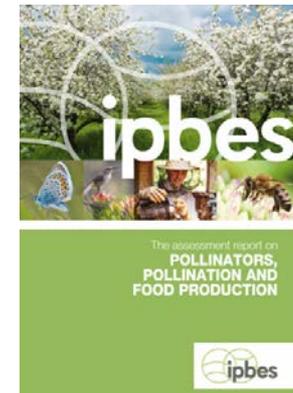
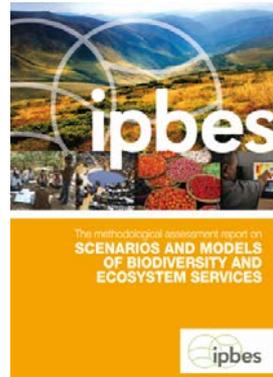
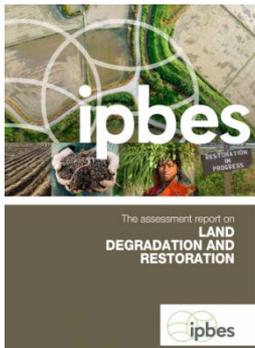
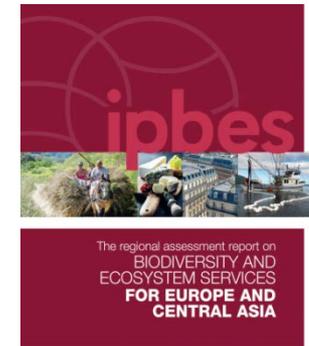
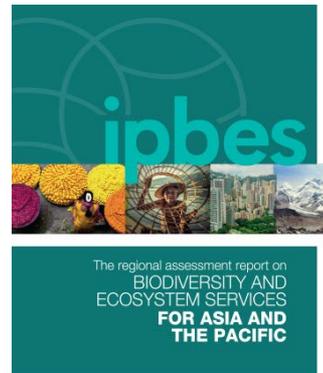
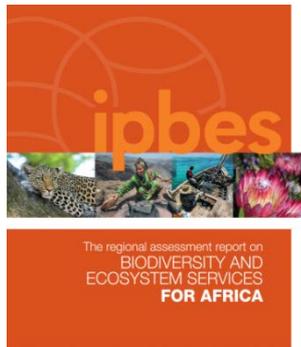
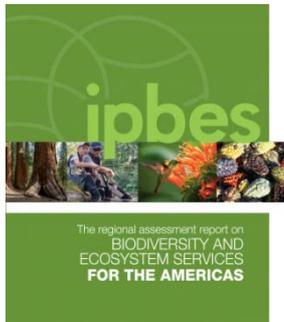


