



SCIENCE COMMUNICATION FOR SUSTAINABILITY

Viveka Jani
for
BNE-Festival NRW 2022

What is science communication

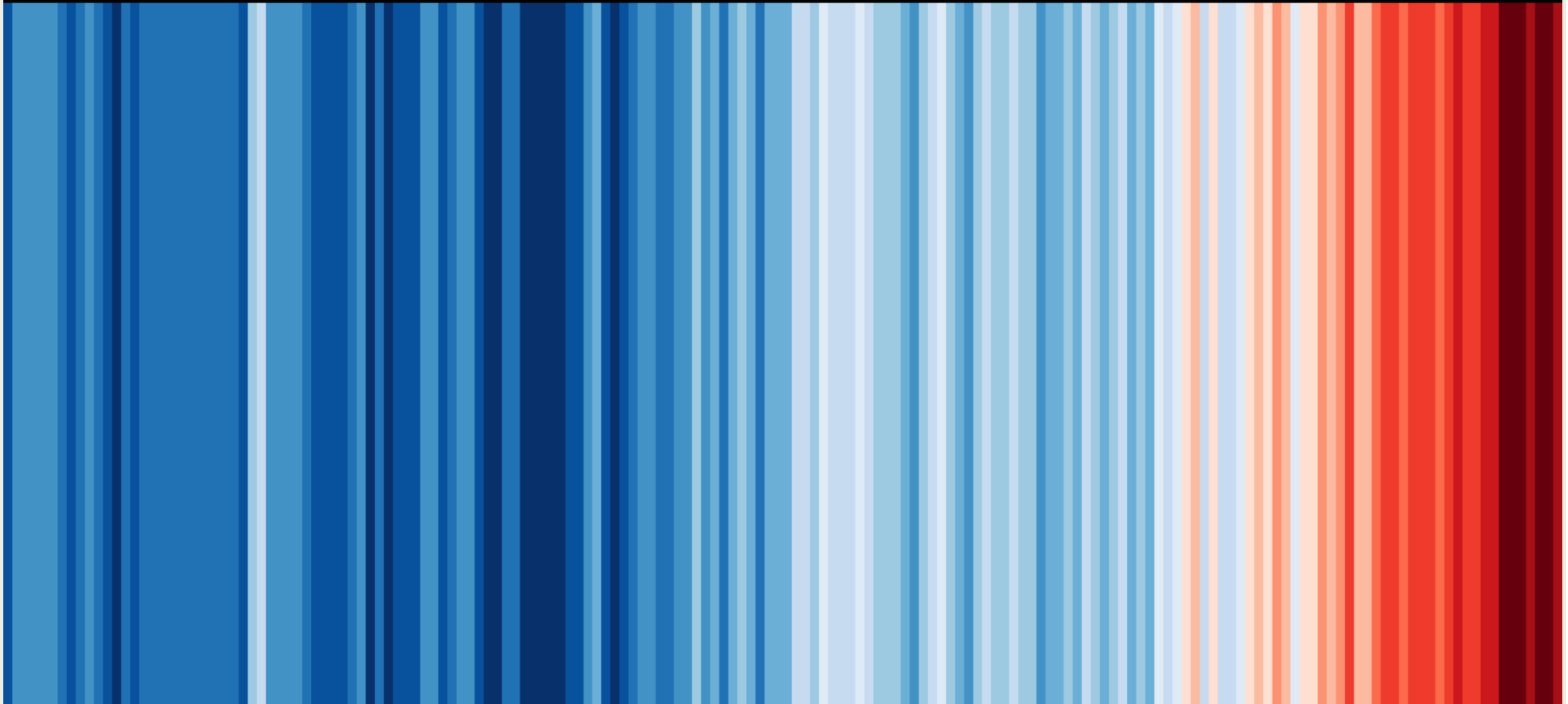
- Informing, educating, raising awareness on science-related topics for the common public
- Tells a captivating story (narrative)
- Sharing a narrative rather than numbers and figures
- Easy to understand and remember
- Oral, visual, textual
- Researchers, students, public, educators, activists, journalists, policy-makers

“Good science and good stories have engaging characters overcoming obstacles to achieve a worthy outcome”

– Frank Sesno, journalist, creator and host of Planet Forward



Global temperature change (1850-2021)



1860

1890

1920

1950

1980

2010

Source: <https://showyourstripes.info/s/globe> (License: Ed Hawkins, University of Reading)

Science communication for sustainability



- Sustainability is multidisciplinary
- Integrate scientific knowledge with local knowledge
- Knowledge is prerequisite for action
- Strong tool for informal learning
- Setting a goal for action
- Coping with threats and supporting innovative pathways toward sustainable development

