

GLOBAL CHALLENGES IN DELIVERING CLIMATE EDUCATION

*THE GOALS AND SCOPE OF CLIMATE
EDUCATION, WAYS TO BUILD CAPACITY IN
ITS DELIVERY, AND HOW TO INTEGRATE IT
INTO EXISTING TEACHING FRAMEWORKS*

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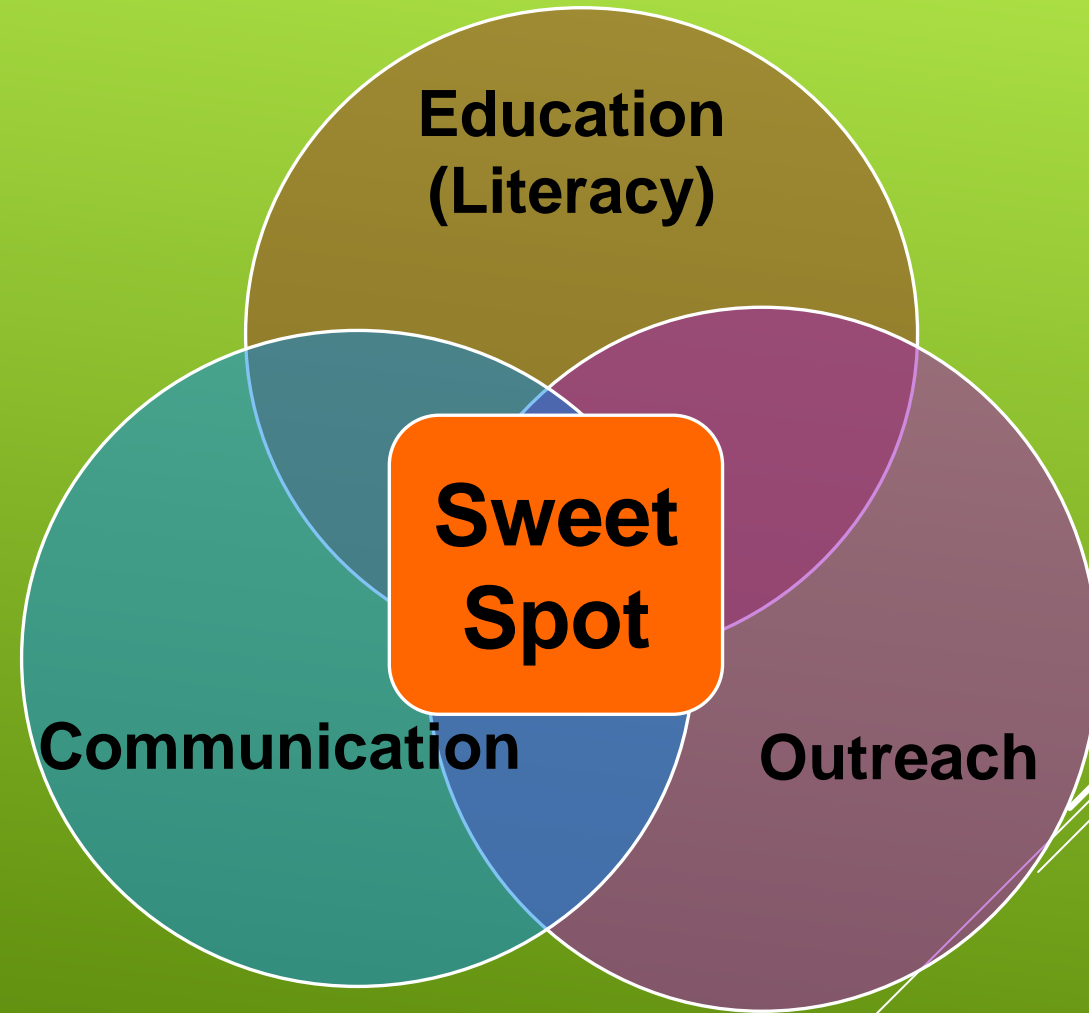
or

