

# Future Earth - Challenges for Actions for Transformation

**Fumiko KASUGA**

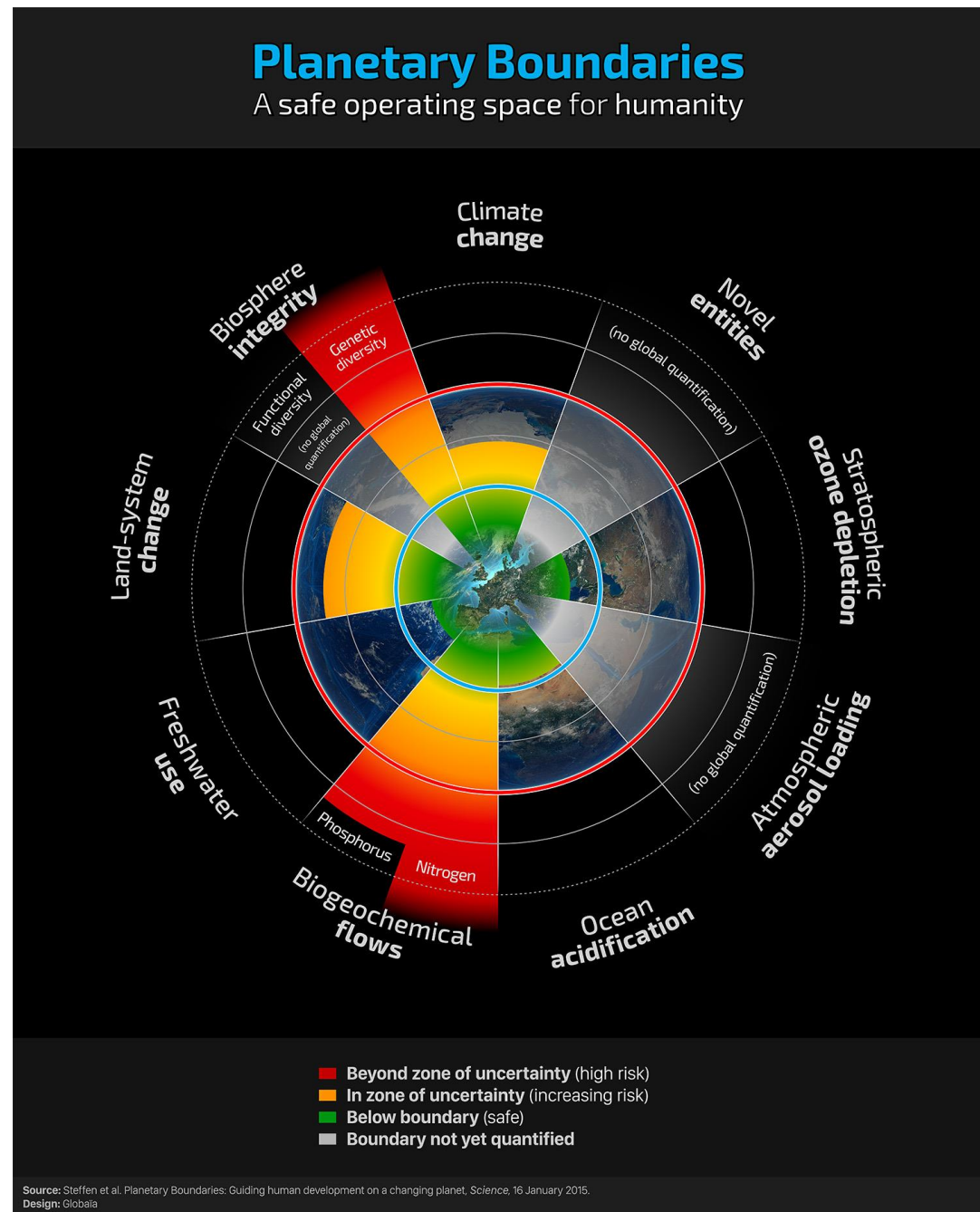
Senior Fellow, National Institute for Environmental  
Studies

Global Hub Director – Japan, Future Earth  
Secretariat

Visiting Professor, The University of Tokyo, IR3S

# Planetary Boundaries:

- Climate Change
- Novel Entities
- Stratospheric Ozone depletion
- Atmospheric aerosol loading
- Ocean acidification
- Biogeochemical Flows
- Freshwater use
- Land-system change
- Biosphere Integrity



