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## **The Pope, The Poor, The Planet**

Jose Ramon T. Villarin

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*THE POPE, THE POOR  
AND THE PLANET:  
Overcoming Insularity Via  
An Integral Ecology*

FR JOSE RAMON T VILLARIN, SJ  
DEPARTMENT OF PHYSICS  
ATENEO DE MANILA UNIVERSITY

# *THE POPE, THE POOR, & THE PLANET*

*Overcoming Insularity Via An Integral Ecology*

**FR JOSE RAMON T VILLARIN, SJ**

**DEPARTMENT OF PHYSICS**

**ATENEO DE MANILA UNIVERSITY**

## OUTLINE

- The complexity of the crisis: a climate example
- Roots of the crisis
- Our response and some pathways of hope
- Ten simple steps

## THE EXPONENTIAL (COMPOUNDING GROWTH / DECAY)

$$dx/dt = r \cdot x$$

In English:

Change of some thing in time depends on  
how much of that thing you have right now.

## THE EXPONENTIAL (COMPOUNDING GROWTH / DECAY)

$$\frac{dx}{dt} = r \cdot x$$
$$x(t) = x(t_0)e^{(r \cdot t)}$$

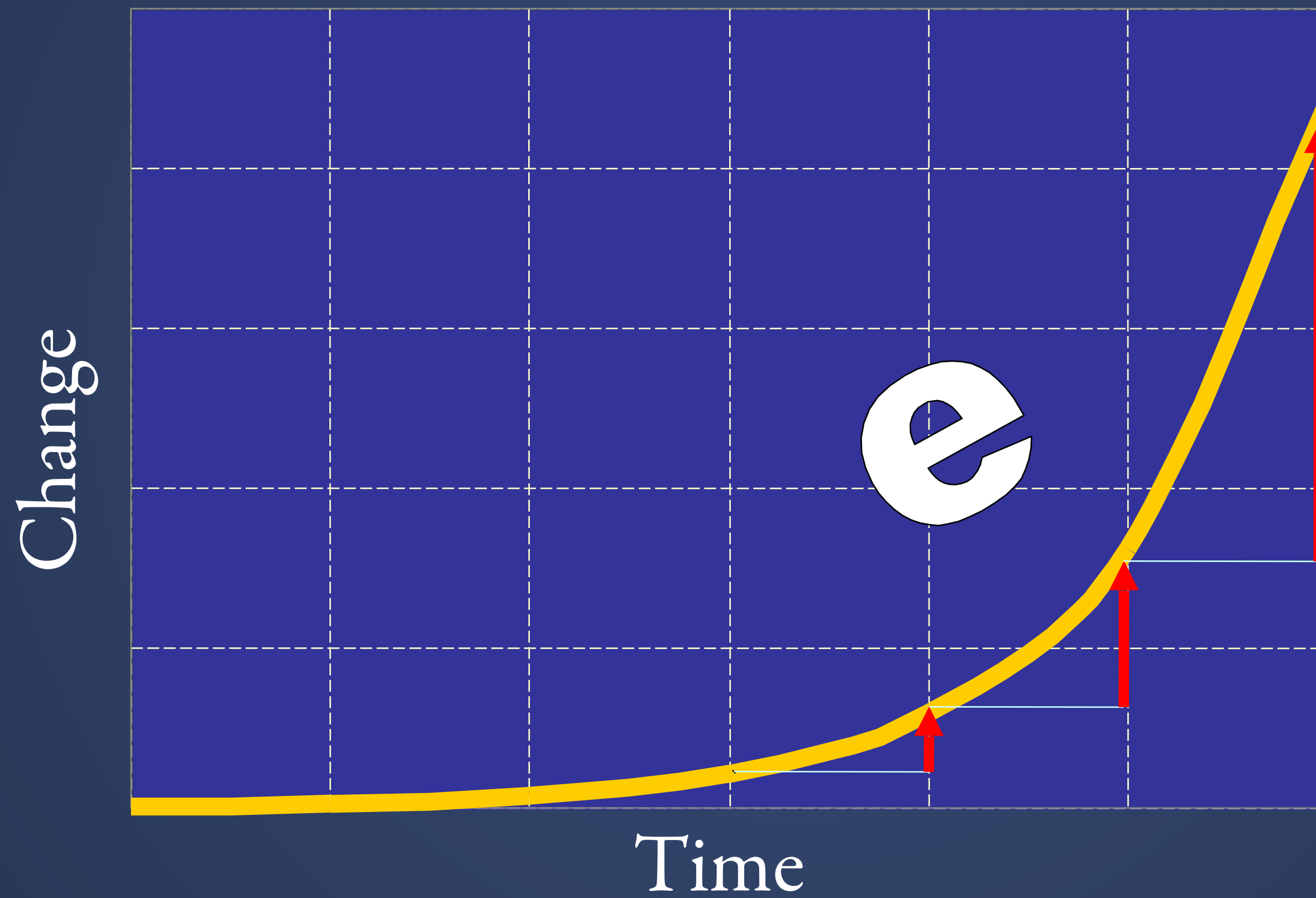
In English:

In growing, things grow slowly at the start  
and grow more rapidly later.

(In decaying, things decay rapidly at the start  
And decay more slowly later.)

