

HERRENHAUSEN CONFERENCE, OCTOBER 9-11, 2019

HERRENHAUSEN PALACE, HANOVER, GERMANY

EXTREME EVENTS –  
BUILDING CLIMATE  
RESILIENT SOCIETIES



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**Gerrit Schenk**



**Dorothea Frank**





# Rosemary



Source: <https://www.giardinaggio.it/giardino/aromatiche/rosmarino/rosmarino.asp>



## Climate extremes

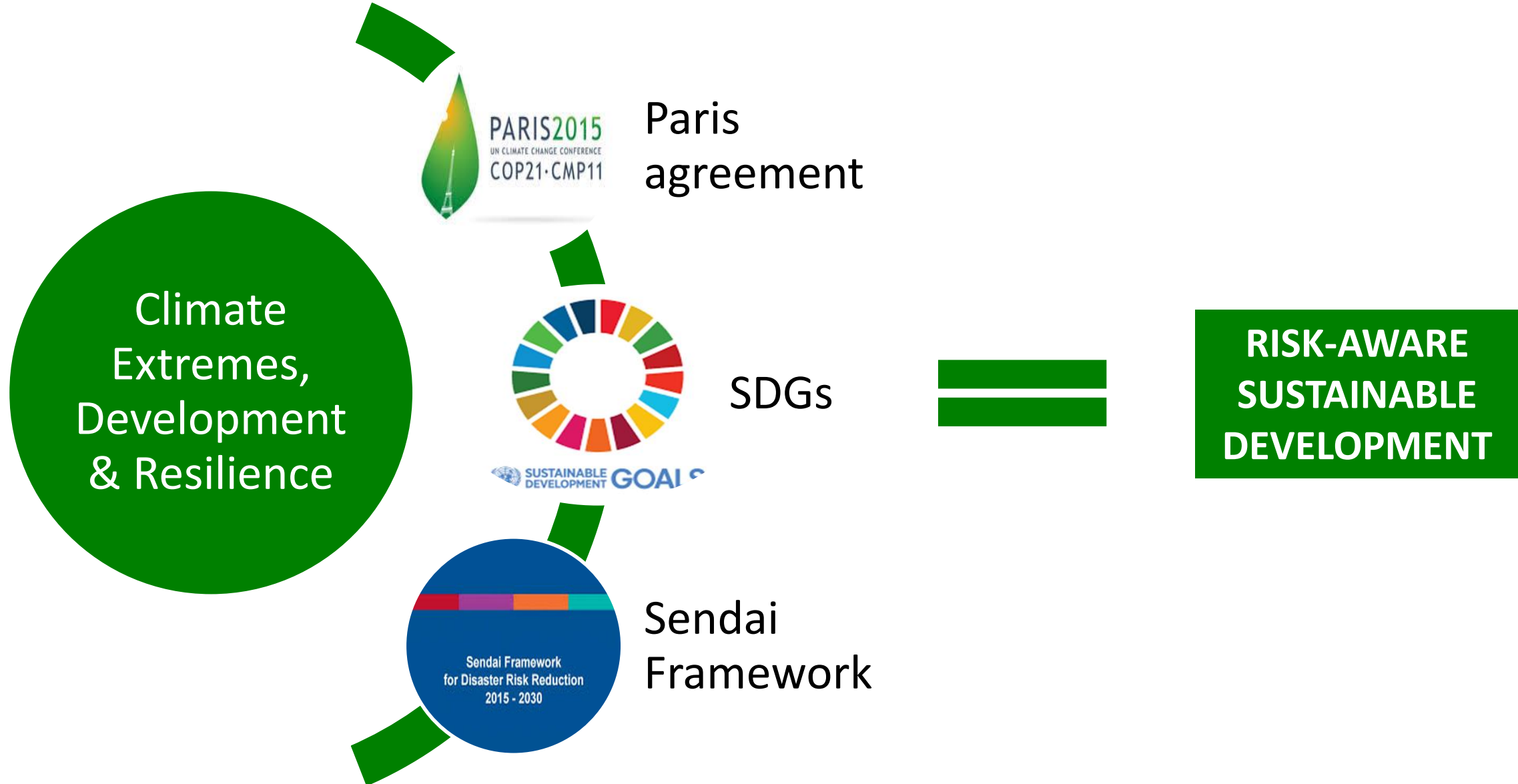