Finding the Sweet Spot for Climate Action and Engagement

In order to reduce climate
risks and optimize resilience

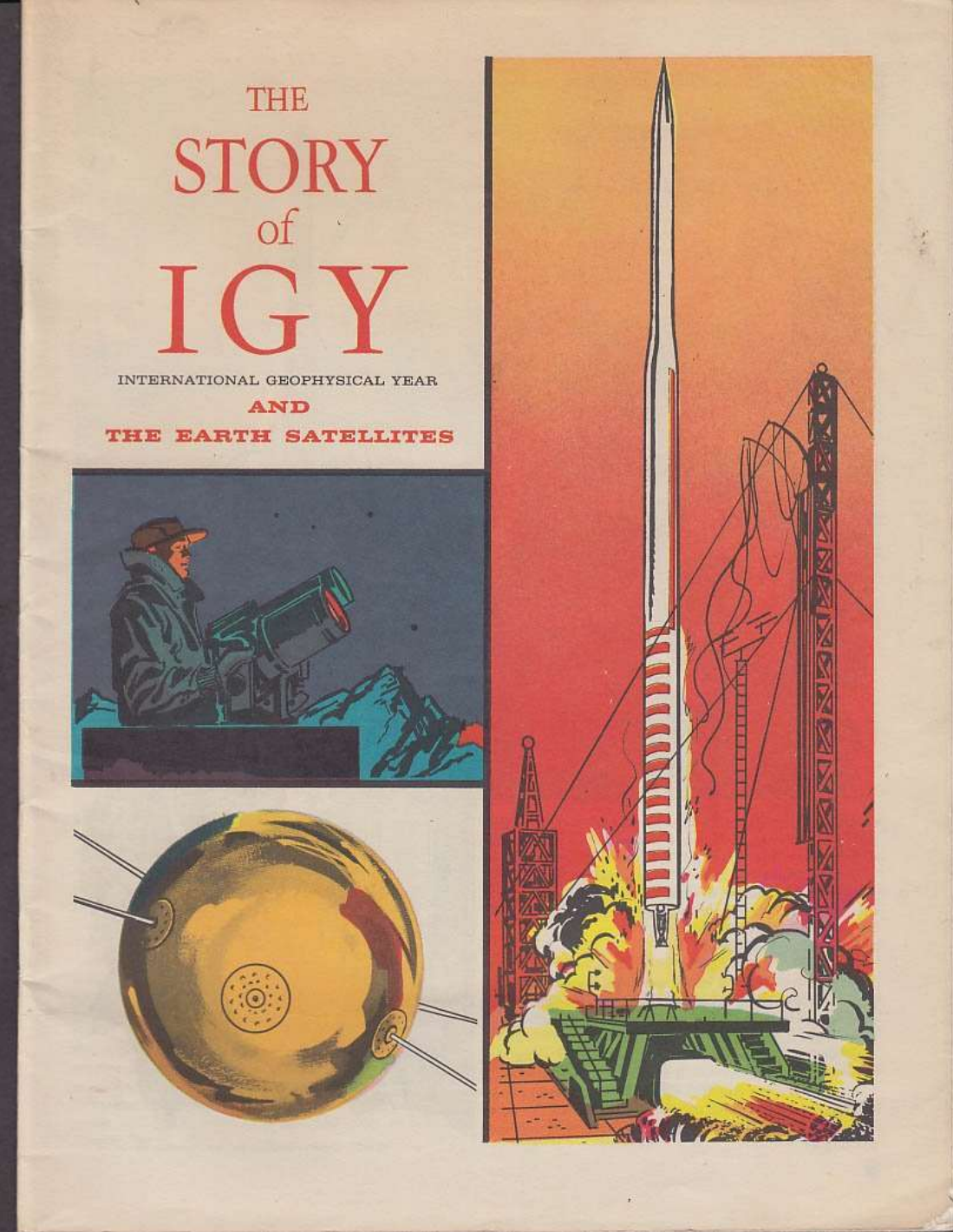
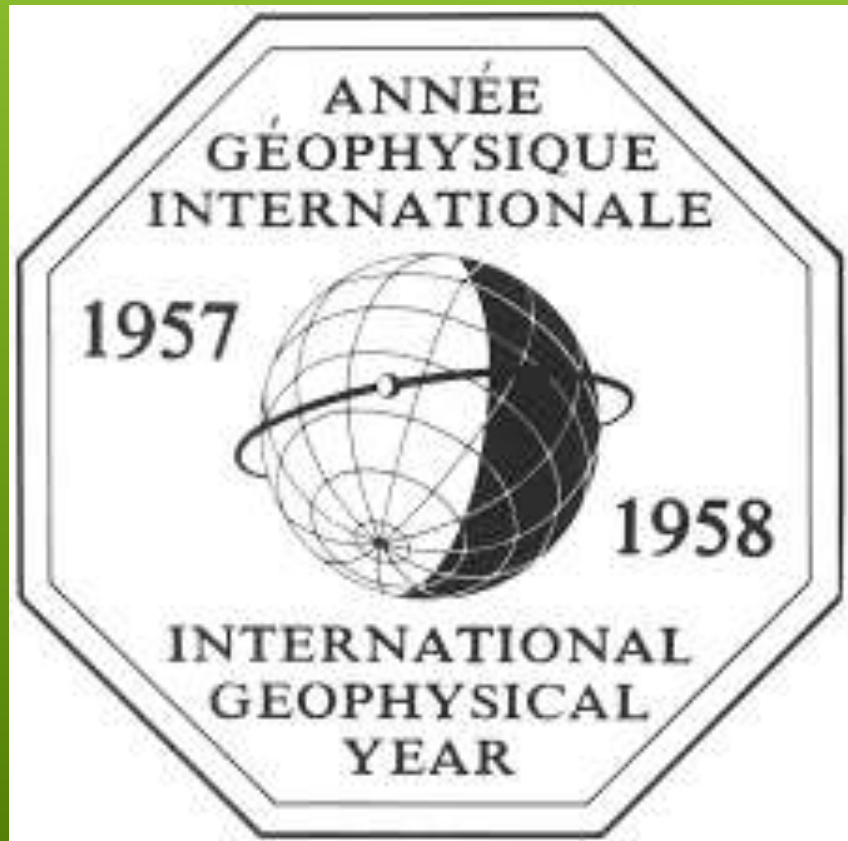
ECO-SYSTEM