## THE EXPONENTIAL (COMPOUNDING GROWTH / DECAY)

### The Exponential



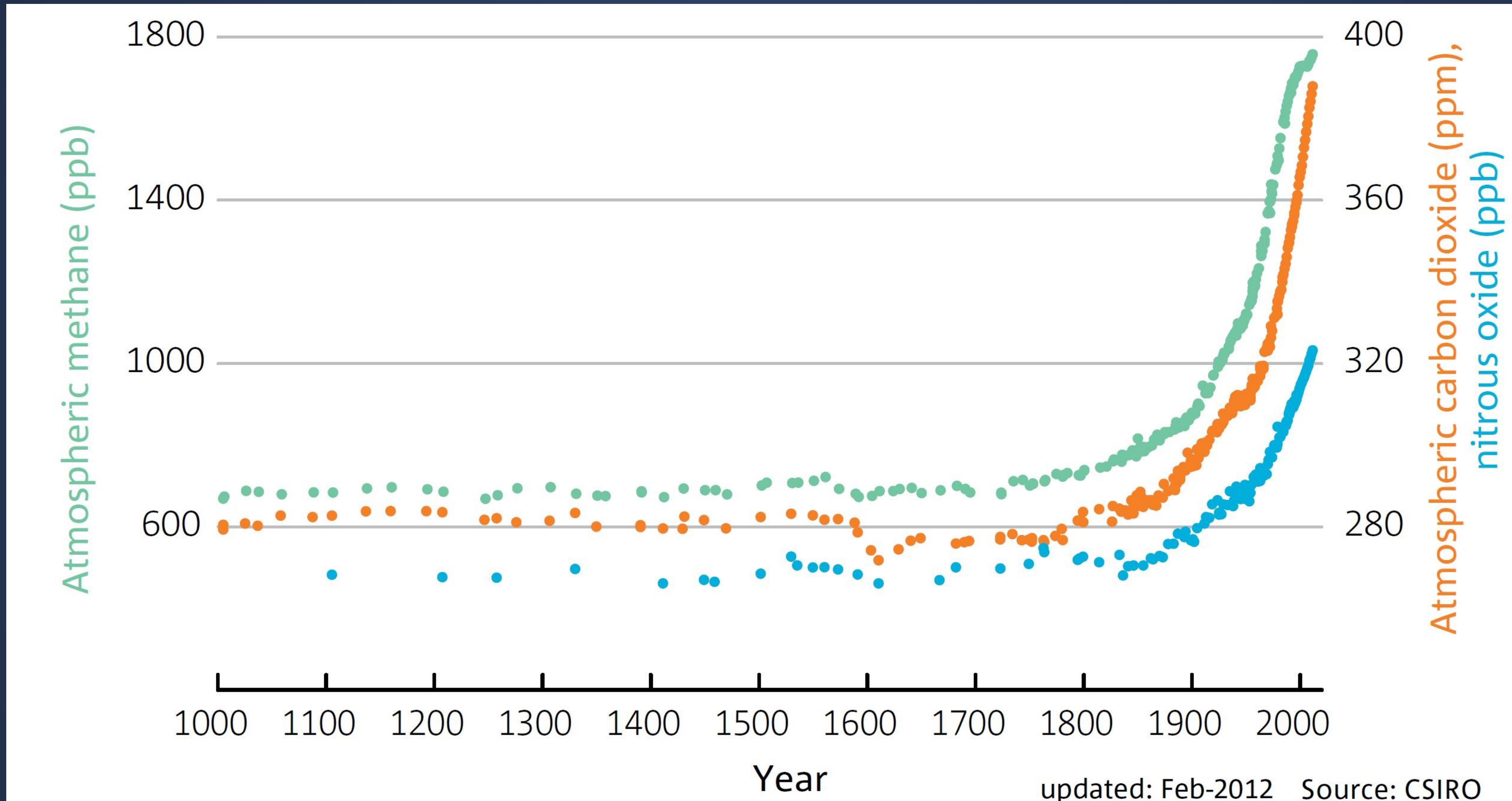


# EXPONENTIAL GROWTH OF GHGs

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# Exponential Growth of GHGs



