

# Why we need transformative scenarios for people and nature: Diverse scenario approaches, including the Nature Futures framework

IGES, 26 February 2024

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**Stockholm  
University**



**GLOBAL CHANGE  
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Image: Simon Stålenhag/Radical Ocean Futures

# Madagascar on the brink of climate change-induced famine

By Andrew Harding  
Africa correspondent, BBC News

2 days ago

Climate change



## South Korean flood deaths expose government indifference to climate change



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CLIMATE  
Europe battles heatwave and fires, record temperatures scorch China



## Extreme weather live: heatwave red alerts expected for more cities in Italy; Greece wildfires spread

Twenty-three of Italy's 27 main cities expected to be under red alert as temperatures continue to rise; wildfires north and west force residents to flee  
Italians report sharp rise in emergency cases as Rome

Fires and floods, heatwaves and hurricanes

## Heat Waves Grip 3 Continents as Climate Change Warms Earth

Across North America, Europe and Asia, hundreds of millions of people endured blistering conditions. The U.S. special envoy for climate change called it "a threat to all of humankind."

## The Fires in Greece Are a Terrifying Warning

Aug. 27, 2021, 1:00 a.m. ET

## Climate change extreme weather costs Germany billions annually

Reuters



LEONARDO DiCAPRIO JENNIFER LAWRENCE  
ROB MORGAN JONAH HILL MARK RYLANDCE TYLER PERRY TIMOTHÉE CHALANMET BOB PERLMAN ADRIANA GRANDÉ SCOTT MESCUDI GATE BLANCHETT MERYL STREEP

# Don't Look



BASE  
TRUL  
POSS  
EVEN

A FILM BY ADAM MCKAY  
DON'T LOOK UP

NETFLIX PRESENTS A HYPEROBJECT INDUSTRIES PRODUCTION A FILM BY ADAM MCKAY LEONARDO DiCAPRIO JENNIFER LAWRENCE JONAH HILL MARK RYLANDCE TYLER PERRY TIMOTHÉE CHALANMET BOB PERLMAN ADRIANA GRANDÉ SCOTT MESCUDI AND MERYL STREEP CASTING BY FRANÇOISE MAUSIER COSTUME DESIGNER GABRIEL HILLER MUSIC BY NICHOLAS BRITELL EDITOR SUSAN HARTY PRODUCTION DESIGNER CLAYTON HARTLEY EXECUTIVE PRODUCERS LINDS CHANDLER AND TONY GILBERT PRODUCED BY ROM SUSTINO PRODUCED BY JEFF WADMAN WRITTEN BY ADAM MCKAY & DAVID SIROTA SCREENPLAY BY ADAM MCKAY DIRECTED BY ADAM MCKAY

IN SELECT THEATERS DECEMBER AND ON  
**NETFLIX | DECEMBER 24**

NEW YORK TIMES BESTSELLER

# THE SIXTH EXTINCTION

AN UNNATURAL HISTORY



# THE DAY AFTER TOMORROW



# EXTRAPOLATIONS



# MAD MAX FURY ROAD

THE FUTURE BELONGS TO THE MAD

A REAL D 3D EXPERIENCE

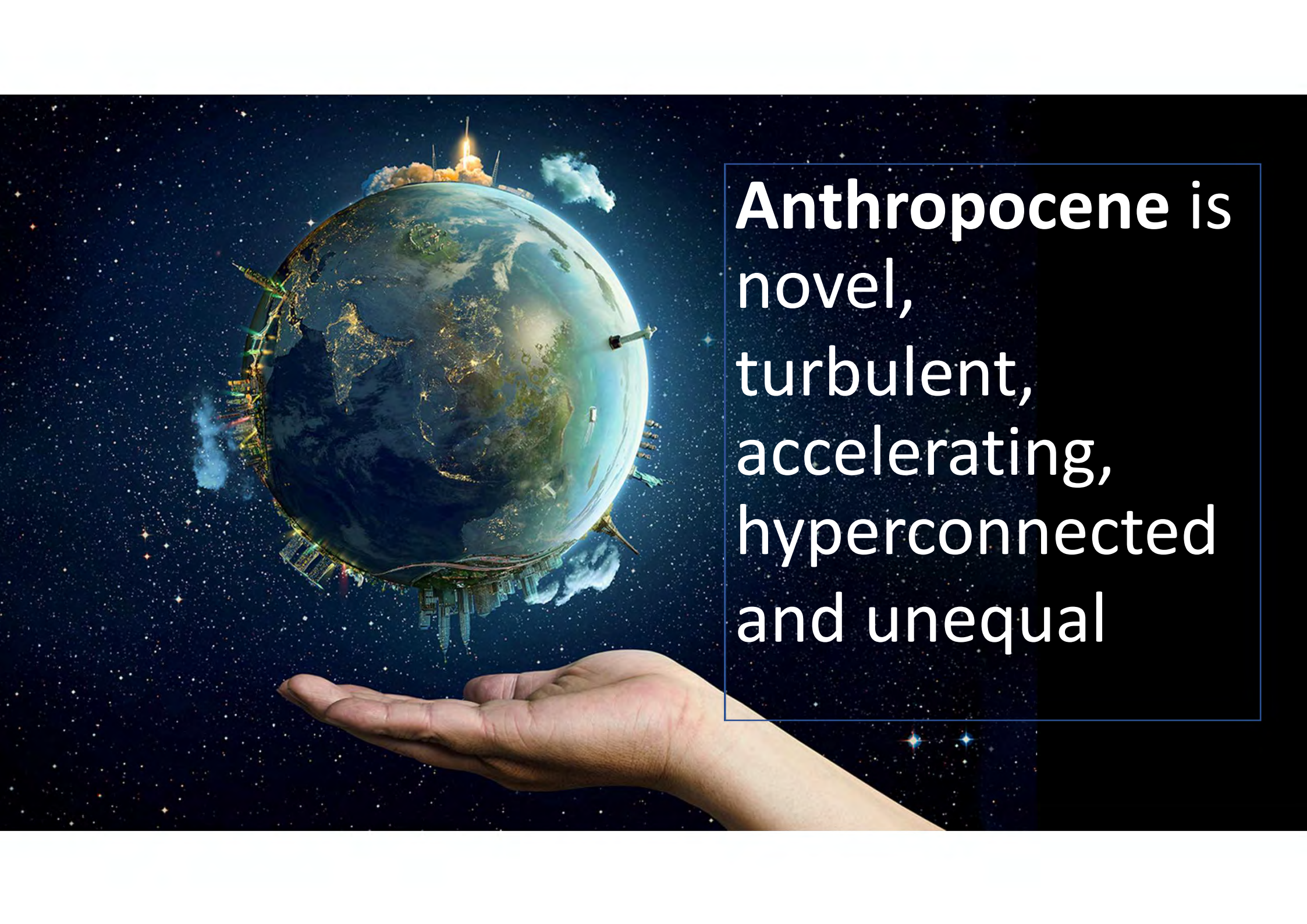
# Cthulucene



UNEARTHING THE CAPITALOCENE:  
TOWARDS A REPARATIONS ECOLOGY





A hand is shown from the bottom, holding a globe of the Earth. The globe is depicted with a futuristic, high-tech appearance, featuring various space stations, rockets, and satellite-like structures attached to its surface. The background is a dark, starry space. The text is overlaid on the right side of the image, enclosed in a blue-bordered box.

**Anthropocene is  
novel,  
turbulent,  
accelerating,  
hyperconnected  
and unequal**

'The future is already here it is just unevenly distributed' William Gibson





What do preferable futures for people and nature look like?