## Future Earth characteristics:

- Research informing solutions
- Interdisciplinarity
- Stakeholder engagement



Picture from the animation:  
“Welcome to the Anthropocene”



# futureearth

research for global sustainability

Facilitating networking

Synthesizing activities

Creating innovation

- Communication

- Capacity building

*Recognizing single discipline  
or science alone cannot solve  
environmental and societal  
problems*

*Research programme*



Picture from the animation:

“Welcome to the Anthropocene”

# Global Research Projects



oneHEALTH



# Future Earth at COP23

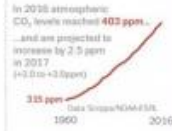


## Global carbon dioxide emissions projected to rise after three stable years

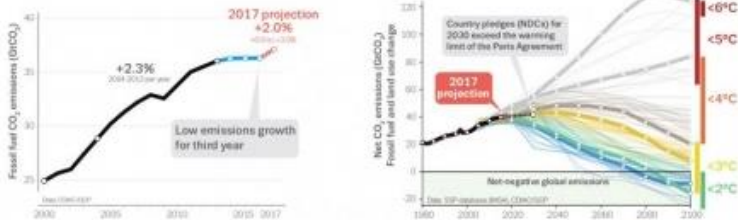
### Global Carbon Budget 2017

In 2017, CO<sub>2</sub> emissions from fossil fuels and industry are projected to **grow by 2.0%** (+0.8 to +3.0%).

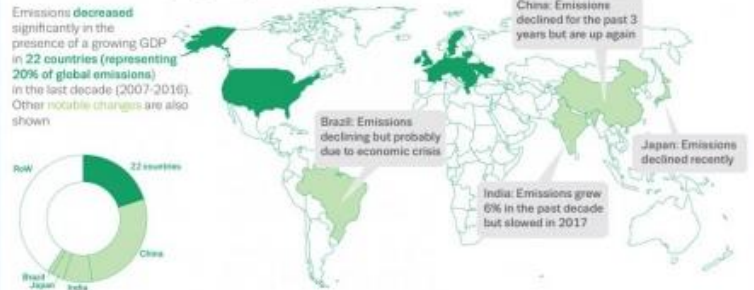
This follows three years of nearly **no growth (2014-2016)**



The **plateau** of last year was not peak emissions after all...



...we are changing trajectory...



...but atmospheric concentrations continue to rise



The 2017 Global Carbon Budget at a glance. Credit: Future Earth/Global Carbon Project

NOV 13 2017

by Owen Gaffney

WATCH THE VIDEO: New results suggest that time may be running out for the world to meet international targets for climate change.

Net-negative global emissions

2017 projection

<math>+6^{\circ}\text{C}</math>  
<math>+5^{\circ}\text{C}</math>  
<math>+4^{\circ}\text{C}</math>  
<math>+3^{\circ}\text{C}</math>  
<math>+2^{\circ}\text{C}</math>

2017 projection

Net-negative global emissions

Data: SSP database (IIASA), CDIAC/GCP

f t G+

Future Earth Global Carbon Budget 2017

2%

GLOBAL EMISSIONS GROWTH

UNCERTAINTY 0.8 - 3 %

PROJECTION FOR 2017

MORE VIDEOS

2:26 / 3:35

YouTube



# MAIRS-FE — Monsoon Asia Integrated Research on Sustainability - Future Earth



# Future Earth Regional Activity in Asia

+63 2 433 3689



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

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







Future Earth/Earth League

The period of 2016-2017 saw a number of significant climate-related events around the world.

NOVEMBER 13, 2017

# 10 MUST KNOWS

What are the 10 things all leaders should know when crafting policies on climate change? That question was the focus of a [statement](#) released by Future Earth and the Earth League at this year's United Nations climate negotiations, or COP23. Check out a [full list](#) of our resources from this conference in Bonn, Germany and read a [reflection](#) from Future Earth's Kaela Slavik.



KNOWLEDGE FOR ACTION



NO PEAK EMISSIONS

CONNECTIN



PARTNERS FOR THE...

