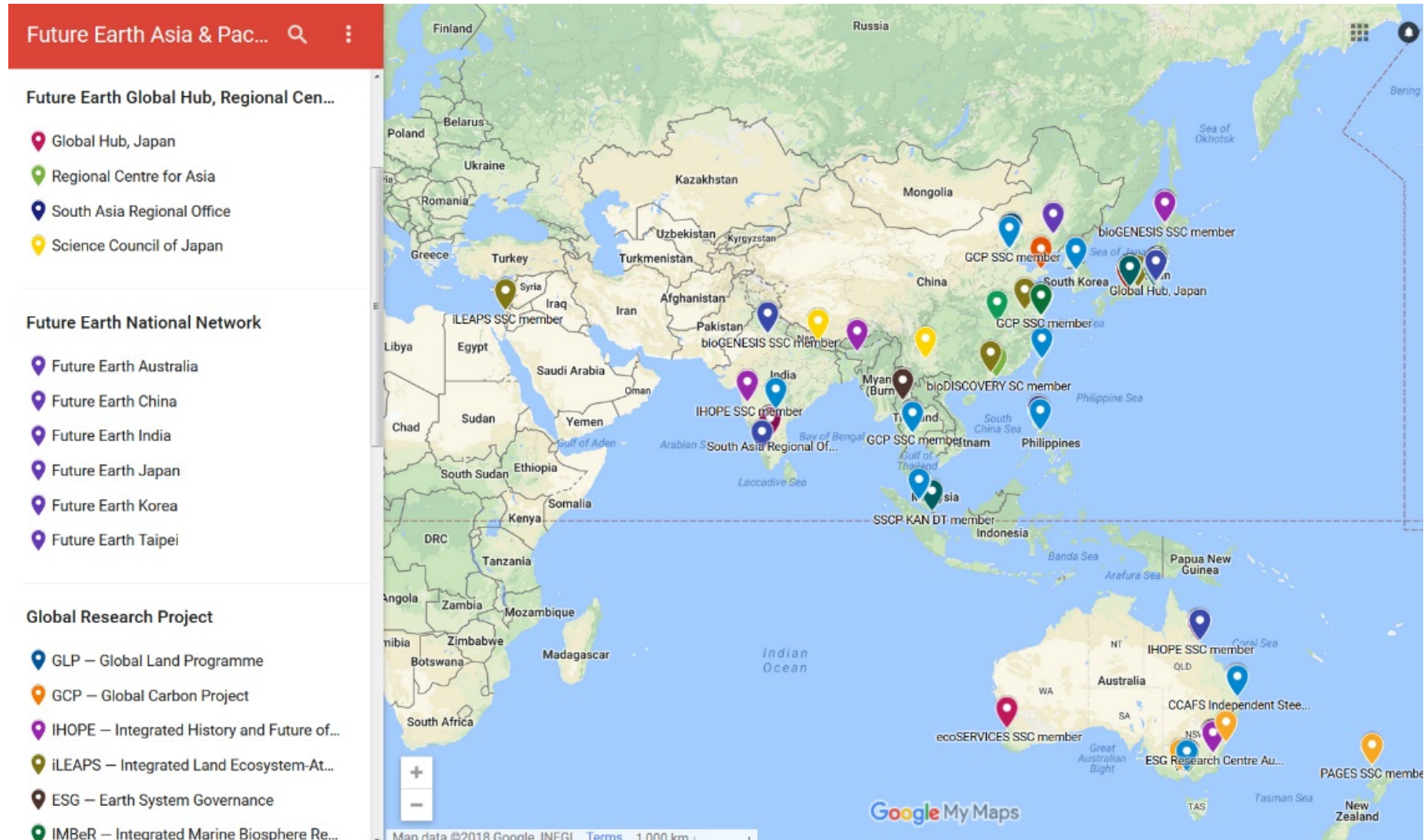
18th Science Council of Asia Conference  
6 December 2018, Tokyo



[www.futureearth.org/asiacentre/](http://www.futureearth.org/asiacentre/)



# Future Earth Community in Asia and Pacific



[www.futureearth.org/asiacentre/future-earth-community-asia](http://www.futureearth.org/asiacentre/future-earth-community-asia)