endanger

strengthen  
resilience

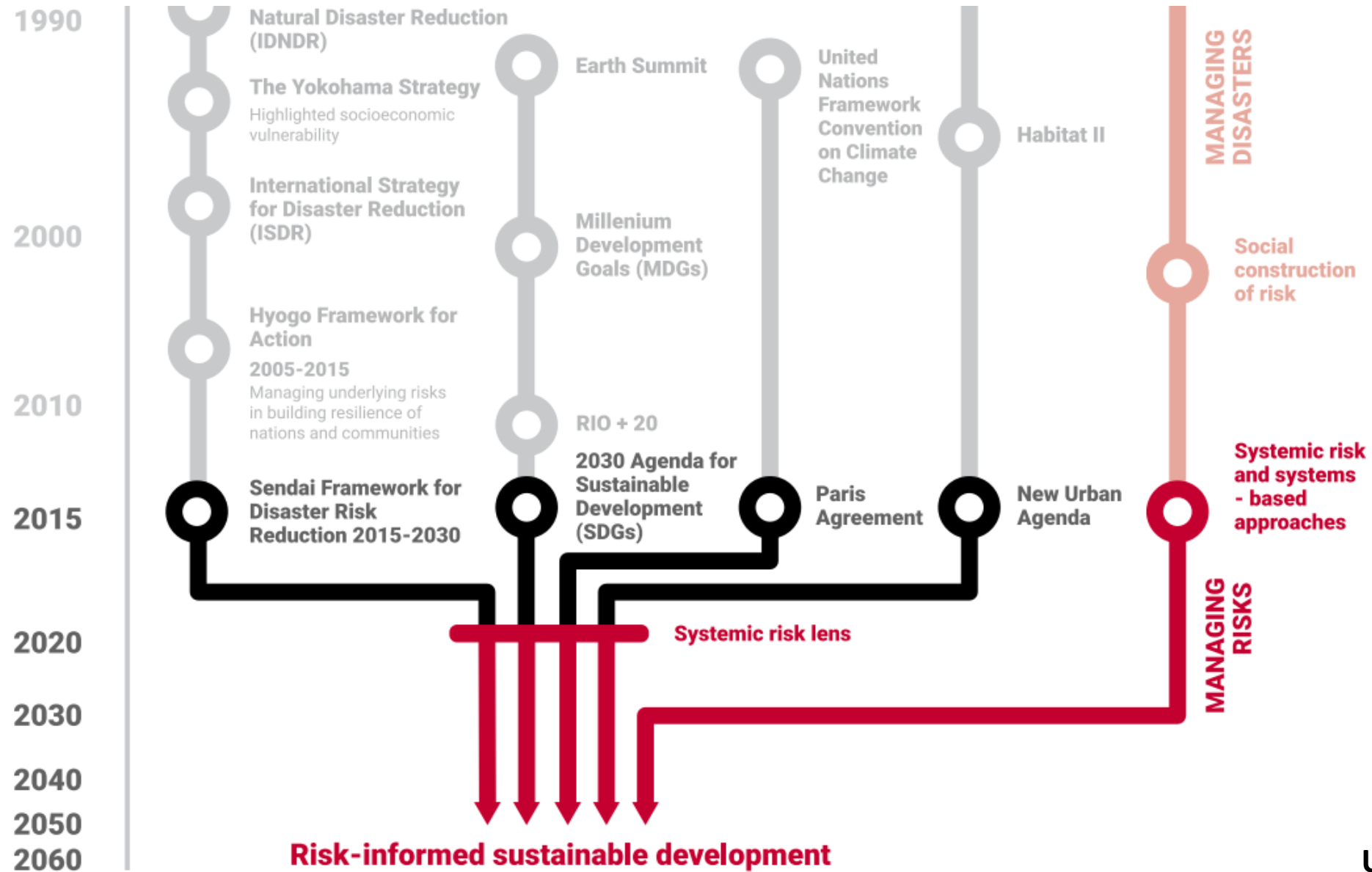


Sustainable development goals

# Linking three major frameworks



# Timeliness wrt development of international agendas



UNDRR, 2019

# Risk awareness needs to be improved



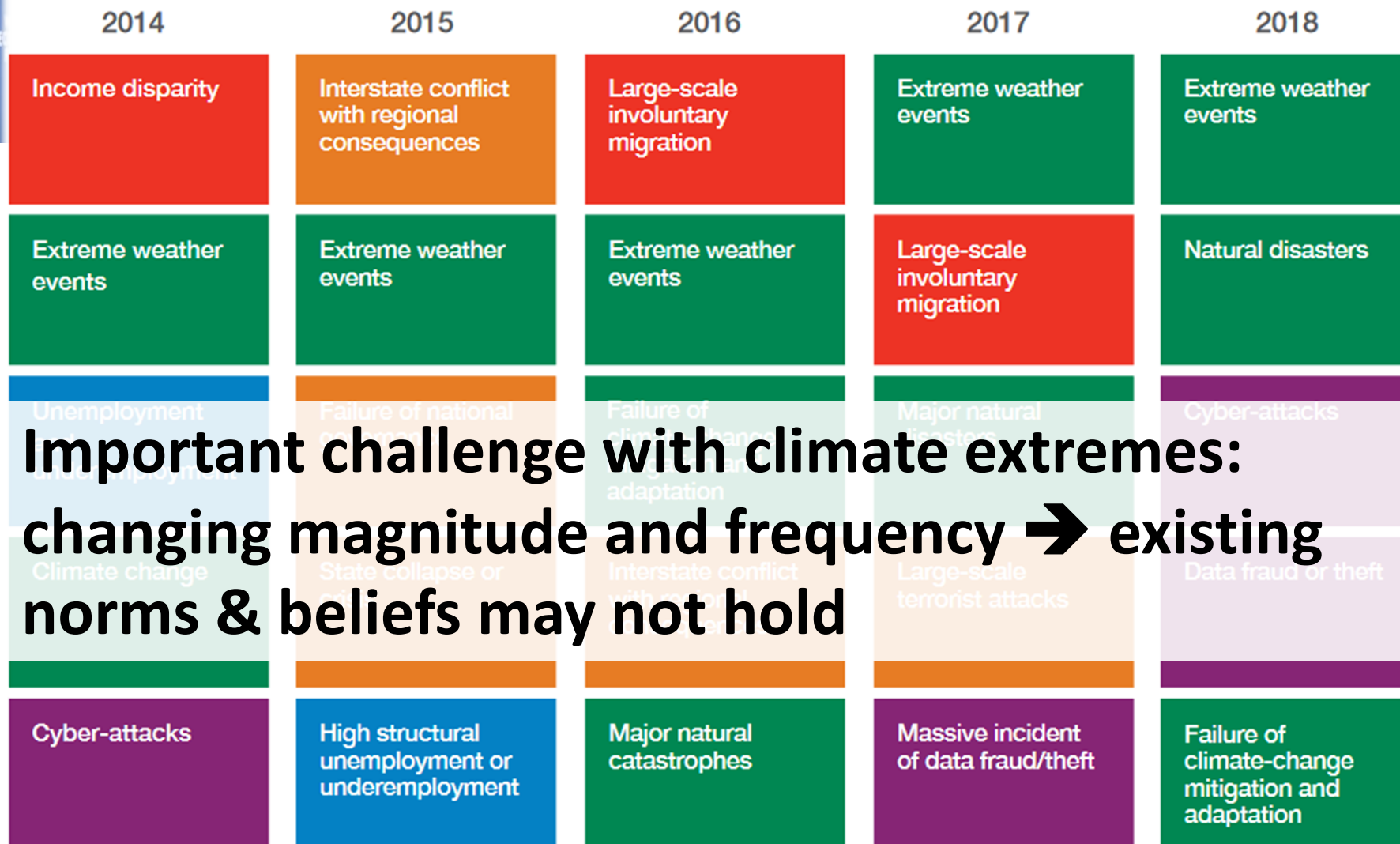
**Climate Extremes: 3x, only in one resort  
(Traffic, infrastructure, Digital affairs)**