**Integrated
Education,
Communication
& Outreach for
Engagement &
Action**



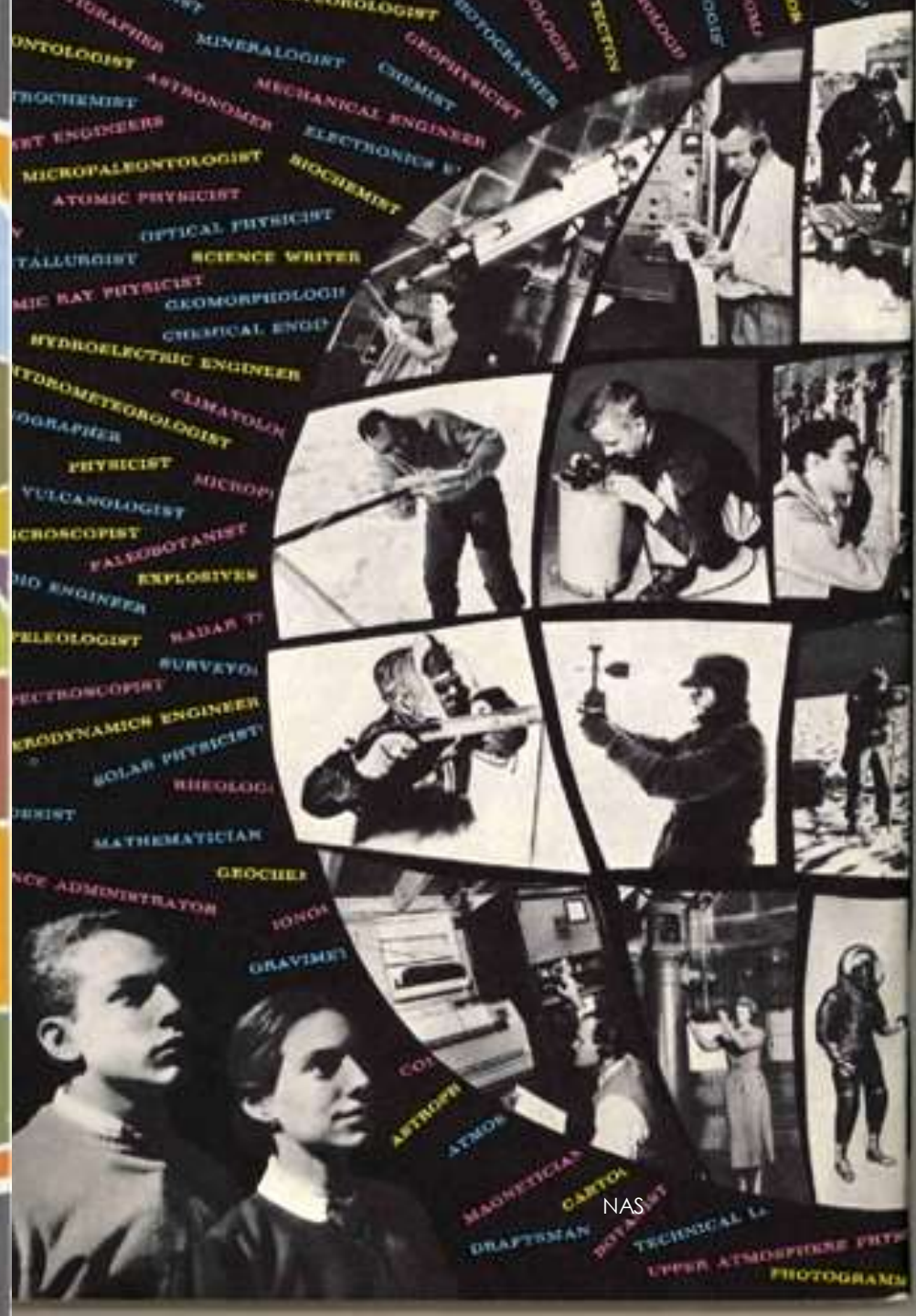
Building Community & Capacity

Climate Education, Communication and Outreach Date to 1957-1958



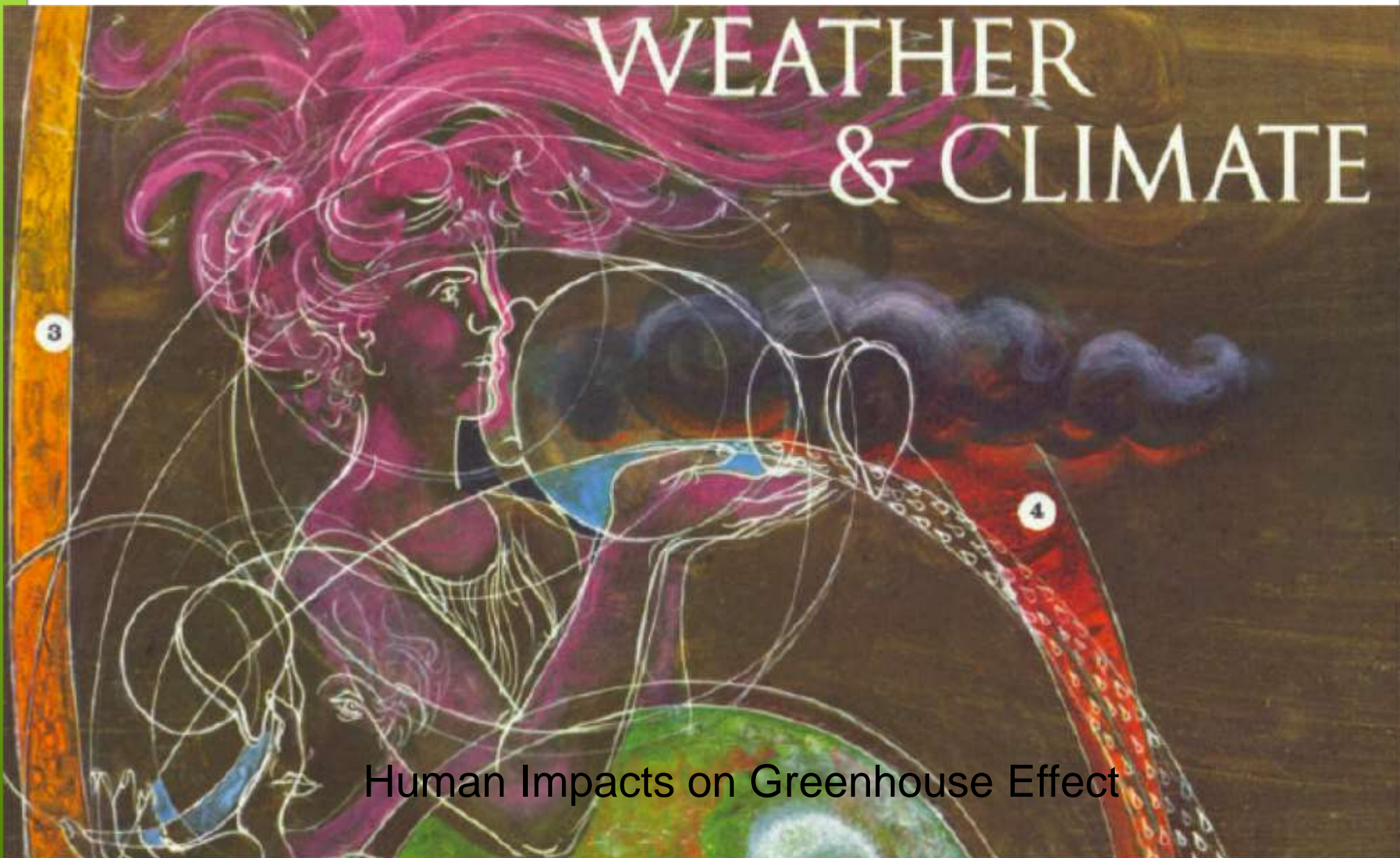
"Planet Earth"

THE
MYSTERY
WITH
100,000
CLUES



NAS

WEATHER & CLIMATE



Human Impacts on Greenhouse Effect

“Our industrial civilization has been pouring carbon dioxide into the atmosphere at a great rate....



**If it remained, it
would have a
marked warming
effect on the
earth's climate...**



**Conceivably... it could
cause significant
melting of the great
icecaps and raise sea
levels in time."**

**Planet Earth: The Mystery with 100,000 Clues
National Academy of Sciences
1958**

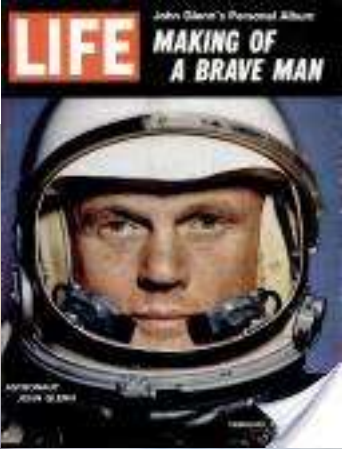
A wireframe globe is centered in the frame, with a red line tracing an orbital path around it. The background is a dark, starry night sky with a faint, glowing nebula or galaxy structure. The text is overlaid on the globe.

