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Carbon offsetting: What it is and why it has failed

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How is Shell
accelerating
to net zero?
WITH
BEN VAN BEURDEN

First Things First: Avoid, Reduce ... and only after that–Compensate

Posted on 27 April 2020

The tempta
are easier o
bandaid to
cannibalize

By Martha Stevenson
Scientist

WASTE Lansink 1979	ENERGY Wolfe 2005	CARBON Horgan 2011	BIODIVERSITY IUCN, UNGC 2012	FOOD WASTE Papargyropoulou 2014
Prevention	Energy Saving	Avoid Wasted Energy	Avoidance	Prevention
Minimization	Energy Efficiency	Efficient Conversion	Minimization	Redistribute
Reuse	Renewables	Renewable Energy	Restoration	Animal Feed / Compost
Recycling	Low Emission			Energy Recovery
Energy Recovery	Conventional with Offset	Offset	Offset	
Disposal				Disposal

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Reflected in the num
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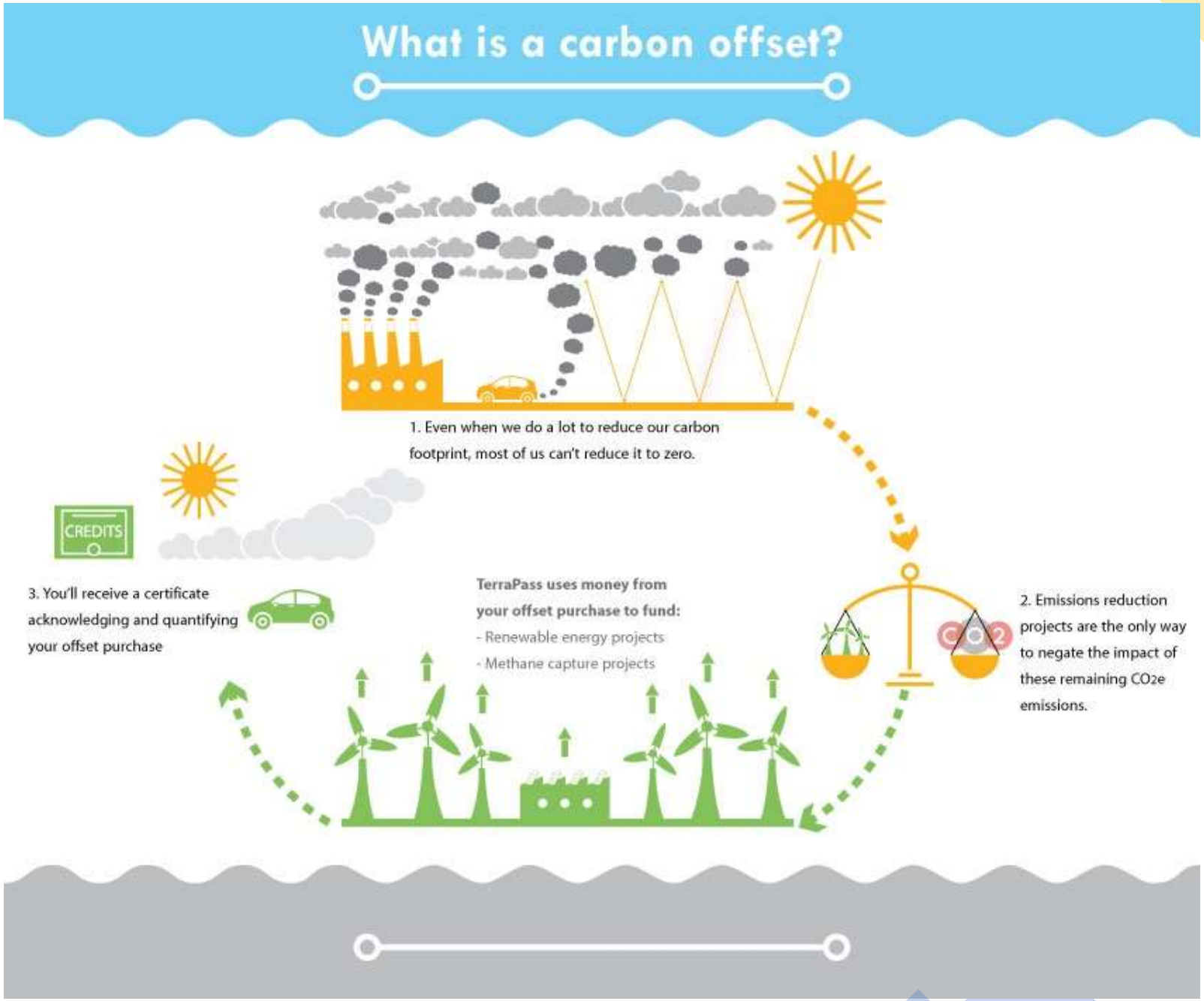
efforts for meaningful change.