**Disasters: 1x, only in one resort  
(Science)**

**Risks: 8x, not consistent meanings**

**Another example: “Smart Cities”**

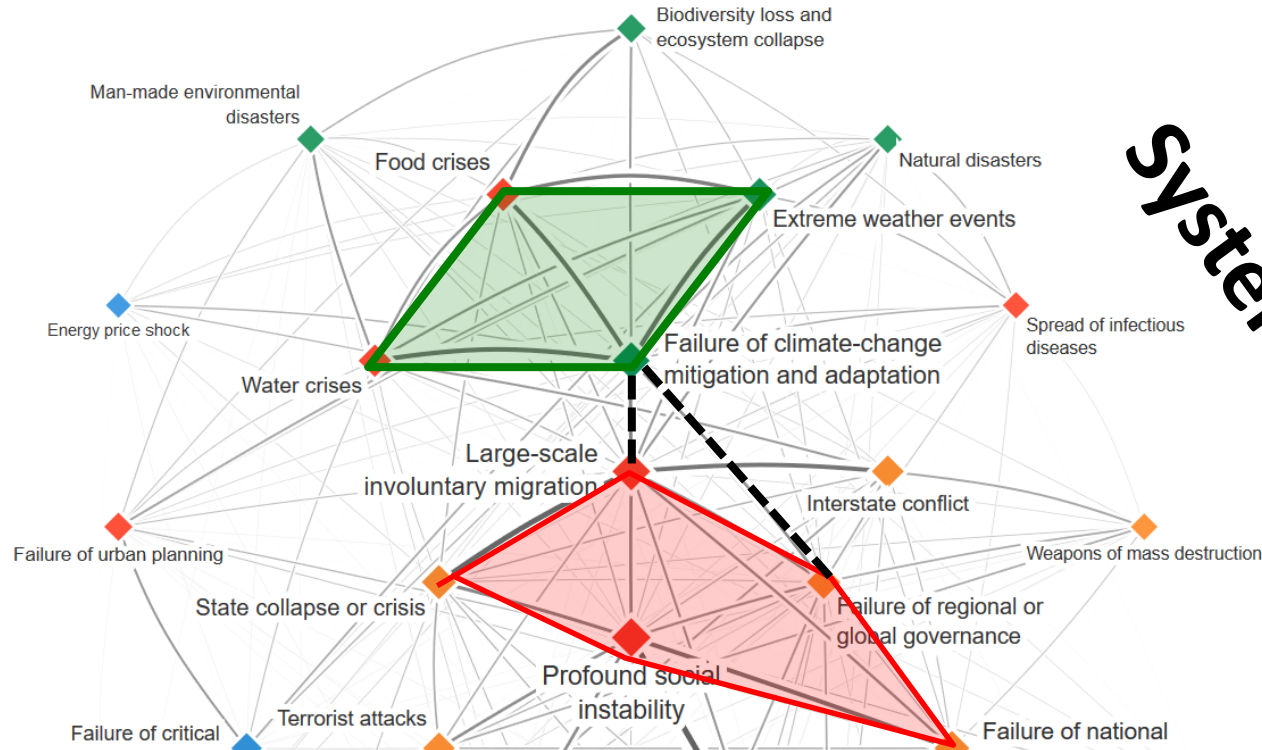
# Urgency is undoubted



**Important challenge with climate extremes:  
changing magnitude and frequency → existing  
norms & beliefs may not hold**

Source: World Economic Forum, Global Risks Reports.