THE INCONSTANT AIR

© MCMLX U.S. National Academy of Sciences



Bell Science Hour-
Produced by Frank Capra



Energy Companies well aware...



EACH DAY HUMBLE SUPPLIES ENOUGH ENERGY TO MELT 7 MILLION TONS OF GLACIER!

This great glacier has remained unmelting for centuries. Yet, the petroleum energy Humble supplies—converted into heat—could melt it at the rate of 40 tons each second! To meet the nation's growing needs for energy, Humble has applied science to nature's resources to become America's Leading Energy Company. Working wonders with oil through research, Humble provides energy in many forms—to help heat our homes, power our transportation, and to furnish industry with a great variety of versatile chemicals. Stop at a Humble station for new Econ Extra gasoline, and see why the "Happy Motoring" Sign is the World's First Choice!

HUMBLE
OIL & REFINING COMPANY
America's Leading Energy Company



Billions and Billions of tons of ice



EACH DAY HUMBLE SUPPLIES ENOUGH ENERGY TO MELT 7 MILLION TONS OF GLACIER!

This great glacier has remained untroubled for centuries. Yet, the petroleum energy Humble supplies—converted into heat—could melt it at the rate of 40 tons each second! To meet the nation's growing needs for energy, Humble has applied science to nature's resources to become America's Leading Energy Company. Working wonders with oil through research, Humble provides energy in many forms—to help heat our homes, power our transportation, and to furnish industry with a great variety of versatile chemicals. Stop at a Humble station for new Econ Extra gasoline, and see why the "Happy Motoring" Sign is the World's First Choice!

HUMBLE
OIL & REFINING COMPANY
America's Leading Energy Company



CLIMATE EDUCATION INTEGRAL TO UNFCCC

ARTICLE 6: EDUCATION, TRAINING AND PUBLIC AWARENESS

In carrying out their commitments under Article 4, paragraph 1 (i), the Parties shall:

(a) Promote and facilitate...

- (i) The development and implementation of **educational and public awareness programmes on climate change** and its effects;
- (ii) **Public access to information on climate change** and its effects;
- (iii) **Public participation in addressing climate change** and its effects and **developing adequate responses**; and
- (iv) Training of scientific, technical and managerial personnel.


Plus international collaboration and cooperation to achieve the above

Fast
Forward
to 1992



United Nations
Framework Convention on
Climate Change

“Public participation in addressing climate change and its effects and developing adequate responses...”

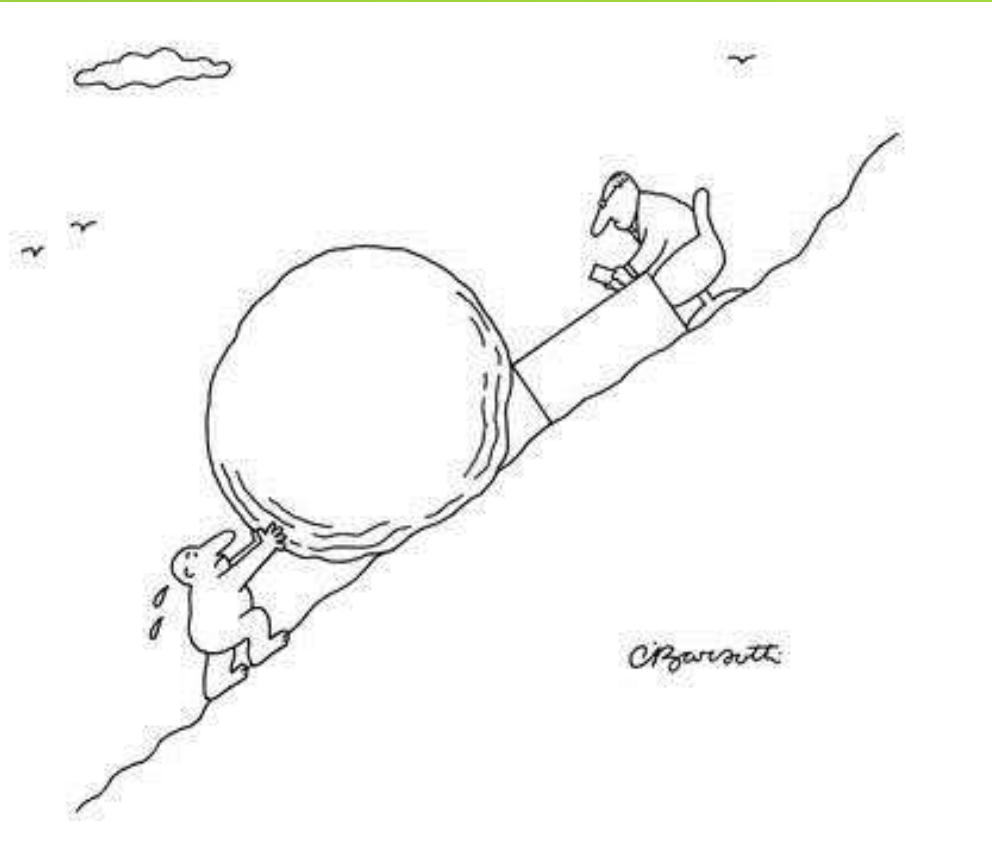


*Public Attitudes towards Climate Change and
Other Environmental Issues across Time and Countries, 1993-2010*

Tom W. Smith & Jibum Kim (2013)

- Increased education = increased concern
- Concern declines with age, increases with youth
- Higher income is associated with seeing it as most important
- Right-wing political parties less concerned about it

EFFORTS TO REVITALIZE ARTICLE 6 STRUGGLE



- Doha Work Programme sets new requirements (2012)
- Ministerial Declaration from LIMA COP20 (2014)
- Article 6 renamed as ACE (Action for Climate Empowerment)

- Few countries include education in their NDC plans
- ACE Focal Points need support

UN CC: LEARN

The One UN Climate Change Learning Partnership

- Broad scope and potential
- Limited capacity due mainly to funding constraints



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC

CEB, EMG, FAO, GEF Secretariat, IDB, IFAD, ILO, ITU, IMO, ITU, OCHA, UNAIDS, UNDP, UNECA, UNECE, UN Environment, UNESCO, UNESCWA, UNECE, UNFCCC, UNFPA, UNHCR, UN-HABITAT, UNICEF, UNIDO, UNISDR, UNITAR, UNSSC, UNU, UN WOMEN, UNWTO, UPU, WFP, WHO, WMO, WTO, and the World Bank