updated: Feb-2012 Source: CSIRO

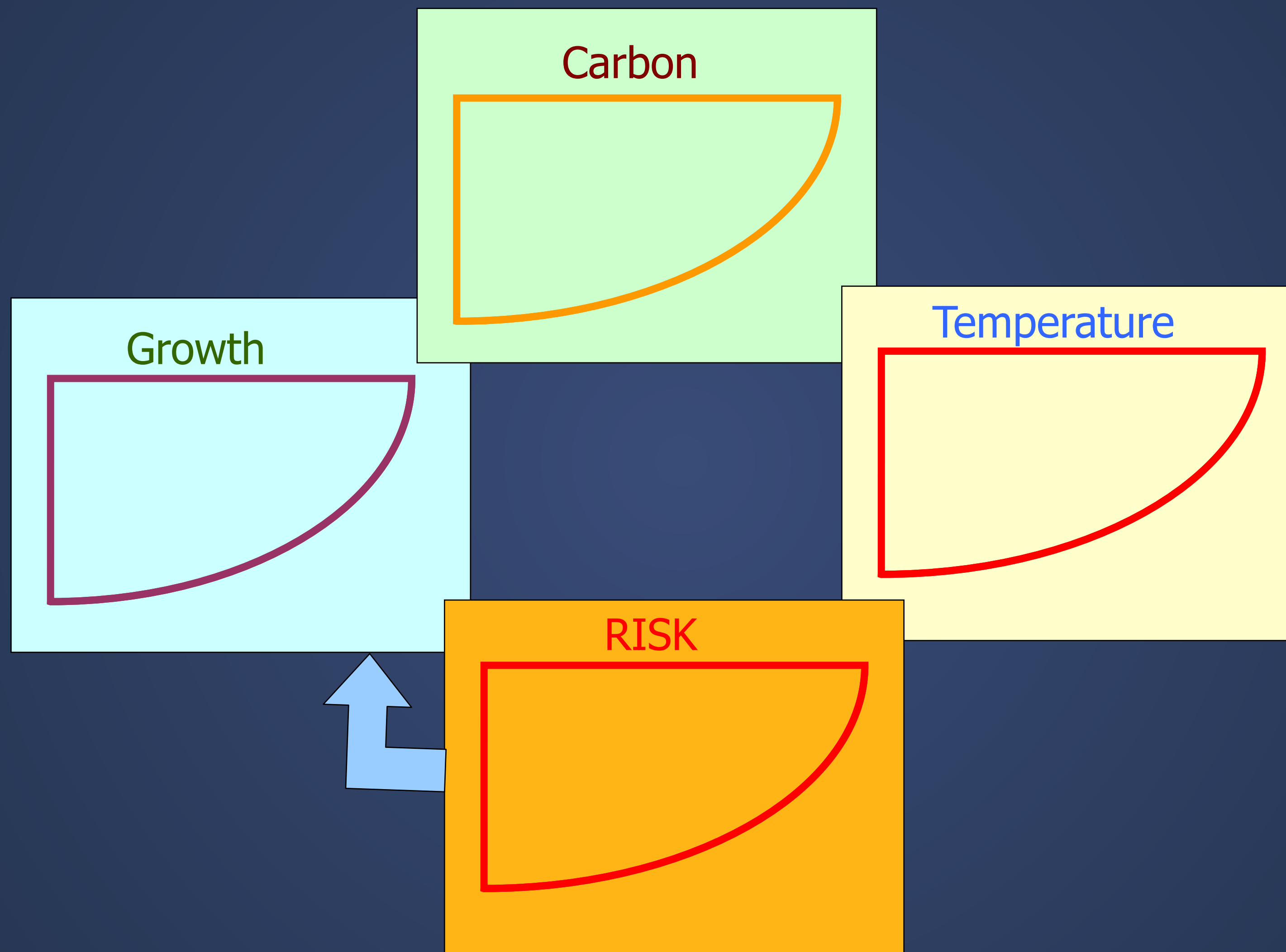
<http://www.csiro.au/>

# SCHEMATIC OF THE CRISIS

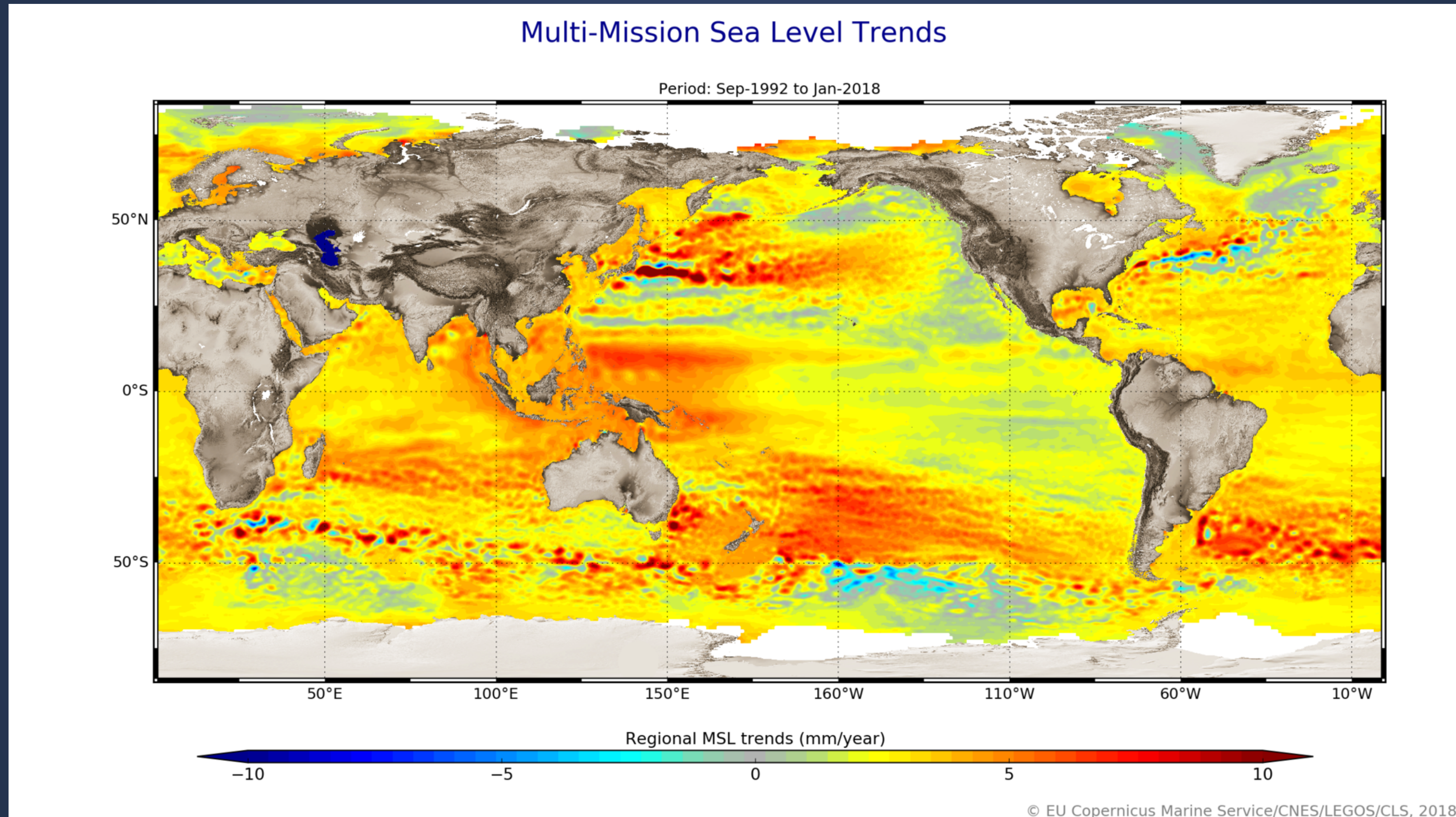
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# SCHEMATIC OF THE CRISIS



## SAMPLE IMPACT: SEA LEVEL RISE



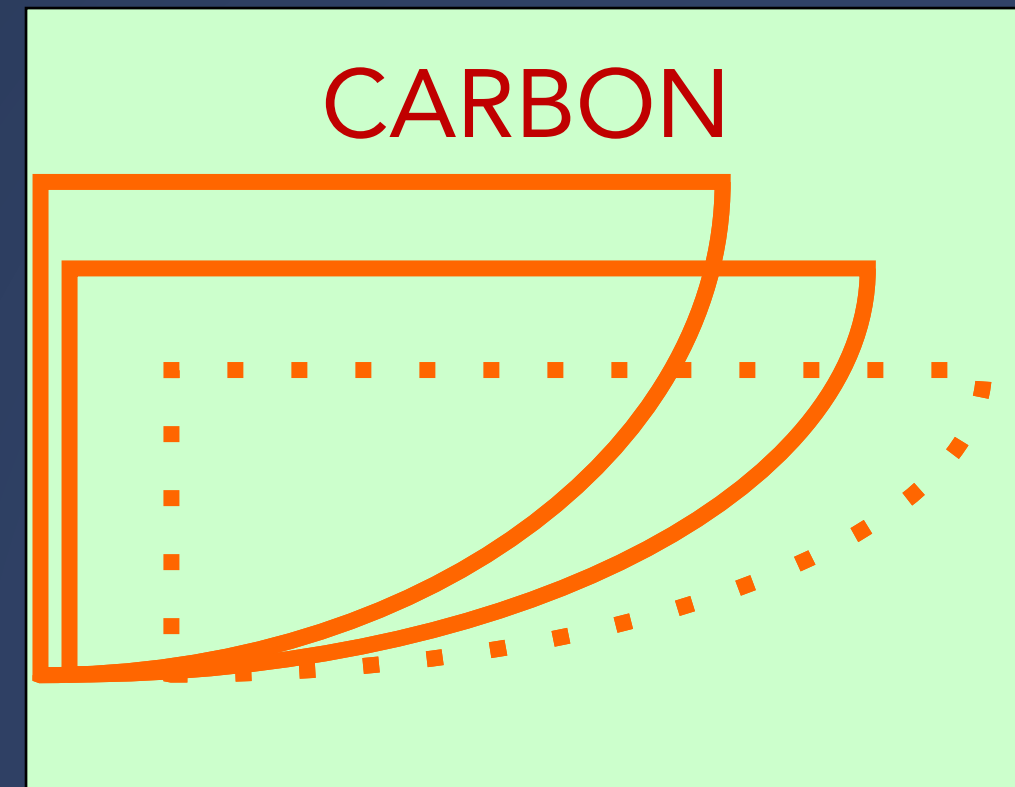
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# SOLUTIONS: MITIGATION AND ADAPTATION

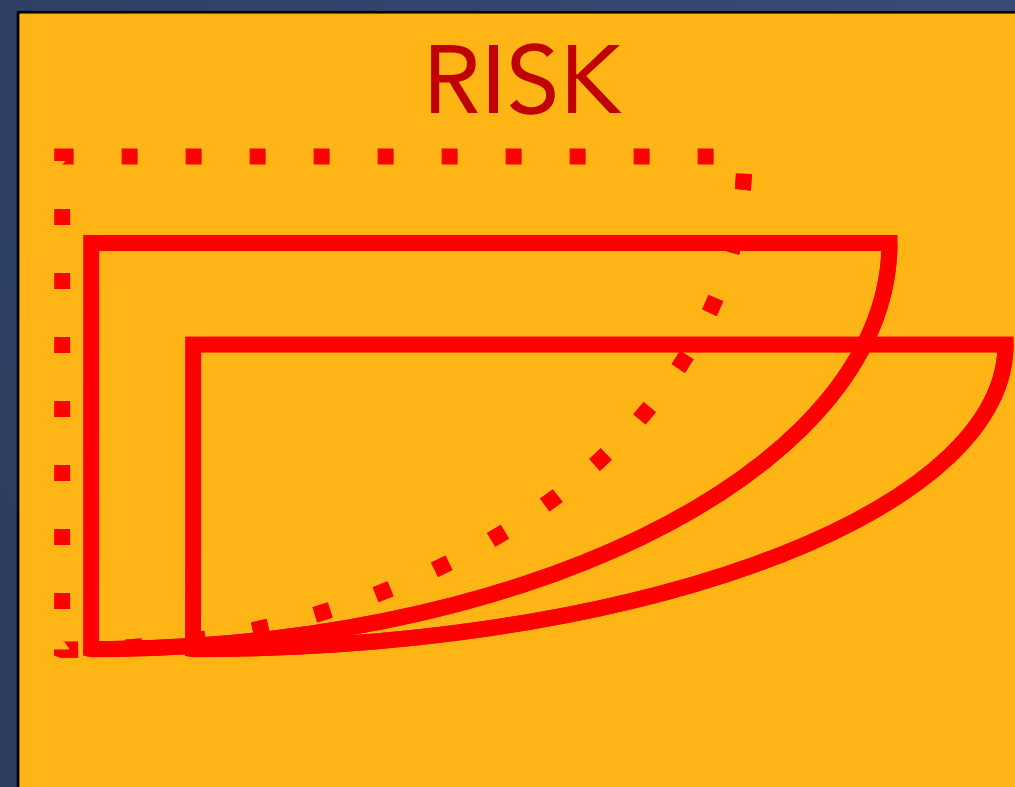
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## SOLUTIONS: MITIGATION AND ADAPTATION



Reduce the carbon.