# Risk network

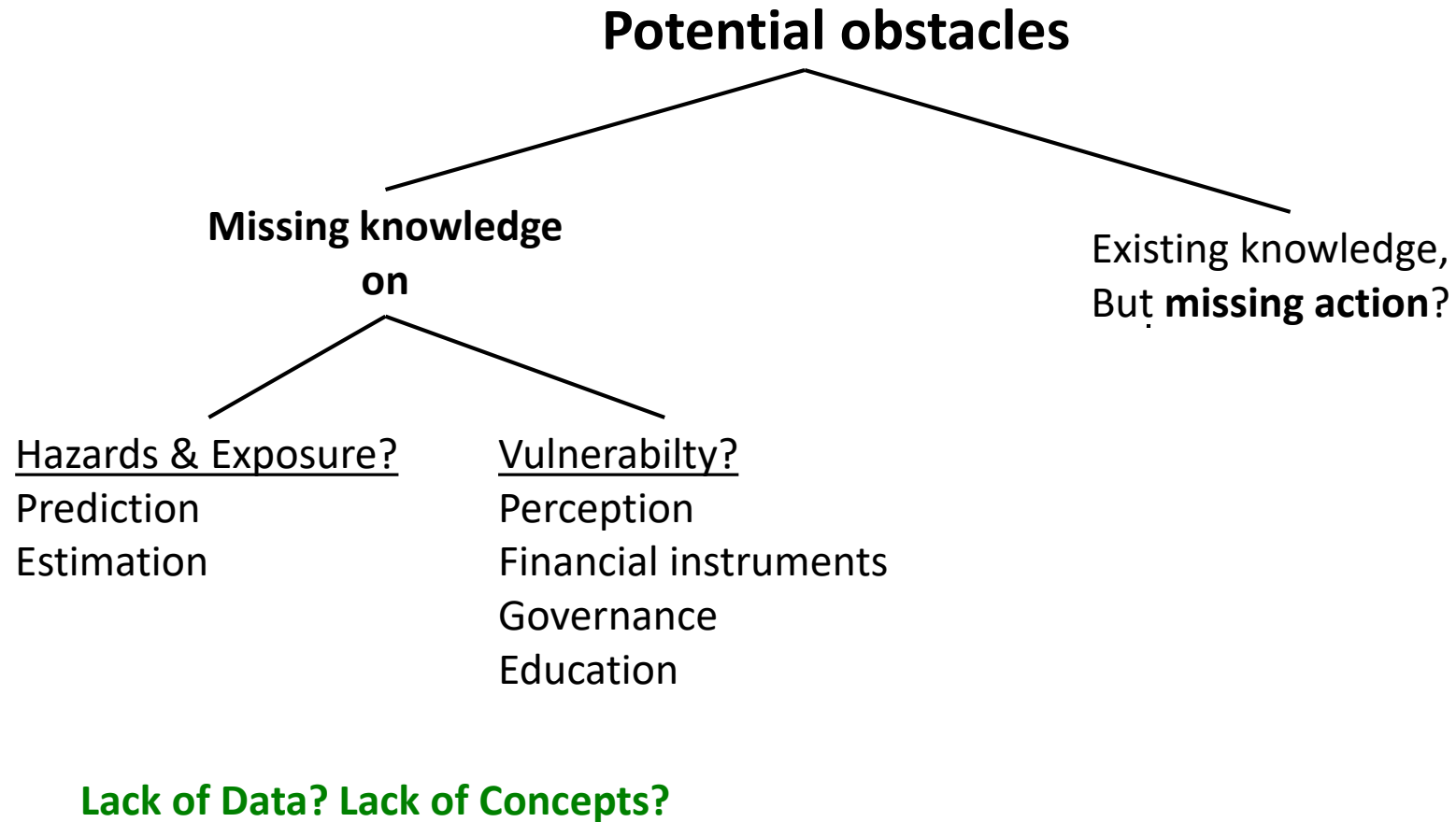


Systemic Risks

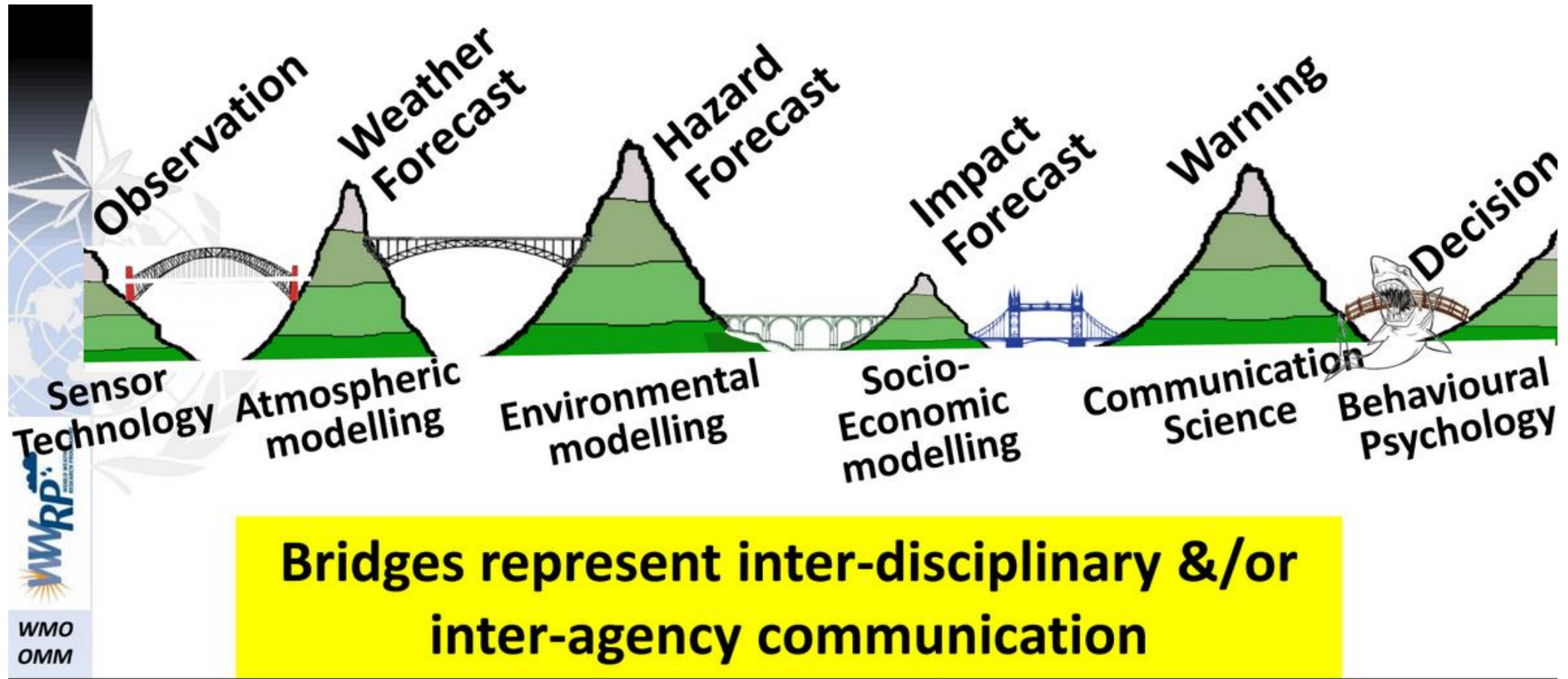
*58% of deaths from natural hazard-related disasters occurred in the top 30 fragile states*