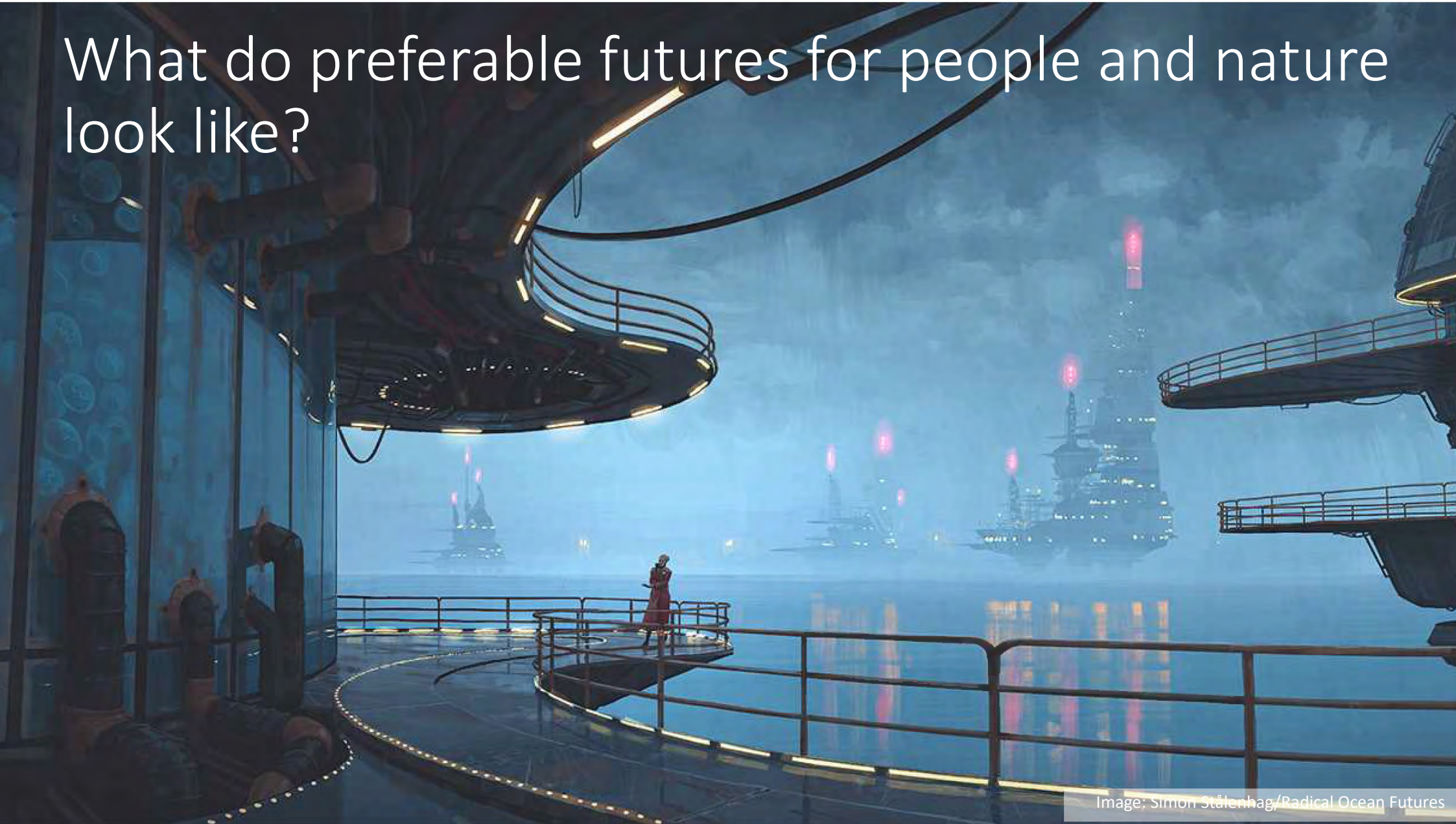


Image: Simon Stålenhag/Radical Ocean Futures

17 JUL 2019 | STORY | ENVIRONMENTAL RIGHTS AND GOVERNANCE

# Towards the vision 2050 on biodiversity: living in harmony with nature

The vision of the Kunming-Montreal Global Biodiversity Framework is a world of living in harmony with nature where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”





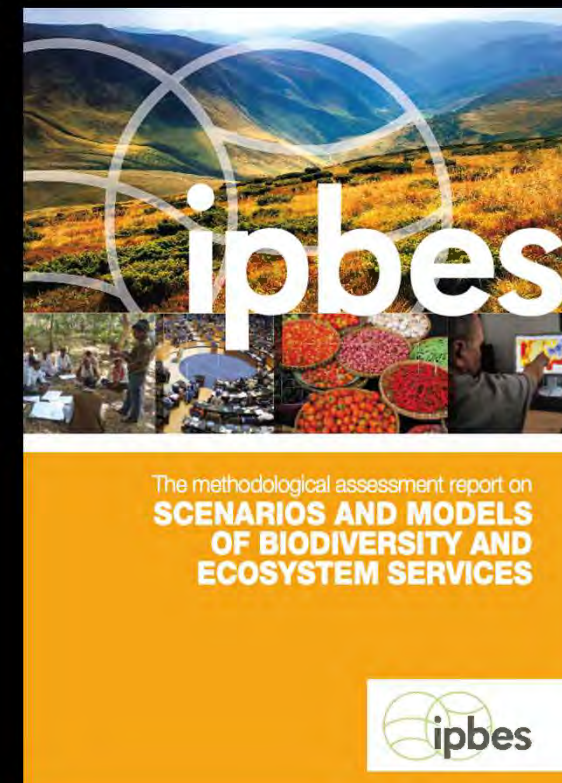
Before we can think of pathways or interventions, we need to build capacities to envision where it is we want to go and what these transformed futures could look like

# Using scenarios for global biodiversity

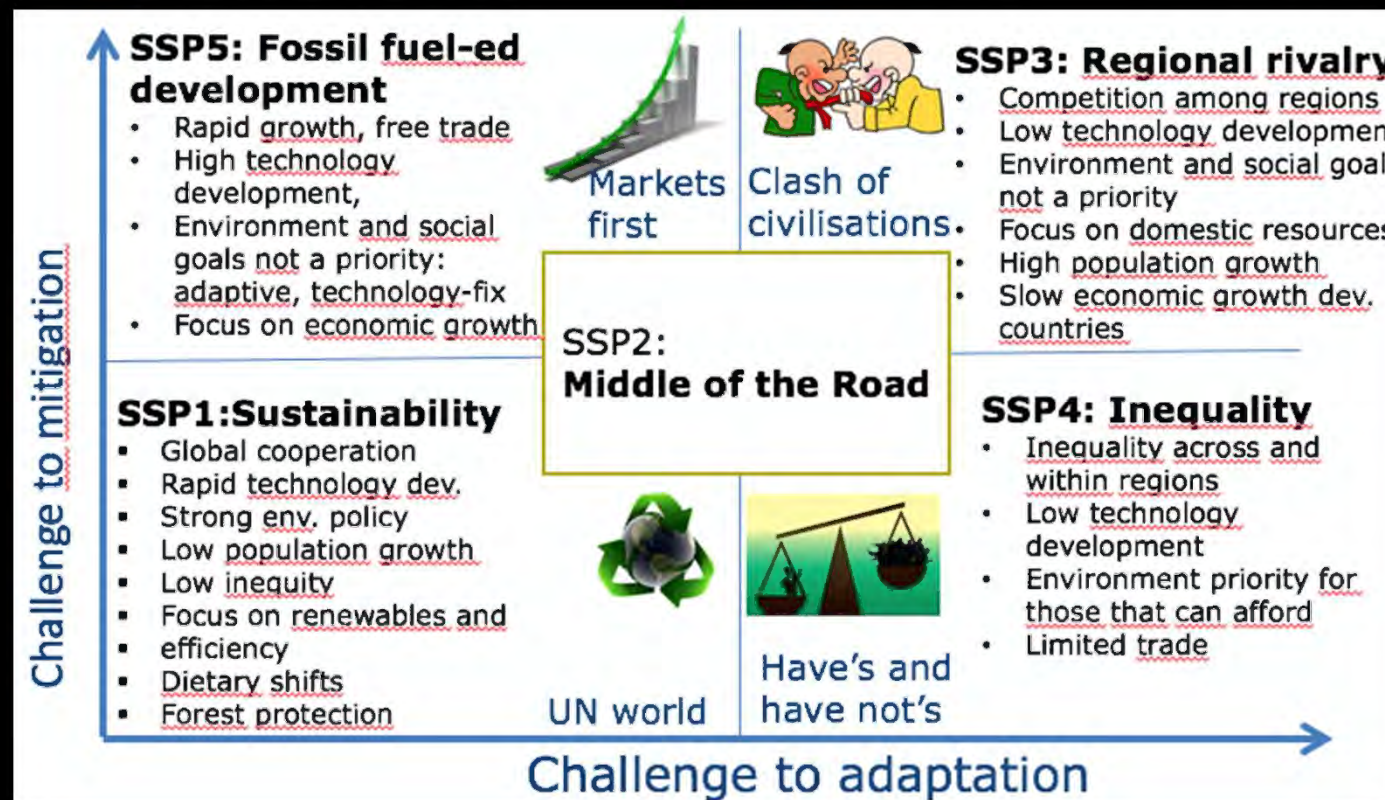
## 2016 IPBES Methodological Assessment

Scenarios are available and they are useful tools for policy support, but:

- Most global scenarios are developed for other purposes, e.g., climate change and its impacts
- Few scenarios detail 'positive' futures - most global scenarios are limited to assessing only impacts on nature, and tend to be negative
- Most global scenarios lack a participatory approach
- Different policy and management responses relating to nature are often not well represented




# IPCC Shared Socio-economic Pathways: Findings from 2019 Global BES assessment



Nature is not a focus in the SSP-RCP framework

O'Neill et al. 2017 *Climate Change*



“Stories are powerful things: they create our reality as much as they explain it.” – Alex Evans

# We need to learn to tell better science stories


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EDITORIAL · 07 MARCH 2018

## Learn to tell science stories

Ocean researchers are among those inspired by science fiction to tell diverse tales of the future.

