

# STAP Report to the 63<sup>rd</sup> Meeting of the GEF Council

Rosina Bierbaum, STAP Chair



Photo ©Carla B. Possamai /  
Muriqui Project of Caratinga  
Courtesy of Karen B. Strier

# Scientific Technical and Advisory Panel

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**Mark Stafford Smith**  
*Advisor to Chair*



**Rosina Bierbaum**  
*Chair*



**Ngonidzashe Chirinda**  
*Climate Change Mitigation*



**Saleem Ali**  
*Climate Change Mitigation*



**Edward Carr**  
*Climate Change Adaptation*



**Miriam Diamond**  
*Chemicals and Waste*



**John Donaldson**  
*Biodiversity*



**Graciela Metternicht**  
*Land Degradation*



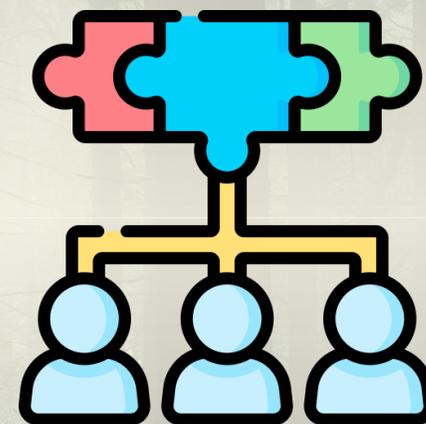
**Blake Ratner**  
*International Waters*



**New science**



**Reports and recent work**

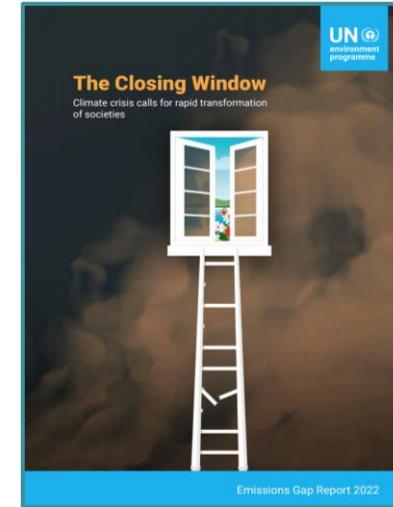
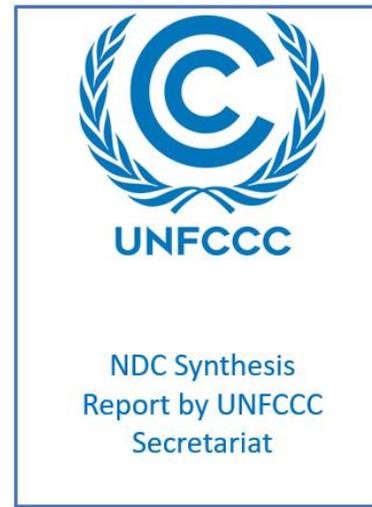
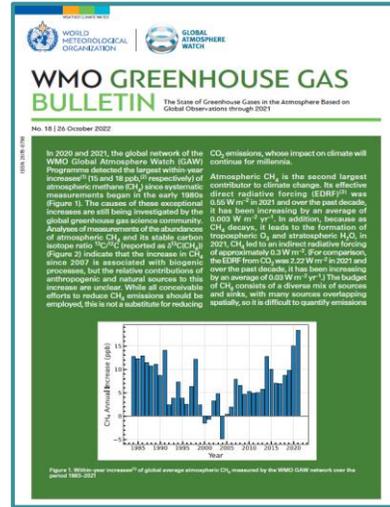
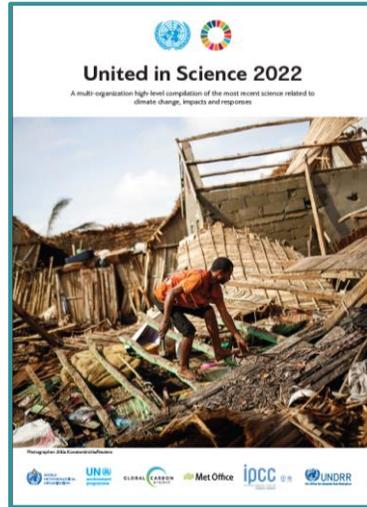