Reduce the risk.

WHERE'S THE CARBON?

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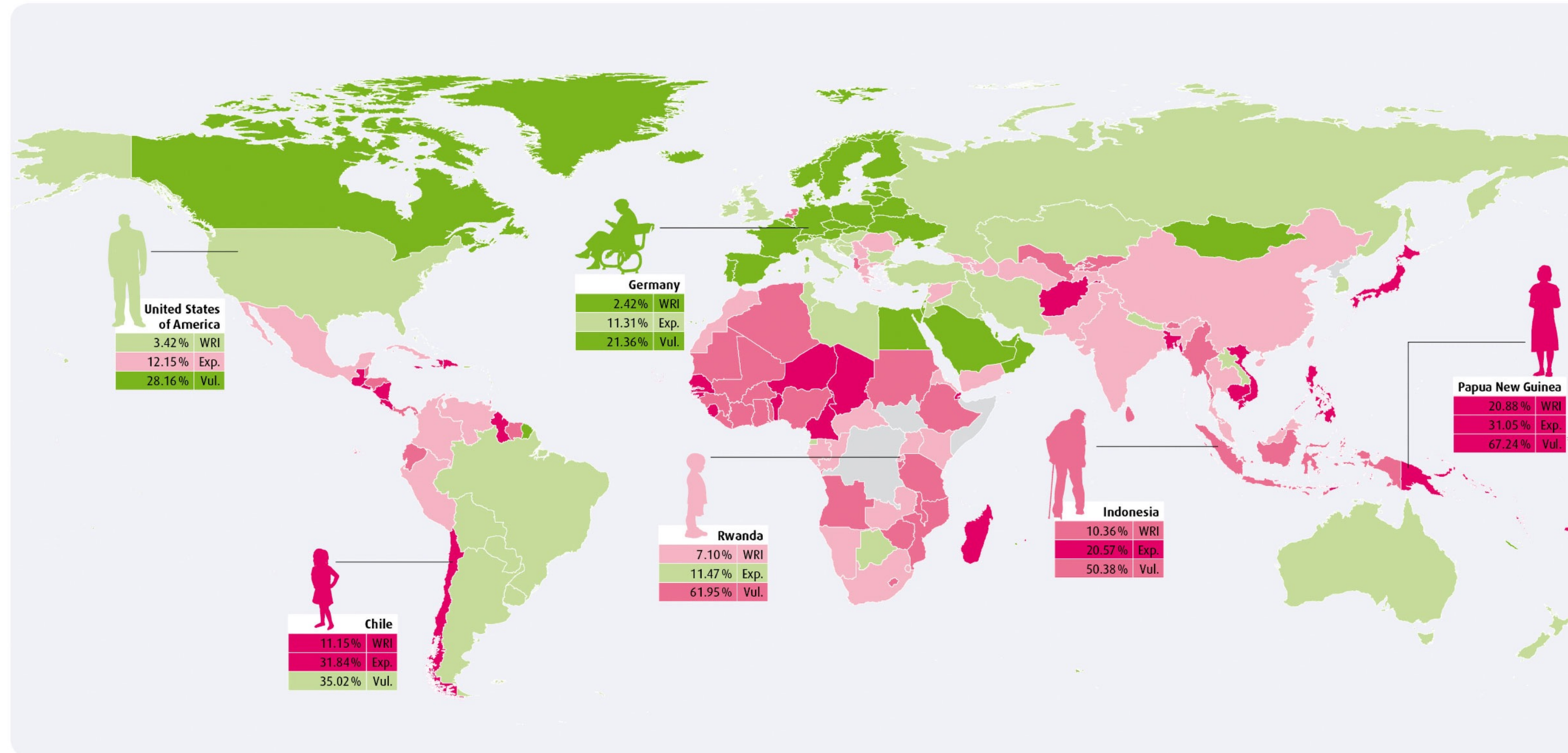
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# WHERE'S THE RISK?

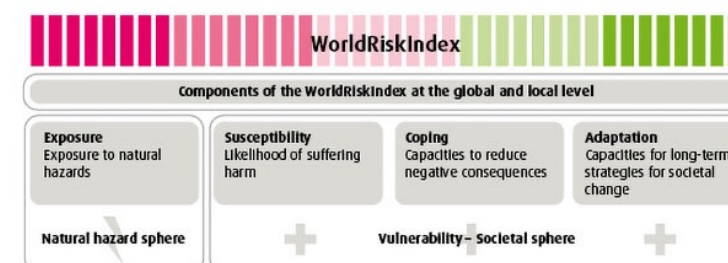


## WorldRiskIndex 2018



WorldRiskIndex (WRI) in %	Exposure in %	Vulnerability in %
very low 0.36 - 3.15	very low 1.02 - 9.53	very low 20.97 - 32.01
low 3.16 - 5.45	low 9.54 - 11.70	low 32.02 - 40.77
medium 5.46 - 7.13	medium 11.71 - 14.50	medium 40.78 - 48.60
high 7.14 - 10.43	high 14.51 - 17.73	high 48.61 - 63.00
very high 10.44 - 50.28	very high 17.74 - 86.46	very high 63.01 - 76.47
no data available	no data available	no data available

Max. = 100%, Classification according to the quantile method.



10 countries with highest risk	10 countries with highest exposure	10 countries with highest vulnerability
Vanuatu 50.28	Vanuatu 86.46	Central African Republic 76.47
Tonga 29.42	Tonga 55.92	Chad 74.70
Philippines 25.14	Brunel Darussalam 52.71	Niger 73.23
Solomon Islands 23.29	Philippines 49.94	Eritrea 72.38
Guyana 23.23	Japan 46.55	Guinea-Bissau 71.67
Papua New Guinea 20.88	Guyana 45.56	Liberia 71.49
Guatemala 20.60	Costa Rica 44.27	Mozambique 71.19
Brunel Darussalam 18.82	Guatemala 38.50	Sierra Leone 70.80
Bangladesh 17.38	Solomon Islands 37.81	Burundi 69.87
Fiji 16.58	Mauritius 37.22	Madagascar 69.68

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Data source: IFHV, based on the PREVIEW Global Risk Data Platform, CReSIS, CIESIN and global databases; detailed information at [www.WorldRiskReport.org](http://www.WorldRiskReport.org)

Climate Risk Report, 2018  
(<http://ehs.unu.edu>)

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## WHERE'S THE RISK?

