



DISCLAIMER



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ALL VIEWS EXPRESSED, ARE THOSE
OF THE AUTHOR, AND MAY NOT
REFLECT VIEWS OF ORGANIZATIONS
WITH WHICH HE IS AFFILIATED

CHINA

Borders

14 sovereign states

Population

> 1.4 billion

Size

~ 9.6 million km²

‘Tropics to Tundra’

Map from
‘Mountains to Sea’
The Nature Conservancy (TNC)



Worries & Hopes (- & +)

- Negative Consequences for Other Places (Environment, Job Losses, Quality Issues)
- Over-assertive Behavior
- Burdensome Costs (Debts)
- Loss of Market Access or Share
- Unfair Trade & Investment Practices
- Inadequate Standards / Enforcement
- 'Unacceptable' Domestic / Int'l Practices
- Green Prosperity Opportunities
- Capable & Experienced Partner
- Shared Innovation Experience
- Access to Huge Markets
- 'Grow with China'
- Access to Investment Capital, New Infrastructure, Capacity-building & Jobs
- Solutions for Poverty Reduction & Sustainable Development

Cooperation, Collaboration, Compromise,
Competition, Confrontation, Conflict

3 Questions

Can the world's most populous country, leading trading nation & second largest economy become an environmentally friendly society?

What might such a transformation mean for the rest of the world?

Major benefits/costs for Canada?

“Green Prosperity”

Prosperity: ‘wealth, health and happiness’; ‘a rich and full life’;
‘beyond the yardstick of GDP’

Green Prosperity: ‘Healthy Nature, Healthy Communities,
Healthy People’

“...**Shared and lasting prosperity**, in which people have the potential to flourish...without increasingly damaging the finite planet we share with other species, and on which we depend for a home...” **Tim Jackson**

“Global Green Prosperity” 2010-2030

2009 “Prosperity Without Growth” Tim Jackson

2010+ “A Pathway to Prosperity” Global Green Growth Institute

2010+ “Green growth presents a new approach to economic growth - putting well-being at the centre of development while ensuring that natural assets continue to provide the resources and environmental services to support sustainable development” OECD

2015-2030 “Global and Inclusive Prosperity” UN2030 SD Goals

2017 “Only Green Growth Can Bring Prosperity” Nicholas Stern

2019 “A New Multilateralism for Shared Prosperity: Geneva Principles for Global Green New Deal” UNCTAD

CHINA – ‘Fish’ and ‘Prosperity’



Symbolism is Important

Wealth Distribution



¥

“Green is Gold”

“Lucid Waters & Lush Mountains
are invaluable assets” – Xi Jinping

**Bamboo Forest
Anji County,
Zhejiang Province**

GREEN IS GOLD

THE STRATEGY AND ACTIONS OF CHINA'S
ECOLOGICAL CIVILIZATION



‘ECOLOGICAL CIVILIZATION’

Linking
Environment,
Economy, Social,
Political & Cultural
Aspects of
Development

http://web.unep.org/greenecomony/sites/unep.org.greenecomony/files/publications/greenisgold_en_20160519.pdf

ECOLOGICAL CIVILIZATION IN THE PEOPLE'S REPUBLIC OF CHINA: VALUES, ACTION, AND FUTURE NEEDS

Arthur Hanson

NO. 21

December 2019

ADB EAST ASIA
WORKING PAPER SERIES

Three Levels of Transformative Change

- **Ecological Civilization by 2035**
“Ecologically Respectful Conserver Society”
- **Green Development**
*‘Green Growth, ‘Green Economy’,
Green Infrastructure*
- **Environmental Protection**
‘New Path for Environmental Protection’

'Greening' China & World

Governance

*Meeting Climate INDC**

Rule of Law

*CITES** Enforcement*

Green Finance

Green Bonds

Innovation

Wind & Solar

Inclusiveness

UN 2030 SD Goals

* *Intended Nationally Determined Contribution* (under Paris Agreement on Climate Change)

** *Convention on Int'l Trade of Endangered Species*

Five China Green 'Revolutions'

Clean & Green Technology

Circular Economy

Water & Sanitation

'Rural Vitalization'

Urban Green Development

Increase 'Natural Capital'



'Built Capital'

Beijing Subway Network
(> 500 Km)



Maotai Wastewater Treatment



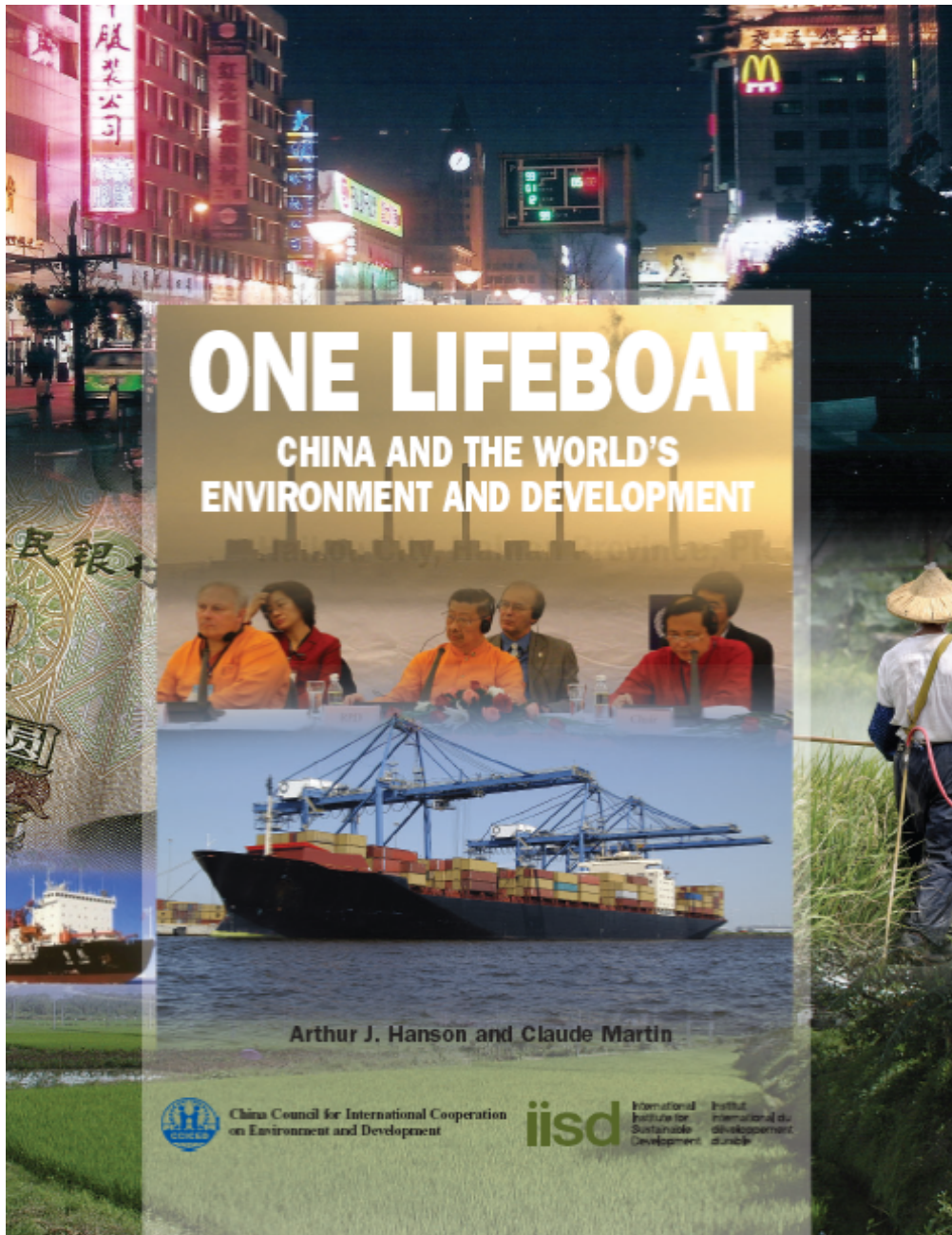
Chishui River,
Guizhou Province

‘Human Capital’