**Future work**

**New Science**



# New science: climate change mitigation



**Atmospheric greenhouse gas concentrations continue to rise** – 2022 *United in Science and WMO GHG Bulletin*

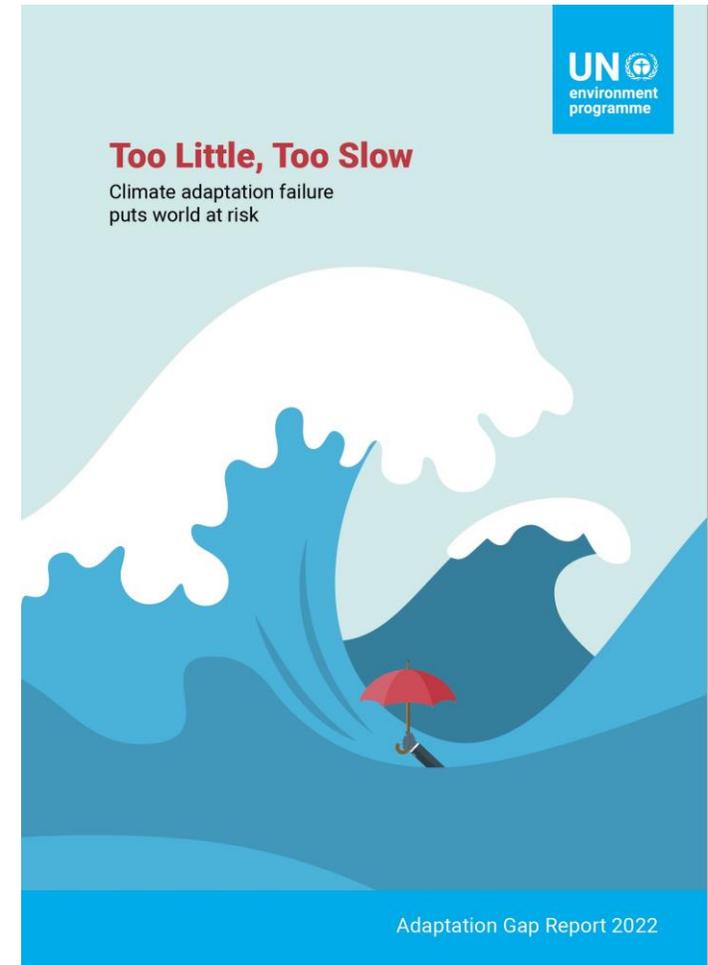
**Current pledges will increase emissions by 2030, compared to 2010 levels, heading to 2.5°C warming by 2100** – *UNFCCC 2022 NDCs Synthesis Report*

**No credible pathway to 1.5°C in place** – *UNEP Emissions Gap Report 2022*

**None of 40 IPCC indicators of system-wide transformation needed for 1.5°C are on track** – *WRI State of Climate Action 2022*

# “Too little, too slow – climate adaptation failure puts world at risk”

- Global efforts make incremental progress but **fail to keep pace with increasing climate risks**
- Good understanding of what we can do more of: **links between adaptation and mitigation** in planning, finance, and implementation
- Integrating **adaptation and mitigation** can improve co-benefits and reduce trade-offs
- **Nature-based solutions** can reduce climate risks and contribute to mitigation



# New science: chemicals and waste

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- **Synthesis of biodegradable plastics from CO<sub>2</sub>**
  - e.g., [Zhang et al., 2022](#); [Kita & Amao, 2022](#)
- **The possibility of upcycling waste plastics into valuable products**
  - e.g., [Sullivan et al., 2022](#); [Wang et al., 2022](#); [Conk et al., 2022](#)
- **Low-cost option for destroying forever chemicals (PFAS) demonstrated**
  - e.g., [Trang et al., 2022](#)