ALLOCATION AND

KNOWLEDGE FOR

10 MUST KNOWS

VOLCANOE! AND

NO PEAK EMISSIONS

SEPT. 7 SEPT. 16 SEPT. 25 OCT. OCT. 5 OCT. 14 OCT. 23 NOV. 2 NOV. 11 NOV. 20 NOV. 29 DEC. DEC. 9 DEC. 18 DEC. 27 JAN. JAN. 6 JAN. 15

Timeline JS

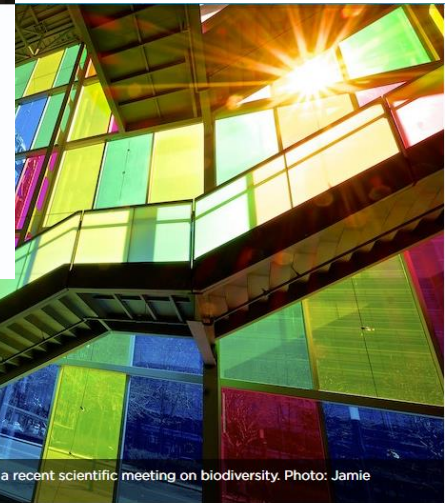
# Future Earth and the Secretariat of the Convention on Biological Diversity agreed to strengthen collaboration, and Future Earth contributed to the 21st meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the CBD December, 2017, Montreal



Cristiana Pasca-Palmer (left) of the Convention on Biological Diversity and Future Earth's Anne-Hélène Prieur-Richard (right) sign a new agreement at an event in Montreal. Photo: IISD/ENB, Francis Dejon

The international research organisations will join forces to catalyse new research to inform evidence-based policy focusing on the world's biodiversity.

Today, Future Earth and the Secretariat of the [Convention on Biological Diversity \(CBD\)](#) agreed to strengthen their collaboration around a number of key areas. The two organisations signed the new agreement at the 21st meeting of the Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA), which runs from 11 to 14 December in Montreal.



Montreal's Palais des Congrès was the site of a recent scientific meeting on biodiversity. Photo: Jamie McCaffrey

Future Earth had a large presence at this meeting in Montreal, which featured discussions on cities and biodiversity, wild meat and more.

Future Earth representatives recently attended the [21st meeting of the Subsidiary Body on Scientific, Technical and Technological Advice \(SBSTTA-21\) of the Convention on Biological Diversity \(CBD\)](#), convened from 11 to 14 December 2017 at the Palais des Congrès in Montreal, Canada. SBSTTA is an open-ended, intergovernmental scientific advisory body that provides the Conference of the Parties (COP) with advice around the implementation of the convention. This meeting brought together civil society groups, technical experts and government officials from around the world.

# 7th International Conference on Sustainability Science (ICSS 2017)

WHO WE ARE NEWS EVENTS RESEARCH PRODUCTS GET INVOLVED OPEN NETWORK

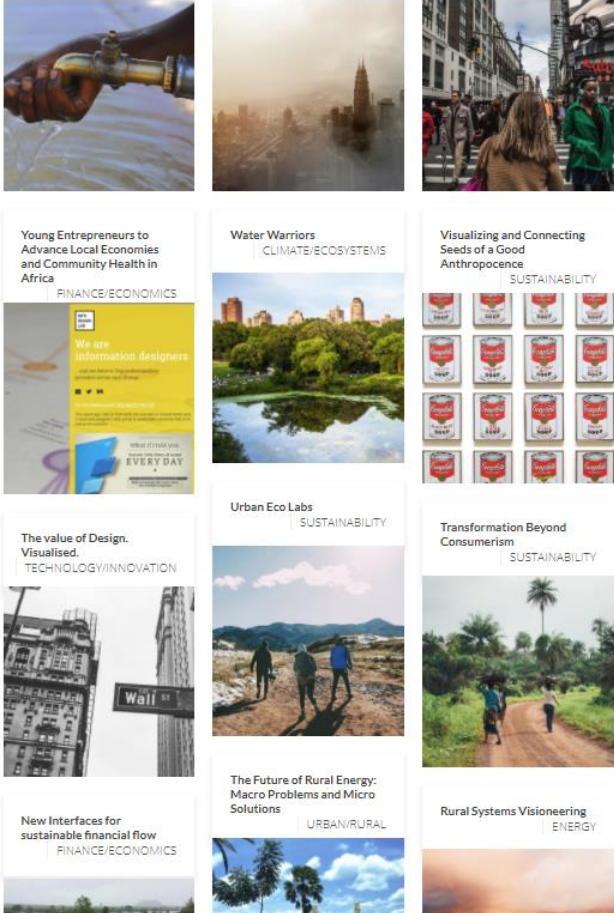
## Call for sessions: 7th International Conference on Sustainability Science (ICSS 2017)



Image: United Nations

Submit proposals for sessions for a conference with the theme of "Global Goals - new approaches to knowledge generation - challenges and solutions from local to global scales." Deadline for submissions is 28 February 2017.