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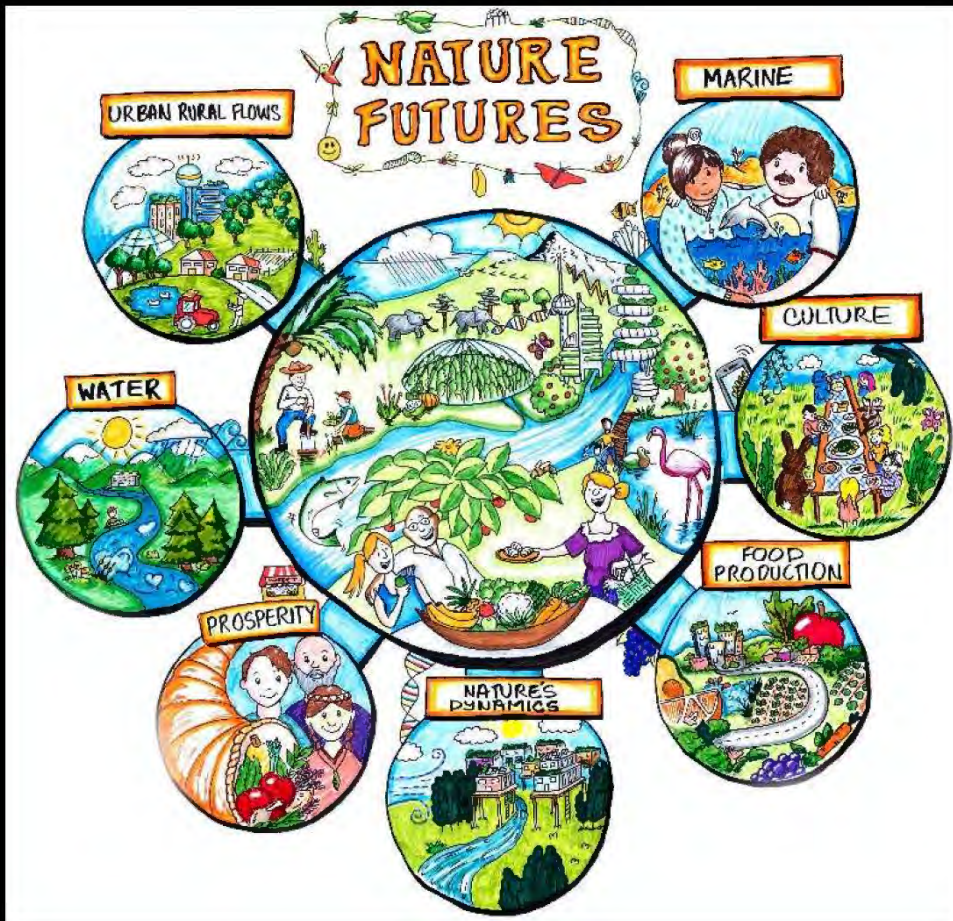
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**How to write for Nature Futures**

<https://www.nature.com/articles/d41586-018-02740-5>



Science-fiction Prototyping (Merrie et al 2018, *Futures*)

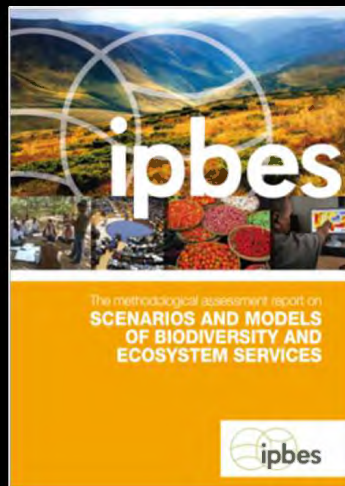


IPBES Expert group on scenarios and models (2016 - 2019) tasked to establish a new Global Scenarios Framework:

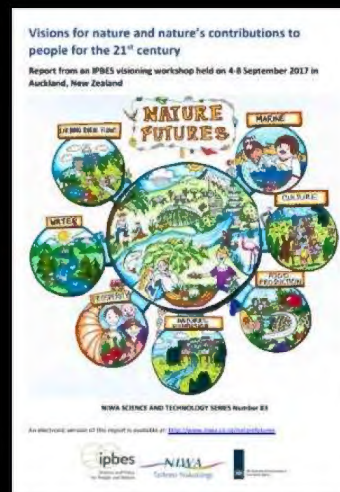
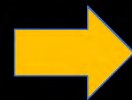
- Nature-centric
- Positive – provide direction for futures that we want to help us determine what we need to do to achieve goals and targets
- Recognise that there are different world views, knowledge systems, ways of valuing nature



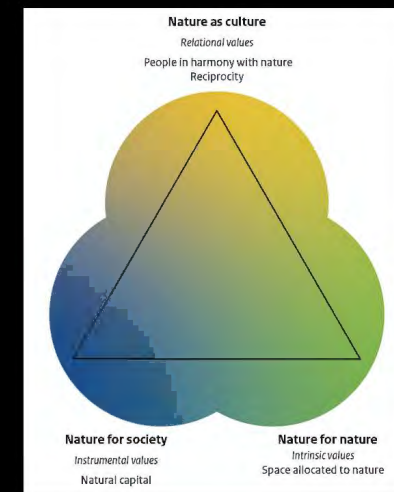
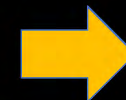
# IPBES Task Force on Scenarios and Models of biodiversity and ecosystem services



Phase I (2014-2016):  
Assessment of the use  
of scenarios and  
models of BES

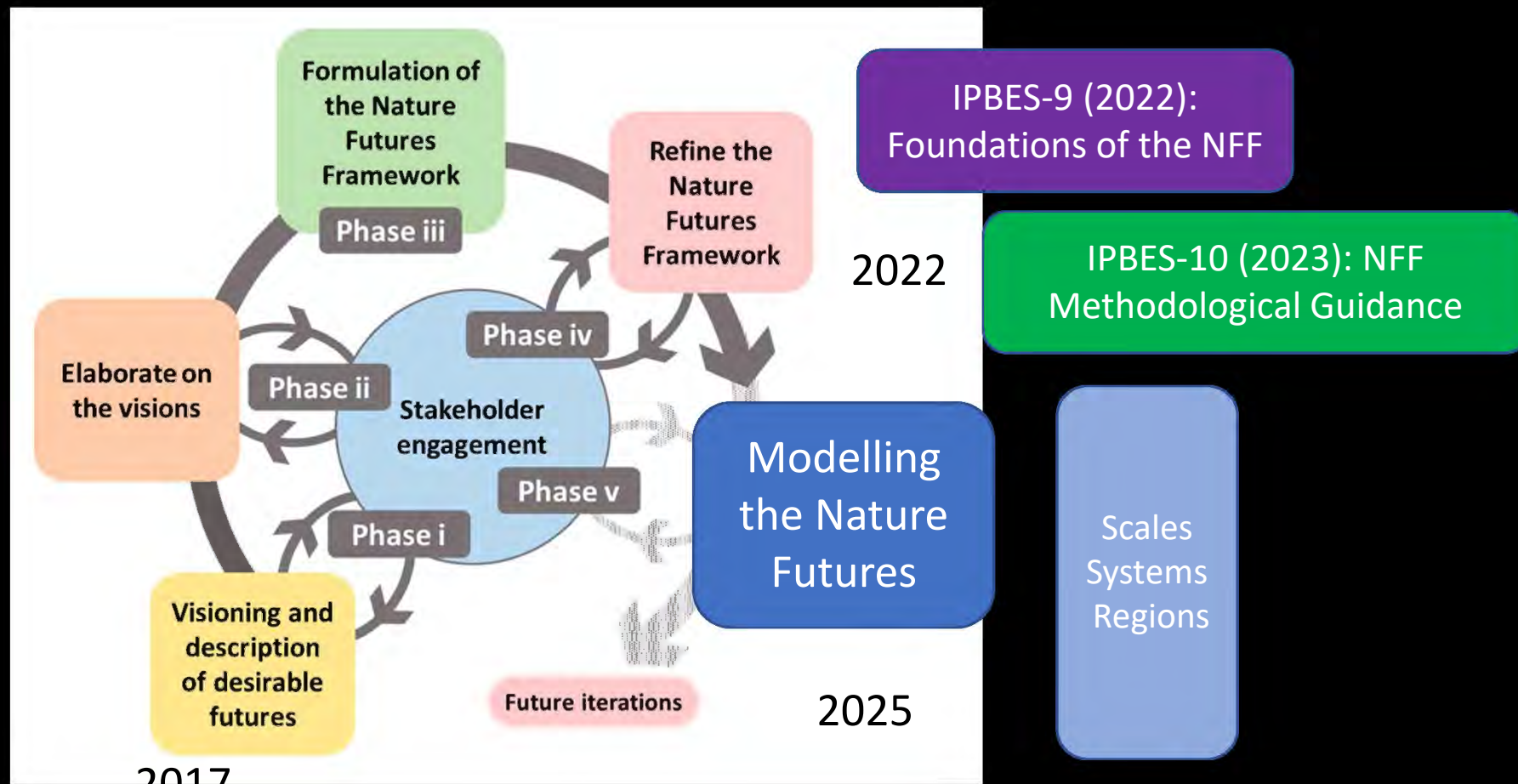


Phase II (2016-2019):  
initial participatory  
development of the  
Nature Futures  
Framework