Rank	Country	Risk (%)
1.	Vanuatu	50.28
2.	Tonga	29.42
3.	Philippines	25.14
4.	Solomon Islands	23.29
5.	Guyana	23.23
6.	Papua New Guinea	20.88
7.	Guatemala	20.60
8.	Brunei Darussalam	18.82
9.	Bangladesh	17.38
10.	Fiji	16.58
11.	Costa Rica	16.56
12.	Cambodia	16.07
13.	Timor-Leste	16.05
14.	El Salvador	15.95
15.	Kiribati	15.42

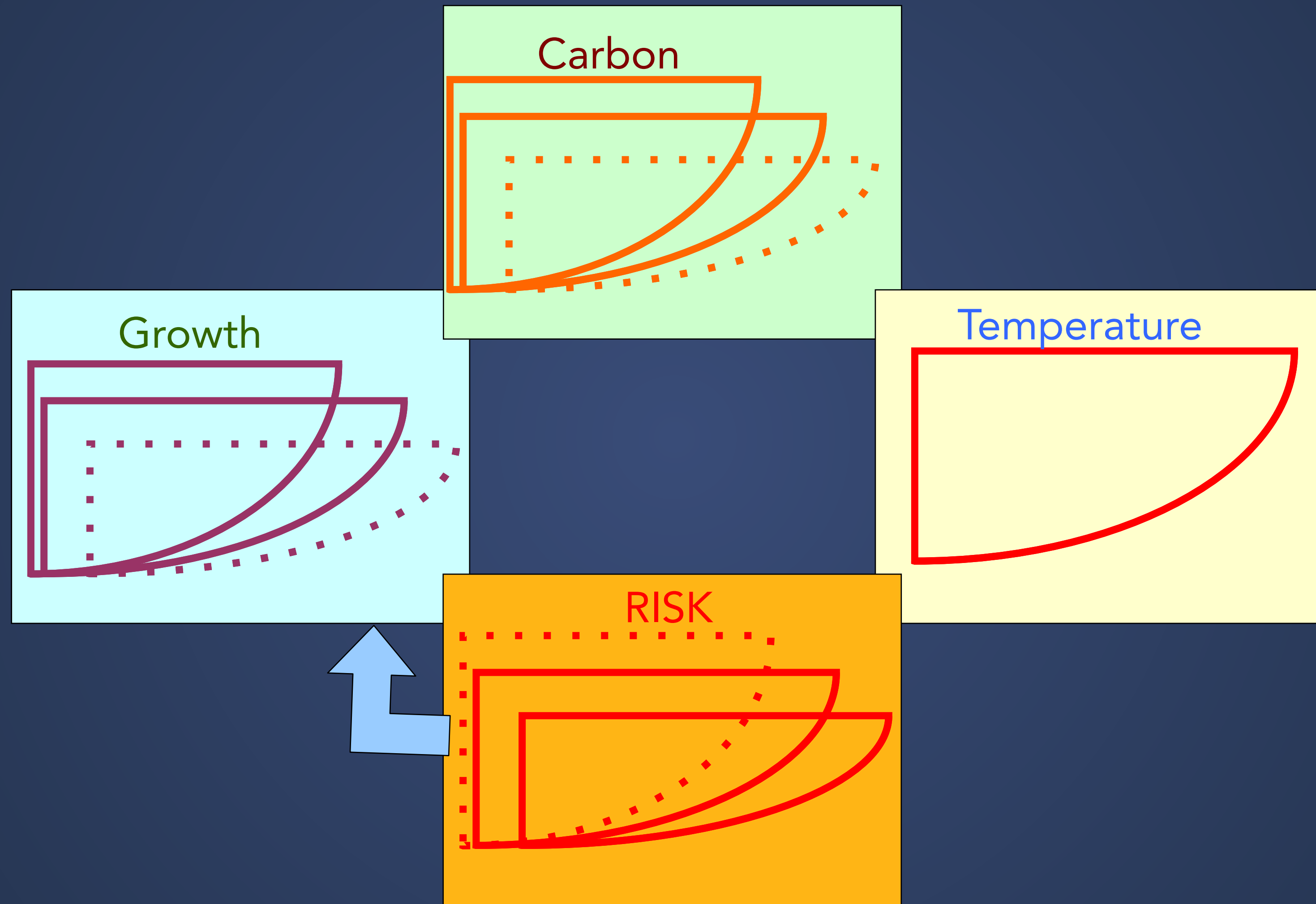
Climate Risk Report, 2018 (<http://ehs.unu.edu>)