<https://www.uncclearn.org>

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UN CC:Learn
The One UN Climate Change Learning Partnership

MENU

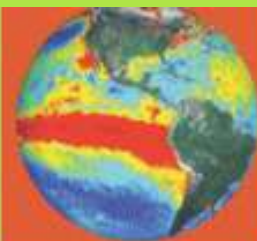
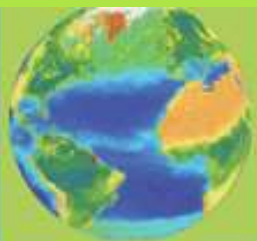
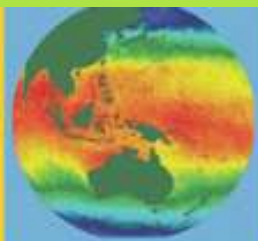
#CCFacts: What You Need to Know About Climate Change

[How Can Universities Take Climate Change into Account?](#)



UN CC:e-Learn Platform Reaches 25,000 Certificates

CLEAN



CLIMATE LITERACY & ENERGY AWARENESS NETWORK

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CLEAN

Teaching Materials

Teaching Climate Literacy

CLEAN Network
About CLEAN

Understanding the Carbon Cycle: A Jigsaw Approach

Jump to this Activity »

<http://serc.carleton.edu/NAGTWorkshops/climatechange/activities/15162.html>

David Hastings, SERC – On the Cutting Edge Collection



This is a jigsaw activity in which students are assigned to research one step out of five in the geochemical process stages of the organic carbon cycle. Students then teach their step in cross-step groups until everyone understands all five process stages.

Activity takes one to two class periods.

Discuss this Resource»

Learn more about Teaching Climate Literacy and Energy Awareness»

Notes From Our Reviewers The CLEAN collection is hand-picked and rigorously reviewed for scientific accuracy and classroom effectiveness. Read what our review team had to say about this resource below or learn more about how [CLEAN](#)

Topics

Carbon Cycle

See more on this topic.

Established in 2016 at COP24
An official UNFCCC Community

ECOS

Education, Communication & Outreach Stakeholders
in support of innovative climate action & engagement



Education

Education seeks to achieve profound, long-term changes in understanding, particularly among young people. It involves developing educational curricula, training of trainers and teachers and adequate pedagogies. The results of a successful programme would ultimately be a population whose deep-seated appreciation of the climate challenge leads to greater national action and commitment.



Training

Training programmes seek to spread specific practical skills that can have an immediate practical application. Examples include the ability to gather and interpret climate data, conduct inventories of national emissions, and identify climate-friendly technologies. Training is about learning by doing – individuals, communities and organizations can all benefit from ongoing learning.



Public awareness

Many governments and non-governmental organizations (NGOs), intergovernmental organizations and UN agencies have already launched major public awareness programmes. But there remains an enormous unmet need for more outreach. Creating a successful outreach programme that truly changes behaviour involves targeted and systematic communications.

Public access to information

Programmes to engage citizens and CSOs in addressing climate change can be improved by ensuring that information is freely available. This is crucial in order to develop and implement effective policies and to engage people actively in implementing these policies. Technologies such as databases and the internet facilitate the provision of climate information, data and statistics to all citizens.



Public participation

By ensuring that people can participate effectively in climate change decision-making and implement climate mitigation and adaptation activities, governments should seek to integrate civil society perspectives and mobilize the general public. In some places, this will prompt profound changes to how political leaders and civil servants are accustomed to working and encourage people to be more attentive to policy-making.

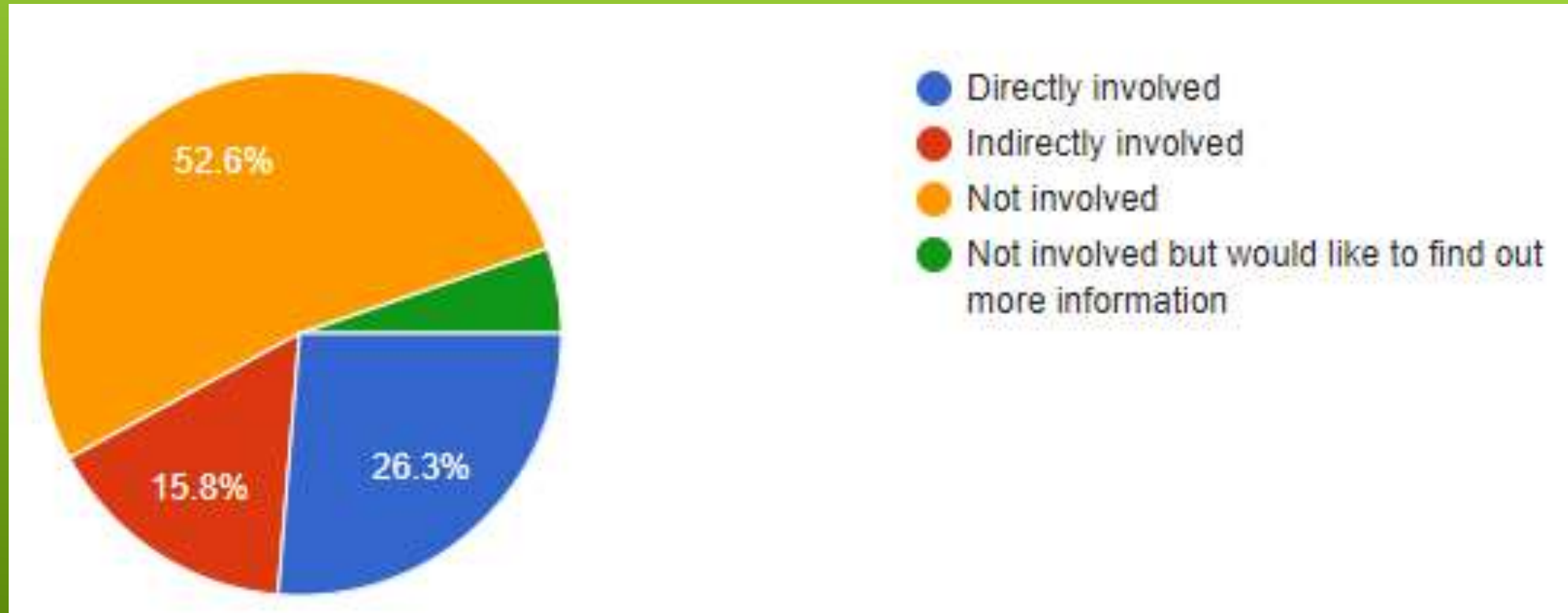


International cooperation

International cooperation and exchange can play a major role in strengthening ACE efforts. Many governments and relevant stakeholders need access to expertise and financial and technical resources so they can develop their own climate change programmes. All countries can benefit from sharing success stories, exchanging personnel and strengthening institutional capacity.