Researchers and professionals in sustainability can submit sessions for an upcoming conference in Stockholm focusing on the United Nations' 17 Sustainable Development Goals. These international targets set benchmarks that nations can work toward to grow in sustainable and equitable ways. The conference, the 7th International Conference on Sustainability Science (ICSS 2017), is organised by Future Earth and the Stockholm Resilience Centre of the University of Stockholm.



Young Entrepreneurs to Advance Local Economies and Community Health in Africa  
FINANCE/ECONOMICS

Water Warriors  
CLIMATE/ECOSYSTEMS

Visualizing and Connecting Seeds of a Good Anthropocene  
SUSTAINABILITY

Urban Eco Labs  
SUSTAINABILITY

Transformation Beyond Consumerism  
SUSTAINABILITY

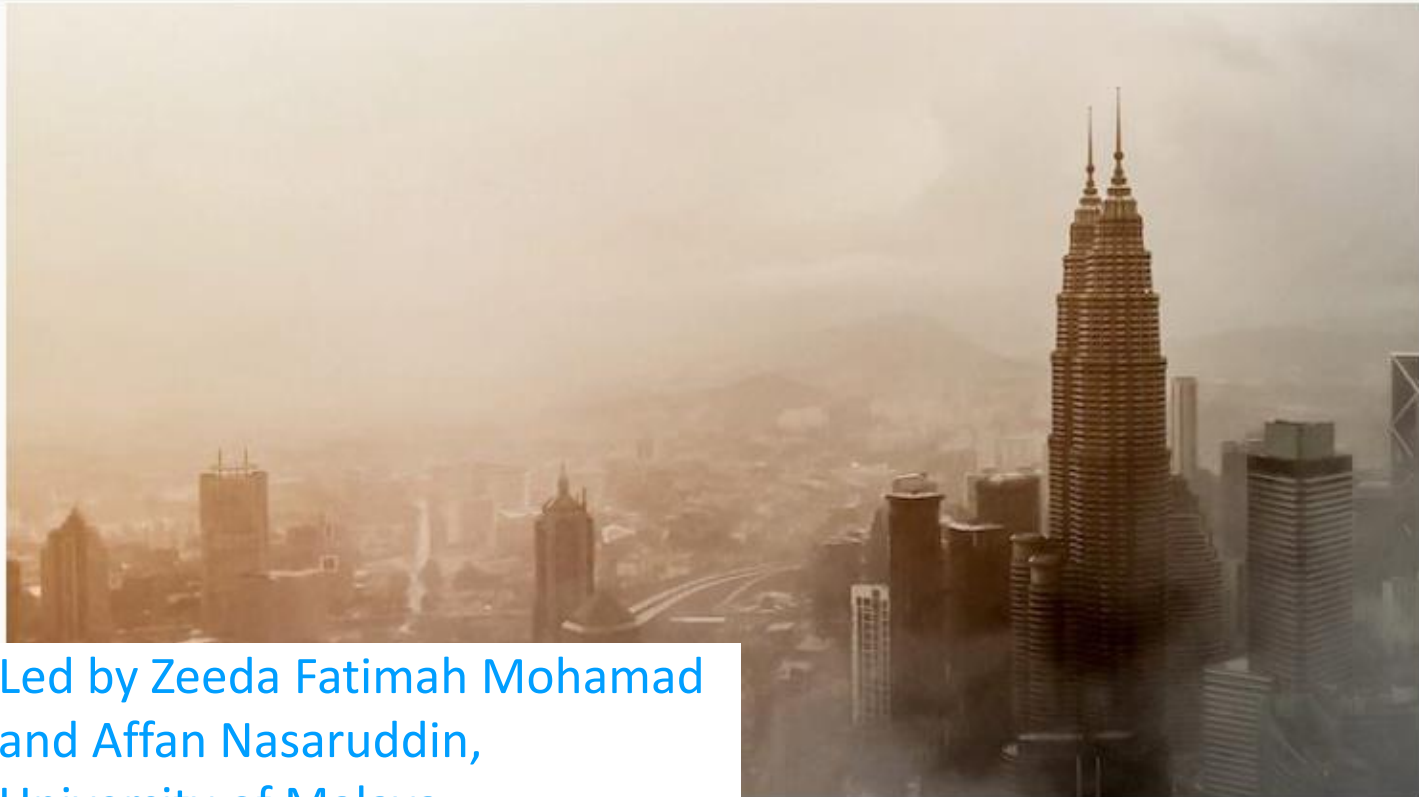
The value of Design. Visualised.  
TECHNOLOGY/INNOVATION