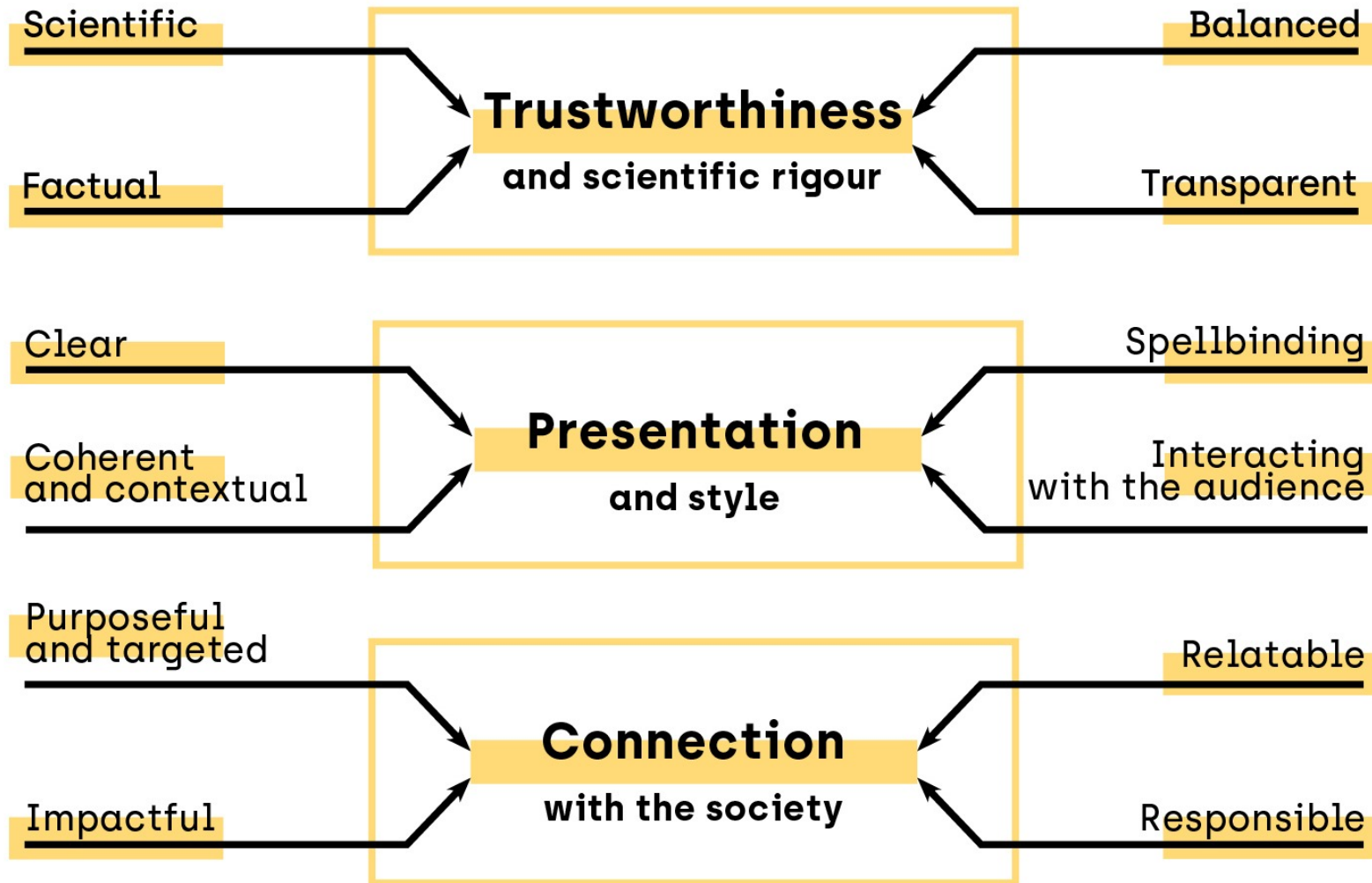
Why is science communication important?