ECOS STAKEHOLDERS INVOLVED WITH ACE



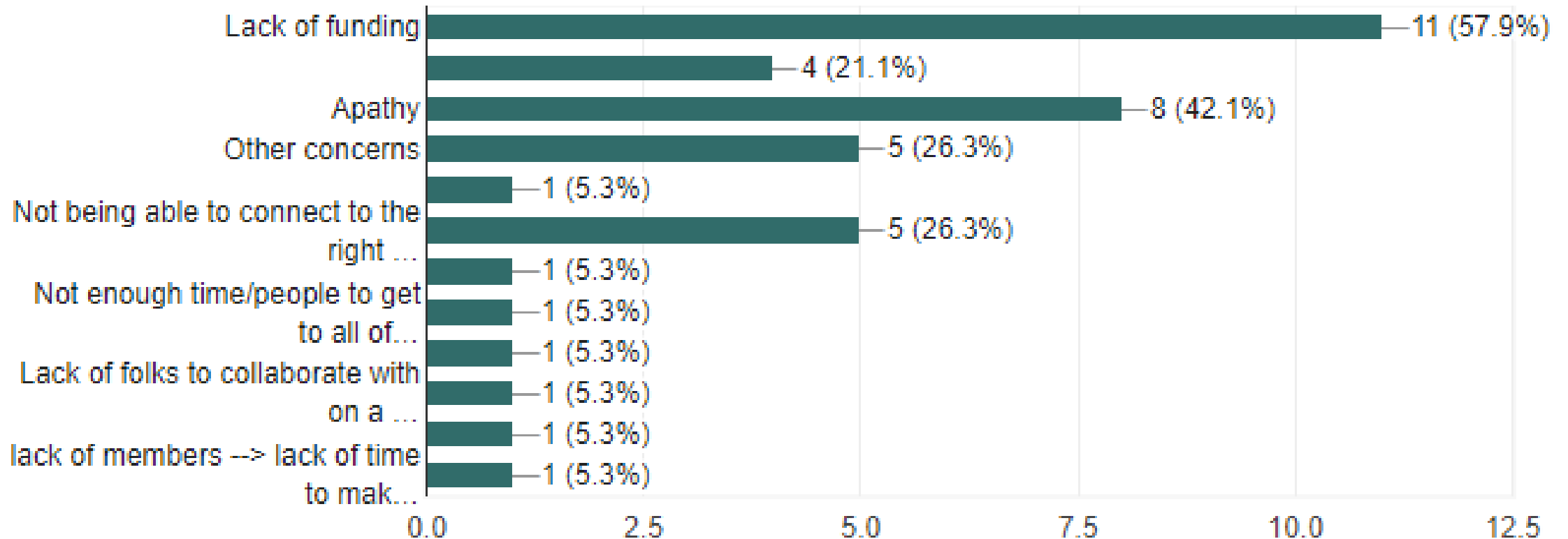
Survey conducted in 2018

KEY GOALS OF ECOS STAKEHOLDERS


- Awareness raising
- Educating
- Tutoring
- Providing information
- Youth empowerment
- Capacity building