# THE CLIMATE ETHICAL PROBLEM: DIFFERENTIATION

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# THE CLIMATE ETHICAL PROBLEM: DIFFERENTIATION

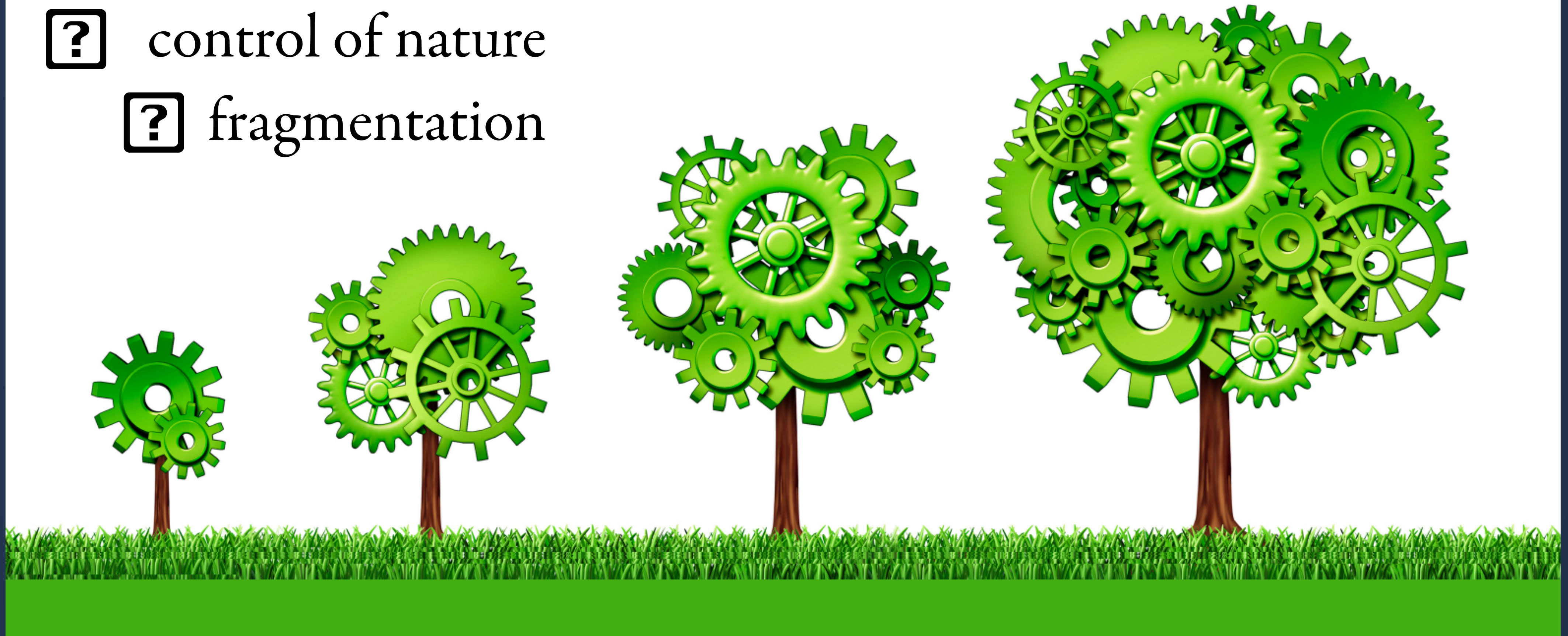


## ROOTS OF THE CRISIS

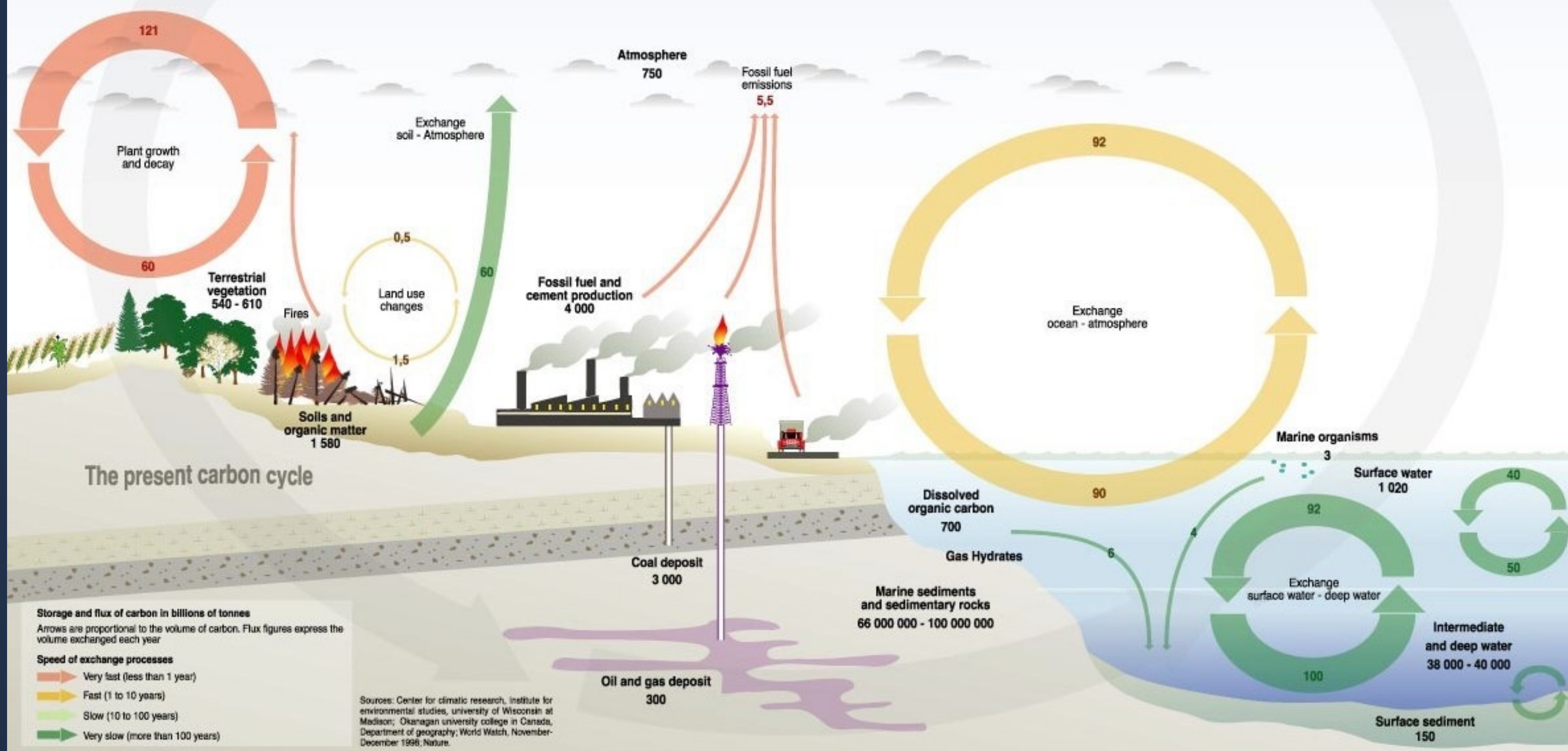
- Technocracy
- Misguided Anthropocentrism

# Technocracy

- ❑ control of nature
- ❑ fragmentation

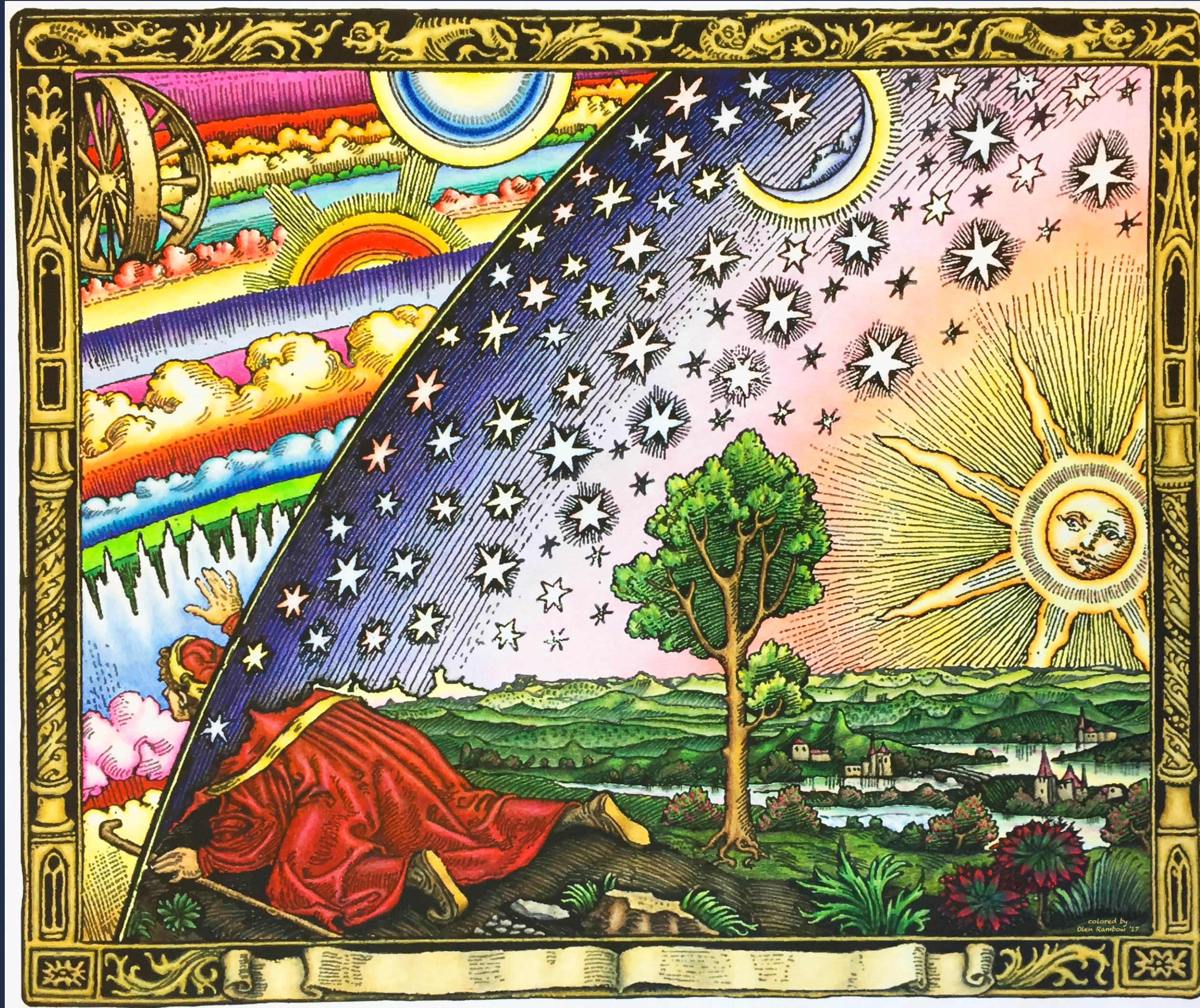


# The Carbon Cycle



Carbon cycle. (2005). In UNEP/ GRID-Arendal Maps and Graphics Library.  
 Retrieved 05:36, June 22, 2008  
 from [http://maps.grida.no/go/graphic/carbon\\_cycle](http://maps.grida.no/go/graphic/carbon_cycle).