# New science: international waters

- The **world's largest Marine Protected Area (MPA)** surrounds the Hawaiian islands
- The benefits of MPAs have usually been measured only by resident fish populations and sedentary marine life
- New evidence from this MPA suggests that **benefits extend to two migratory species: bigeye and yellowfin tuna**



View of East Island at Lalo (French Frigate Shoals). Image: Haunani Kāne

# Living Planet Report 2022: building a nature-positive society

## *Interlinked Emergencies: Climate Change and Biodiversity Loss*

- 69% decline in vertebrate wildlife (1970-2018)
- 94% in Latin America
- 83% decline in freshwater species

Consequences? loss of life and economic assets; poverty and food insecurity; social unrest, migration; zoonotic diseases.

And the most vulnerable are the most affected.

Need for rapid system-wide transformation in economic and financial systems; integrate equity and fairness; and explore values, rights and norms in decision- and policy-making.



[https://wwflpr.awsassets.panda.org/downloads/lpr\\_2022\\_full\\_report.pdf](https://wwflpr.awsassets.panda.org/downloads/lpr_2022_full_report.pdf)

# New IPBES reports

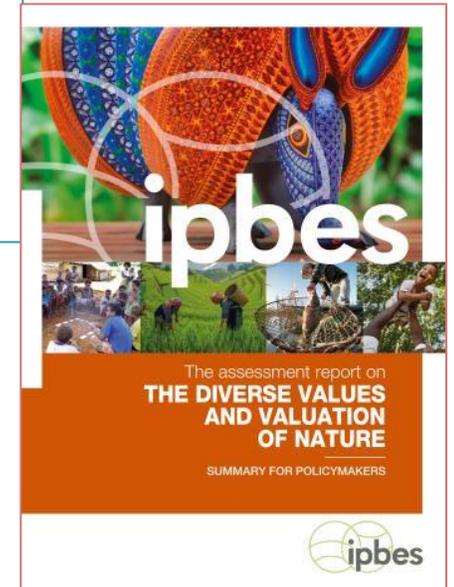
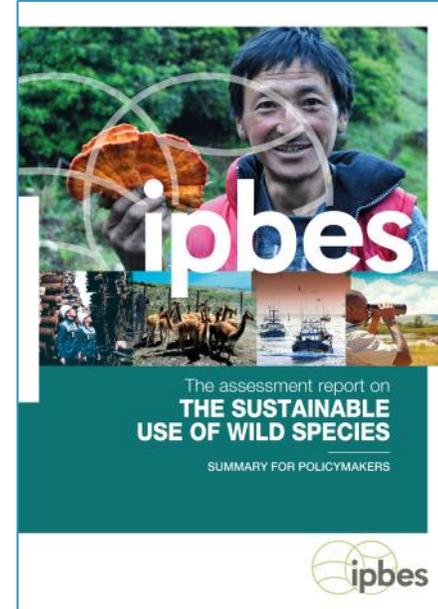
**70% of the world's poor** depend directly on wild species for food, medicine, and energy

**Indigenous peoples** manage the use of wild species on more than 38 million km<sup>2</sup> in 87 countries

**Nature-based tourism** can be an important non-extractive use of wild species

**More than 50 different methods** are available to assess diverse values of nature but...

**Less than 5% of studies** report uptake of valuation in policy decisions





# The Land Gap Report



Office 365 Stock Image

Countries' climate pledges rely on **unrealistic amounts of land-based carbon removal** - almost 1.2 B hectares, equivalent to all current global cropland

**Half** of this land would be new forests or plantations not likely to lead to significant carbon offsets in this critical decade

Prioritize protecting **intact mature forests/restoring ecosystems**

**Indigenous peoples/local communities vastly outperform** governments and private landholders

Carbon accounting should include clearer information on **the impacts** of different mitigation actions over time