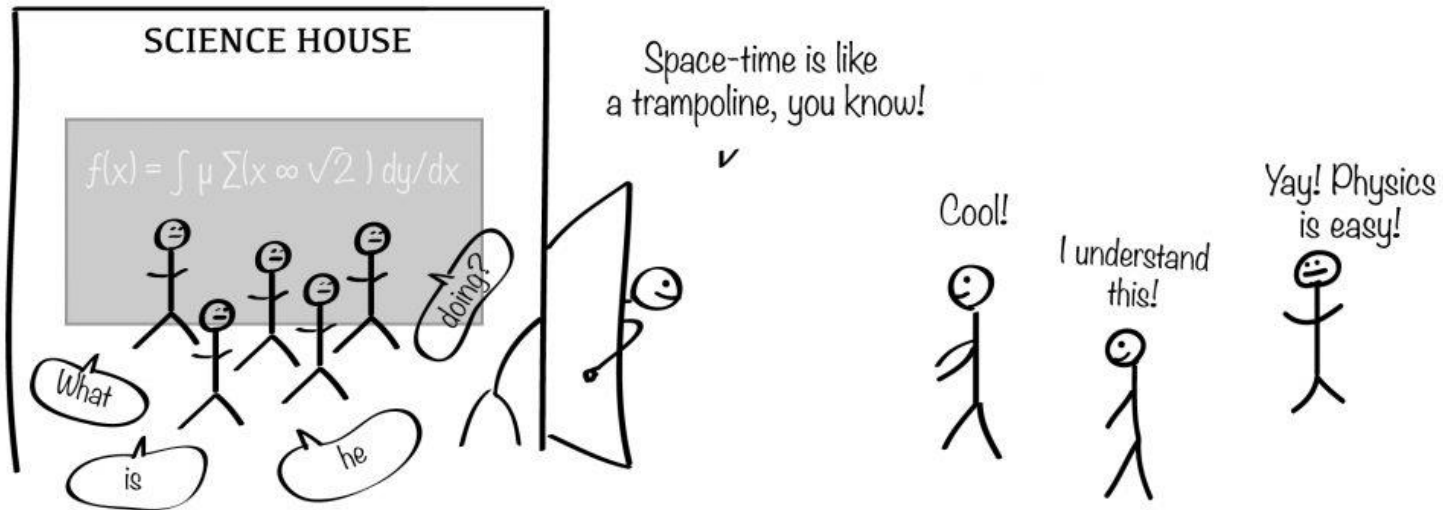
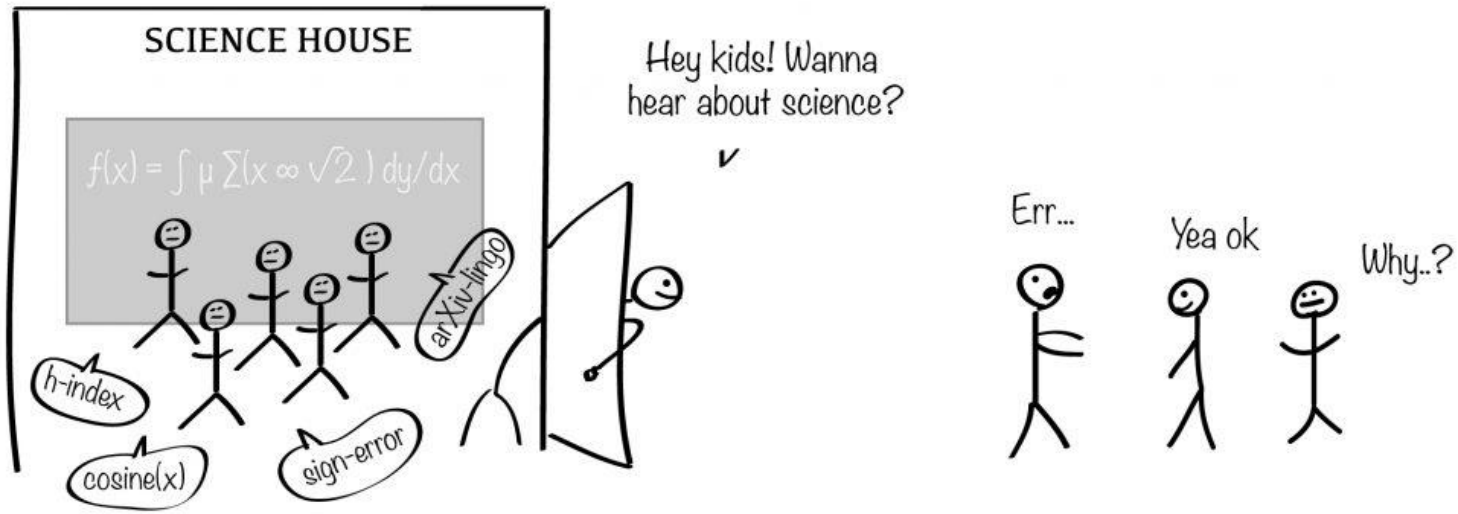
- **Bridge between science and society**
- Informing the public/raise awareness
- Educate decision makers
- Address urgent issues
- Public engagement and dialogue
- Reduce misinformation (and fake news)
- Trust in scientific research
- Research from across the world
- Sense of wonder and curiosity
- Inspire budding scientists



Source: College of Communication, Boston University

12 QUALITY INDICATORS for SCIENCE COMMUNICATION





Mind the language

- Easy to understand and non-technical
- Concise
- Not too bleak, but paints a scenario that encourages action
- Not exaggerated or sensationalized
- Metaphors and analogies
- Language of the masses
- **KISS: Keep It Simple, Silly!**





HOW SOME CREATURES COPE WITH CLIMATE CHANGE

THE BLACK GUILLEMOT IS ADVANCING ITS BREEDING SEASON TO SYNC WITH MELTING ICE.

THE HERRING IS MOVING FURTHER NORTH IN SEARCH OF COOLER WATERS.

THE GRAY WHALE IS CHANGING ITS MIGRATION PATTERN.

THE POLAR BEAR IS RESORTING TO STEALING GOOSE EGGS.

THE EMPEROR PENGUIN IS BREEDING ON MOVING ICE SHELVES IN THE ABSENCE OF SEA ICE.

THE DENIER IS UPPING HIS PETTINESS QUOTIENT.