## TECHNOCRACY



- Fragmentation
- Separation

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## ANTHROPOCENTRISM: Misguided sense of place

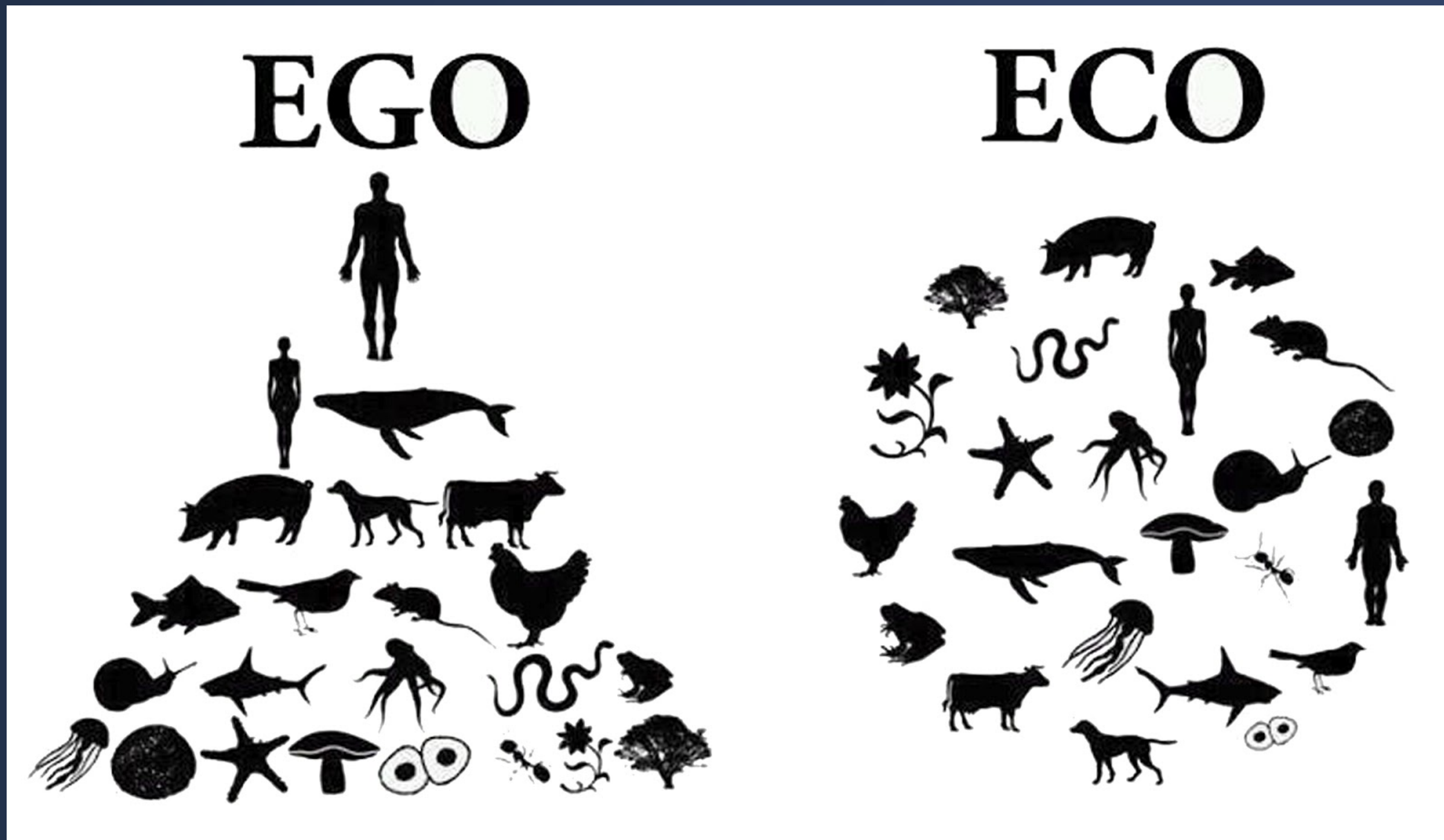


Image: [kindredspiritus.wordpress.com](http://kindredspiritus.wordpress.com)

False Superiority (Human Exceptionalism)

False Inferiority (Human Mediocrity)

## OUR RESPONSE AND SOME PATHWAYS OF HOPE:

- An integral way of looking
- Leadership of the commons
- Educating persons and culture
- An ecological spirituality



Together, look at  
creation whole.

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<https://pangasinan.gov.ph/wp-content/uploads/2018/02/mangrove-2.jpg>

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Lead the commons.