# New science: PAs slow warming

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- About 16% of the world's land area is currently protected
  - storing up to 16% of the world's land carbon
- Protected areas provide habitat, are more diverse, and may shelter species from extreme heat as climate changes
- Protected areas:
  - cool land surface temperature in the tropics
  - decrease the warming rate in boreal forests 20% compared to surrounding areas.
  - may create thermal refugia for vulnerable species
  - contribute to climate mitigation and adaptation



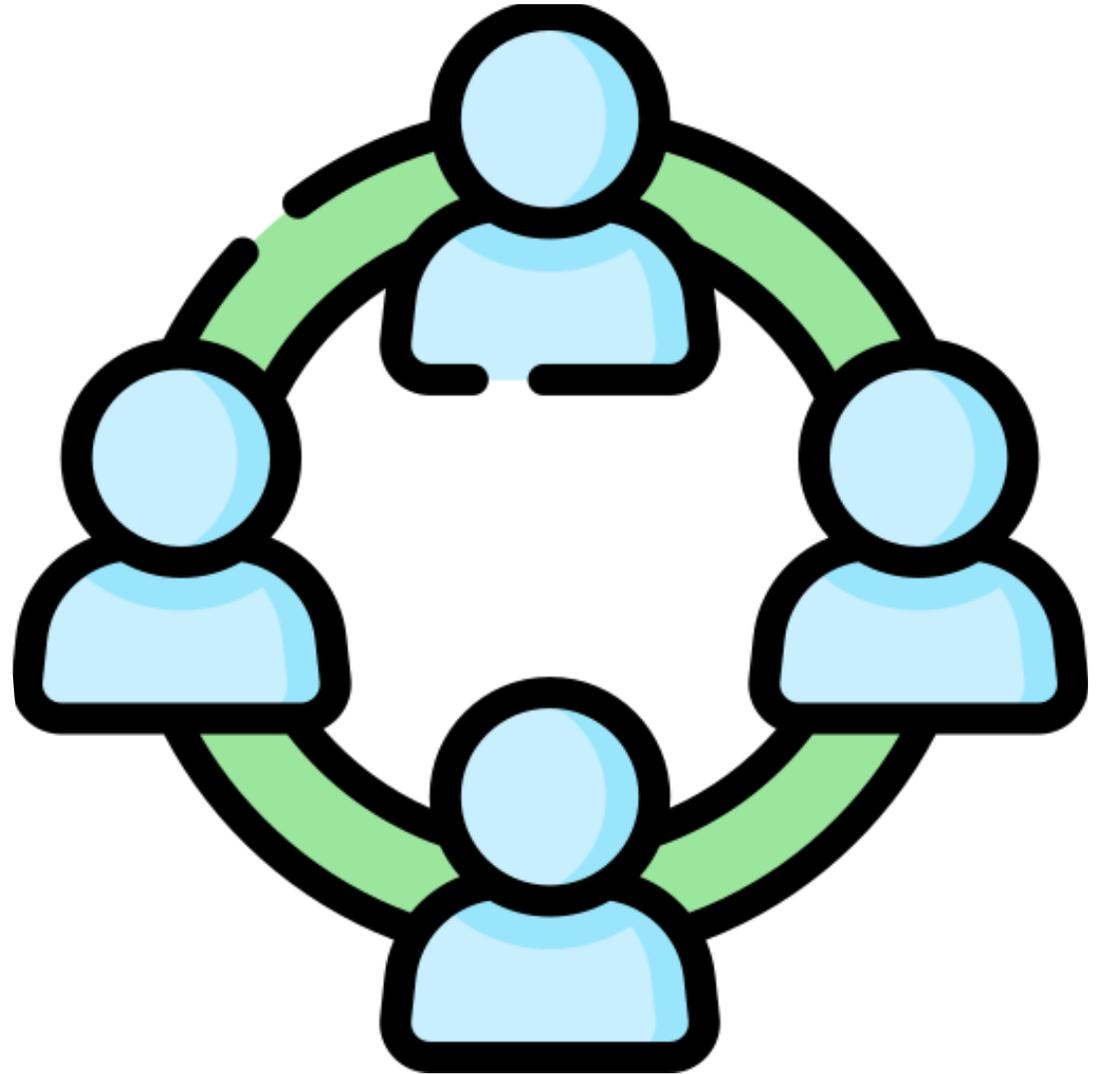
Batang Gadis National Park (TNBG) Officials install camera traps to monitor biodiversity. Prayugo Utomo/IDN Times. Indonesia, 2022.