New Interfaces for sustainable financial flow  
FINANCE/ECONOMICS

The Future of Rural Energy: Macro Problems and Micro Solutions  
URBAN/RURAL

Rural Systems Visioning  
ENERGY





Led by Zeeda Fatimah Mohamad and Affan Nasaruddin, University of Malaya



## Heartware approach

### Water Warriors

#### BACKGROUND

Water Warriors is a Living Lab initiative currently coordinated by a group of action researchers based at the University of Malaya, Kuala Lumpur, Malaysia. We apply the "heartware" approach to support transformation at two river basin communities: one, the University of Malaya campus community located at the Klang River basin within the capital city of Kuala Lumpur (urban) and two, the District of ngor River basin at the State of Selangor (rural) in Malaysia.

SHARE



#### Institution/Organization

University of Malaya, Malaysia



#### Place

Malaysia



#### Lab project lead

1. Zeeda Fatimah Mohamad, University of Malaya
2. Affan Nasaruddin, University of Malaya



## Sustainable Development Goals



外務省  
MOFA Japan

Piko Taro & MOFA (SDGs) ~PPAP~

[Mofachannel](#)

PPAP (Pen Pineapple Apple Pen)

or

PPAP (Public Private Action for Partnership)



首相官邸

Prime Minister of Japan and His Cabinet

1st Japan SDGs Award, Dec. 26, 2017

Best winner: Shimokawa-cho Town, Hokkaido (small town with biomass energy use)

# 第2回 イオン未来の地球フォーラム

いま次世代と  
語りたい未来のこと

—持続可能な消費と生産—

2nd AEON Future Earth Forum  
Generations in Dialogue:  
Sustainable Consumption and Production

## 2ND FORUM ON FUTURE EARTH

2018年1月20日 | 土 |

13:00-17:00 (12:00開場)

場所：東京大学 安田講堂 (本郷キャンパス内)

参加無料 対話型パネルディスカッションあり

言語：日本語



AEON

IR3S



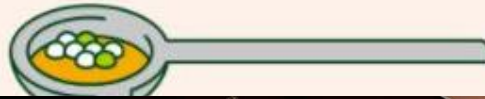
Integrated Research System  
for Sustainability Science  
サステイナビリティ学  
連携研究機構

futurearth  
research for global sustainability



# 第2回 イオン未来の地球フォーラム

## いま次世代と



Willingness to pay for green technology, more value in sympathy, 'like button' than materials

Sense of 'Sufficiency' for sustainable development/life

Efforts needed to visualize added values to consumers

参加無料 対話型パネルディスカッションあり

言語：日本語

AEON

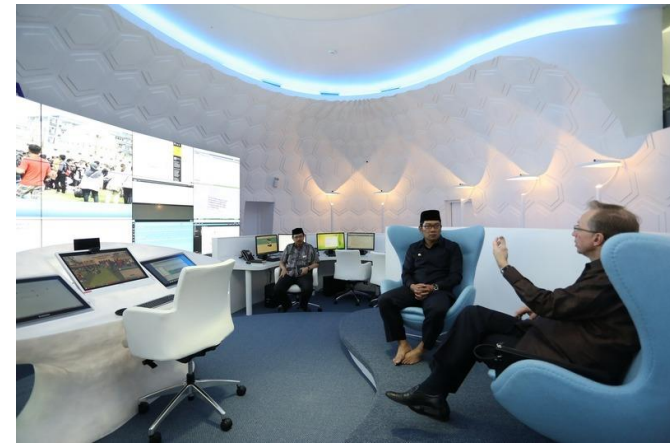
IR3S



futurearth  
research for global sustainability

# Asia: frontier of both global issues and opportunities for solutions

- Rich in **diversity** in the nature and in human society (history, culture, demography, population, urbanization, economy, etc.)
- Affected by various natural **disasters** and **social problems** – all global challenges
- **Opportunities** – overcoming problems, new development - sustainable