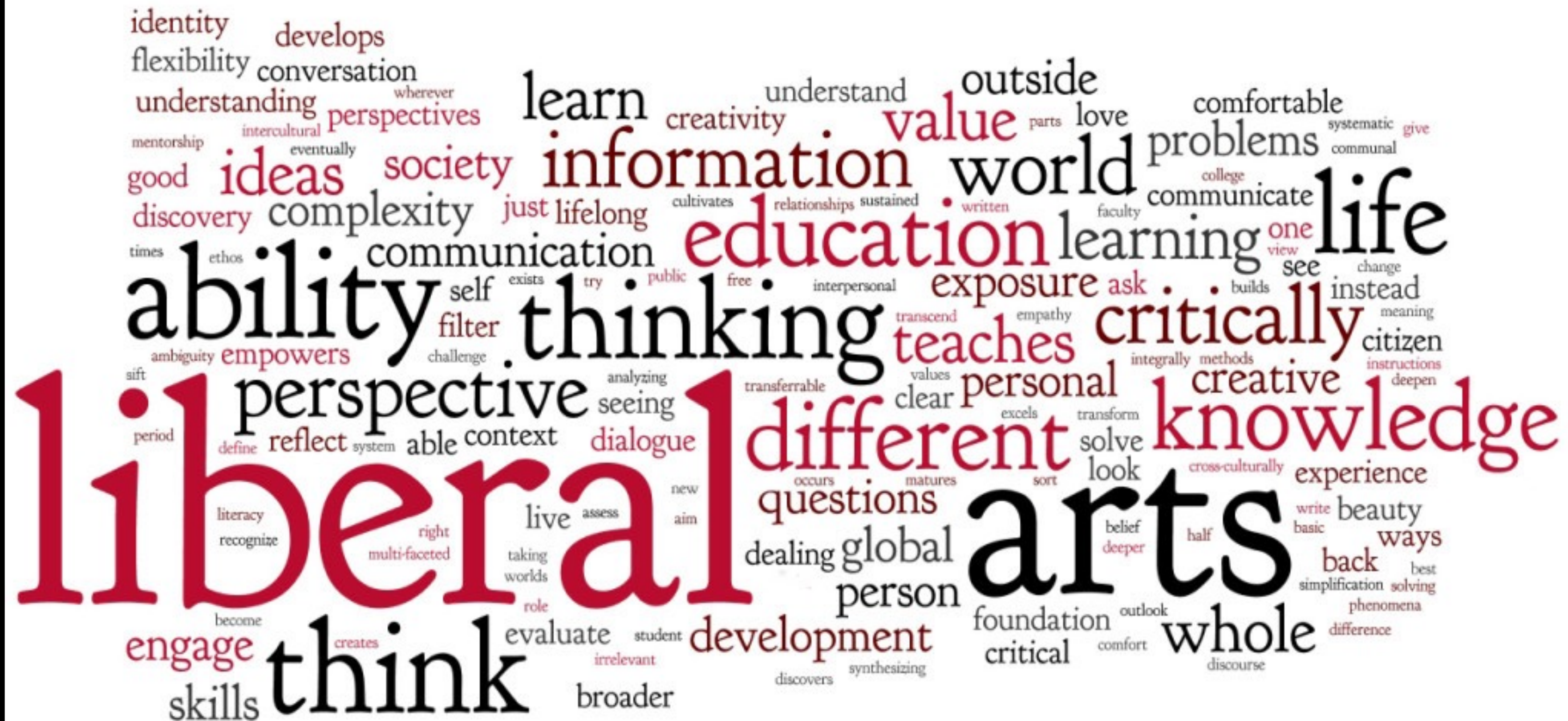


Lake Palakpakin, Laguna



## FORM THE WHOLE PERSON

# Value of Liberal Arts Education





<https://bicoltoday.com/2011/08/26/sixth-grader-becomes-a-national-pride/>

Educate persons  
and cultures.

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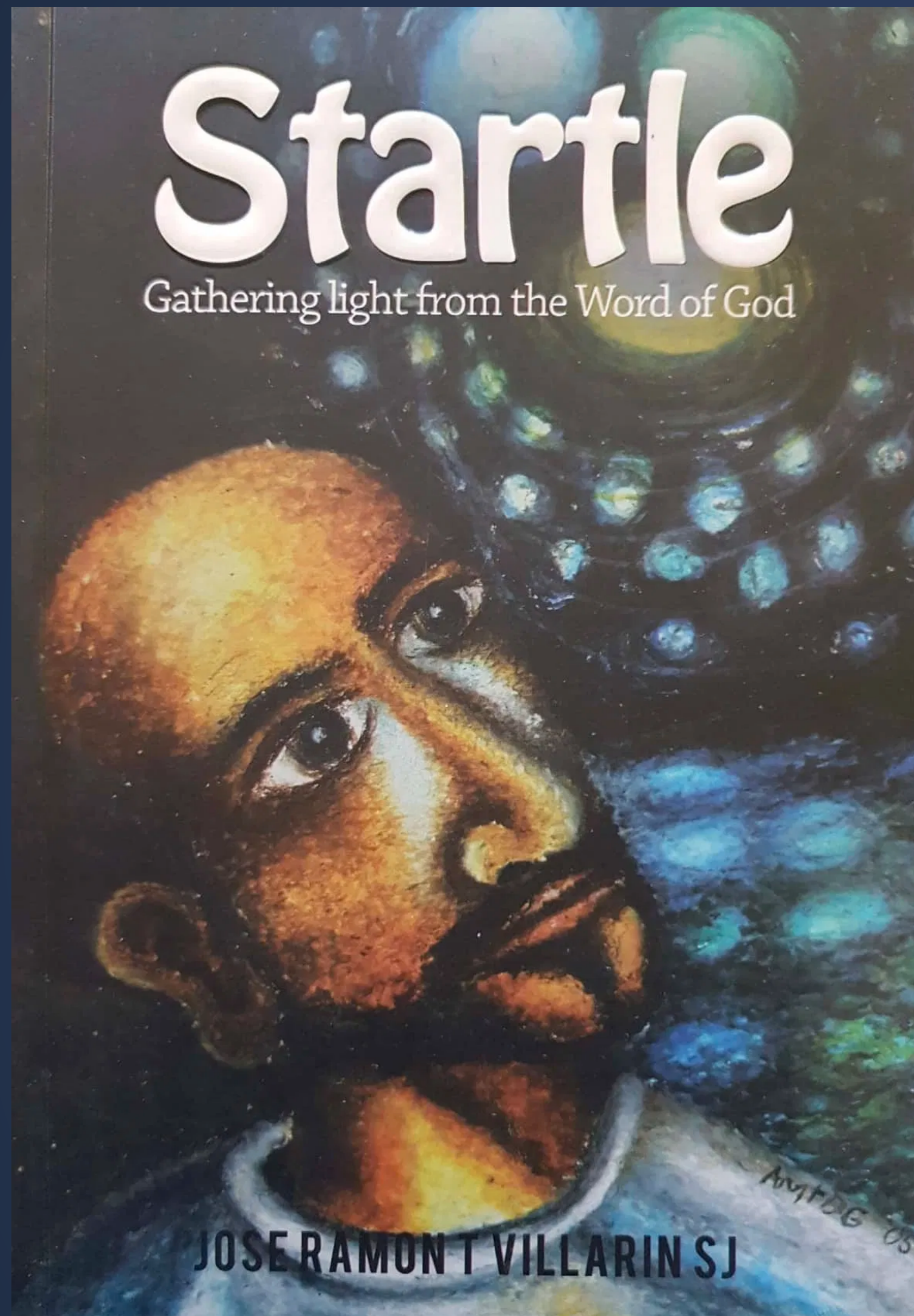


Hieronymus Bosch, The Garden of Earthly Delights

Discover God again.

“The Lord God then took the man and settled him in the garden of Eden, to cultivate (‘abad’) and care (‘shamar’) for it.” (Gen 2:15)

“abad” – to till, work, cultivate  
“shamar” – to keep, guard, preserve



## Reconnect to God

- Deepen our spiritual connections to self, others, and creation.
- Contemplative-in-action

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# TOP 10 LIST OF SIMPLE STEPS

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## TOP 10 LIST OF SIMPLE STEPS



10. Say grace before  
and after meals.

[http://newsinfo.inquirer.net/files/2015/01/18\\_PopeTacloban13.jpg](http://newsinfo.inquirer.net/files/2015/01/18_PopeTacloban13.jpg)

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TOP 10 LIST OF SIMPLE STEPS

9. Climb a mountain (dive the sea).

<https://unsplash.com/@joannecaselynsuarez>

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## TOP 10 LIST OF SIMPLE STEPS



8. Unplug  
and savor the silence.

## TOP 10 LIST OF SIMPLE STEPS



7. Repair something broken.

## TOP 10 LIST OF SIMPLE STEPS



6. Get to know a poor person.

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## TOP 10 LIST OF SIMPLE STEPS



5. Try fasting.

## TOP 10 LIST OF SIMPLE STEPS



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4. Go read a book to children.

91164517

<https://www.gettyimages.com/detail/news-photo/filipino-girl-is-carried-to-safety-through-floodwaters-news-photo/91164517>

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## TOP 10 LIST OF SIMPLE STEPS



3. Care for  
some space  
that belongs  
to everyone.

## TOP 10 LIST OF SIMPLE STEPS



<http://www.wardie.org.uk/>

2. If you're Catholic, receive communion.

## TOP 10 LIST OF SIMPLE STEPS



<https://www.chamellephotography.com/wp-content/uploads/2016/10/Amelie-12-screencapture-tin-toys-closeup.jpg>

1. Make a box for your valuables.

# Arigato gozaimasu, Shoichi Kodoh



R. Gavino / Philippine Embassy in Tokyo

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