Remembering Gustavo...



Photo: Avecita Chicchon, 2022

Reports and recent work



# Assembly report: 6 entry points for GEF-8

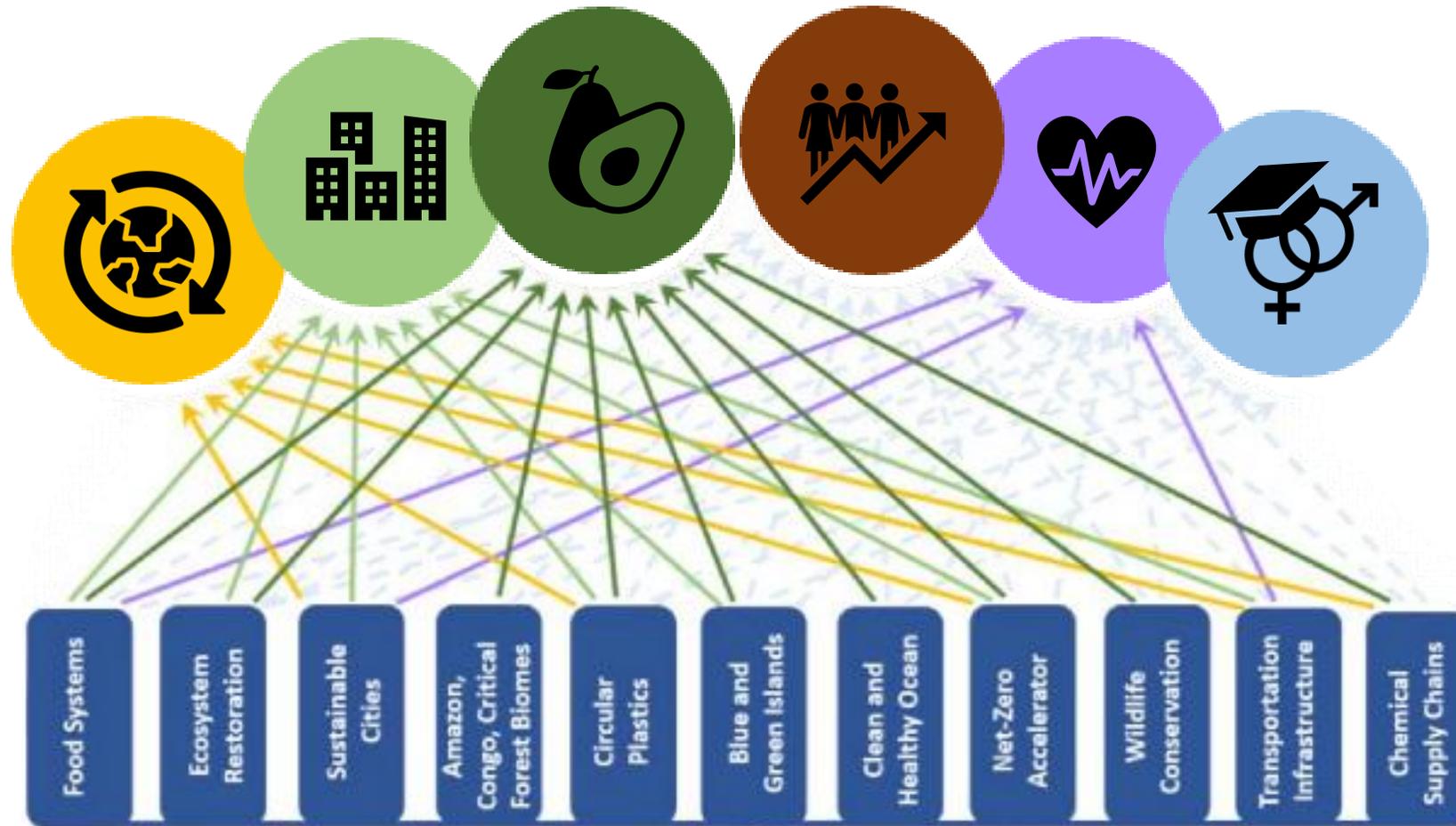


Figure 1 taken from the STAP Assembly Report.