# South Asia Regional Office of Future Earth



Will host a Water Future Conference  
**“Towards a Sustainable Water Future”** in  
September 2019 with focus on **water-**  
**related Sustainable Development Goals.**

- Established in 2016
- Hosted by: Divecha Centre for Climate Change (DCCC), Indian Institute of Science
- Director: Prof. S.K. Satheesh, Chairman of DCCC



[www.waterfutureconference.org/](http://www.waterfutureconference.org/)



# Developments in Future Earth in Asia & Pacific – National Networks

## **China: Chinese National Committee for Future Earth (CNC-FE)**

Based at: State Key Laboratory of Numerical Modelling for Atmospheric Sciences and Geophysical Fluid Dynamics (LASG), CAS, Beijing

Director: Prof. Qin Dahe, Vice President, CAST

## **Taipei: Future Earth - Taipei**

Based at: Center for Sustainability Science, Academia Sinica, Taipei

## **Korea: Future Earth Korea**

Based at: Korean Academy of Science and Technology (KAST) , Seoul

Chair: Prof. Soon-Chang Yoon, Vice President for External Relations, KAST

## **India: Future Earth National Committee for India**

Based at: Indian National Science Academy (INSA)

Chair: Dr. K Krishnamoorthy, Distinguished Visiting Scientist of the Indian Institute of Science

## **Australia: Future Earth Australia**

Based at: Australian Academy of Science, Canberra

Director: Dr. Tayanah O'Donnell, Australian Academy of Science

## **Japan: Future Earth National Committee for Japan**

Chair: Prof. Kazuhiko Takeuchi, Integrated Research System for Sustainability Science (IR3S), The University of Tokyo Institutes for Advanced Study (UTIAS)

Secretariat: Graduate School of Media and Governance, Keio University, Fujisawa

## **The Philippines**

National Scientist Prof. Emeritus Dr. Lourdes J. Cruz, University of the Philippines



# Future Earth Philippines Program



- **Future Earth Philippines Program (FEPP)** launched on 19 November, 2018
- Led by National Scientist Prof. Lourdes J. Cruz, University of the Philippines
- Aims to improve the country's capability to achieve the **Sustainable Development Goals (SDGs)** through **Philippine Knowledge-Action Programs for Sustainability (PKAPS)**
- Has interactions with the **business community** starting from the program's conception.

## Development of Partnerships between **Future Earth Philippines Program (FEPP)** with **Business and Industry**

1. **FEPP** obtained an endorsement from the **Chamber of Commerce of the Philippine Islands (CCPI)** before the **Department of Science and Technology approved funding** (June 2018) for its establishment
2. Representatives from the business/industry sector attended the workshop on “Assessment and Scoping Workshop on Philippine Sustainability (November 2018).

*Danilo Manayaga of **SECURA** International Corp. gave a talk in the workshop, on his “Sustainable and Inclusive Agribusiness Model for Biomass Production”. In the model, SECURA (as **technology, management and finance provider**) forms a **venture company** with a cooperative of farmers/land owners and workers/employees and a local business partner or NGO.*

3. One of those who attended the Assessment and Scoping workshop in November 2018 is the founder of a NGO (Kabuhayan Daan sa Kaunlaran, **KDK**) of a group of businessmen operating closely with the Manila local government. KDK focuses on “Environmentally Sustainable Economic Systems” through **zero waste food systems** and value (nutrition, taste and shelf life) enhancement. They advise “**markets** (second harvest), **processors** (food plants and food service) and **consumers** (households) on **zero waste**.”

4. **Business and industry representatives** were invited at the launching of **FEPP** in November 2018 and they are consulted in the drafting of relevant proposals for Philippine Knowledge to Action Programs on Sustainability (PKAPS).