Phase III (2019-2023):  
further development of  
Nature Futures  
Framework scenarios

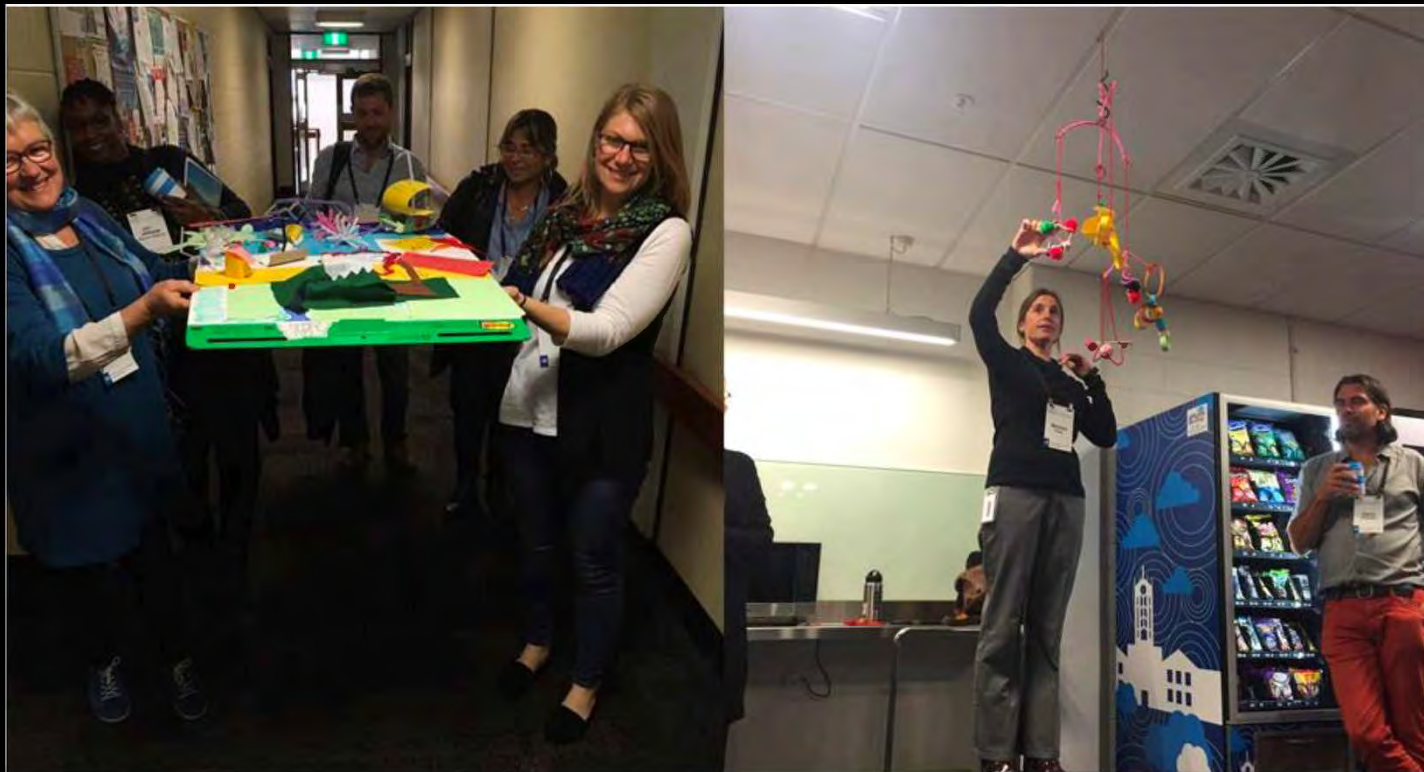
# IPBES Task Force on Scenarios and Models: Nature Futures Framework Timeline



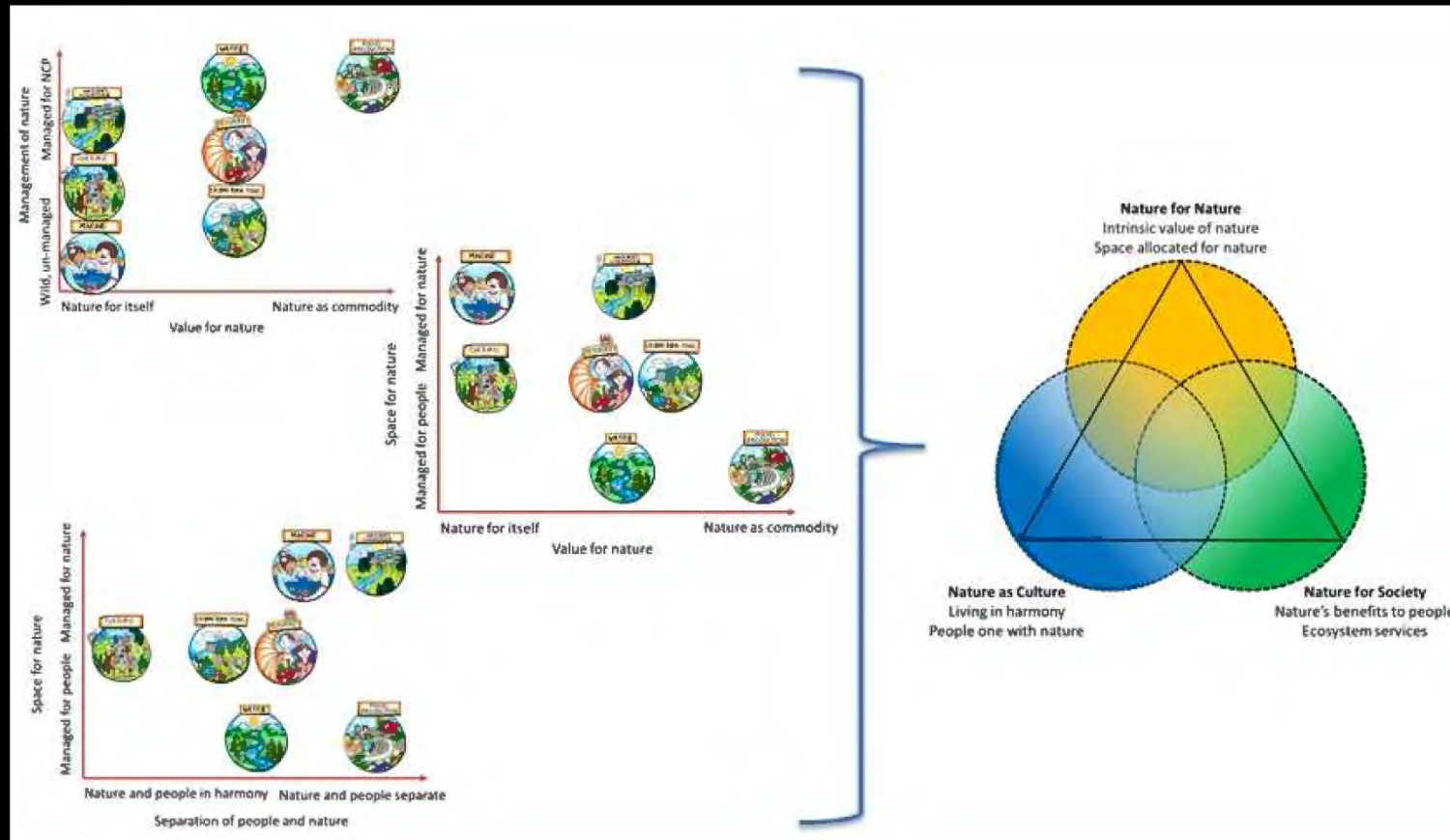
Adapted from Pereira, L. et al. (2020) *People and Nature*

## 2017: Generating 7 visions of desirable futures for people and nature with diverse IPBES stakeholders

- 1<sup>st</sup> step in developing new global biodiversity scenarios “Visioning Nature Futures” Workshop 4-8 Sep 2017, Auckland, New Zealand



# 2018: Mapping visions across dimensions and drivers: The Hague



Pereira, L. M., K. K. Davies, E. den Belder, ...C. J. Lundquist. 2020. Developing multiscale and integrative nature–people scenarios using the Nature Futures Framework. *People and Nature* 2:1172-1195.