‘Social Capital’





What do China's Transformations & Green Revolutions Mean Globally?



“Safeguarding the Commons”

Naoko Ishii, former CEO
Global Environmental Facility (GEF)

“These global commons—the ecosystems, biomes and processes that regulate the stability and resilience of the Earth system—are the very foundation of our global economy and modern society.”

“We need to transform food, urban, and energy systems, and move to a circular economy. Business as usual will guarantee disaster; incremental change will not suffice. The only solution is transformational change.”

'4 Words'



ENACT
U of Michigan,
1970



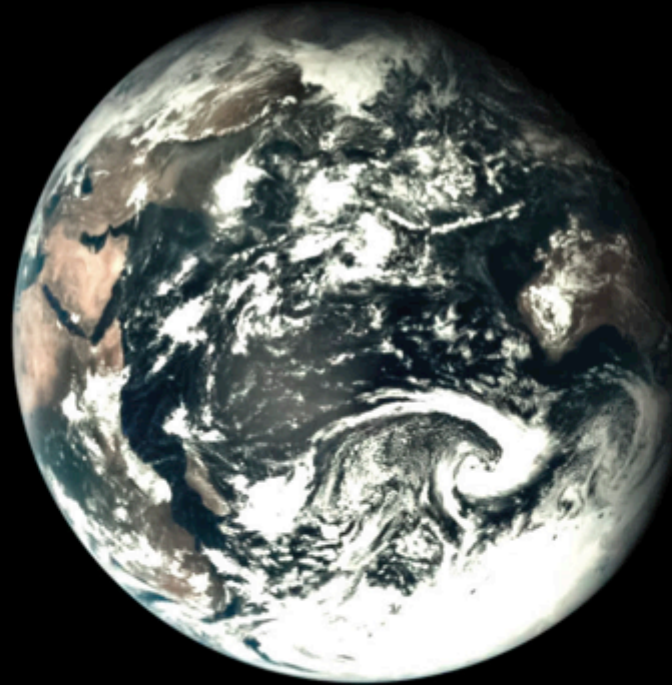
U of Michigan 50th Anniversary 'Teach-In on the Environment'

March 2020

China

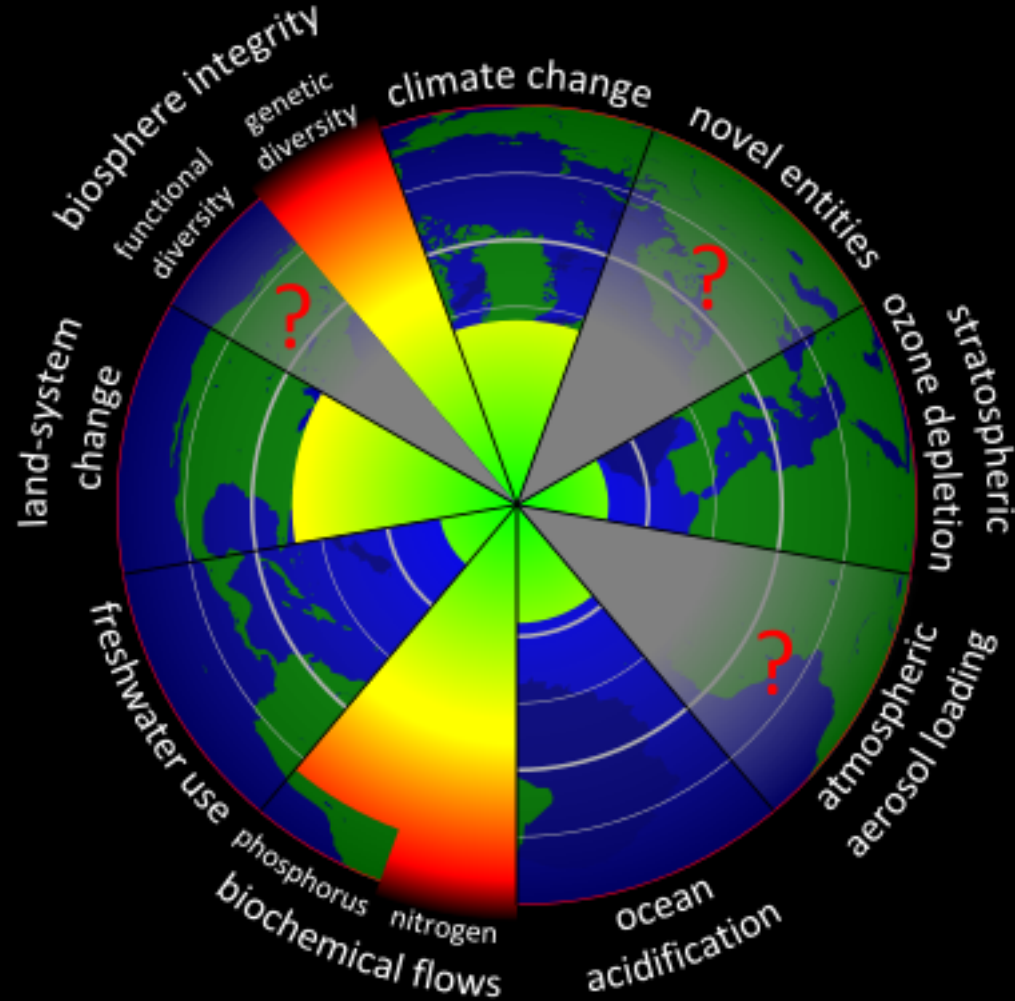
Earth and Moon

Photo Taken
from
Chang'e 5 T1
(2014)