A happy young girl looking forward to a wonderful future. So nice to see!

www.greenhumour.com

14 LIFE BELOW WATER

CONSERVE AND SUSTAINABLY USE THE OCEANS, SEA AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT

OUR OCEAN
THE PLANET'S LARGEST ECOSYSTEM
IS ENDANGERED

PLASTIC/MARINE POLLUTION

OVER-FISHING

OCEAN WARMING

ACIDIFICATION

EUTROPHICATION

INCREASING ACIDIFICATION IS THREATENING MARINE LIFE AND LIMITING THE OCEAN'S CAPACITY TO MODERATE CLIMATE CHANGE

THE OCEAN ABSORBS AROUND 1/4 OF GLOBAL ANNUAL CO₂ EMISSIONS

PLASTIC POLLUTION IS CHOKING THE OCEAN

17+ MILLION METRIC TONS OF PLASTIC ENTERED THE OCEAN IN 2021

PROJECTED TO DOUBLE OR TRIPLE BY 2040

90% OF THE WORLD'S FISHERS ARE EMPLOYED IN SMALL-SCALE FISHERIES WHO NEED ACCELERATED SUPPORT DUE TO THE PANDEMIC

STAINABLE DEVELOPMENT GOALS REPORT 2022: UNSTATS.UN.ORG/SDGS/REPORT/2022/



Pictures speak louder than words

Sources:
Greenhumour.com (License: Rohan Chakravarty)
National Geographic (License: Cristina Mittermeier)
Climatevisuals.org (License: Aji Styawan)
UN.org (SDGs)

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Kiribati Adaptation Programme



Initiative of: Office of the President, Government of Kiribati*

Partners: UNDP; Asian Development Bank (ADB); World Bank; United Nations Environment Programme (UNEP); Australian Bureau of Meteorology and New Zealand Meteorological Office; United Nations Development Programme (UNDP)-Global Environmental Facility (GEF)

Year: 2003 - 2016

Sector: Cross-sectoral (Water resource management, Coastal zone management and Infrastructure)

Scale: National

The Kiribati Adaptation Program (KAP) was implemented in three phases to increase long term climate change adaptation planning in Kiribati with a focus on improving the management of freshwater resources and enhancing coastal resilience against sea level rise, climate change induced hazards and diseases, and other environmental challenges.

KAP used a participatory approach to integrate climate change adaptation into national economic and operational planning while identifying key priority sectors and strategies for adaptation, developing and implementing cost-effective adaptation measures, and extending these projects to the remote outer islands.

A major component of the programme involved raising awareness on climate change risks, improving resilience and building capacities of different stakeholders through local and national consultations as well as workshops and education campaigns designed to inculcate a positive public attitude towards the adoption of relevant adaptation strategies.