# STAP Assembly report: transformation needed at 4 levels

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- **GEF projects** are integrated and pathways to scaling for transformation are identified
- **Focal areas and IPs** support well-targeted innovation and system transformation
- **Portfolio-wide strategy** promotes adaptive and integrated approaches to transformation and for KM&L
- **Leverage partnerships** to engage, support, and influence alliances to transform systems

# Assembly report: 7 recommendations

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Rose-veiled fairy wrasse (*Cirrhilabrus finifenmaa*); Maldives  
© Yi-Kai Tea



<https://www.discoverwildlife.com/news/new-species-discovered-this-year/>

1. Develop a clear **risk framework**
2. Create an explicit GEF-wide strategy for **innovation**
3. Establish a GEF-wide strategy for **policy coherence**
4. Identify **co-benefits** to track and report

# Assembly report: 7 recommendations (cont)

5. Establish a **knowledge management and learning** system
6. Include **youth and other marginalized groups** in design and implementation of projects
7. Prioritize the GEF's engagement in **external partnerships**



Food security IAP meeting, Ethiopia  
Photo: Yiheyis Maru

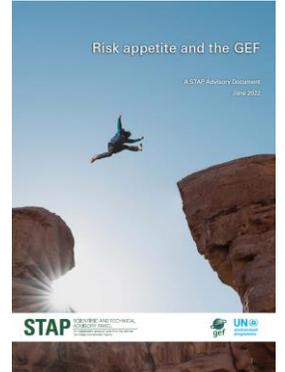


Food security IAP meeting, Ethiopia  
Photo: Alan Nicol

# Risk appetite and the GEF

Review of 9 agencies: 3 key points:

1. Consistent leadership
2. An effective engagement process
3. Strategic choices:
  - *What categories of risk?*
  - *Consistency of approach?*
  - *Qualitative or quantitative framework?*
  - *Risk assessed at what level?*
  - *How to distribute responsibility for risk?*



# Streamlining the project cycle

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Knobbed hornbill (*Aceros cassidix*)  
Sulawesi, Indonesia  
Photo: Tim Laman



- New **PIF template**
  - coherent, integrated, and simpler
- New STAP **screening guidelines**
  - 12 questions
- New STAP **screening template**

<https://stapgef.org/resources/advisory-documents/stap-guidelines-screening-gef-projects>

# What will STAP look for in screening IP PFDs?

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- Systems thinking
- Theory of change
- Knowledge management and learning
- Policy coherence
- Innovation
- Transformational change