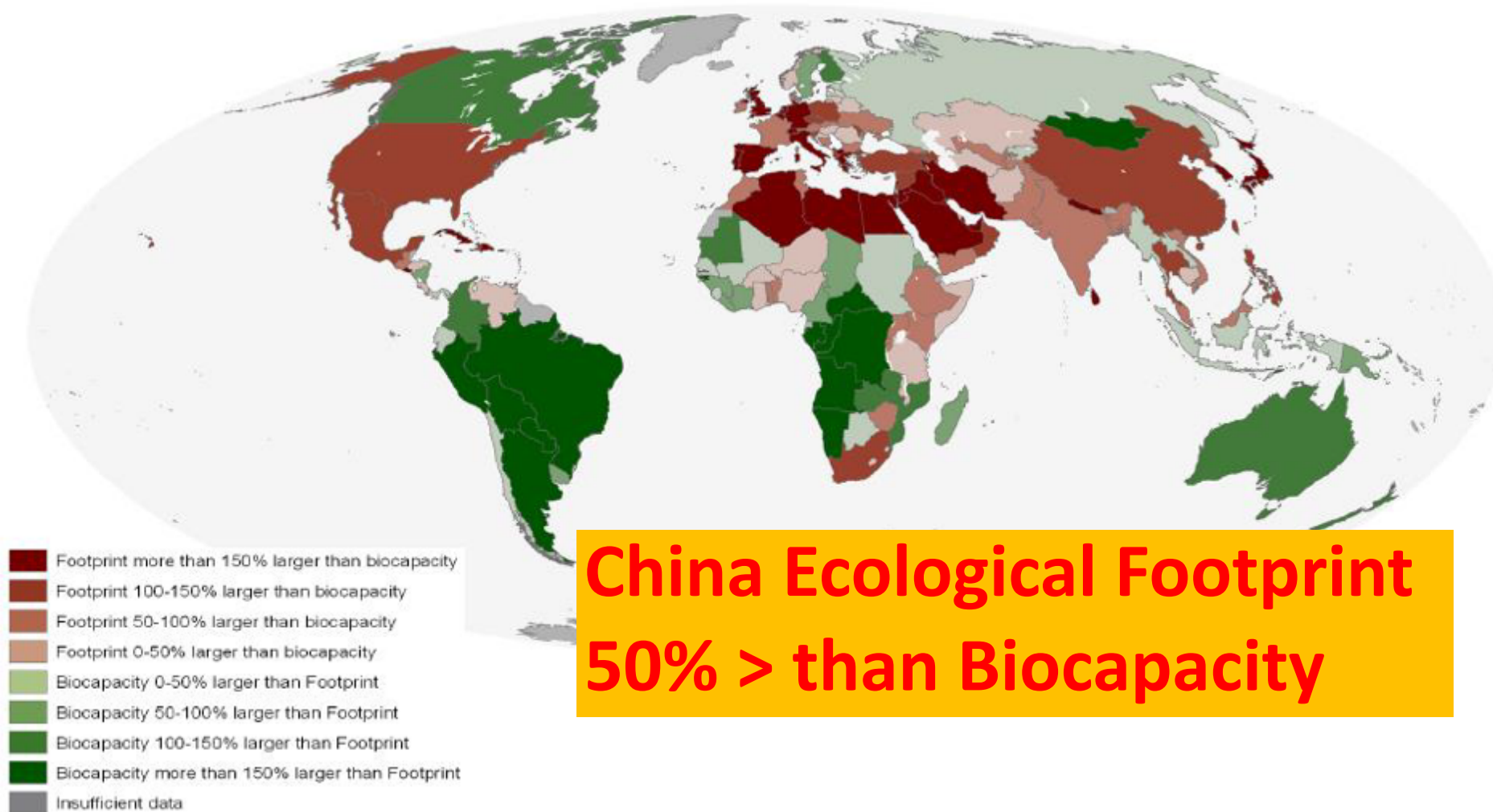
www.planetary.org/multimedia/space-images/earth/earth-and-the-moon-from-change5t1-2.html

Nine 'Planetary Boundaries'