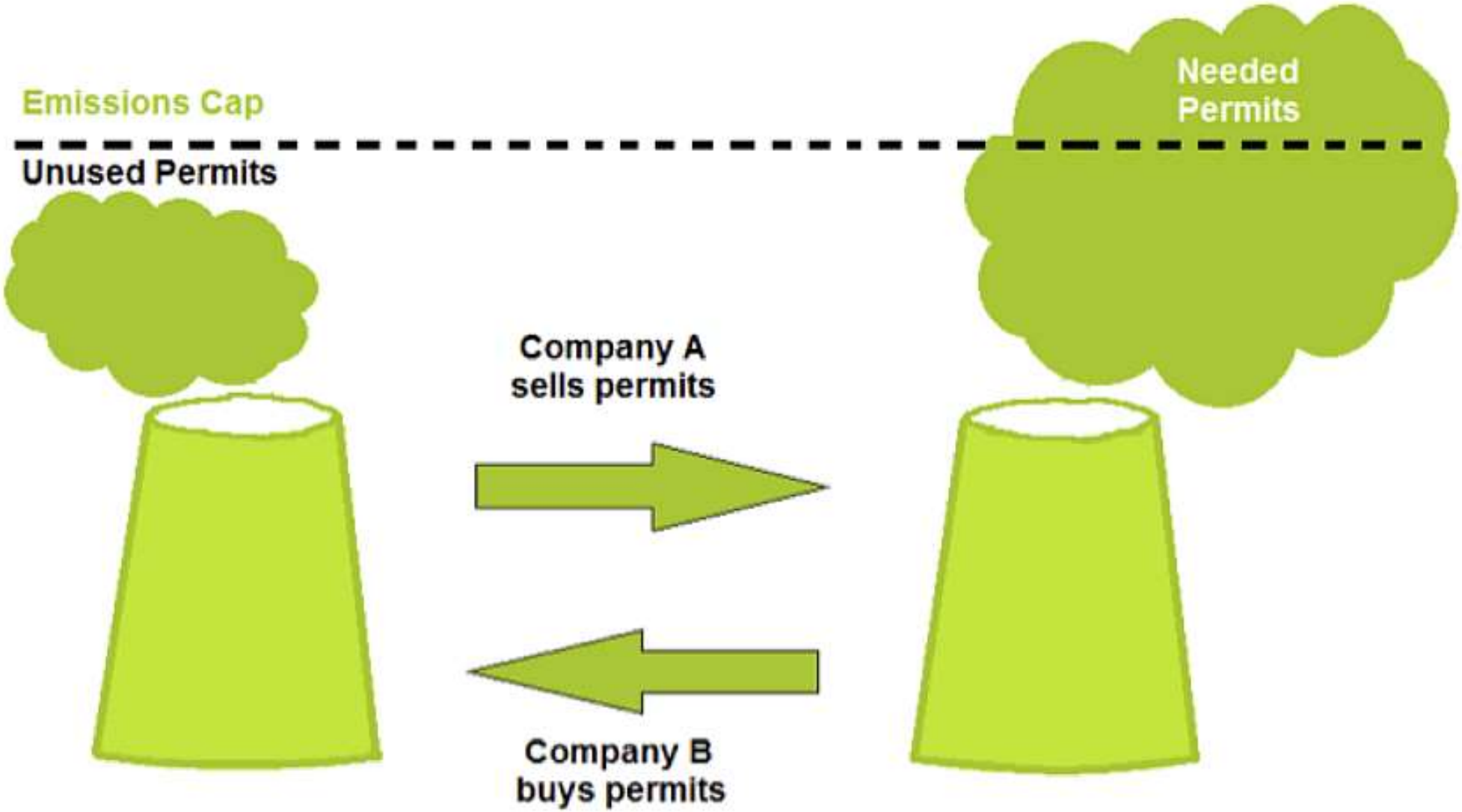
Mitigation hierarchies have been used for over a century in natural resource management and include prioritized steps that lead to the best outcomes for people and nature. These steps are generally Avoid, Reduce, Restore, Compensate/Offset,[1] however adapted for the system to which they are applied. These hierarchies are inspired by Muir's Preservation theory (avoid/protect) and Pinchot's Conservation theory (reduce/compensate)–the basis of environmentalism in the United States and made manifest in the fact that many of our national parks, protected areas like Yellowstone or Yosemite or Shenandoah, are adjacent to or completely surrounded by national forests, managed for highest best use while sustaining impacts.