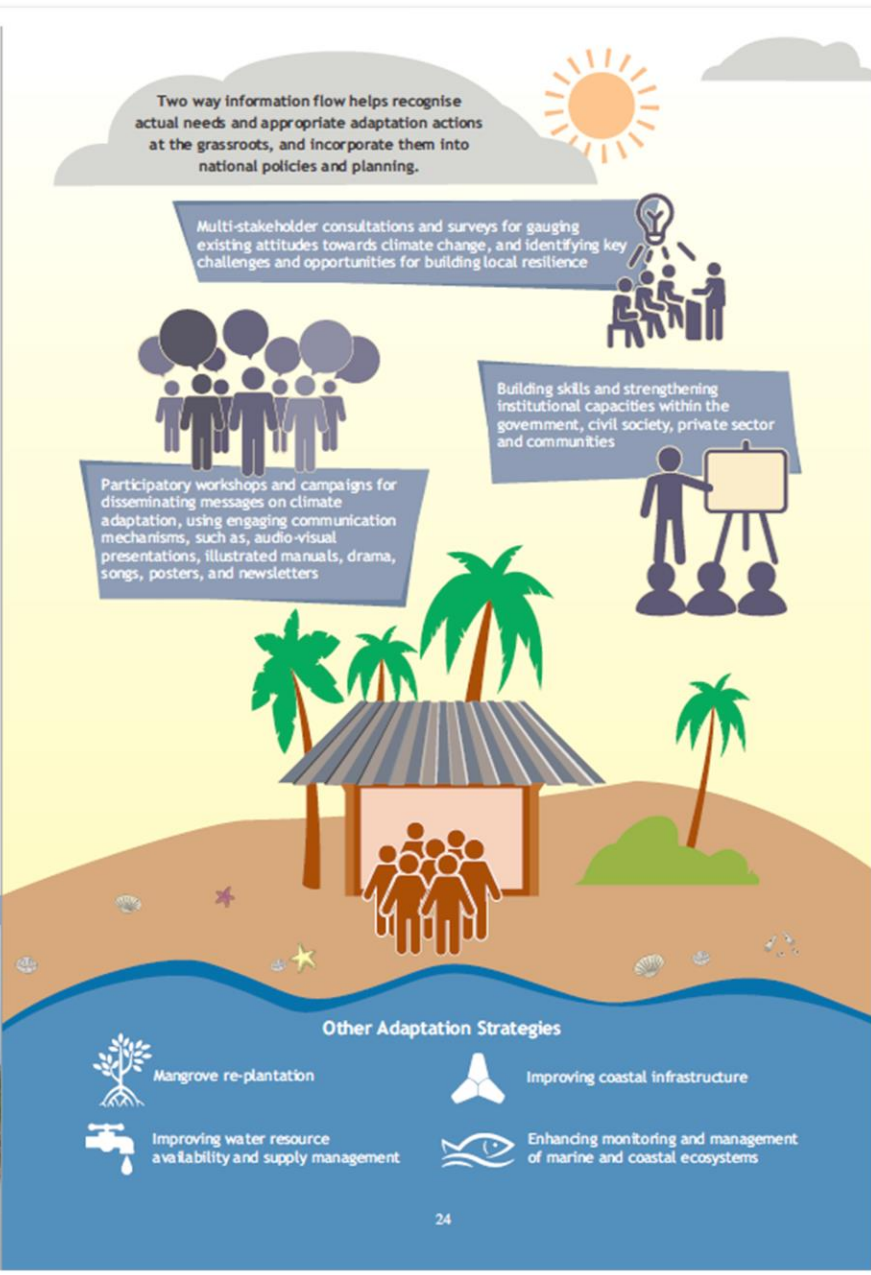


Wikimedia Commons/Luigi Guarino



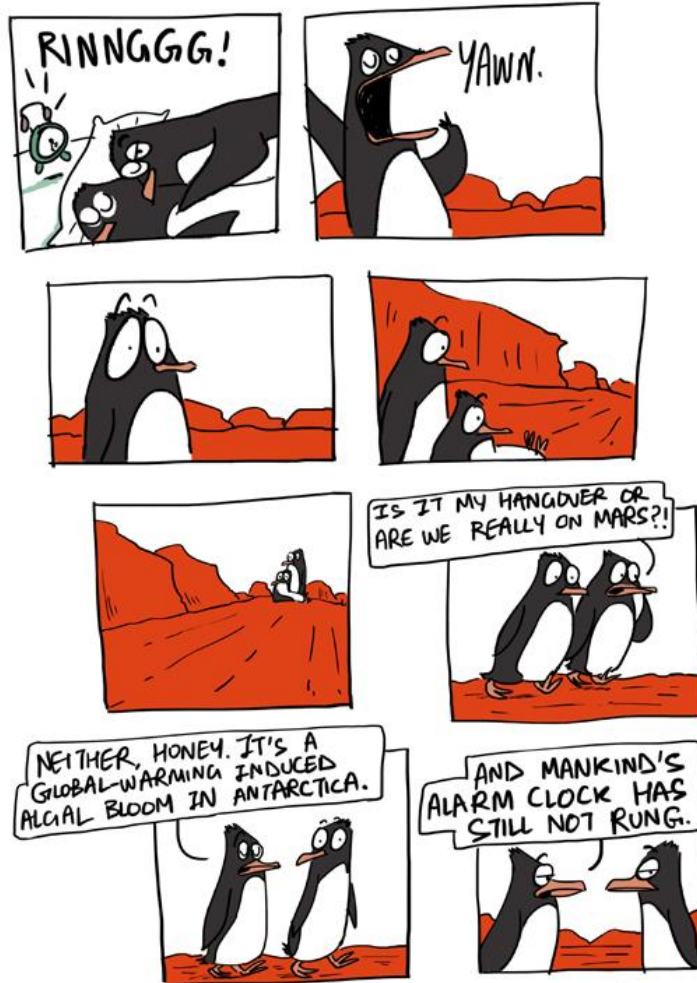
Flickr/Carlo Iacovino (Global Environment Facility)

Website: <http://www.climate.gov.ki/category/action/adaptation/kiribati-adaptation-program/>