<https://www.discoverwildlife.com/news/new-species-discovered-this-year/>

# A typology of adaptation benefits

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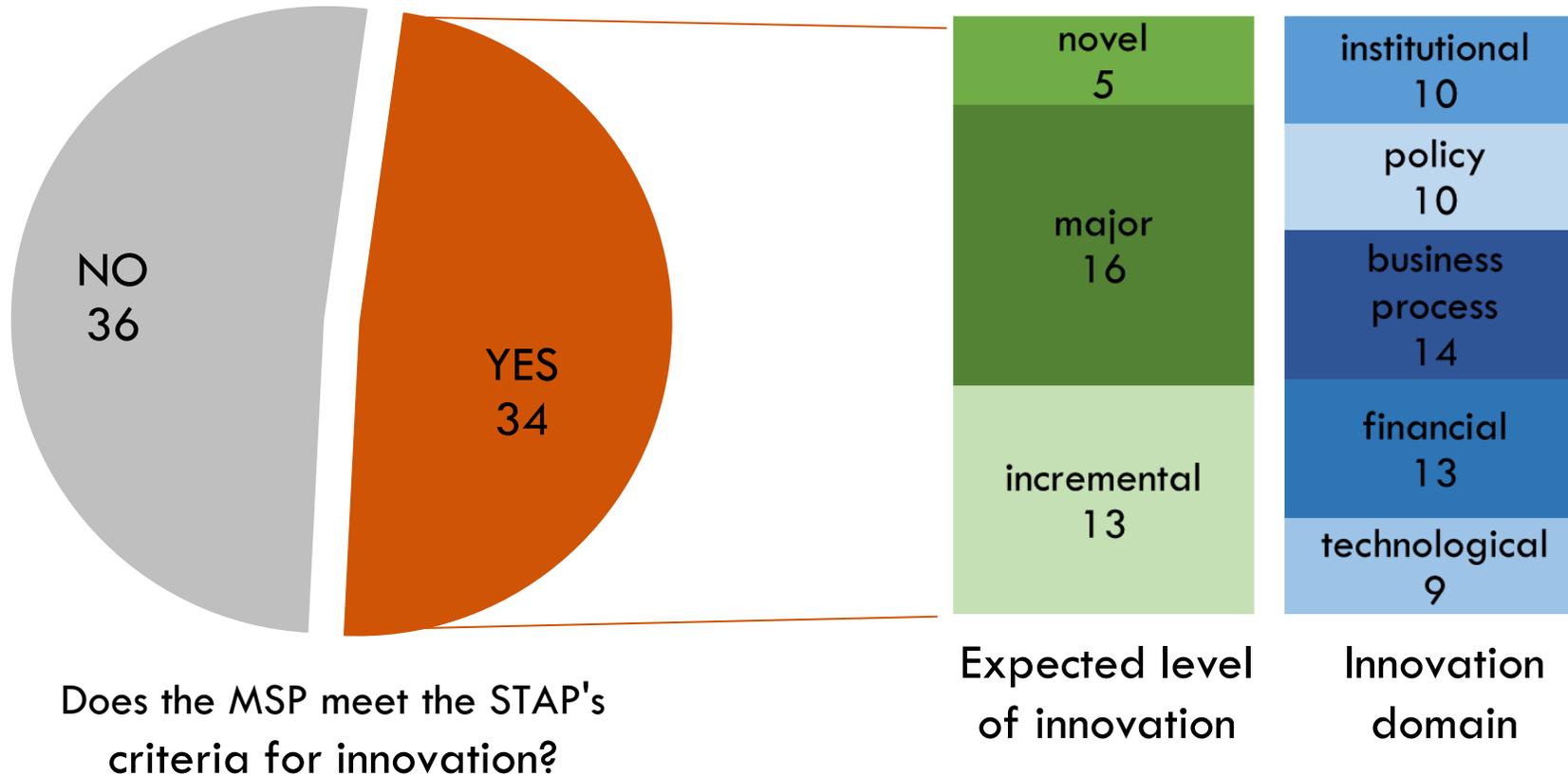
- The IPCC noted the **fragmented** nature of adaptation investments
- To deal with this, clear adaptation rationales are needed, based on three categories:
  - **exposure**
  - **sensitivity**
  - **adaptive capacity**



Mangrove reforestation project in Senegal.