https://en.wikipedia.org/wiki/Planetary_boundaries

ECOLOGICAL FOOTPRINT

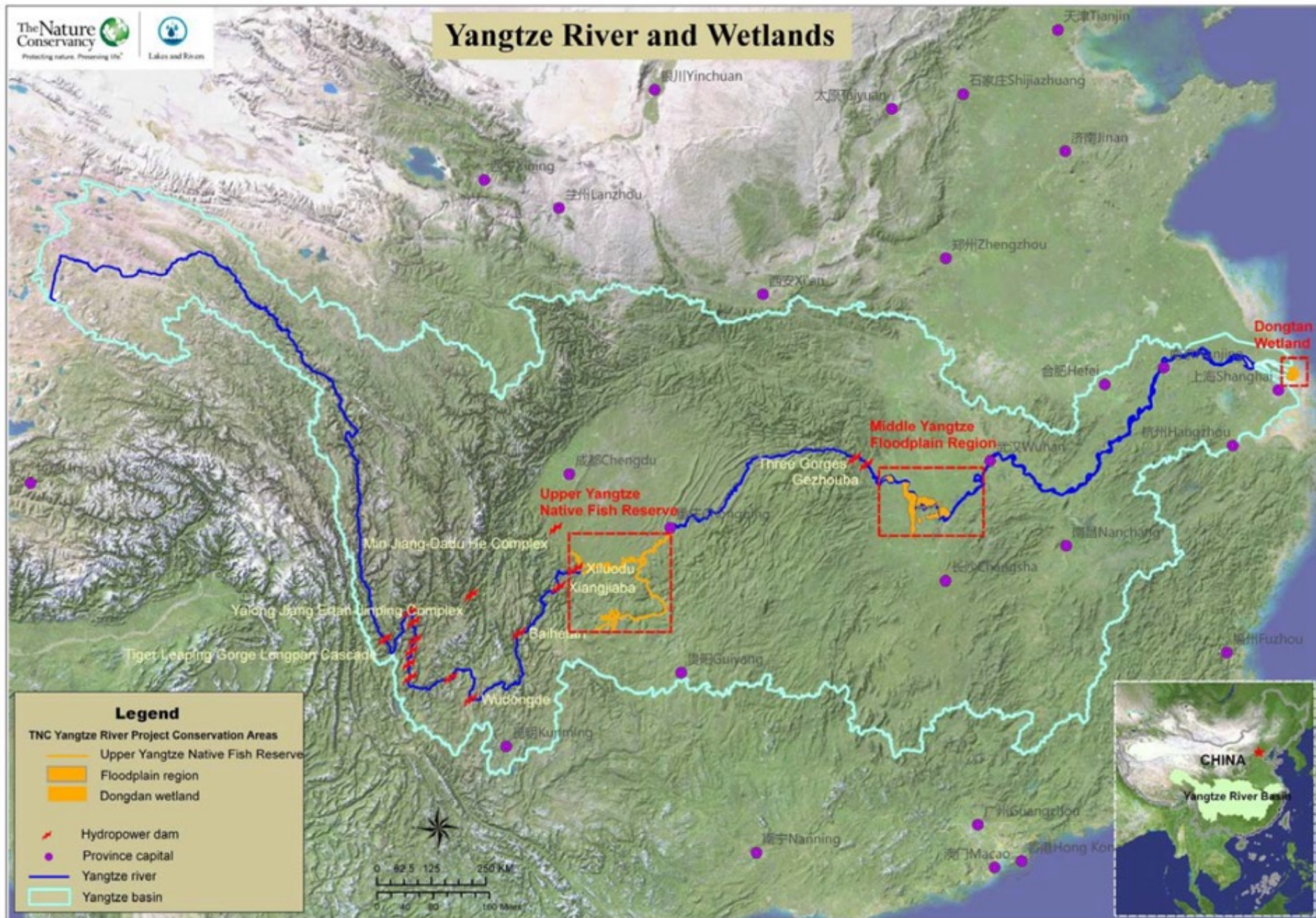


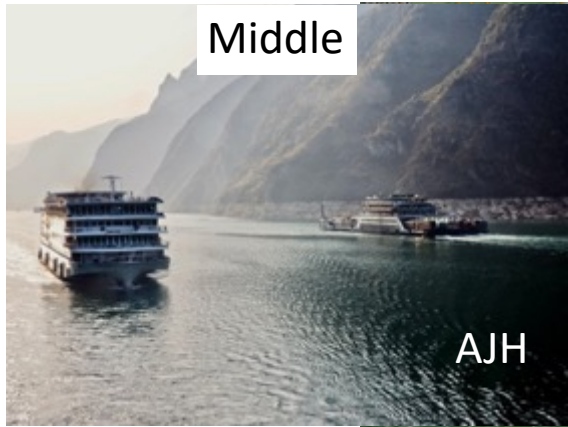
**China Ecological Footprint
50% > than Biocapacity**



http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/

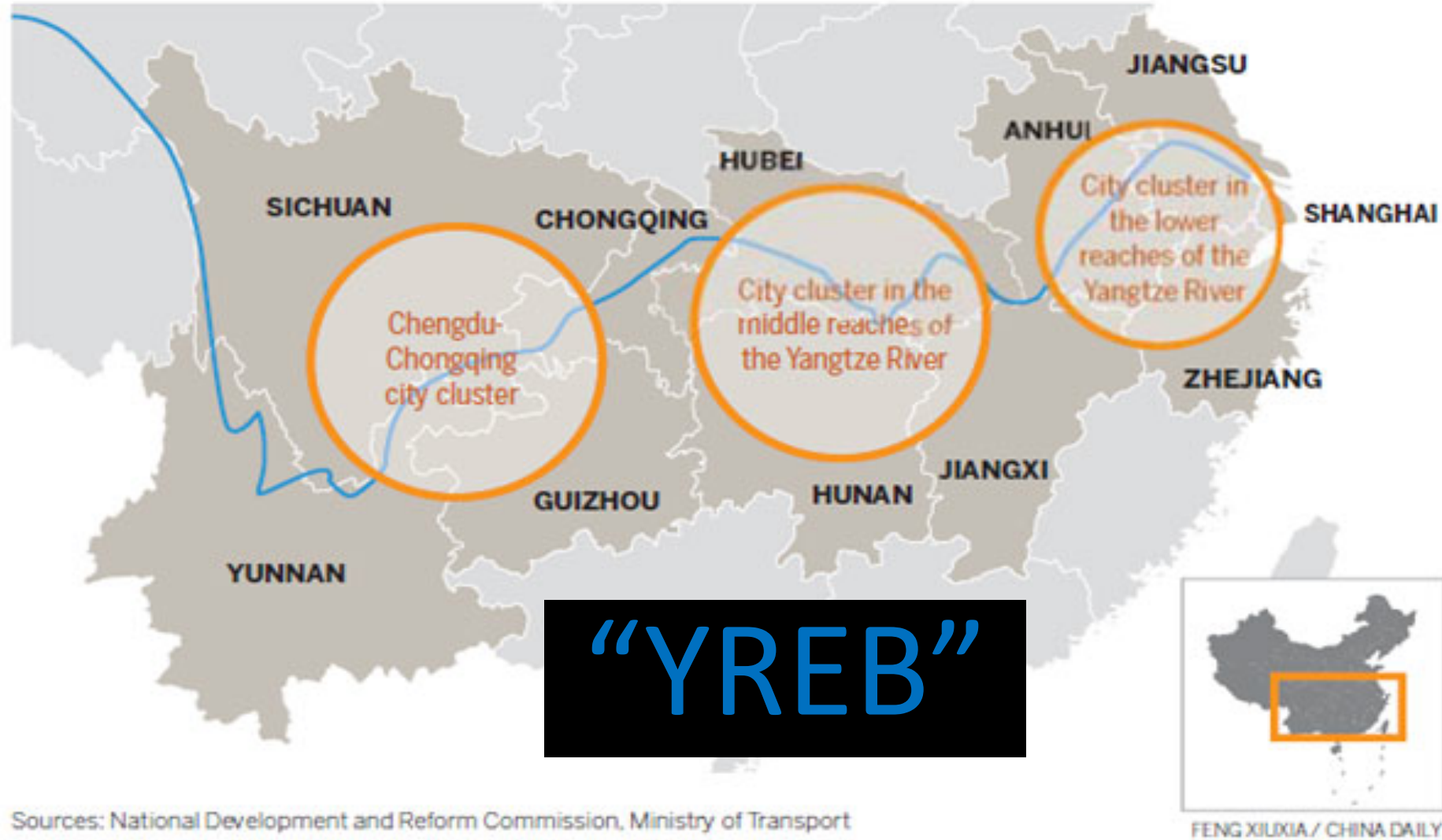
<http://www.unep.org/greeneconomy/Portals/88/Conferences/GE%20Week%202013/Footprint%2020131107.pdf>





CHINA'S LARGEST DEVELOPMENT NETWORK PROPOSED

The Yangtze River economic belt would span 11 provinces and municipalities in three groups.





Inger Andersen UNEP Executive Director

Speech Int'l Finance Forum 2021 Spring Mtg

**“Three Global Environmental Emergencies”
+ COVID Green Recovery**

“Stabilize the climate, Protect our natural world, Stem pollution.”

“If we don’t do this, we can say goodbye to any chance of creating a world of prosperity, equality and peace.”

Invest in 5 areas: **“Clean and efficient energy, clean transport, green buildings, natural capital, clean R&D.”**



‘GAME CHANGERS’

**“STABILIZE
CLIMATE”**



Energy Revolution China - GHG Peak Before 2030

Chinese Climate Goals

By 2030

GHG emissions peak before 2030

CO₂ per unit of GDP reduced > 65% cf. 2005 level

Non-fossil fuel energy around 25%

By 2060

‘Carbon neutrality achieved’

Immediate

No Further Sale of Coal-fired Power Plants Abroad

Coal-Based Economy

**Zhoushan Islands,
Zhejiang Province**



East Kalimantan, Indonesia



**2011 - Coal for Export
Strip Mine in Nature Reserve**



**Transition to
Low Carbon
Economy**



**Resource - Efficient
Green Development**

**'Sharing
Economy'**

25% Land in Forest

Improve Circular Economy



“Sustainable Hydropower” CTG China Three Gorges Dam Corp.

“With a total installed capacity of 124GW, 17.7GW of which is overseas, CTG has become China's largest clean energy corporation and the world's largest hydropower enterprise, operating in 47 countries with 89 ongoing international contracts and investment projects in Africa, Asia, Europe and the Americas.”