# 2021: Online Dialogues with National focal points and ILK Task Force workshop



Choti Tekam (Africa)



Anjali Choudhary (Asia)



Naresh Bhoje (Americas)

# INDIGENOUS & LOCAL KNOWLEDGE

Dialogue Workshop on Scenarios & the Nature Futures Framework

We MUST Look to the PAST to INFORM the FUTURE...

ALL IS IN EVOLUTION

Welcome from  
KAMAL KUMAR Rai  
Nepal  
Carolyn Lundquist  
New Zealand



Medicines  
Respect Indigenous & Local Knowledge

RELATIONSHIPS with NATURE

Land Based

SELF-DETERMINATION

NEED A SHARED VISION

ANCIENT PRACTICES help us survive

INDIGENOUS CYCLES - Biospheres, CLIMATE

OUR VALUES ARE RELATIONAL to the LAND

SCENARIOS  
quantitative or qualitative  
WE SEE FUTURE possibilities

NEXT STEPS

Revitalize ROLES of Women

INDIGENOUS KNOWLEDGE is legitimate & should be used in Decision Making LOCAL NATIONAL, Global

LAND & PEOPLE are Cyclical and INTERRELATED

ceremony, DANCE & SONGS!

SCENARIOS SHOULD NOT HAVE ENDING POINTS

Conservation SUSTAINABILITY STOP EXPLOITATION of people & LANDS

FOOD SYSTEMS  
Asia Pacific  
THREE REGIONAL Sessions  
Europe & Africa  
Americas  
Knowledge SYSTEMS  
SPIRITUALITY  
GOVERNANCE SYSTEMS  
Protect LANDS & Waters

Encourage Youth to WORK with ELDERs



FIRE, AIR, WATER

HARMONY with NATURE

Change Policy GOVERNMENT Legislation  
another Future IS POSSIBLE

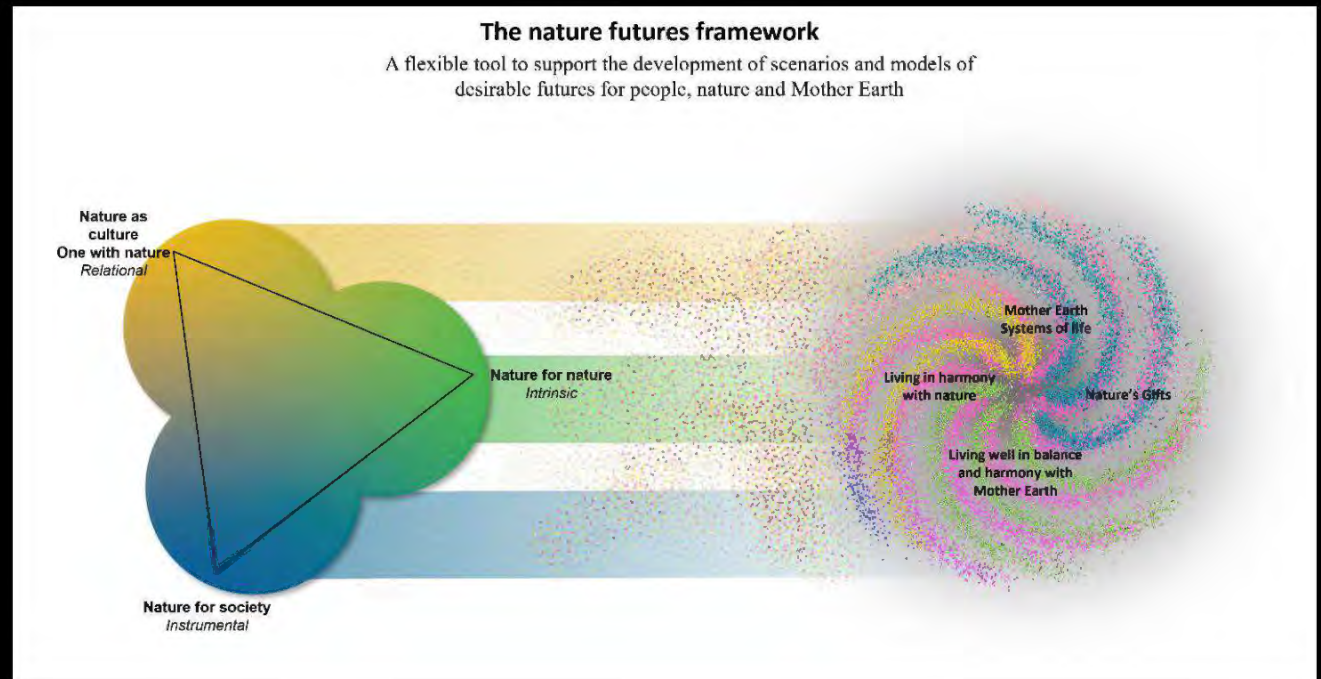
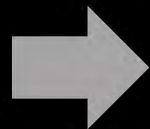
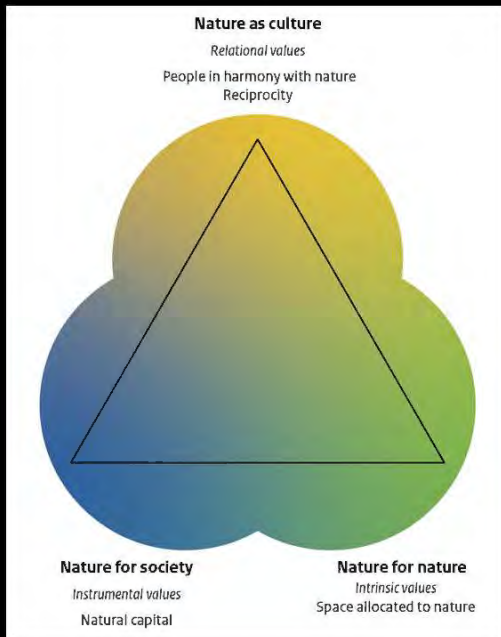
PATHWAYS SUPPORT INDIGENOUS ECONOMIES

Defend LANDS & WATER

ADVOCACY HOLISTIC MODELS



# The Nature Futures Framework: A flexible tool to support the development of scenarios and models of desirable futures for people, nature and Mother Earth



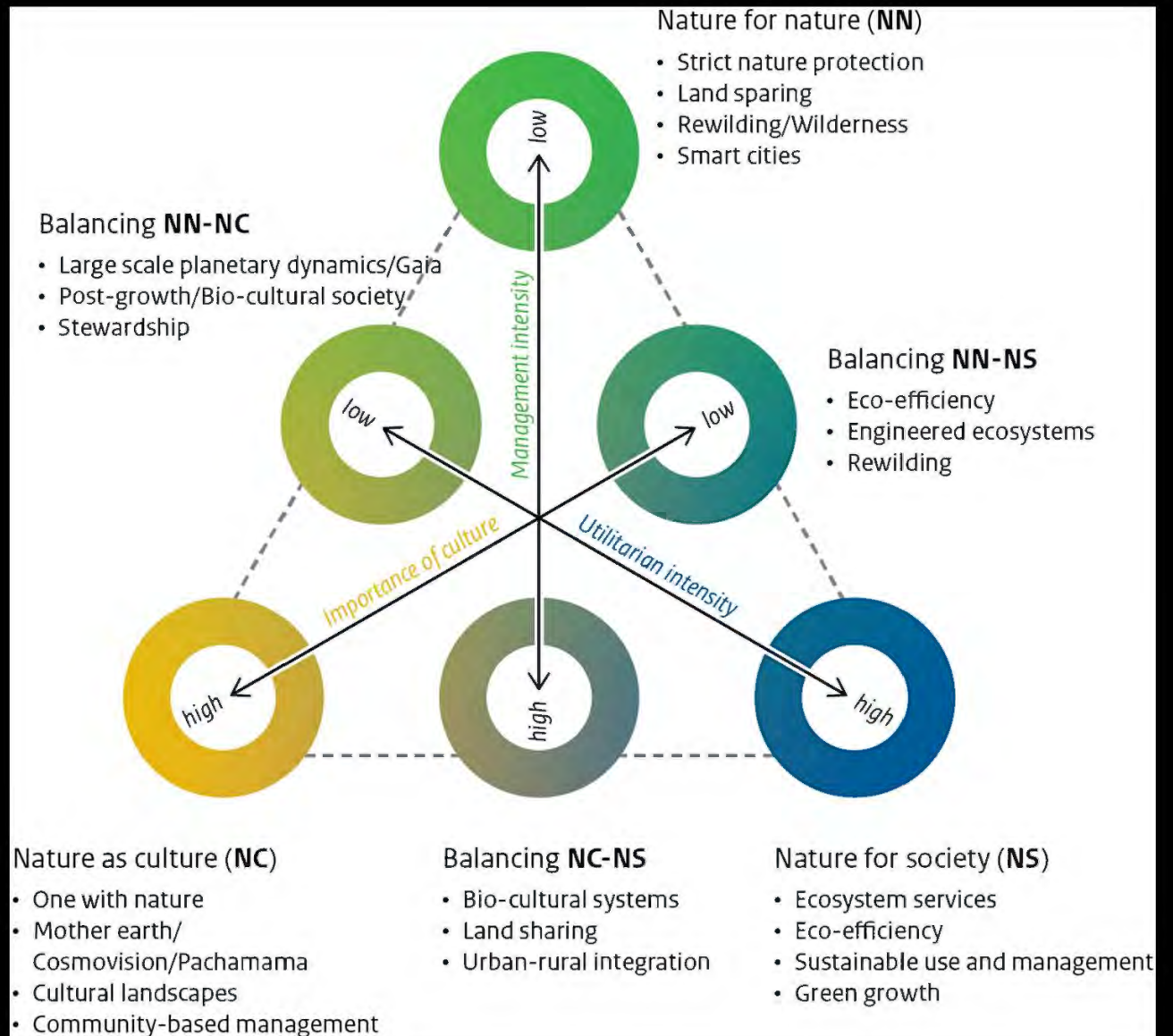
## Many uses for the Nature Futures Framework