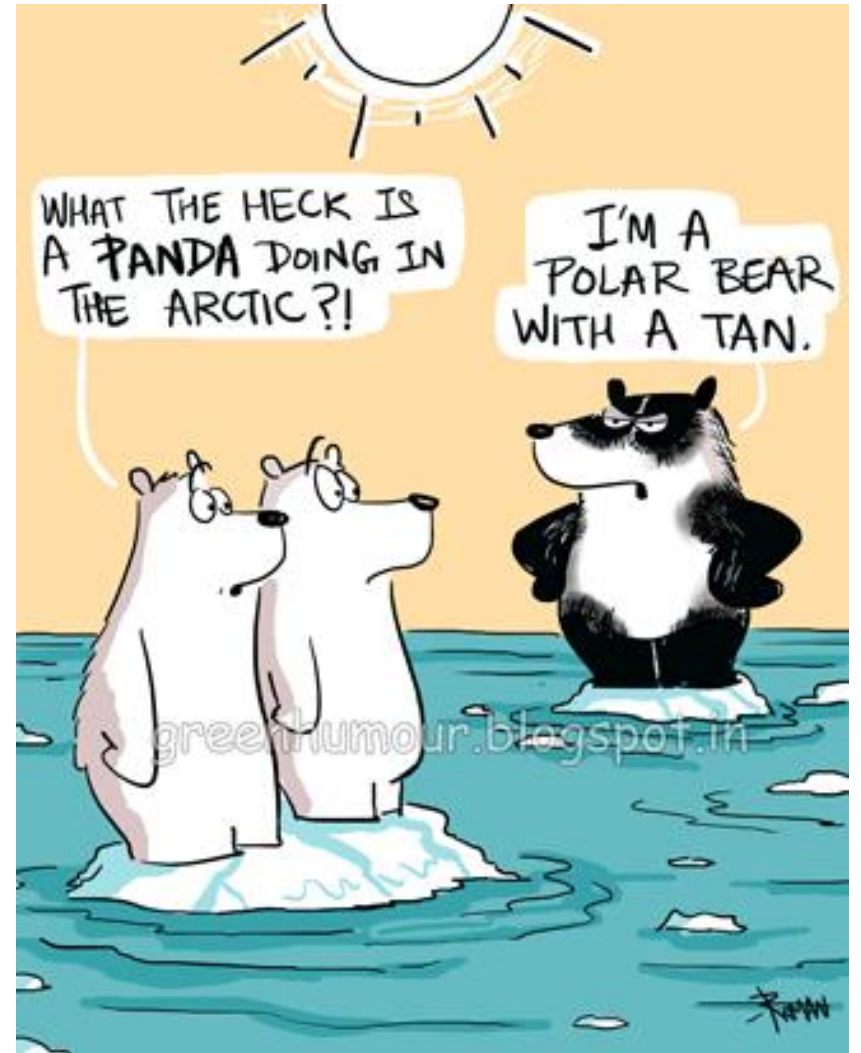




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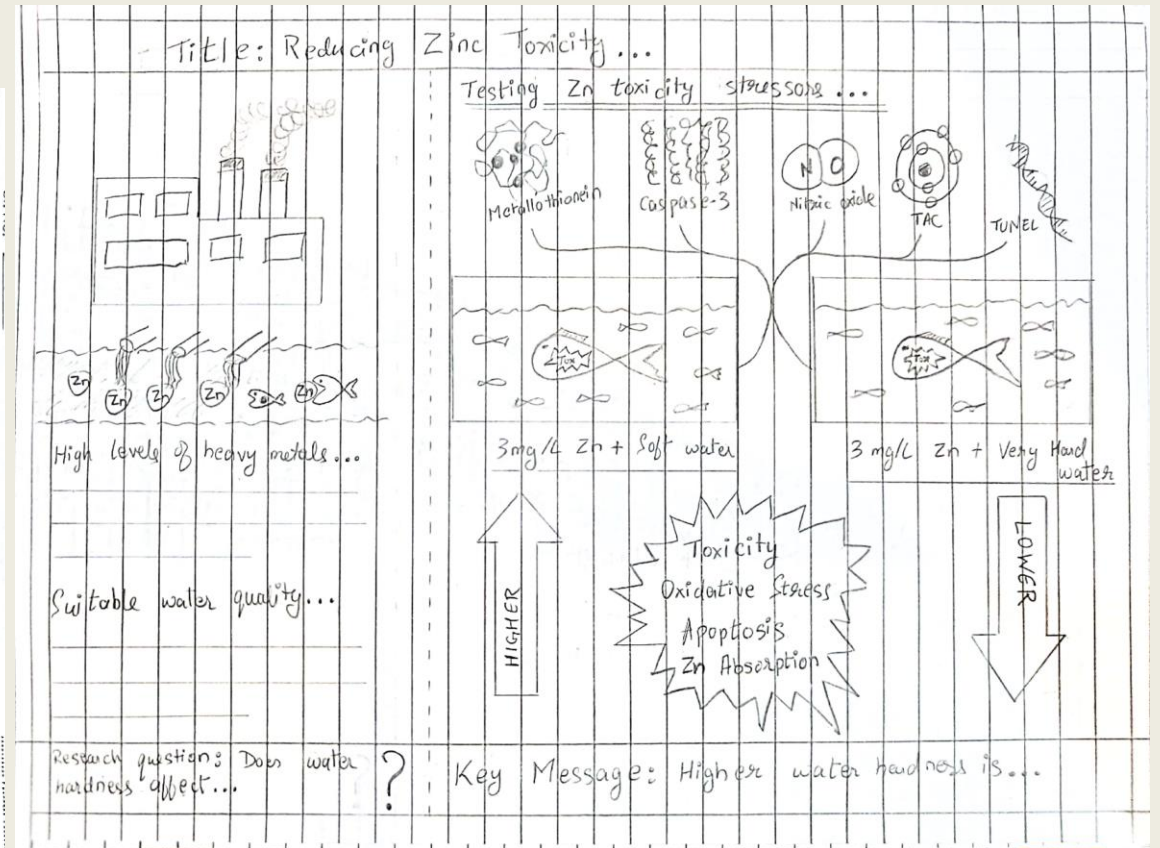
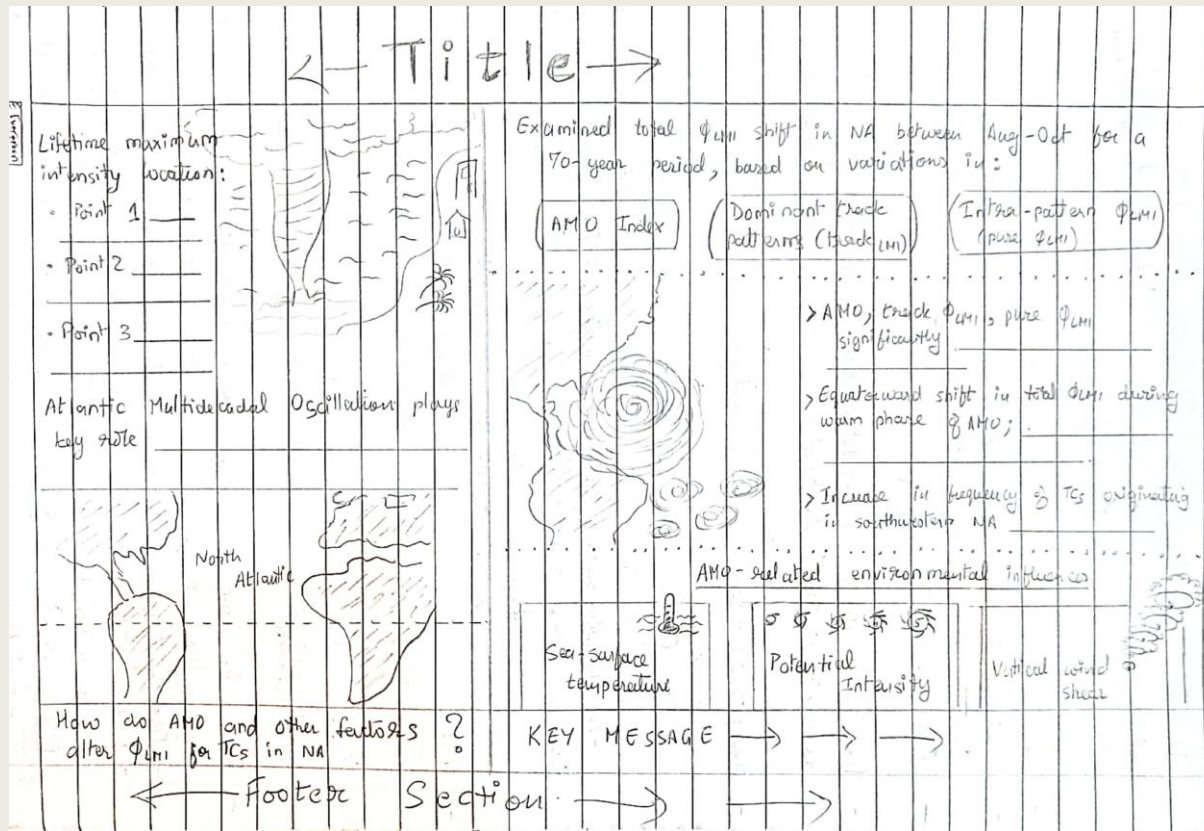