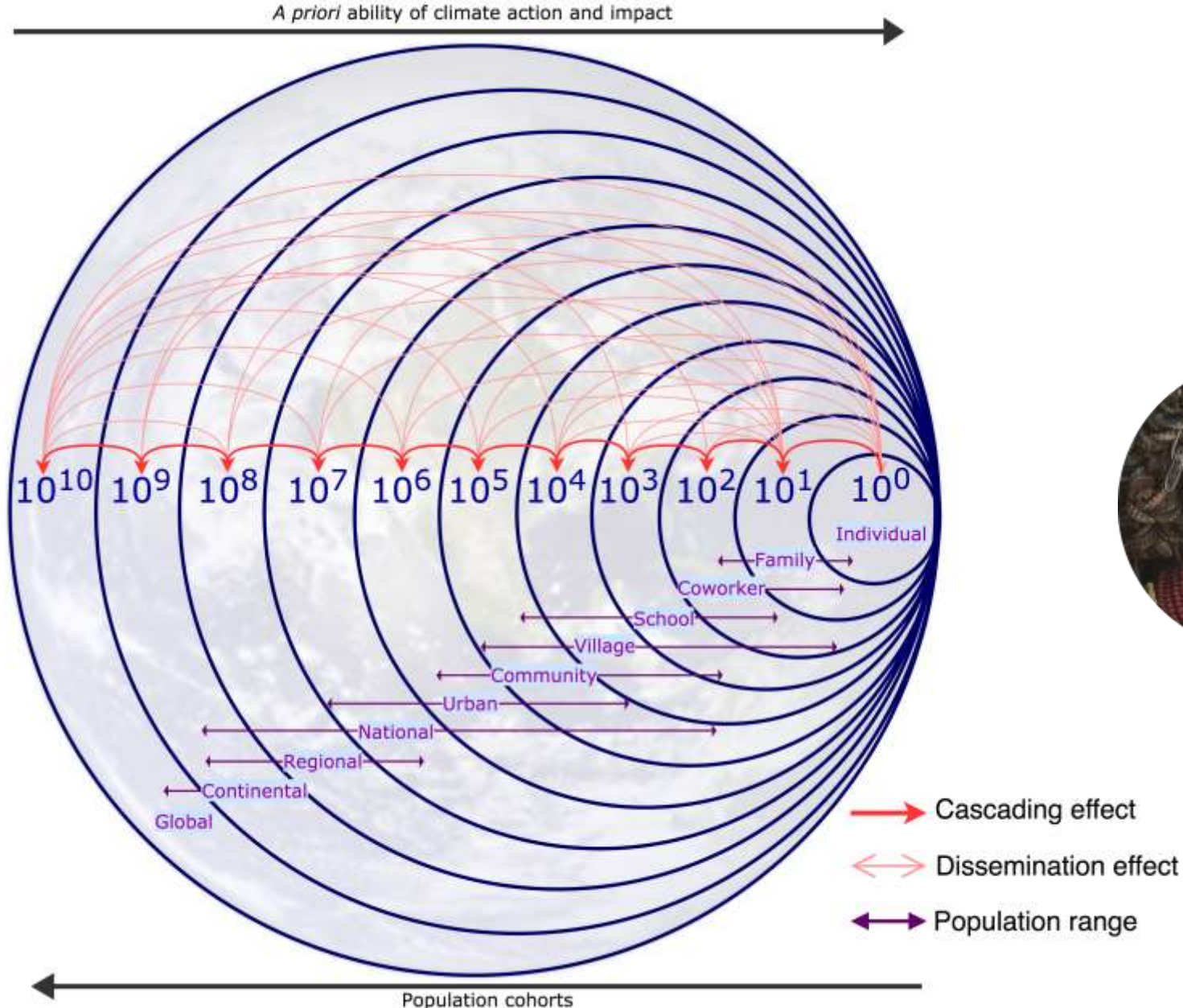
OBSTACLES



WHY THE LACK OF CLIMATE LITERACY ?

- Climate is complex and interdisciplinary (falls through disciplinary cracks)
 - Some degree of controversy about science (vested interests) and value of education
 - Do top-down UNFCCC negotiations bias toward elite experts (not public engagement)?
 - No money/profits in climate literacy
- 

Powers of 10: Scaling Climate Action Strategies across Society

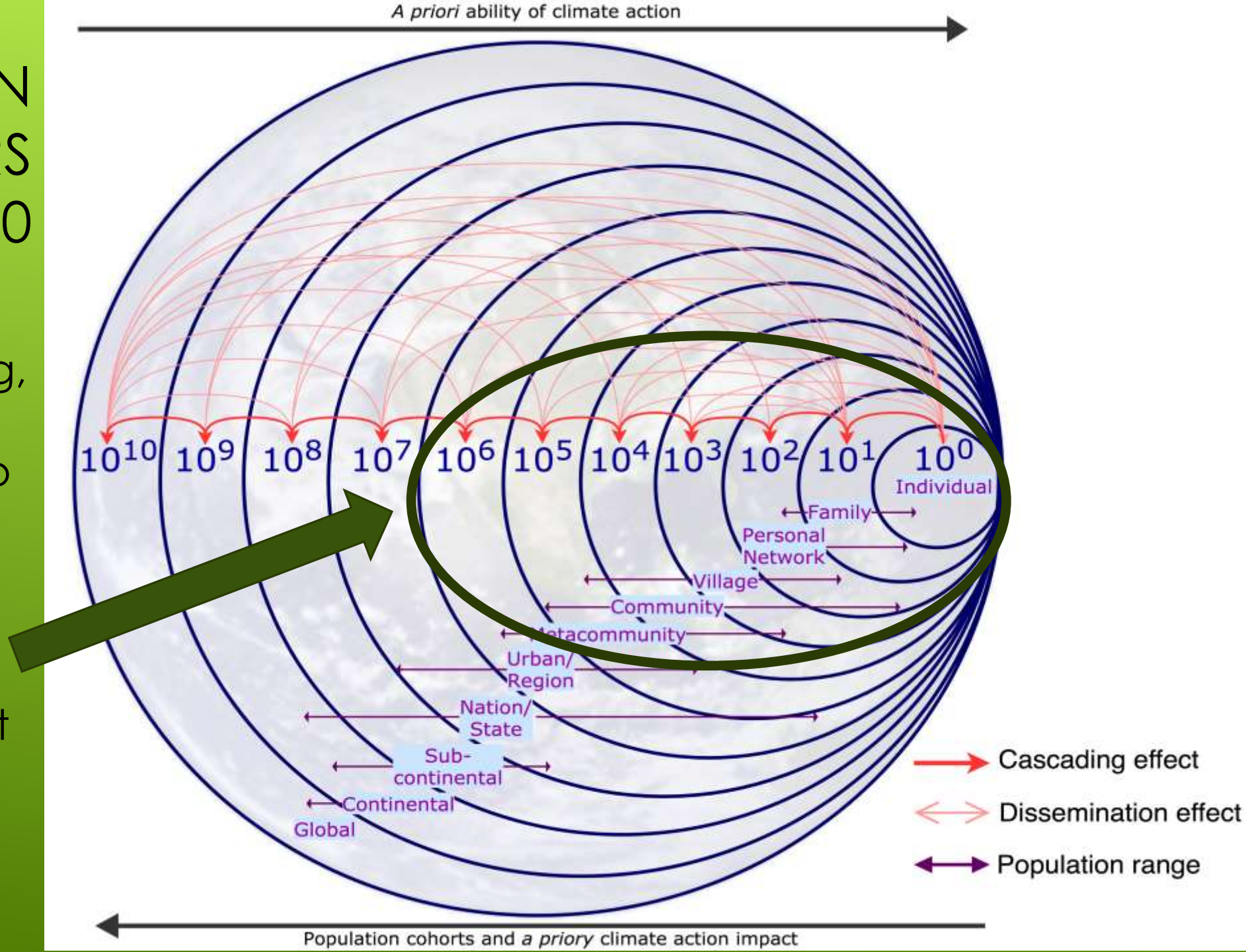


Bhowmik and McCaffrey et al.
Forthcoming

EDUCATION IN THE POWERS OF 10

Literacy Building,
Information Sharing,
Messages/
Motivation need to
be localized