Yokkaichi (Japan)  
about 50 years ago

Yokkaichi City now

Bandung City Command Center  
from <https://portal.bandung.go.id/>

# Regional Centers and Offices

Global Hubs

Regional Centres

National Networks

Global Research Projects

Future Earth's regional centres and offices play a crucial role in adapting and spreading the vision of the programme, driving research around the sustainability challenges facing particular regions of the world.



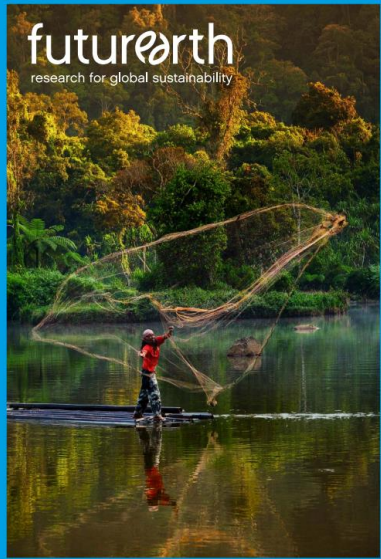




# Regional Advisory Committee for Future Earth in Asia



# Other outreach activities (<http://www.futureearth.org/>)



WHO WE ARE    NEWS AND EVENTS    RESEARCH    PRODUCTS    GET INVOLVED    OPEN NETWORK

## Early Career Professionals

One of Future Earth's key focuses is on engaging diverse early-career professionals from a range of disciplines and sectors. We seek to bring together professionals from different domains and to strengthen their capacities in conducting inter- and transdisciplinary research around global sustainability – with the goal of generating solutions for sustainability and improving our understanding of the physical, biogeochemical and human dimensions of global environmental change.

Future Earth engages with a wide variety of early career researchers and other professionals. We work with researchers in the natural and social sciences and the humanities. We also reach out to professionals in policy, business, the technology industry, agriculture, civil society and much more.

If you are an early career professional and would like to get involved in Future Earth, we invite you to join the Future Earth Early Career Professionals Network.

### Joining the Future Earth Early Career Professionals Network entails numerous benefits:

- Engage with other early career professionals through one-on-one and group conversations
- Get the latest scientific research results around sustainability
- Stay up to date with funding opportunities and relevant vacancies
- Be the first to know about exciting conferences and workshops

Members of our network also get the chance to be involved in various Future Earth activities and structures, such as our [Knowledge-Action Networks](#), [regional centres](#) and conferences.

Future Earth engages and partners with a number of existing initiatives and networks that work to empowering the next generation. These include:

- The [Early Career Researchers Network of Networks](#), which brings together 17 global networks
- [Young Leaders for Sustainability](#) (Collective Leadership Institute)
- and many more to come

**If you are interested in joining the Future Earth Early Career Professionals group, please [contact us](#).**

*We define early career professionals as anyone whose career has started within the last 10 years and who is connected to sustainability. This includes researchers who have received their Bachelor's or Master's qualification within the last 10 years or their PhD within the last six years, as well as professionals working at the interface of society, policy, practice and research.*

- Global Research Projects
- Knowledge-Action Networks
- Research Initiatives
- Early Career Professionals**
- Early Career Network of Networks
- Media Lab

Home   Projects   Challenges   About   Resources

## futureearth media lab

Science, Design, Storytelling

GLOBAIA © 2016

### MISSION

We create digital products and experiences that drive new types of connections between people and planet. We do this to immerse people in the challenges of global sustainability and deepen their personal sense of involvement. This is our theory of change.