Later in the 20th century, as the focus of the environmental movement expanded beyond land, river, and wildlife management principles to addressing the ever-increasing impact or footprint of industrial activity–these same principles have been adapted to sustainable materials management. In 1979, Lansink's Ladder was introduced in the Dutch parliament as the first waste management hierarchy. This ladder or hierarchy included the steps of "Prevention: Reuse: Recycle: Recover: Dispose" and went on to become the basis for waste

WWF Discussion Paper: Mitigation Hierarchies April 2020
PDF 522 KB

What is a carbon offset?





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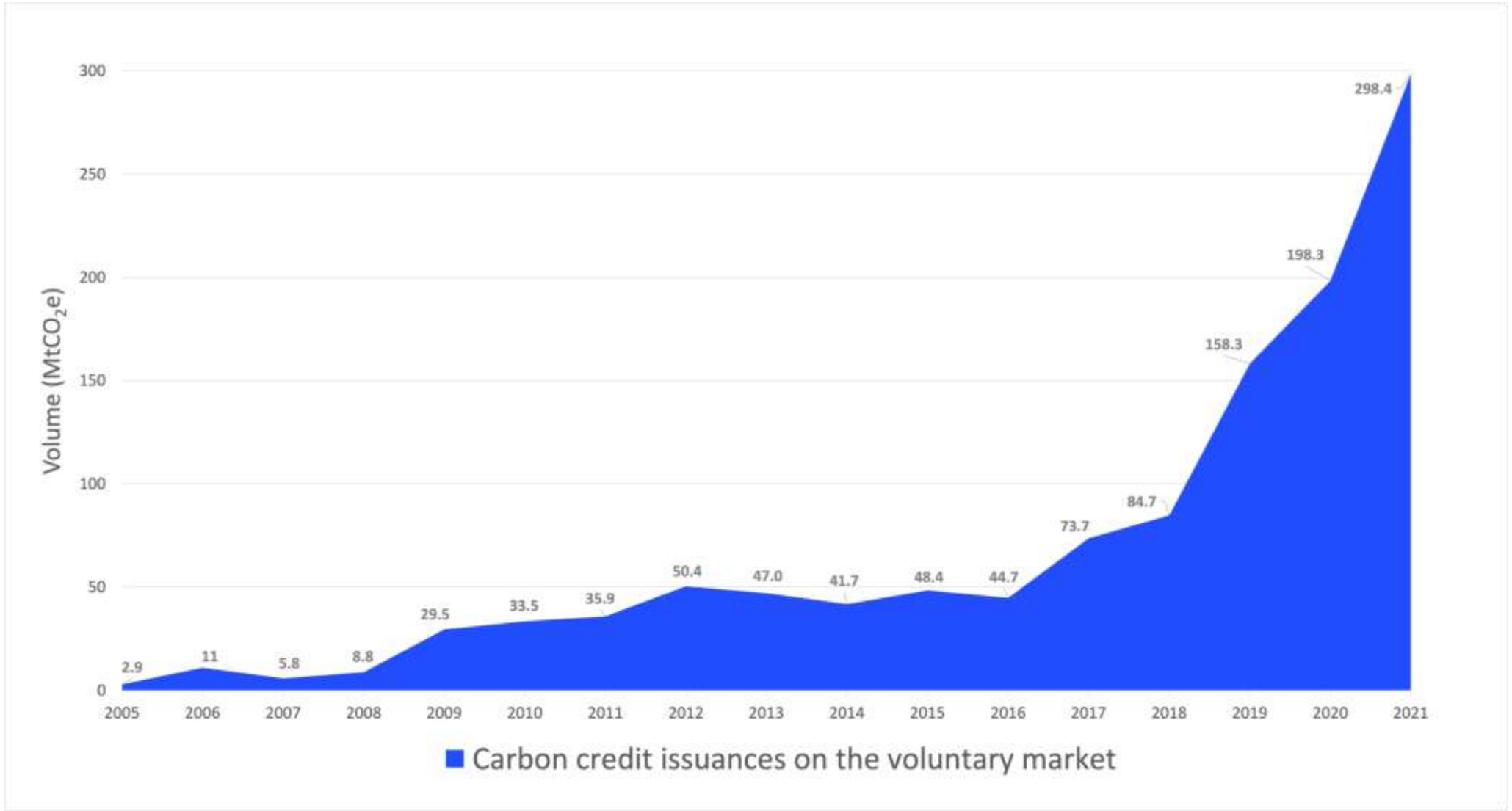
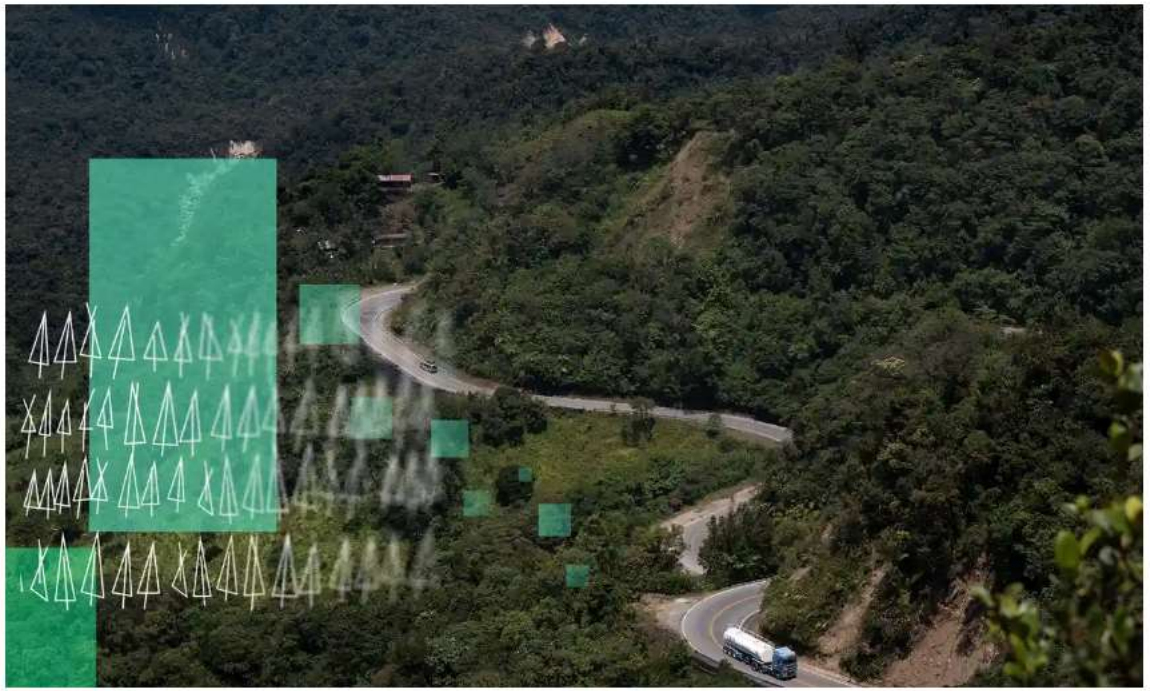


https://evetamme.com/2022/05/16/whats-next-for-carbon-markets/

Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows

Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating

- 'Nowhere else to go': Alto Mayo, Peru, at centre of conservation row
- Greenwashing or a net zero necessity? Scientists on carbon offsetting
- Carbon offsets flawed but we are in a climate emergency



The Alto Mayo protection forest in Moyobamba, Peru, was supposed to be a flagship offsetting project but has faced human rights issues. Composite: Guardian Design/AFP/Getty Images