UN Global Biological Diversity Convention

**“PROTECT OUR
NATURAL WORLD”**

15th Meeting of Parties Since 1992
(COP15) Will Set Global Goals
2030/2050

Kunming, China

Oct 2021 & May 2022



2020 UN BIODIVERSITY CONFERENCE

COP 15 - CP/MOP10 - NP/MOP4

Ecological Civilization-Building a Shared Future for All Life on Earth

KUNMING · CHINA

CBD COP15 Theme

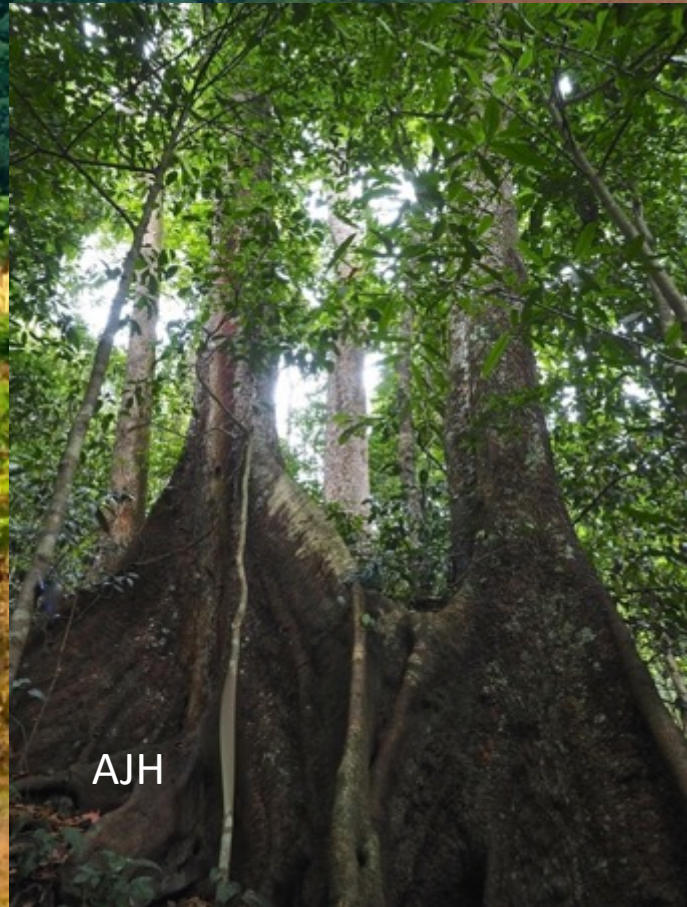
‘Ecological Civilization—Building a Shared Future for all Life on Earth’

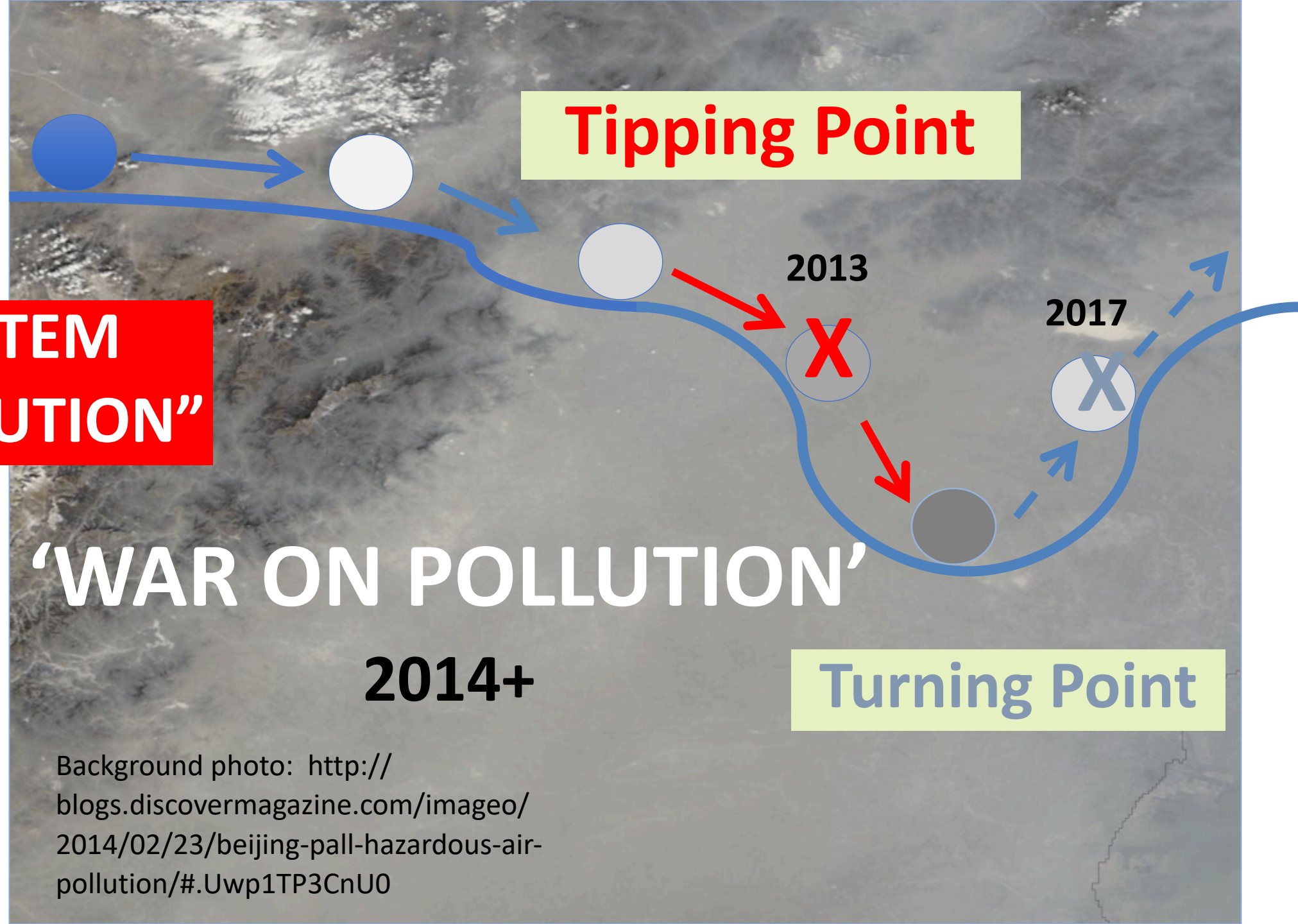
“Building a community of shared future for mankind”