<http://reports.weforum.org/odi.org>



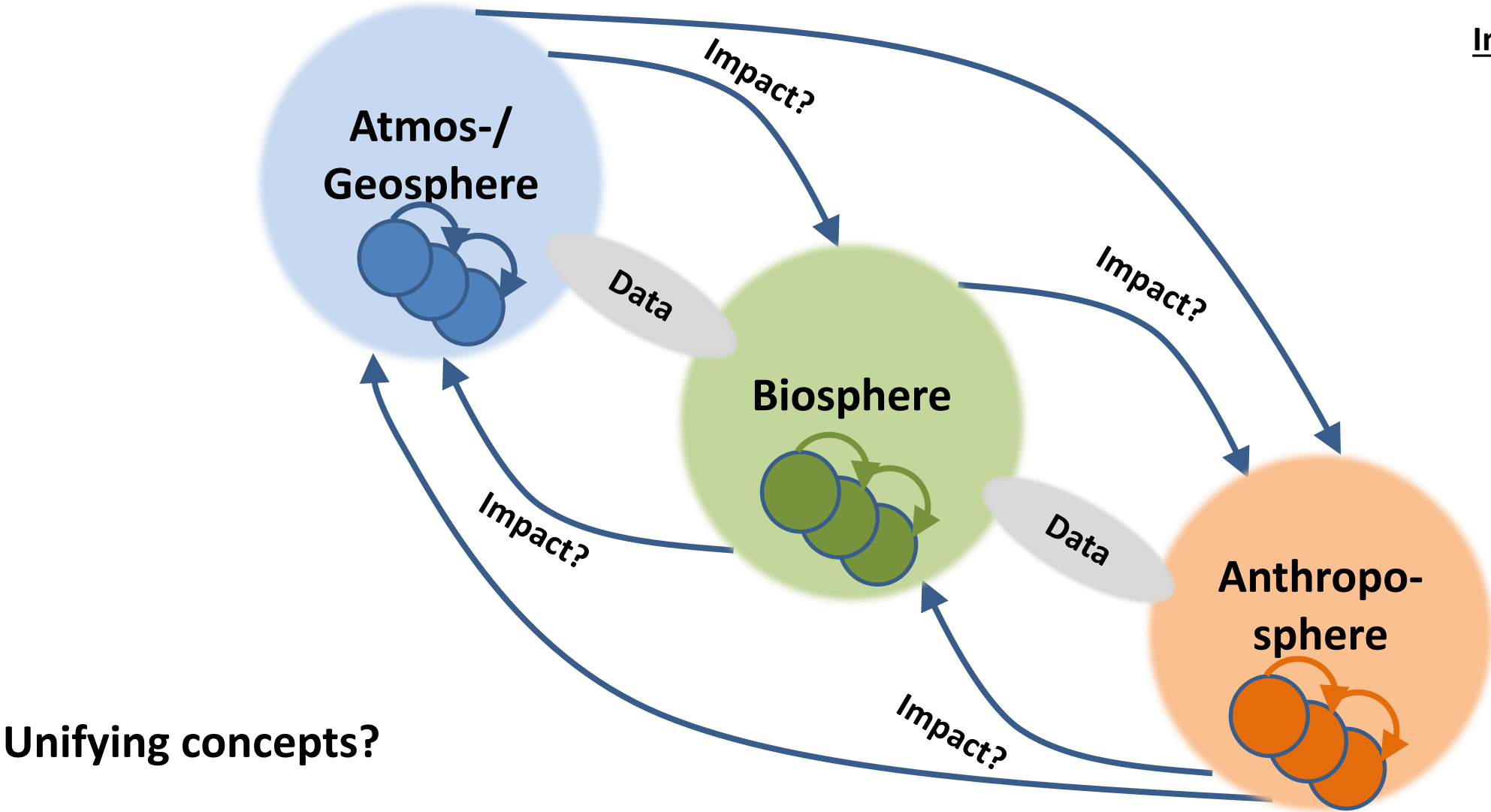


# An interdisciplinary challenge: e.g. five bridges for resilience



Golding et al. 2019, HiWeather/WWRP

# System view on extreme events

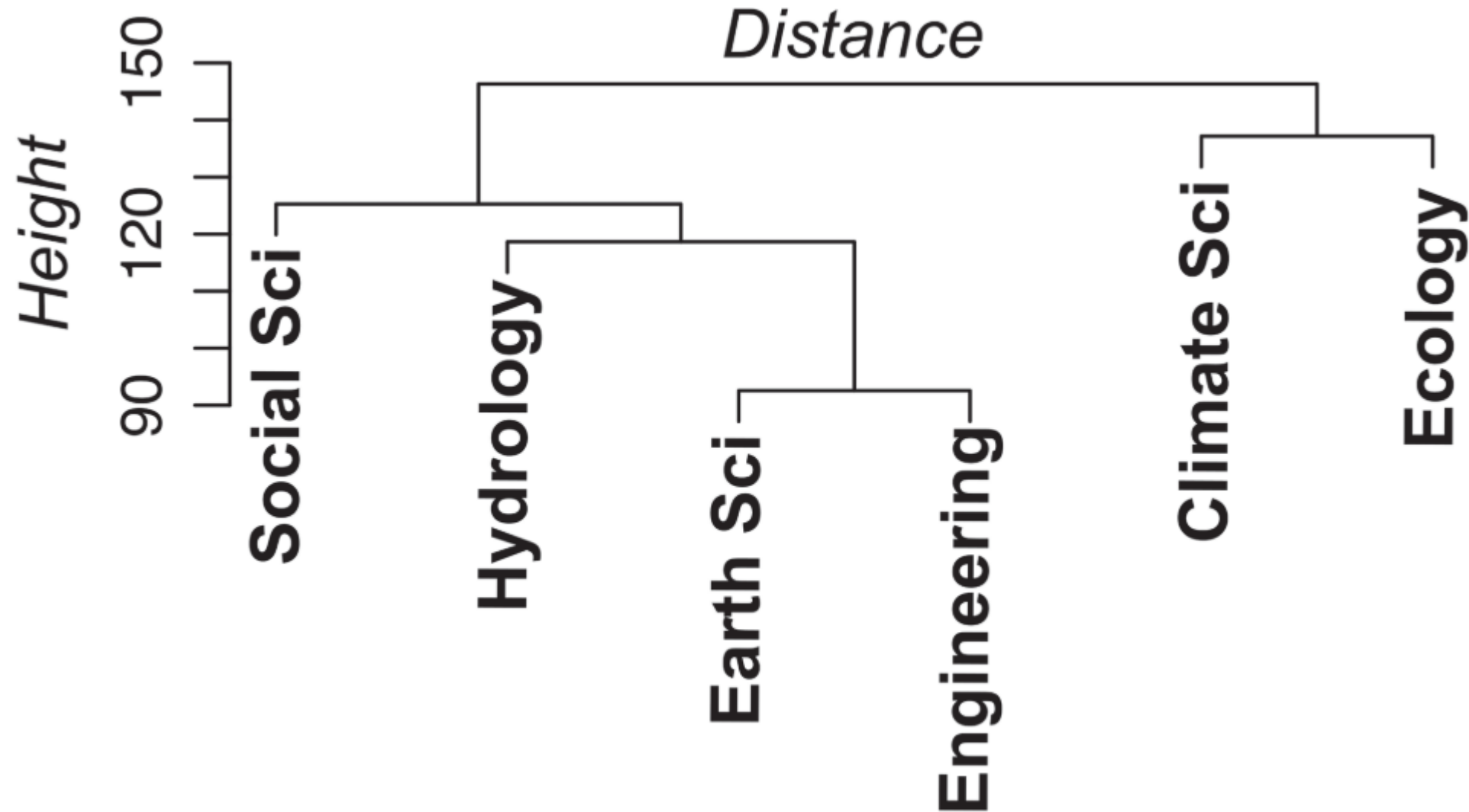