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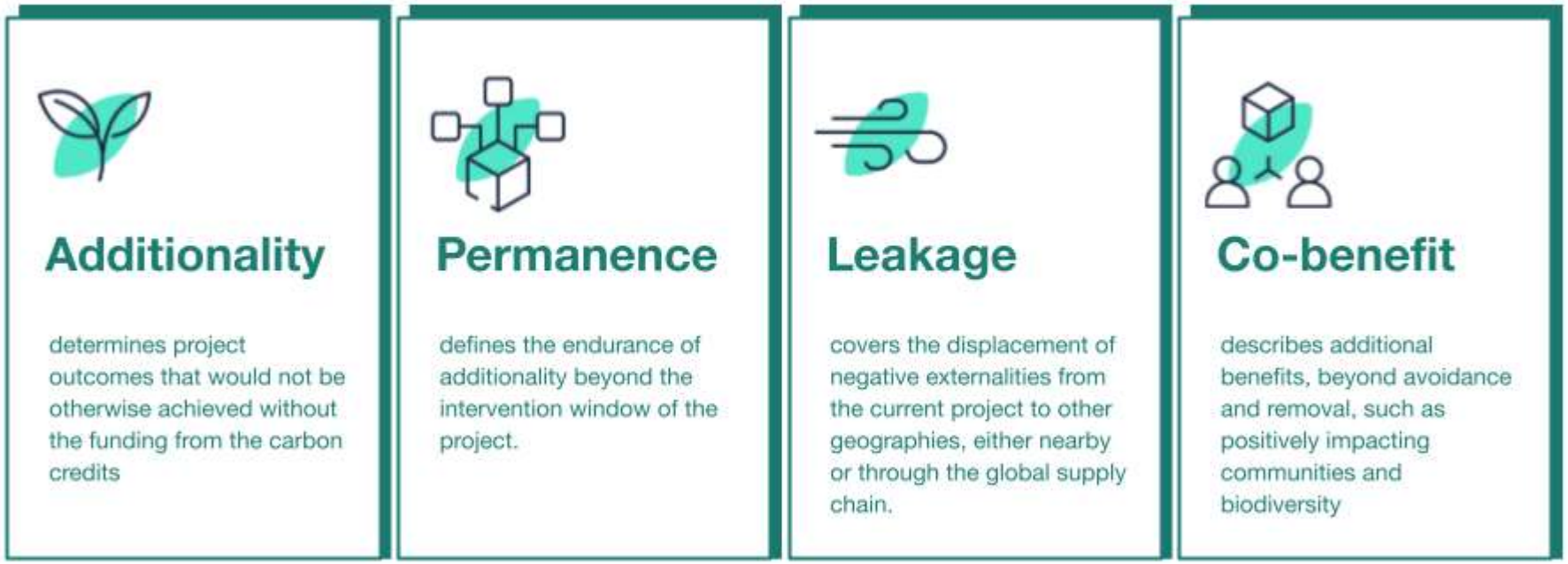
https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe

Quality of Carbon Credits are explained by four criteria



Source: Cambridge Centre for Carbon Credits (4C), Sylvera

ureca

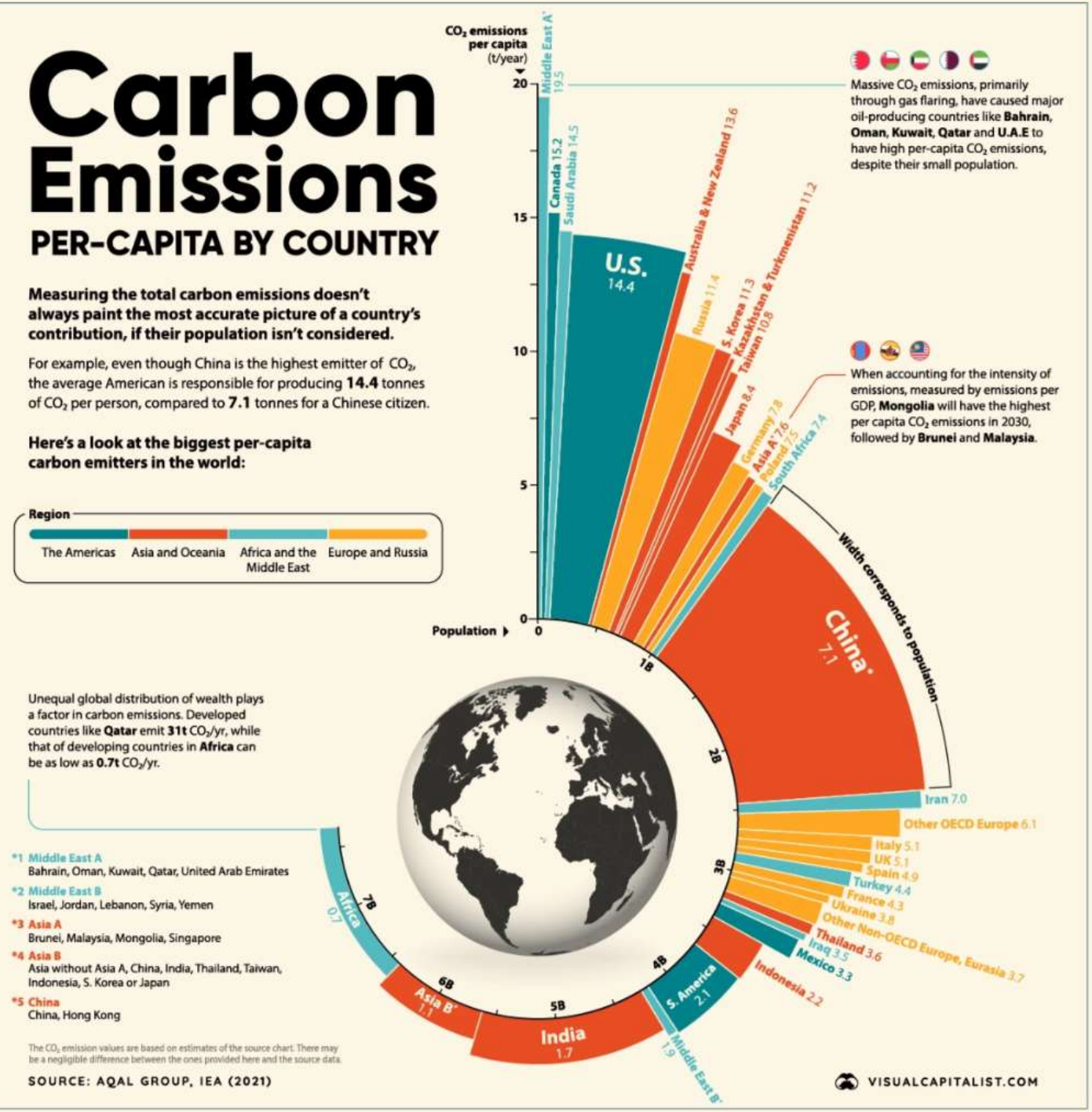
Carbon Emissions

PER-CAPITA BY COUNTRY

Measuring the total carbon emissions doesn't always paint the most accurate picture of a country's contribution, if their population isn't considered.

For example, even though China is the highest emitter of CO_2, the average American is responsible for producing **14.4** tonnes of CO_2 per person, compared to **7.1** tonnes for a Chinese citizen.

Here's a look at the biggest per-capita carbon emitters in the world:



Region

The Americas | Asia and Oceania | Africa and the Middle East | Europe and Russia

Unequal global distribution of wealth plays a factor in carbon emissions. Developed countries like **Qatar** emit **31t** CO_2/yr, while that of developing countries in **Africa** can be as low as **0.7t** CO_2/yr.

*1 **Middle East A**
Bahrain, Oman, Kuwait, Qatar, United Arab Emirates

*2 **Middle East B**
Israel, Jordan, Lebanon, Syria, Yemen

*3 **Asia A**
Brunei, Malaysia, Mongolia, Singapore

*4 **Asia B**
Asia without Asia A, China, India, Thailand, Taiwan, Indonesia, S. Korea or Japan