国連サミット「SDGs(持続可能な開発目標)」

# 地球研プロジェクトの SDGs mapping

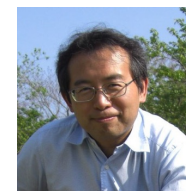
■SDGs の“wedding cake”



SDGs "wedding cake" illustration presented by Johan Rockström and Pavan Sukhdev

出典) (株)インターリスク総研より資料提供

図:環境省 2017年「生物多様性民間参画ガイドライン 第2版」  
[https://www.env.go.jp/nature/biodic/gl\\_participation/013-025.pdf](https://www.env.go.jp/nature/biodic/gl_participation/013-025.pdf)



環境トレーサビリティ(陀安一郎)  
 -> **Trust (SDGs; 17, 11, 6, 15)**



オープンチームサイエンス(近藤泰久)  
 -> **Openness (SDGs; 17, 4, 5, 11)**

## Core Projects



## Research projects





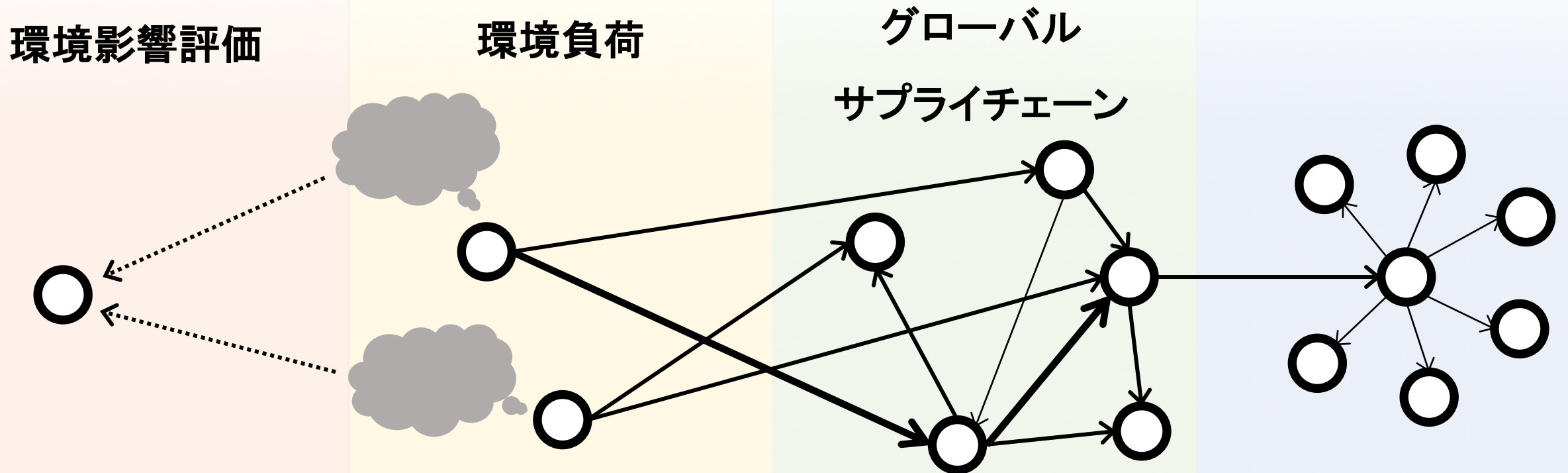
# 総合地球環境学研究所プロジェクト:

## グローバルサプライチェーンを企業、家庭の環境影響評価に関する研究

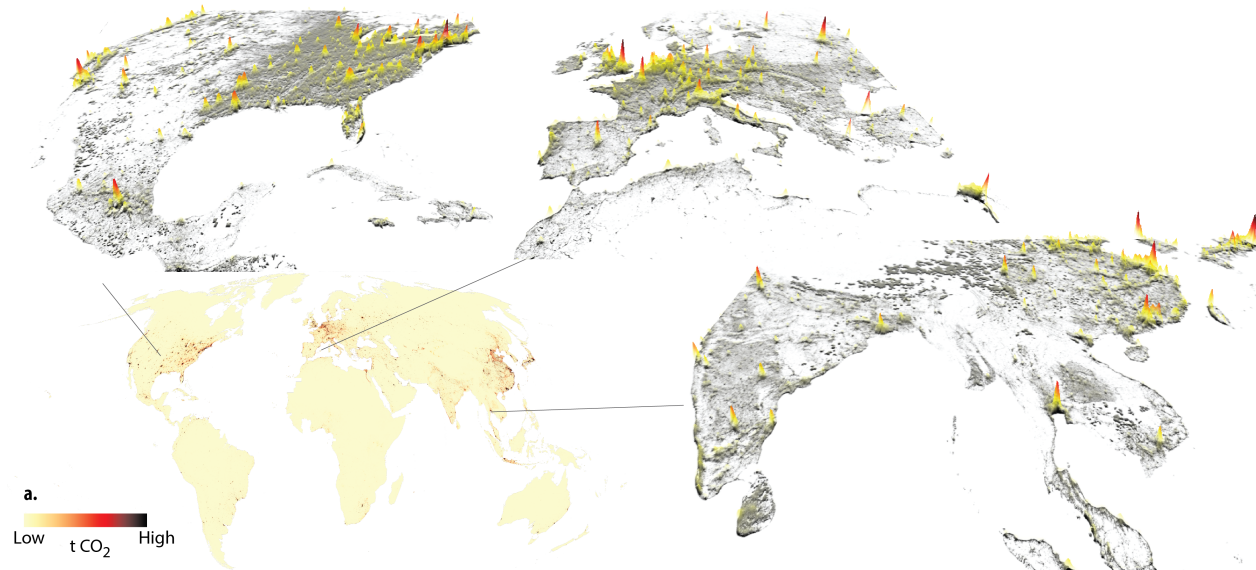
プロジェクトリーダー: 金本圭一郎



**研究目的:** 個別の都市、企業、家庭のサプライチェーンを通じた環境影響を明らかにし、各主体の行動変容を促し、地球環境問題の解決に資する。



# The carbon footprint of 13,000 cities



推計方法: 世界189カ国のカーボンフットプリント、250mメッシュの世界全体の人口データ、世界20,000地域以上の購買力に関するデータなどを組み合わせて作成

## 研究結果

東京・横浜は世界の都市の中で9番目にCO<sub>2</sub>を排出

大阪は35位、名古屋は82位、前橋・高崎は179位

世界の100の都市の消費が、世界全体の18%のCO<sub>2</sub>の排出を誘発

半分以上の国で、上位3つの都市域が1/4以上の国内のカーボンフットプリントを排出

高所得国では、都市の直接排出よりもカーボンフットプリントのほうが遥かに大

## These are the cities with the biggest carbon footprints



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### Do YOU live in one of the most polluting cities in the world? Researchers reveal interactive map of carbon footprints worldwide

- Carbon footprint is a measure of how polluting a city or country is
- An interactive map has collated all the data to reveal the worst offenders
- The US have three cities in the top ten - Chicago New York and Los Angeles
- Surprising inclusions in the top 100 include: Cologne, Manchester and Montreal

PUBLISHED: 19:22 BST, 8 June 2018 | UPDATED: 19:22 BST, 8 June 2018

SCIENTIFIC AMERICAN.

ENVIRONMENT

## Here's How Much Cities Contribute to the World's Carbon Footprint

A new analysis maps residents' carbon dioxide emissions in 13,000 cities, revealing some unanticipated results

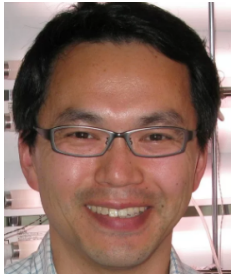




# Research and Social Implementation of Ecosystem-based Disaster Risk Reduction (**Eco-DRR**) as Climate Change Adaptation in Shrinking Societies

YOSHIDA, Takehito and colleagues (~120 members in and outside RIHN)

- Visualizing the risks of natural disasters
- Evaluating multi-functionality of Eco-DRR
- **Consensus building and incentive development**  
(transdisciplinary platform, traditional and local knowledge, institutions, insurance and finance, etc.)



# Transdisciplinary approaches and developing social and economic incentives

- In collaboration with insurance, city and rural planning, and other sectors
- Examining the existing insurance, financial and other institutions in order to identify the gap for promoting Eco-DRR

## Insurance systems in different countries

	Japan
Insurance system/scheme (both exclusive and inclusive coverage included)	Private fire insurance (optional coverage of flood)
Feasibility to be an incentive for Eco-DRR	Demerit: optional subscription limits the impact of the incentive, and fixed insurance rate with no obvious incentive effect <i>Limited feasibility to be an effective incentive in Japan</i>

## PFI (public finance initiatives)