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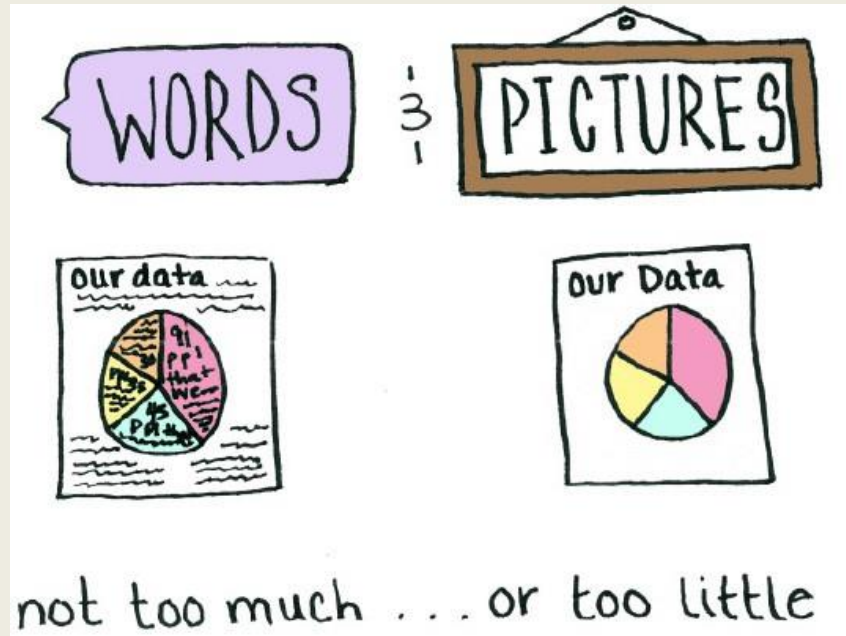


Source: Greenhumour.com (License: Rohan Chakravarty)

Pro tip: Make a rough drawing before digitizing it



Different communication products



- Infographics and posters
- Exhibits
- Videos and documentaries
- Comics
- Flyers and brochures
- Short communications/summaries
- Policy briefs
- News/magazine articles
- Blog
- Public presentations
- Social media posts



Klima X, Norwegian National Museum of Science, Technology, and Medicine
Source: <https://tekniskmuseum.no>