- Visioning
- Identifying pathways to positive futures
- Narrative development
- Qualitative modelling
- Quantitative modelling
- Developing indicators of pluralistic nature values

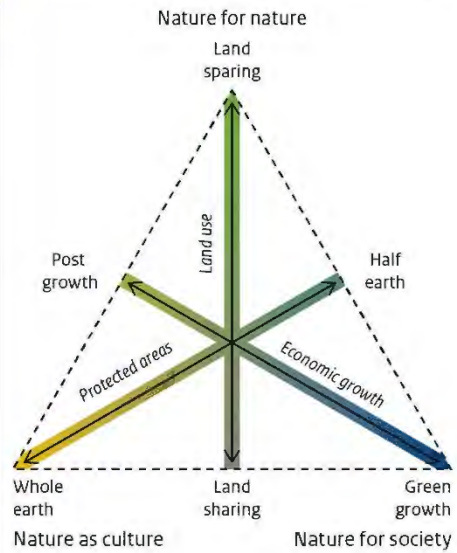




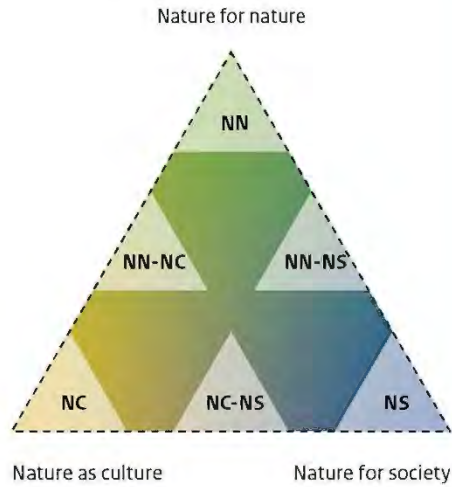
# NFF illustrative narratives: Characterizing six areas of the NFF space



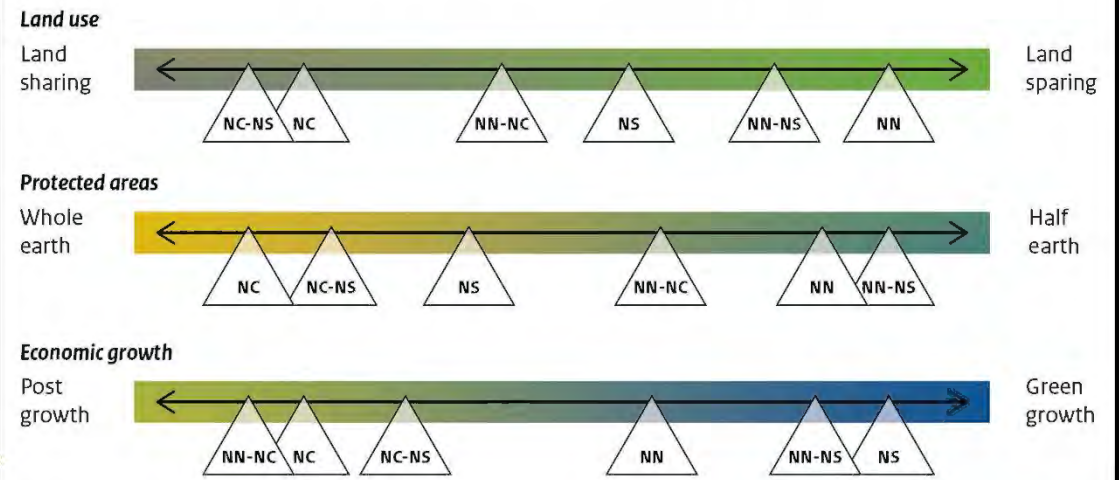
**A. Scenarios of protected areas, land use and economic growth in the Nature Futures Framework**



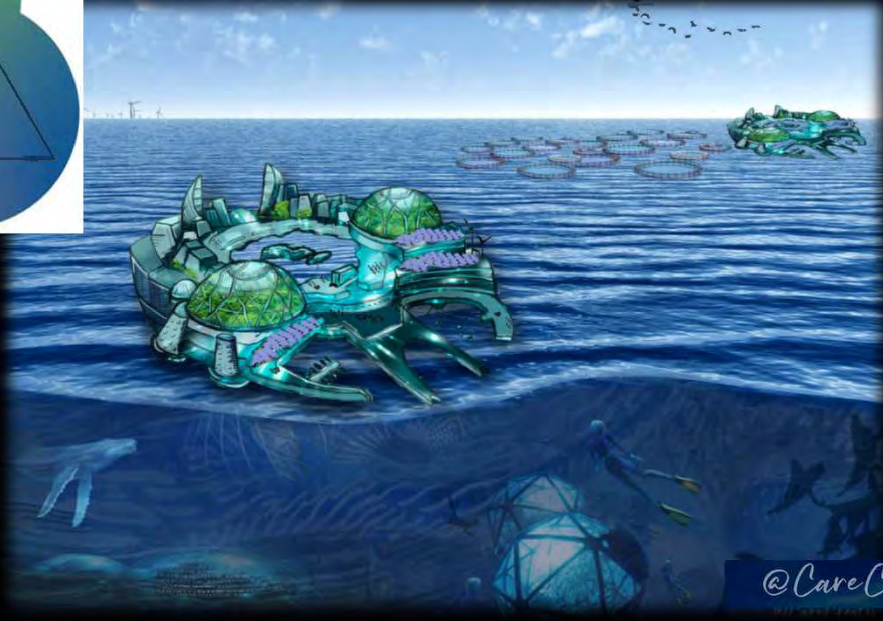
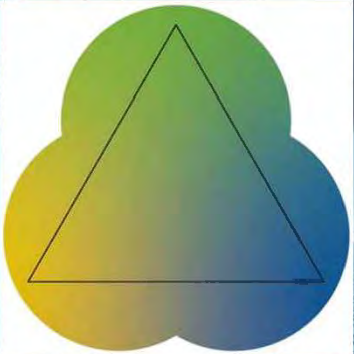
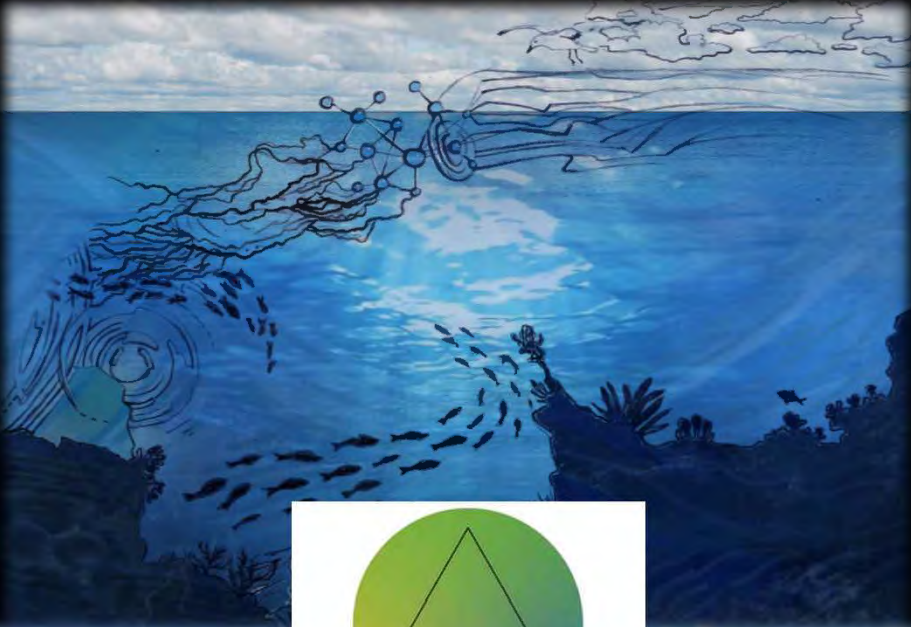
**B. The 6 narrative points in the Nature Futures Framework**