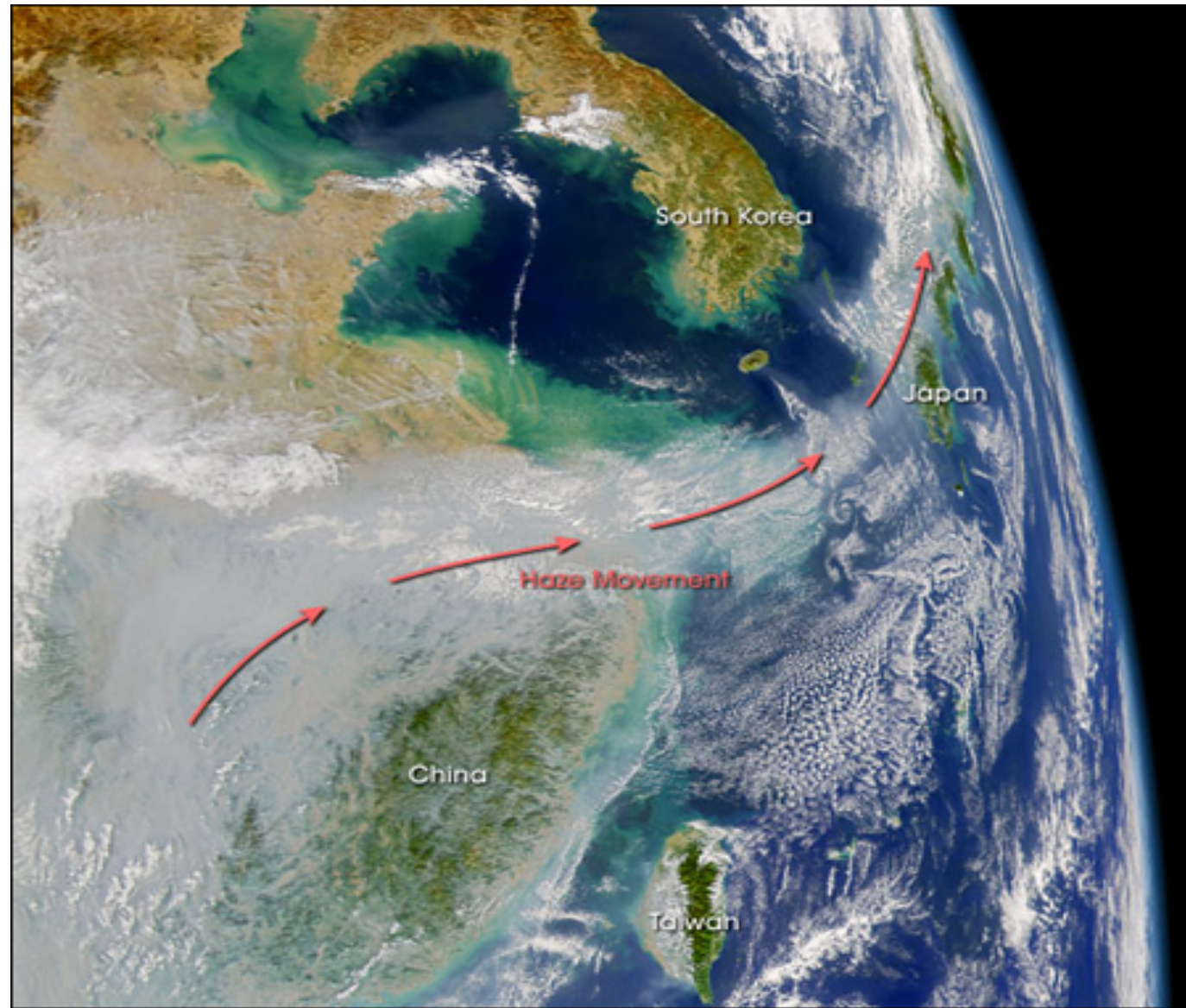
10 Year Fishing Ban Ecological Redlining “No More Big Projects”

Yangtze River – Three Gorges





Background photo: <http://blogs.discovermagazine.com/imageo/2014/02/23/beijing-poll-hazardous-air-pollution/#.Uwp1TP3CnU0>

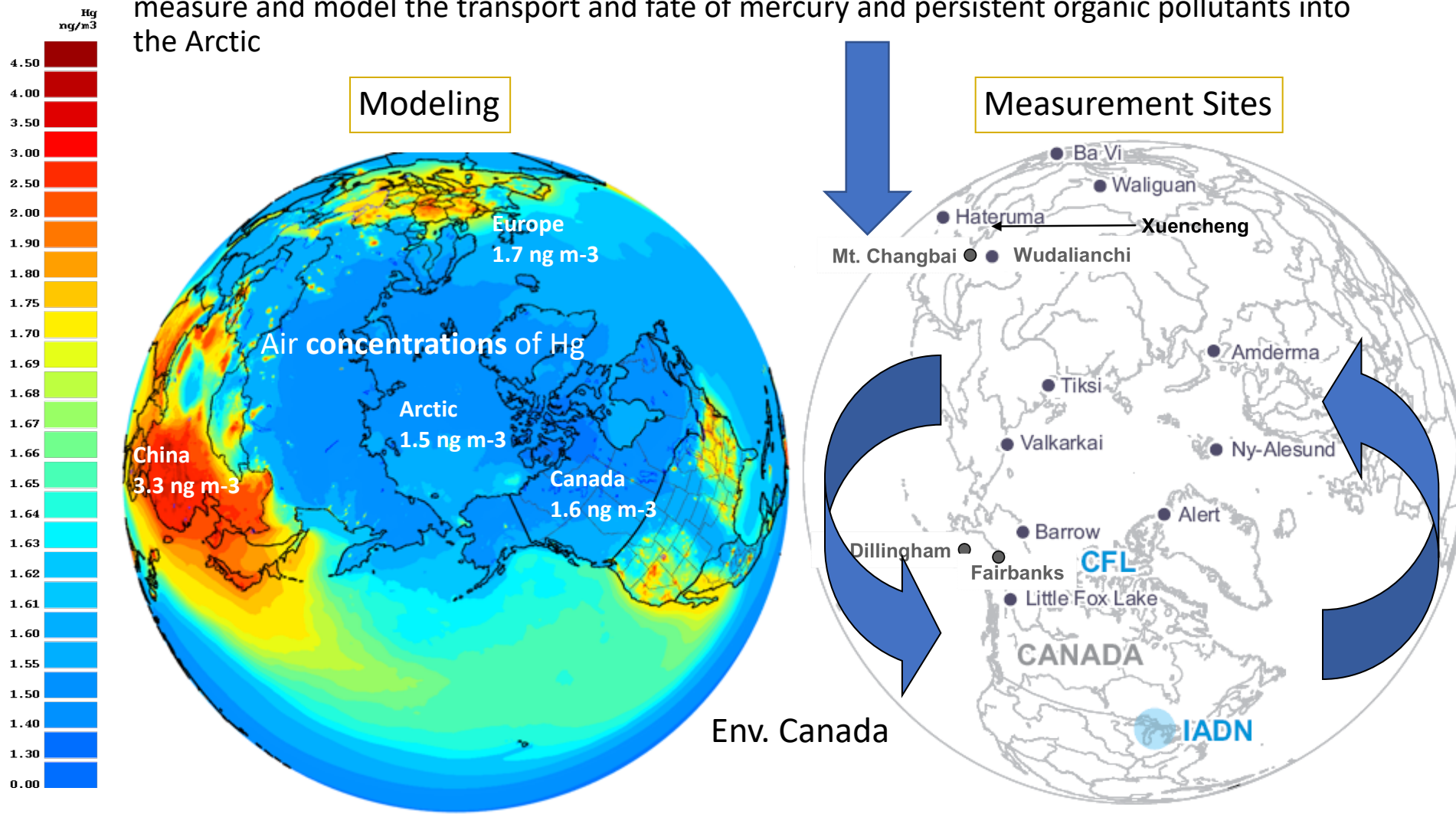


NASA

China-Canada Science Collaboration 2007~2012

'Intercontinental Atmospheric Transport of Anthropogenic Pollutants to the Arctic (INCATPA)' Measurements and Modeling