Engagement and
Innovation also
need local context

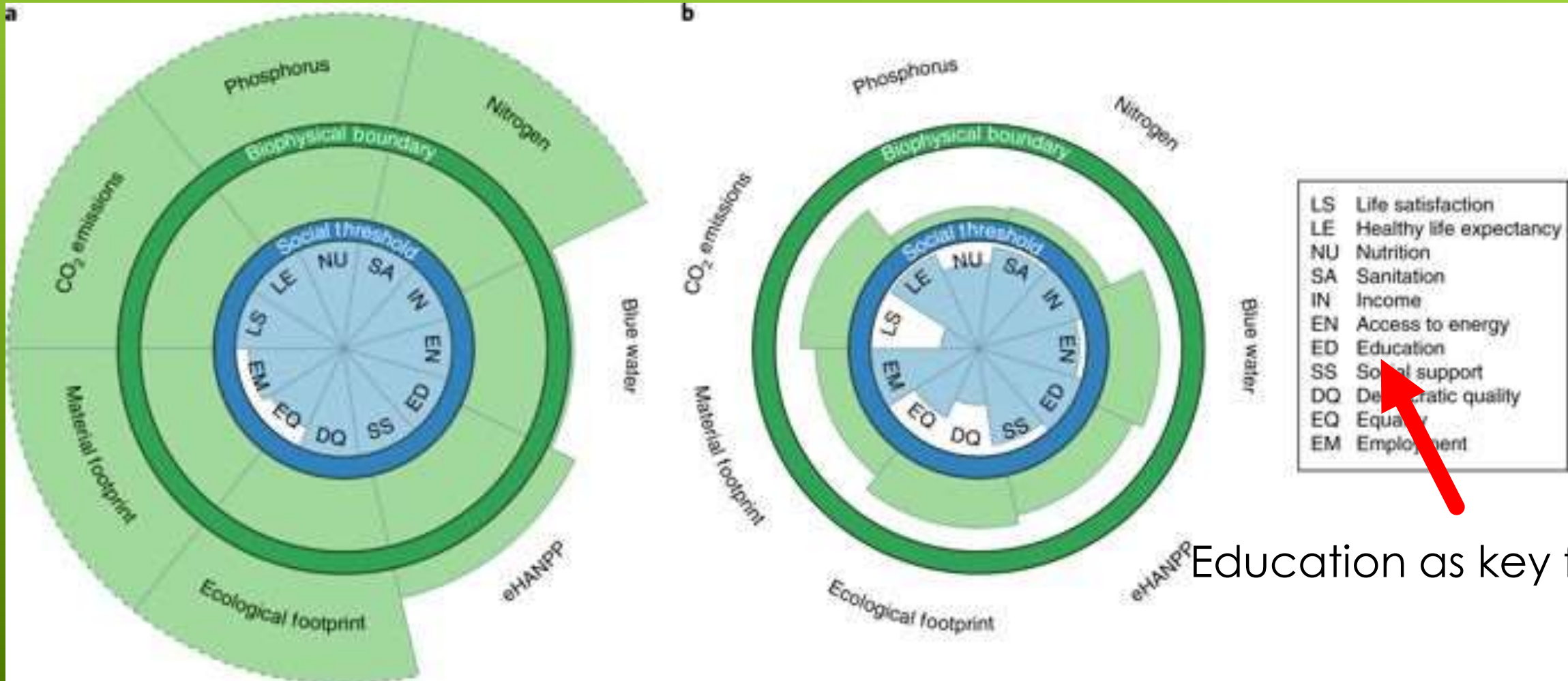


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NATURE SUSTAINABILITY

A GOOD LIFE FOR ALL WITHIN PLANETARY BOUNDARIES

O'NEILL, FANNING, LAMB & STEINBERGER



KEY FINDINGS

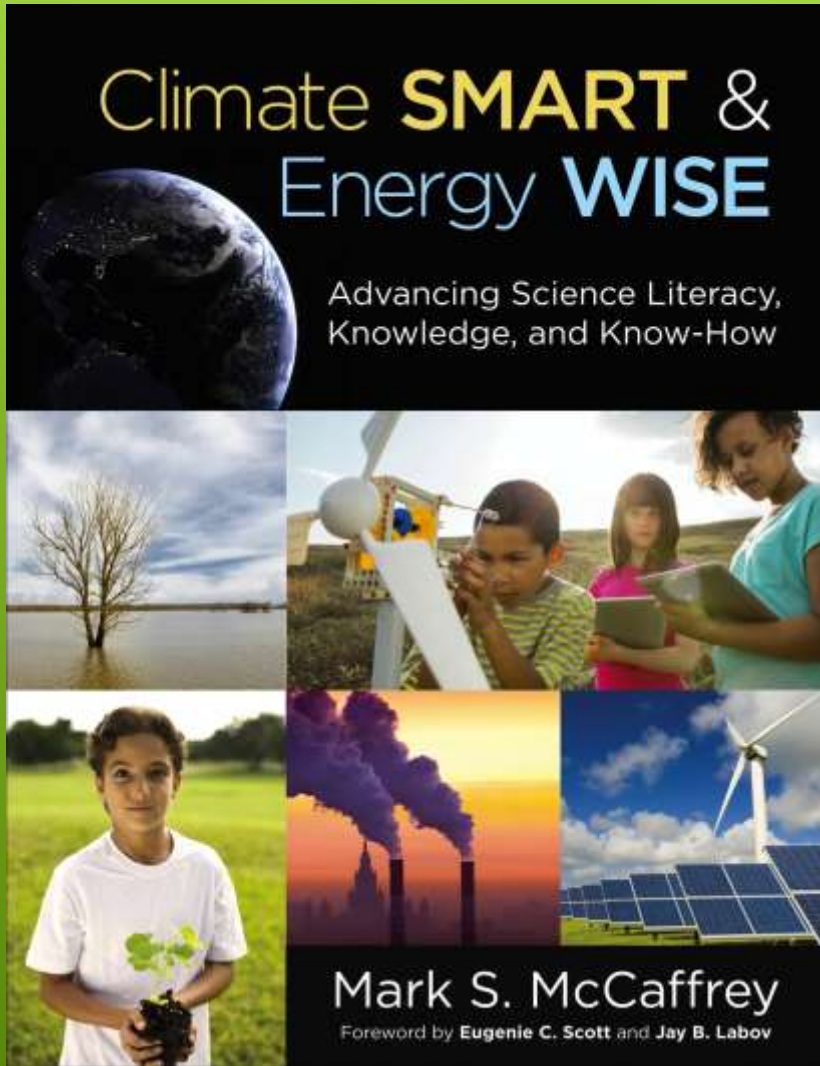
- Social goals that relate directly to meeting physical needs (nutrition, income, access to energy and sanitation) tightly coupled to resource use.
 - Improvements could likely be achieved for all people without significantly exceeding planetary boundaries.
 - An important exception is secondary education, which is both strongly coupled to resource use and associated with high

MEANING: EDUCATION ITSELF CAN BE A MAJOR PART OF THE PROBLEM

Transforming all education to sustainable/regenerative education is imperative

#TeachSDGs





Continue the Conversation

Join the ECOS Facebook Group:
<https://www.facebook.com/groups/ClimateECOS>

marksmccaffrey@gmail.com

“To change something, build a new model that makes the existing model obsolete.”

— Richard Buckminster Fuller