**C. The 6 illustrative narratives along the axes of 3 scenarios**



# NFF for the High Seas



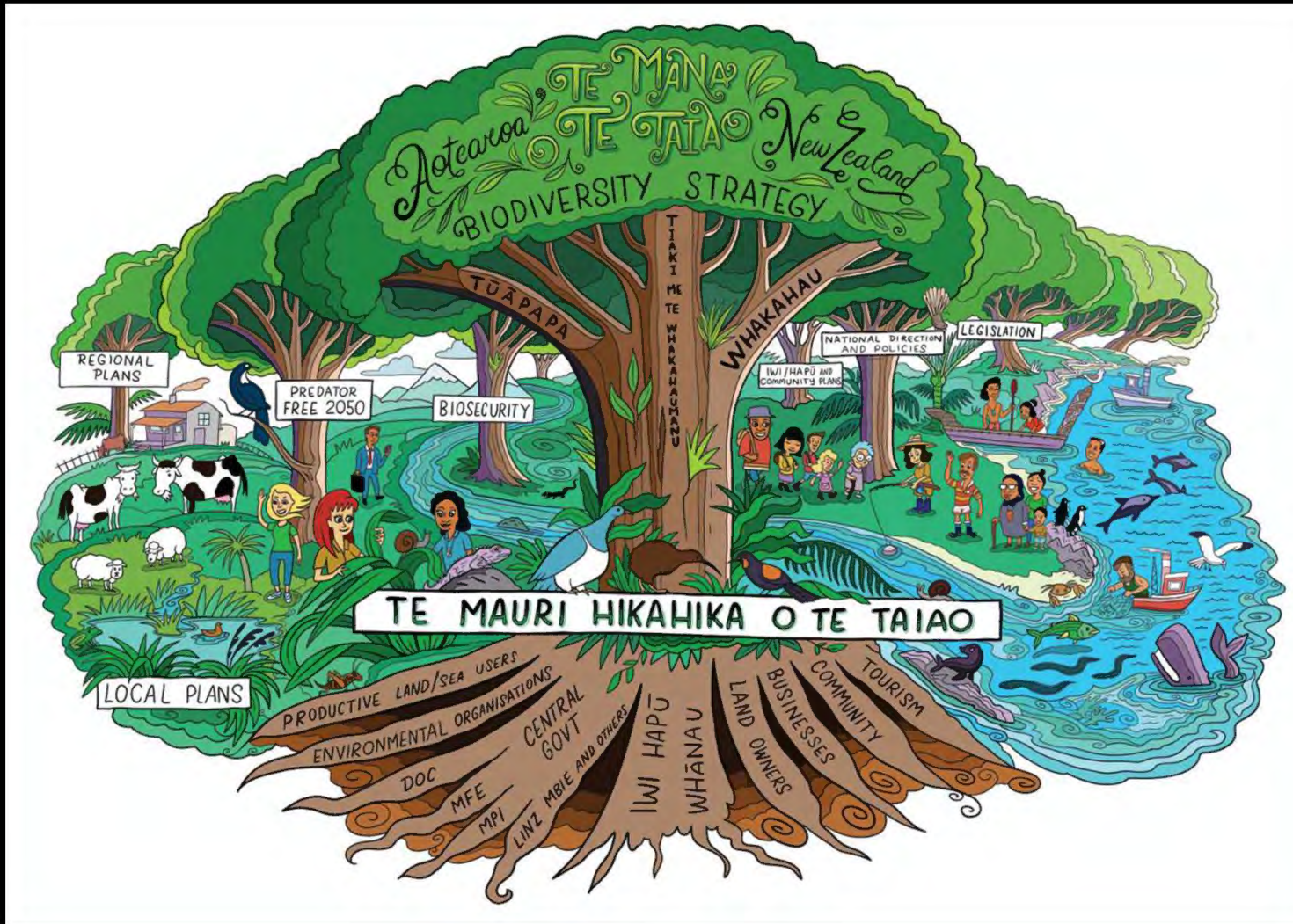
Pereira et al 2023

@CareCreative



Nature Futures Visioning for the Korean DMZ

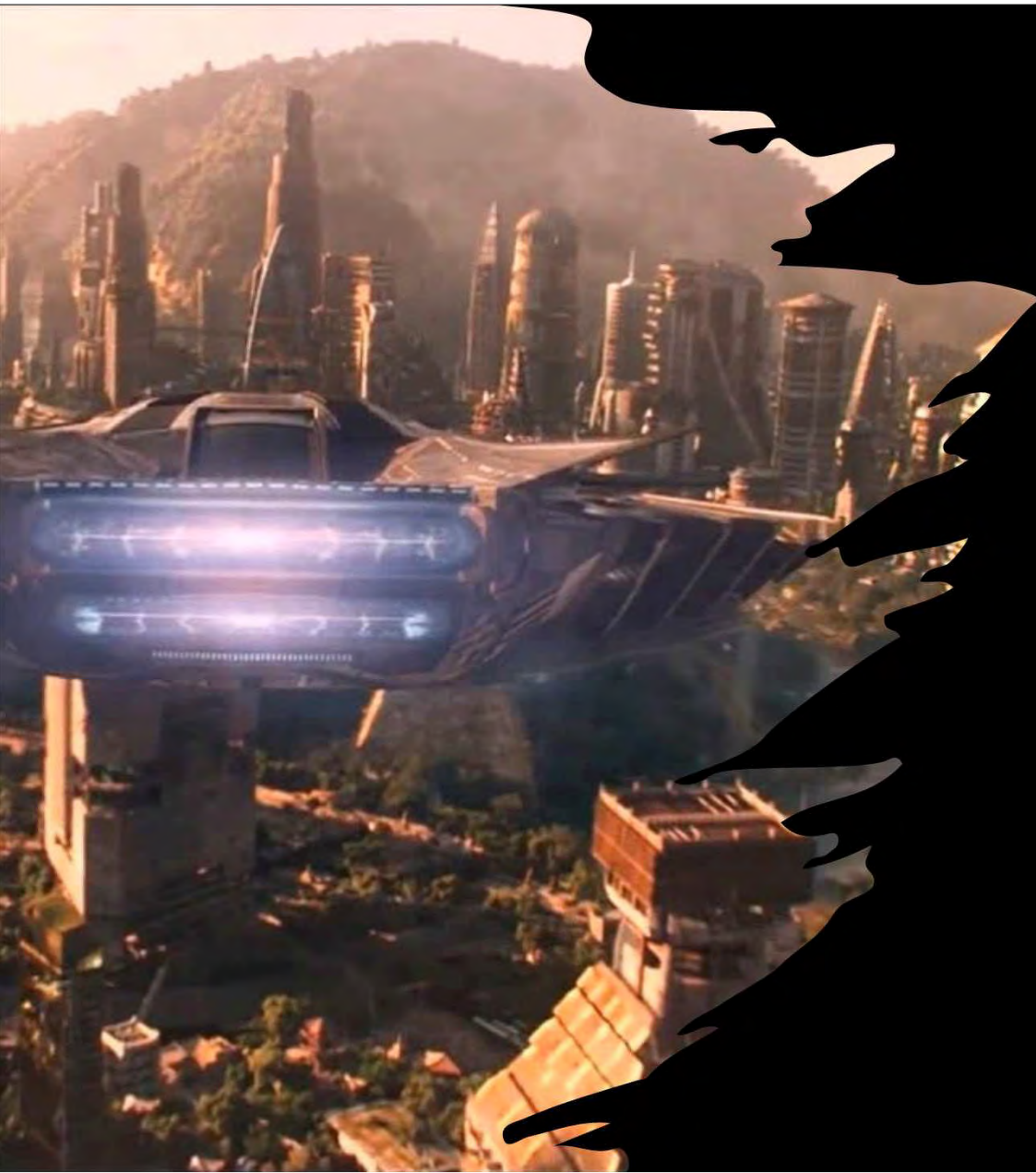
# Informing National Biodiversity Strategies and Action Plans (NBSAPs)