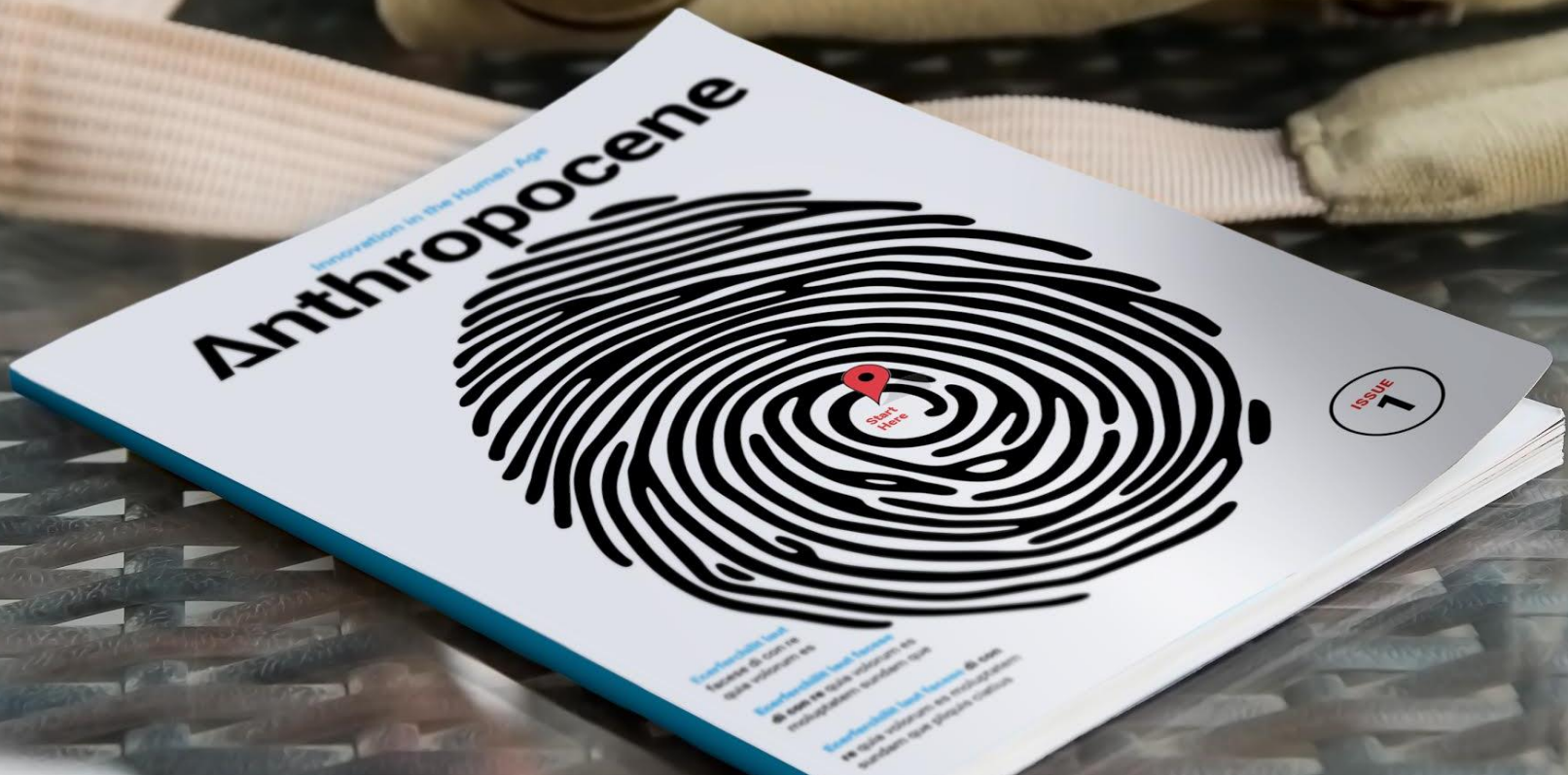


# Anthropocene Magazine

Free download

Not scientific articles or news, but new web magazine to connect people by sciences

[anthropocenemagazine.org](http://anthropocenemagazine.org)