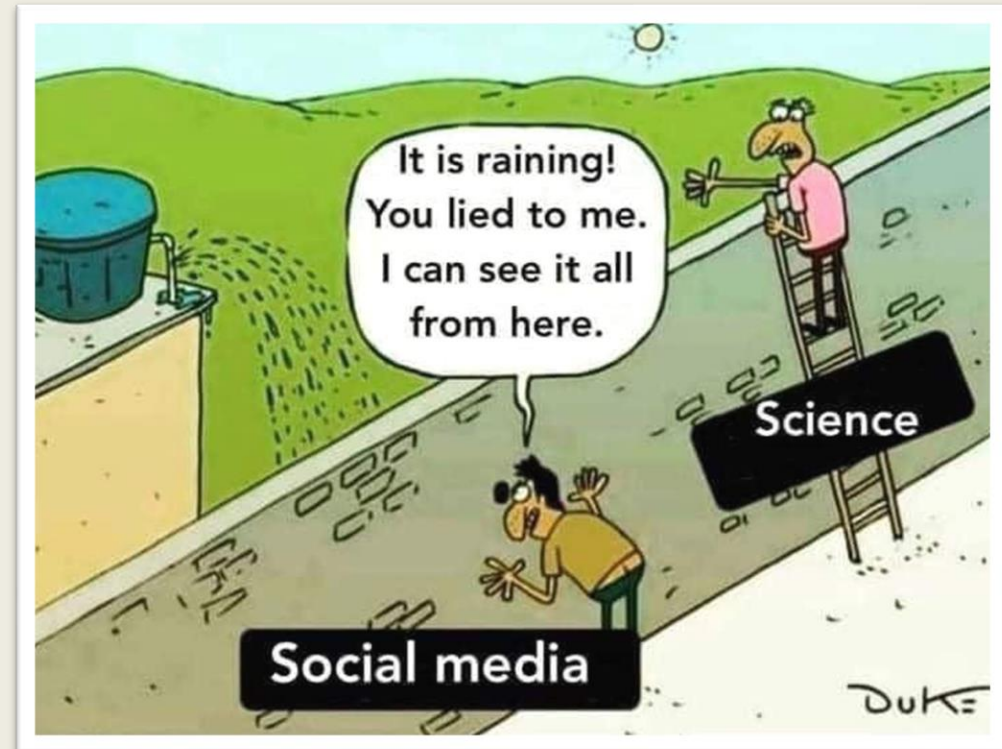
NCAR Climate Change Exhibit
Source: www.dailycamera.com



TOM GAULD

Tweet-sized communication

- Internet and social media are the new preferred medium
- Better outreach
- Misinformation and fake news
- Short and emotive posts instead of prolonged discourse
- Eye-catching visuals with limited words
- Facebook, Instagram, Twitter...

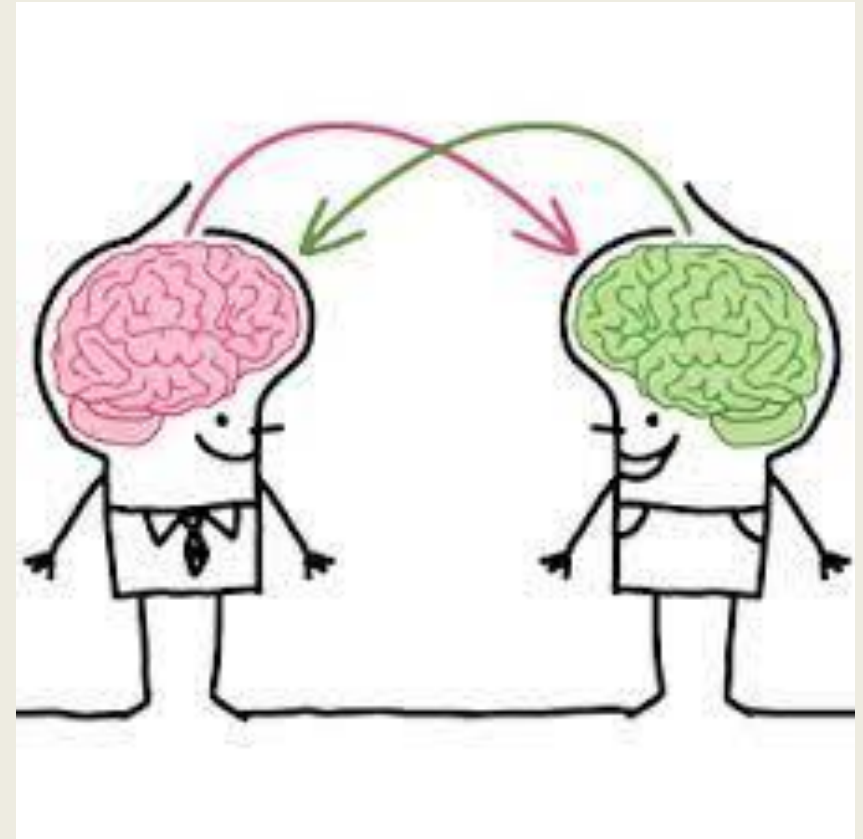


Let's talk about sustainability!

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Quick guide for the workshop task

Infographic	Flyer	Summary
<ul style="list-style-type: none">• Create a one page infographic• Focus on visuals• Icons and illustrations• Introduction and objective (1-2 lines)• Results/Key findings• Conclusion	<ul style="list-style-type: none">• A one-page flyer (can be front and back)• Mix of visuals and text• Photos, icons and illustrations• Similar sections as infographics• Introduction and objective (1-2 lines)• Results/Key findings• Conclusion	<ul style="list-style-type: none">• A one page summary• Focus on text with 1-2 visuals• Photos and illustrations• Catchy title• Main text with sub-sections (~500 words)• What? How? Why?...• Significance/societal or scientific impact
<p>Write a social media post-- 280 characters (including spaces) Also write at least three hashtags</p>		