Te Mana o te Taiao  
– Aotearoa New  
Zealand Biodiversity  
Strategy 2020

# Nature Futures with the Ngoni Kingdom, Malawi



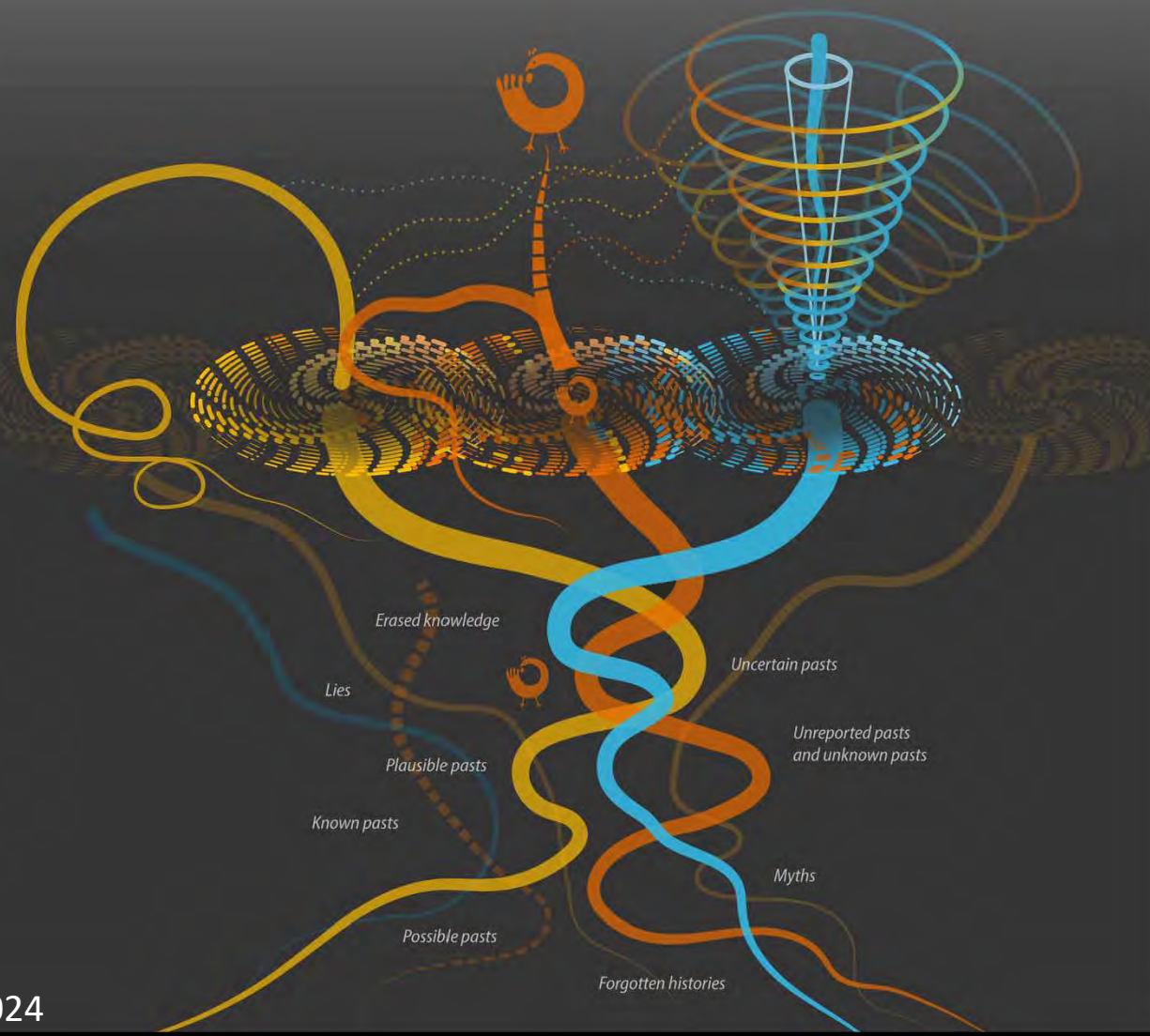


“Sci-Fi is the only genre that enables African writers to envision a future from our African perspective... The value of this envisioning cannot be overstated nor negated. **If you can't see and relay an understandable vision of the future, your future will be co-opted by someone else's vision, one that will not necessarily have your best interests at heart**” (Hartmann, 2012: 111).”

MULTIPLE  
FUTURES

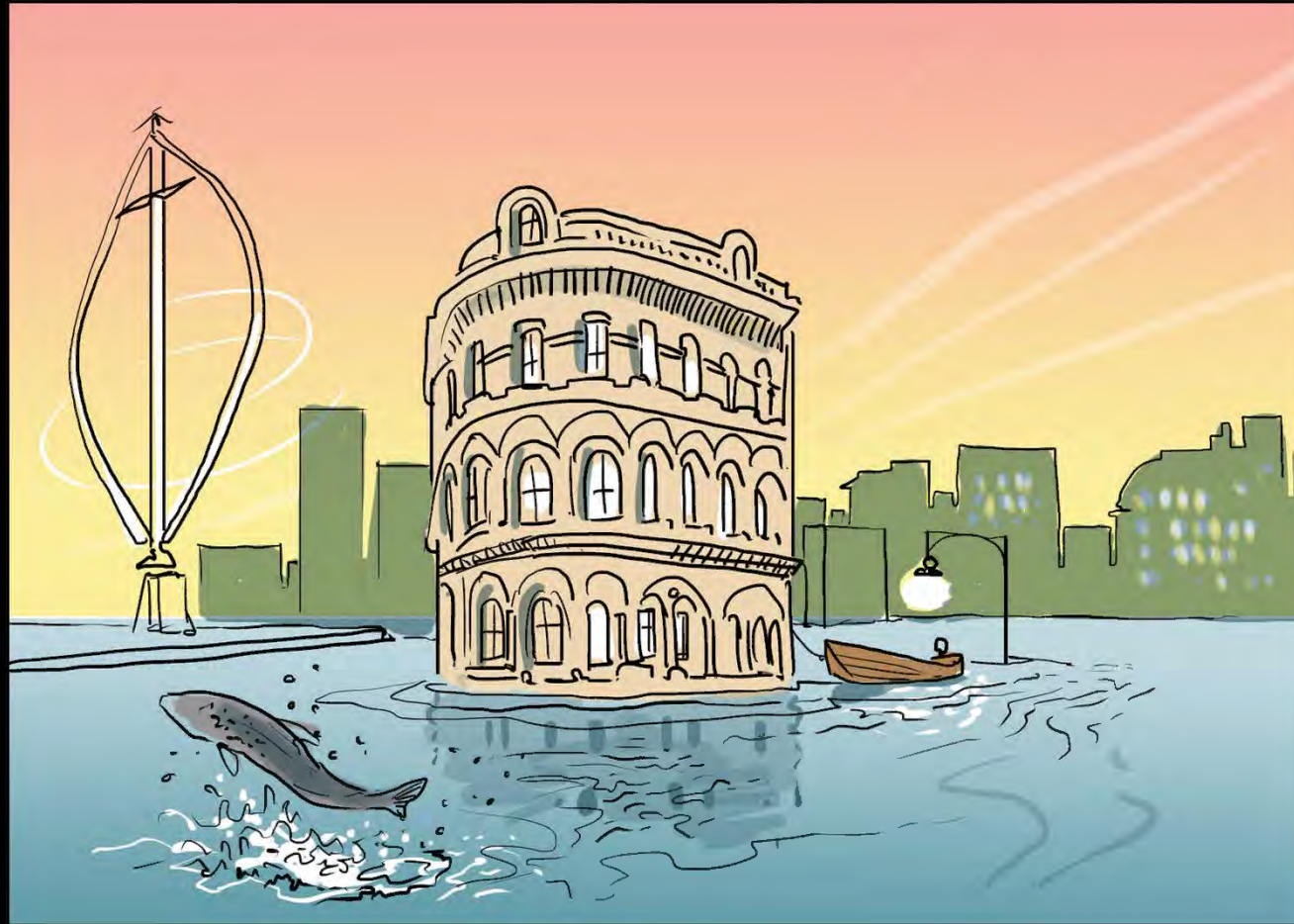
MULTIPLE  
PRESENTS

MULTIPLE  
PASTS



Entangled Time Tree, Terry et al 2024





*Humans have changed the way the world works.  
Now they have to change the way they think about it too.*  
- *The Economist, 2011*