- Canada leads a team of scientists from China, Japan, Vietnam, Russia, U.S.A. and Canada to measure and model the transport and fate of mercury and persistent organic pollutants into the Arctic



Changbai Mtn, China / Paektu Mtn, N. Korea

Science, Tourism & Biodiversity



Governance Approaches

Global

- Growth with equity
- Resilience-building
- Addressing barriers to progress
- Rule of Law
- Multi-stakeholder governance
- Global Compacts

China

- 'Moderately Well-Off' Society
- Ecosystem services
- Rural/Urban Economic & Social adjustments, anti-corruption
- Revised Env. Laws and Enforcement
- 'Socialist Market Economy', Top-down, Party & Expert Consultation
- Targeted, e.g., S-S Cooperation, BRI; and global, e.g. SDG 2030

Greening Investment, Finance, Trade

- China Development Bank
- China Int'l Development Cooperation Agency (CIDCA)
- Asian Infrastructure Investment Bank (AIIB)
- 'New Development Bank' (BRIC Countries)
- China S-S Cooperation Funds (Climate Change, UN SDGs)
- National Green Development Fund (Domestic Pollution)
- WTO & Other Multilateral, Bilateral Trade Agreements
- Loans for China 'Greening' e.g., Green Bonds, World Bank & ADB Finance for Domestic Initiatives; Market Based Sources
- Green Tax Reform; National Climate Emissions Trading

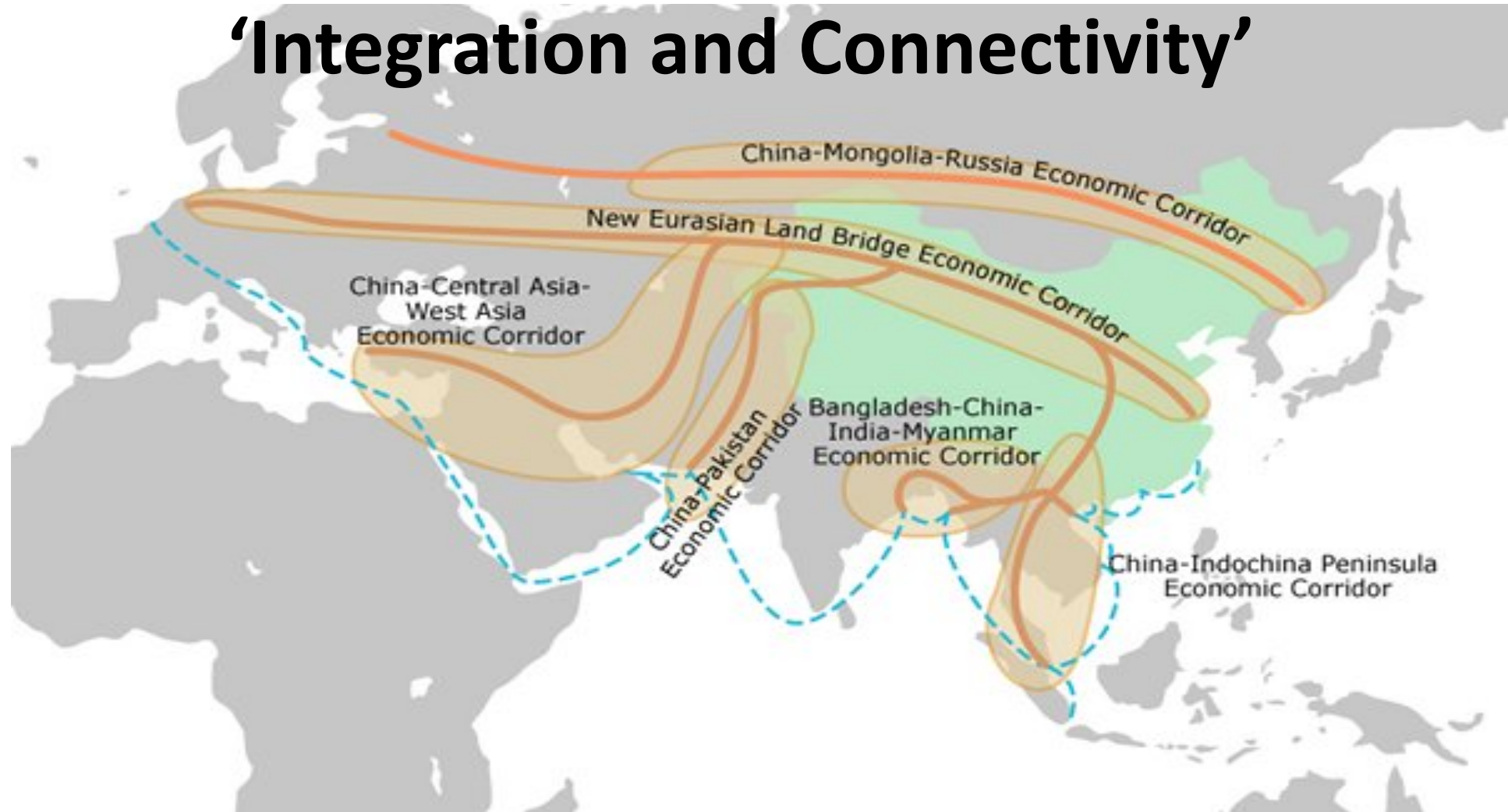
AIIB* “We need to be efficient and green.”
(2015 PRC Minister of Finance Lou Jiwei)

*Asian Infrastructure
Investment Bank



BELT & ROAD INITIATIVE (BRI)

‘Integration and Connectivity’



<http://economists-pick-research.hktdc.com/business-news/article/Research-Articles/One-Belt-One-Road-Initiative-The-Implications-for-Hong-Kong/rp/en/1/1X000000/1X0A23WV.htm?P=Y>



FEDNAV

MV Nunavik in 2014 NW Passage



“Polar Silk Road”

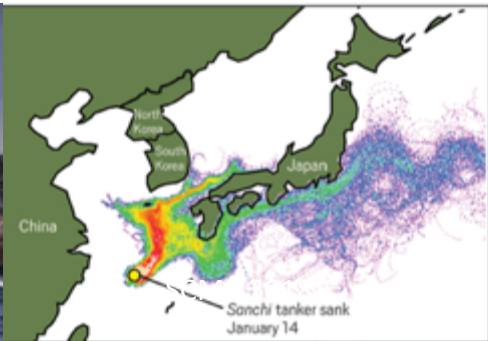
Northwest Passage

*“China charting
a new course”*
- China Daily

http://usa.chinadaily.com.cn/china/2016-04/20/content_24679013.htm

Sustainable Ocean Uses

‘Blue Economy’