**Important aspects:**

- Time-scales
- Spatial scales
- Perception
- Valuation
- Beliefs

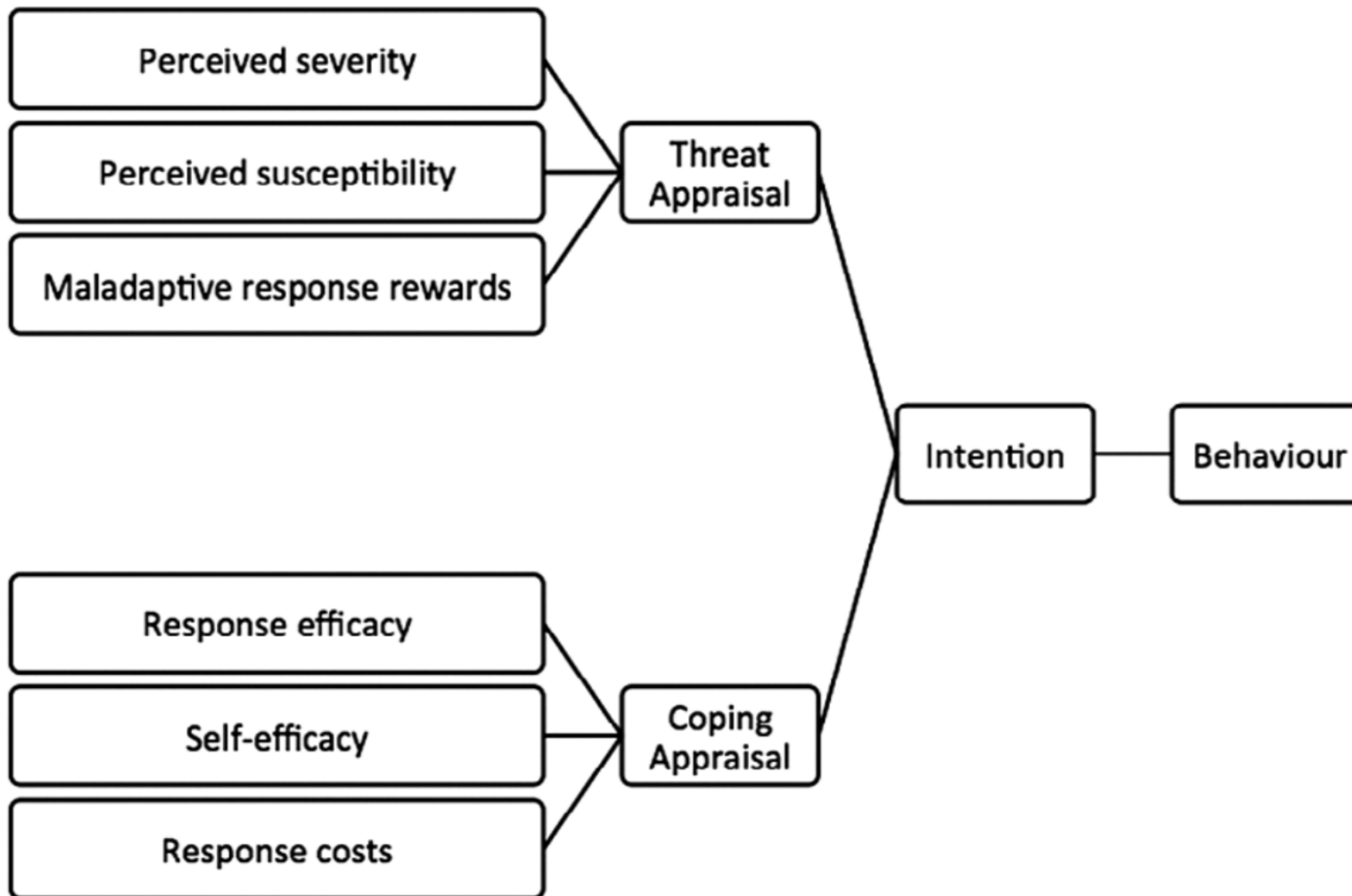
**Unifying concepts?**





McPhilips et al. (2018)

# Protection motivation theory in psychology



Kothe et al. (2019)