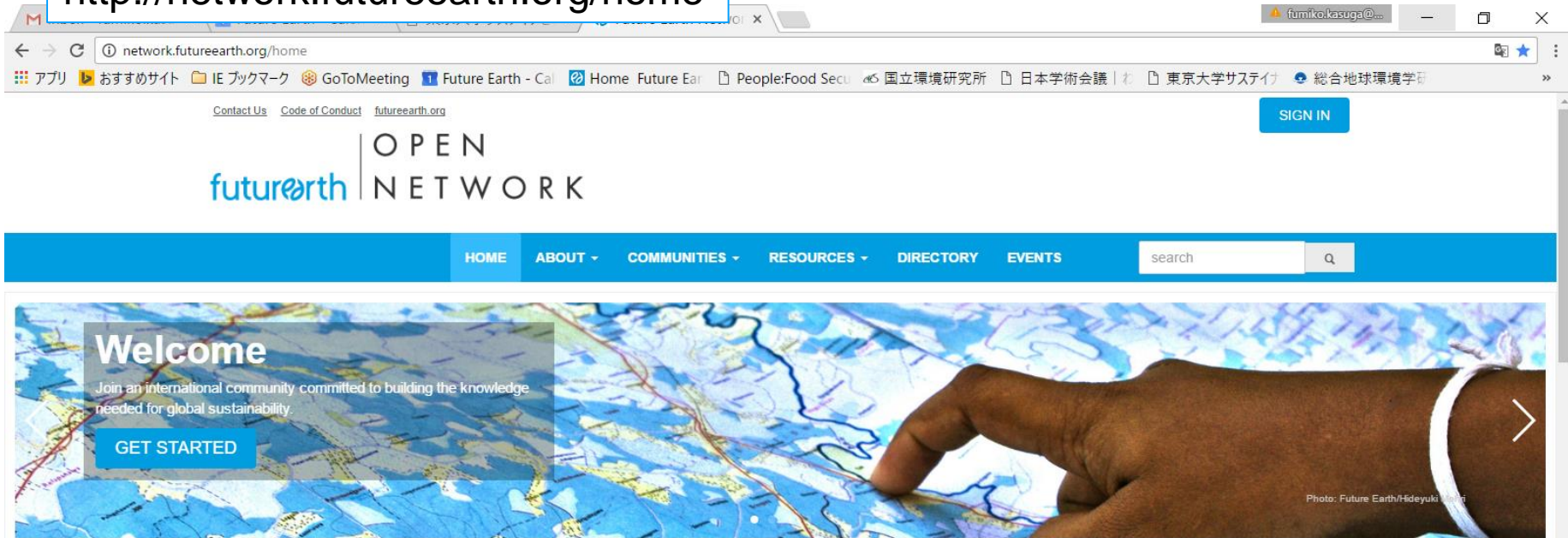






# How to get involved in Future Earth? – via Open Network

http://network.futureearth.org/home



## LATEST DISCUSSIONS



RE: A Webinar Account for Open Network Members

BY: LAUREL MILLIKEN, 8 MINUTES AGO

Posted in: [Community Forum](#)

Hi Erik, That account can only host 1 meeting at a time. If the need arises, we can procure another account.



RE: A Webinar Account for

## ANNOUNCEMENTS

Call for proposals: Joint European Space Agency - Future Earth Activities

BY: CAT DOWNY, 10 DAYS AGO

This call for proposals is being released through the partnership between the European Space Agency and Future Earth. It is designed to enable joint activities between the two organisations, with funds available for activities that help strengthen... [more](#)

[ESA-Future Earth Call](#)

## GETTING STARTED

Welcome to the Future Earth Open Network, the collaboration platform for research in global sustainability. Here are some steps to help you get started:

1. Update your [profile](#) and [email preferences](#)
2. Join a [Knowledge-Action Network](#) community
3. Find other members in the [Directory](#)
4. Browse and join other [communities](#)

If you have other questions, please visit the main



Facilitating networking

Synthesizing activities

Creating innovation

For human and ecosystem  
wellbeing

Concerns over someone  
different from you – gentleness  
and imagination

For ‘No one left behind’



Picture from the animation:  
“Welcome to the Anthropocene”

# Thank you very much!



Website:	<a href="http://www.futureearth.org">www.futureearth.org</a>
Blog:	<a href="http://www.futureearth.org/blog">www.futureearth.org/blog</a>
Facebook:	<a href="http://www.facebook.com/futureearth.org">www.facebook.com/futureearth.org</a>
Twitter:	@FutureEarth