Stop Illegal Wildlife Trade

Ocean Plastics

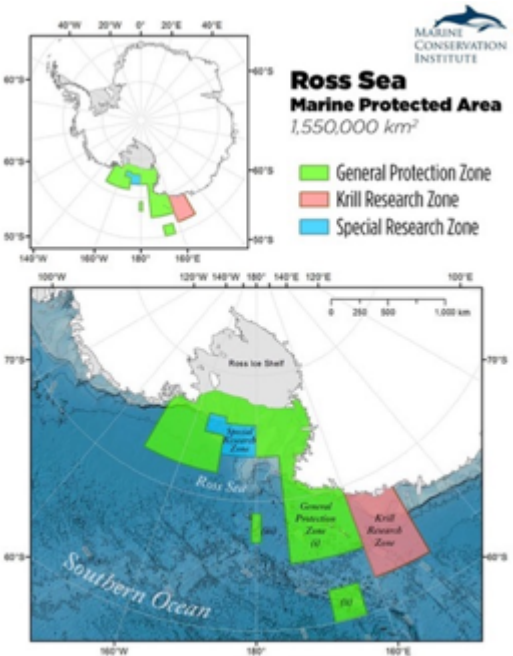
Distant Water Fisheries

High Seas Marine Protected Areas

Oil Risk Management



<http://www.paulhiltonphotography.com/index.php/field-notes/30>



<https://cen.acs.org/articles/96/i4/Sunken-oil-tanker-threatens-fisheries.html>

Oil Palm East Kalimantan, Indonesia



**‘Greening Soft Commodity
Supply Chains’**

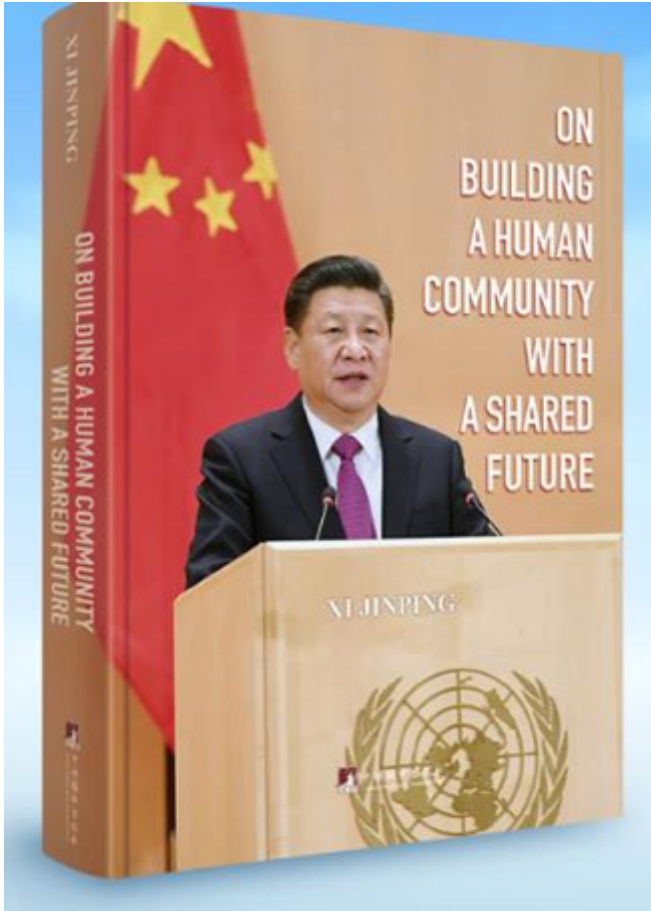


Remnant Tropical Rainforest

Perspectives on China Int'l Roles

- “Keep a low profile, never take the lead...and make a difference” **Deng Xiaoping, 1992**
- “Guide international society” towards “more just and rational new economic order” **Xi Jinping, Feb 2017**
- “The China Solution”: Infrastructure Investment via BRI, Global Governance **The Economist, April17**
- Be a “responsible stakeholder” in the international system **Robert Zoellick, 2005**
- “Environmentally Responsible Global Citizen” **Huguette Labelle, 2007**

“Building a community of shared future for mankind”



Amazon.com



[https://global.chinadaily.com.cn/a/202009/23/
WS5f6ae647a31024ad0ba7b46b.html](https://global.chinadaily.com.cn/a/202009/23/WS5f6ae647a31024ad0ba7b46b.html)

China Global Env & Dev Roles

- Leader **Wind and Solar Tech**
- Champion **Ecological Civilization**
- Disrupter / Innovator **Circular Economy**
- Partner ITER **Fusion Tech Int'l Consortium**
- Enabler / Supporter / Facilitator / Funder **Green BRI**
- Role Model (Domestic & Int'l) **UN 2030 SDGs**
- Follower **Public Participation**

Green Opportunities for China

- **“China Advantage”** Huge domestic plus int’l market potential; Advanced technology commitment; Investment funding available; Relevant experience
- **“Ecological Civilization”** Coherent strategy including structural reform & components such as Circular Economy, Low C Economy
- **“S-S Cooperation”** Development partnerships; BRI; climate change; env & poverty reduction
- **“Momentum”** Int’l expectations for Chinese leadership & new dynamics of Chinese leaders concerning China’s global roles on Environment & Development Governance, Finance, and Innovation

KEY CONCLUSIONS ABOUT CHINA & WORLD

- China Advantage: Expanding domestic markets *plus* international trade & investment
- Chinese government genuinely promotes environmental sector policy objectives including competitive advantages in green tech sectors
- Many niches domestically & internationally are available but competition will be stiff among countries
- China will drive hard bargains for access, e.g., Tesla Electric Autos
- Trade-offs occur to satisfy Chinese domestic interests, e.g., distant water fisheries for lost jobs through fishing bans within China; int'l green certification and standards often still lacking
- 'Rogue activities' still occur, but also good guidelines for green investments are being followed

Biosecurity and COVID-19

<https://upload.wikimedia.org/wikipedia/commons/6/6b/Bat%2820070605%29.jpg>



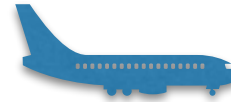
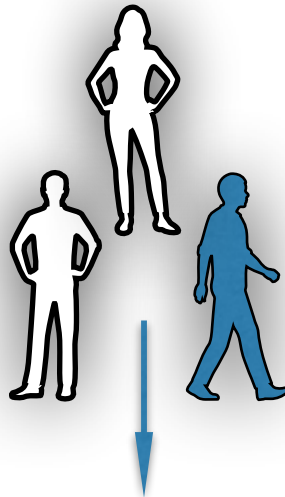
Horseshoe Bat
Infected by Virus


**Virus
Mutates**



AJH


Civet Cat or Other Host



Mink



???

Virus Mutates


Vaccination

https://upload.wikimedia.org/wikipedia/commons/8/8a/American_Mink_-_White.jpg

5000-Room Quarantine Centre for Overseas Arrivals - Guangzhou



CNN 29 September 2021

2020 – 2030

New Challenges & Opportunities

- **Implementing Global Green Governance**
- **Understanding & Acting on ‘Planetary Boundaries’**
- **Demonstrating Value and Means for Global ‘Ecological Civilization’**
- **Realizing Synergies Among Key Goals**



Thank You!