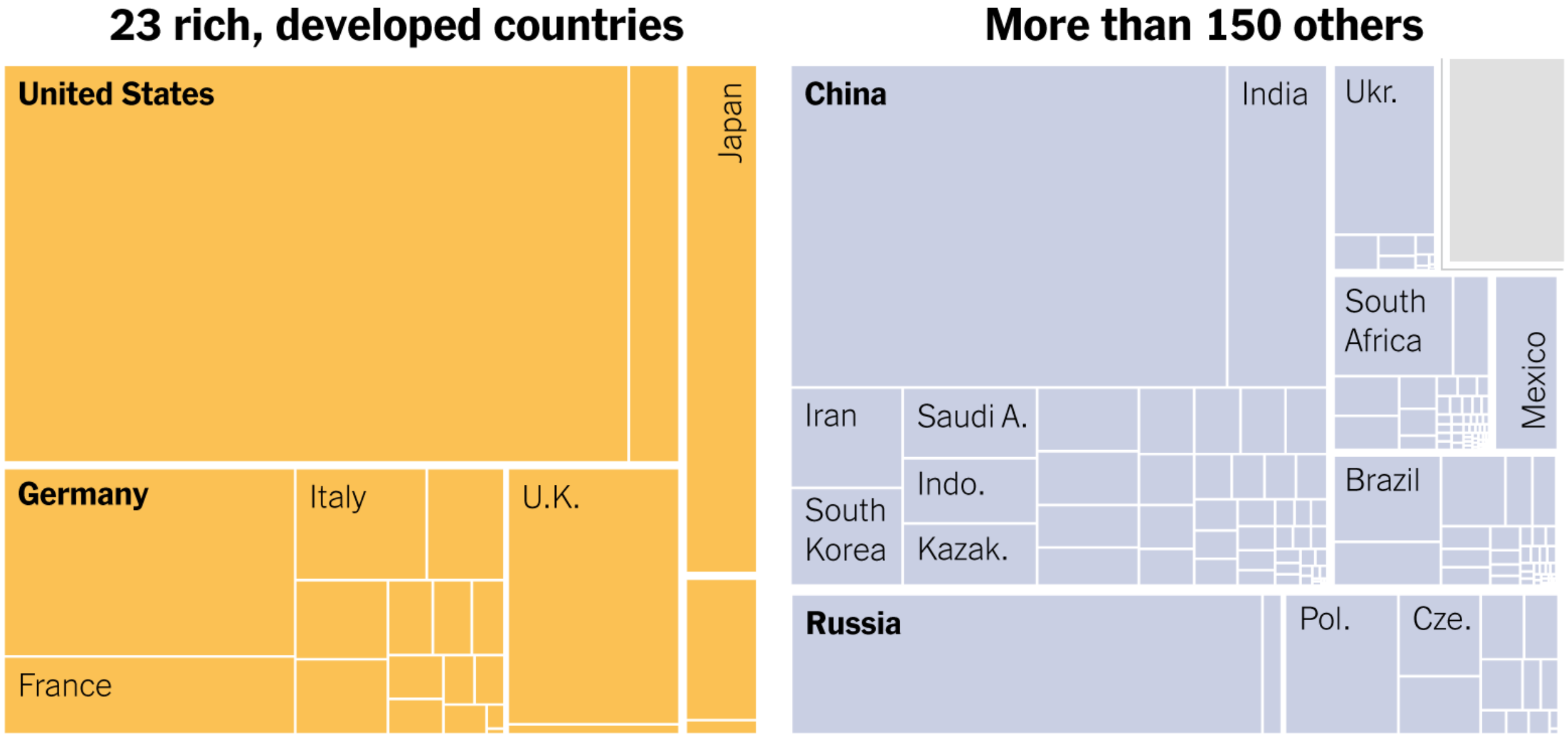
*5 **China**
China, Hong Kong

The CO_2 emission values are based on estimates of the source chart. There may be a negligible difference between the ones provided here and the source data.

SOURCE: AQAL GROUP, IEA (2021)

VISUALCAPITALIST.COM

Cumulative historical greenhouse gas emissions



https://www.nytimes.com/interactive/2021/11/12/climate/cop26-emissions-compensation.html

Carbon Management >
Volume 5, 2014 - Issue 4: Overcoming Obstacles and Barriers for Radical Emissions Reductions

Research Articles

Ten reasons why carbon markets will not bring about radical emissions reduction

Rebecca Pearse & Steffen Böhm

Pages 325-337 | Published online: 17 Feb 2015

Abstract

Almost two decades since the Kyoto Protocol was adopted, global greenhouse gas emissions are still rising rapidly. We argue that the global climate policy focus on carbon markets has played a significant role in the failure to reduce emissions. There are 16 compliance carbon markets in operation across the world. Many more are planned, although there have been numerous problems with carbon trading, including ineffectiveness, weak regulation and implementation, instances of fraud, little to no emissions reduction and major legitimacy issues for governments and the private sector. In this paper we take a "strong" position, arguing that carbon markets do not have a role to play in a policy scenario that requires radical emissions reductions in order to avoid dangerous greenhouse gas concentrations. We put forward 10 reasons why carbon markets should not be the preferred climate policy choice, which we have collated from positions taken by grassroots social movement organizations, think tanks, NGOs and other political advocacy groups as well as individual scientists and scholars.

Keywords: carbon markets | carbon trading | climate change | climate policy | radical emissions reductions

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Thank you!

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