# Artificial intelligence for impact communication

Original image



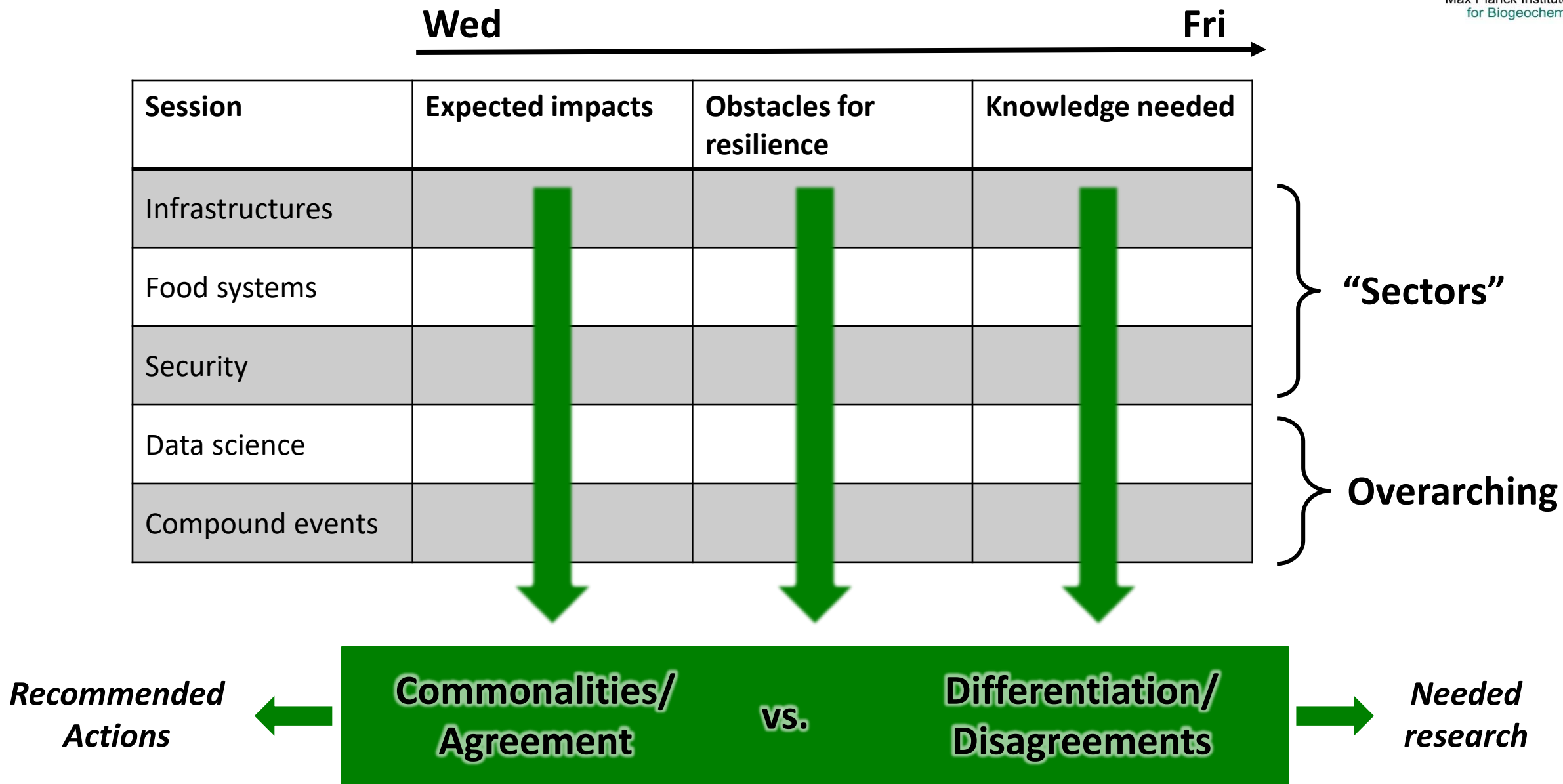
AI generated image



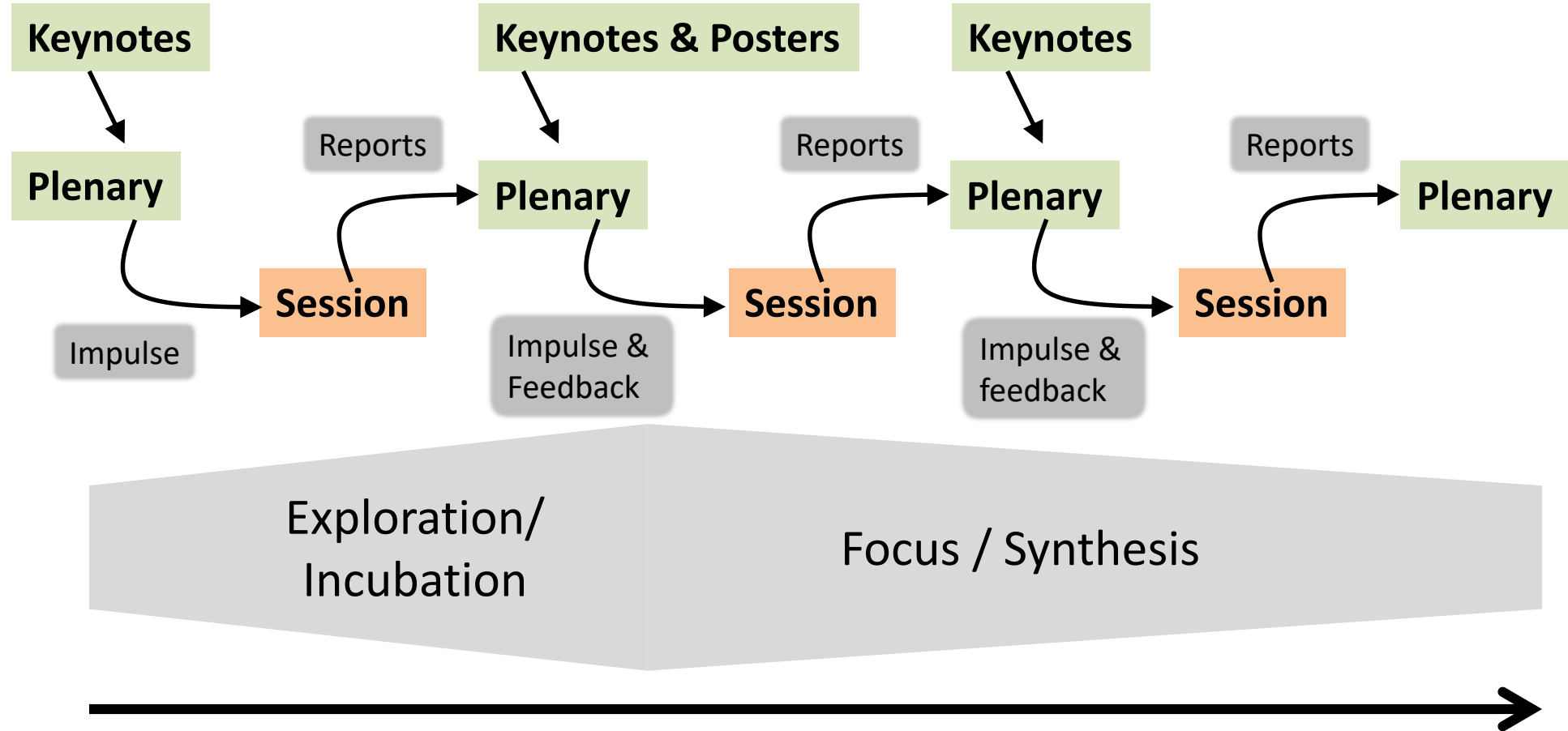
Schmidt et.al (2019) [arXiv.org: 1905.03709](https://arxiv.org/abs/1905.03709)



# Conference structure and anticipated output



# Conference format



# In summary: this conference in numbers





*If I had to select one sentence to describe the state of the world, I would say we are in a world in which global challenges are more and more integrated, and the responses are more and more fragmented, and if this is not reversed, it's a recipe for disaster.<sup>108</sup>*

**Let's contribute to that this is not becoming true!**

**António Guterres, United Nations Secretary-General, January 2019**  
Source: World Economic Forum