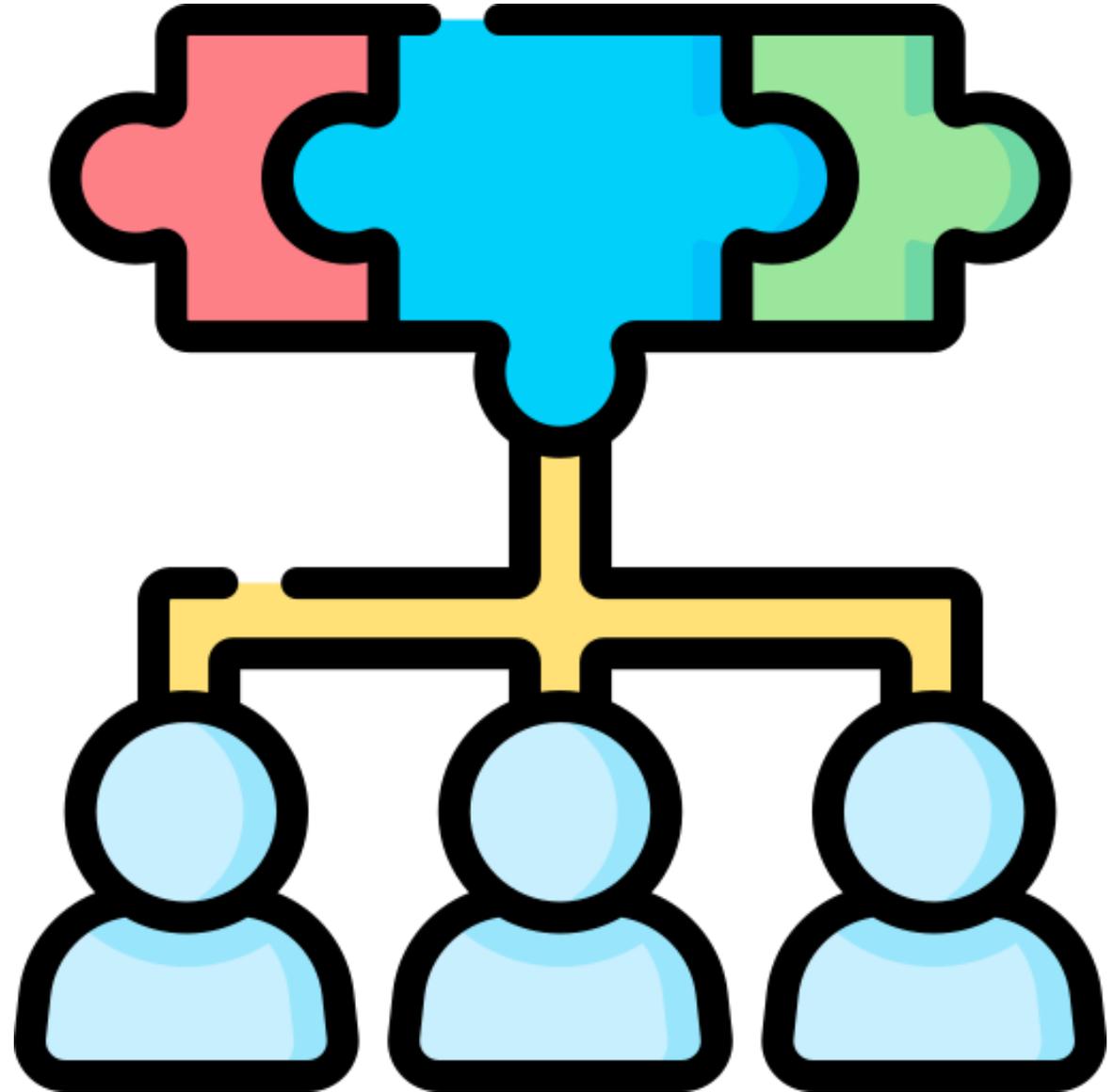
(Image: Clement Tardif / Greenpeace). Accessed from [Chinadialogue.net](https://chinadialogue.net)

# MSPs and innovation – early review



*“Innovation refers to an idea, embodied in a technology, product, or process, which is new and creates value” (STAP innovation report 2019)*

Future work



# Future Work

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Tapir Valley Tree frog (*Tlalocohyla celeste*) Costa Rica; © Juan G. Abarca



<https://www.discoverwildlife.com/news/new-species-discovered-this-year/>

- Risk appetite framework
- Further PIF briefing sessions
- KM IP platforms convening
- Simple future narratives
- Metrics for transformational change
- Policy coherence
- Co-benefits
- Innovation
- Environmental security
- Land Degradation Neutrality
- Non-grant instruments
- Training



**THANK YOU !**