# IPBES Products: Finished, current and up- coming



# What is already there?

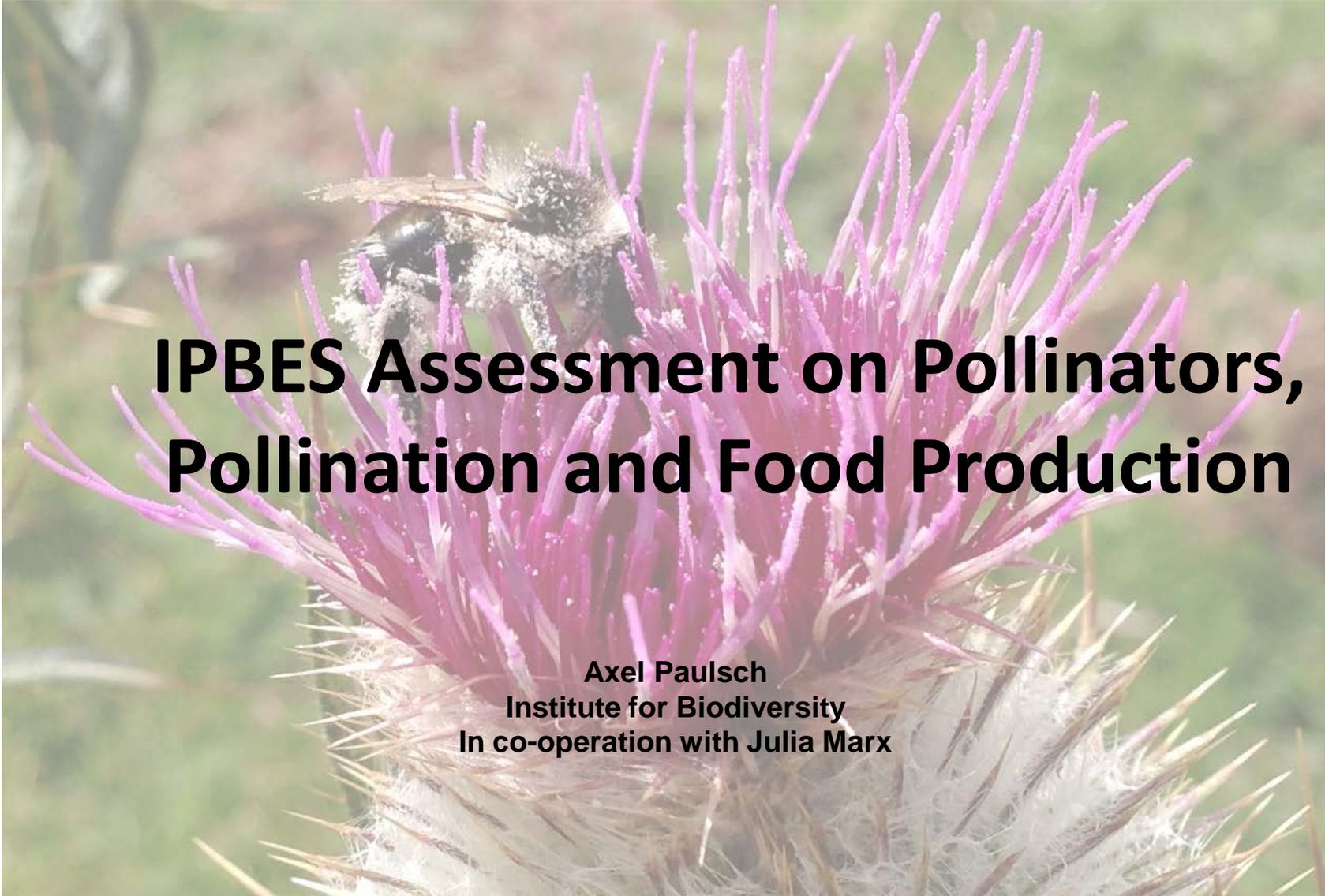
- **4 Regional and a Global Assessments on Biodiversity and Ecosystem Services: Africa, Asia/Pacific, the Americas, Europe and Central Asia (ECA):**
- **Thematic Assessment on Scenarios and Models**
- **Thematic Assessment on Pollinators, Pollination and Food Production: closer look in a minute**
- **Thematic Assessment on Land Degradation and Restoration: closer look tomorrow**



# What is currently underway?

- **Thematic Assessment on Sustainable Use and Conservation of Biodiversity and strengthening capacities and tools**
- **Thematic assessment on Conceptualization of Values of Biodiversity (until IPBES 9 in 2021)**
- **Thematic Assessment on Invasive Alien Species and their control**



The main background image is a close-up photograph of a purple thistle flower. A bee is perched on the flower's head, which is covered in fine, white, fuzzy hairs. The flower's numerous purple, needle-like petals radiate outwards. The background is a soft-focus green field.

# IPBES Assessment on Pollinators, Pollination and Food Production

Axel Paulsch  
Institute for Biodiversity  
In co-operation with Julia Marx



# Pollination Assessment: What it is

- Two- year study conducted by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)
- The first Assessment issued by IPBES
- Assesses changes in animal pollination as a regulating ecosystem service that underpins food production
- The IPBES assessment has critically evaluated an enormous body of knowledge on pollinators, pollination and food production



# Pollination Assessment Process



# Experts team

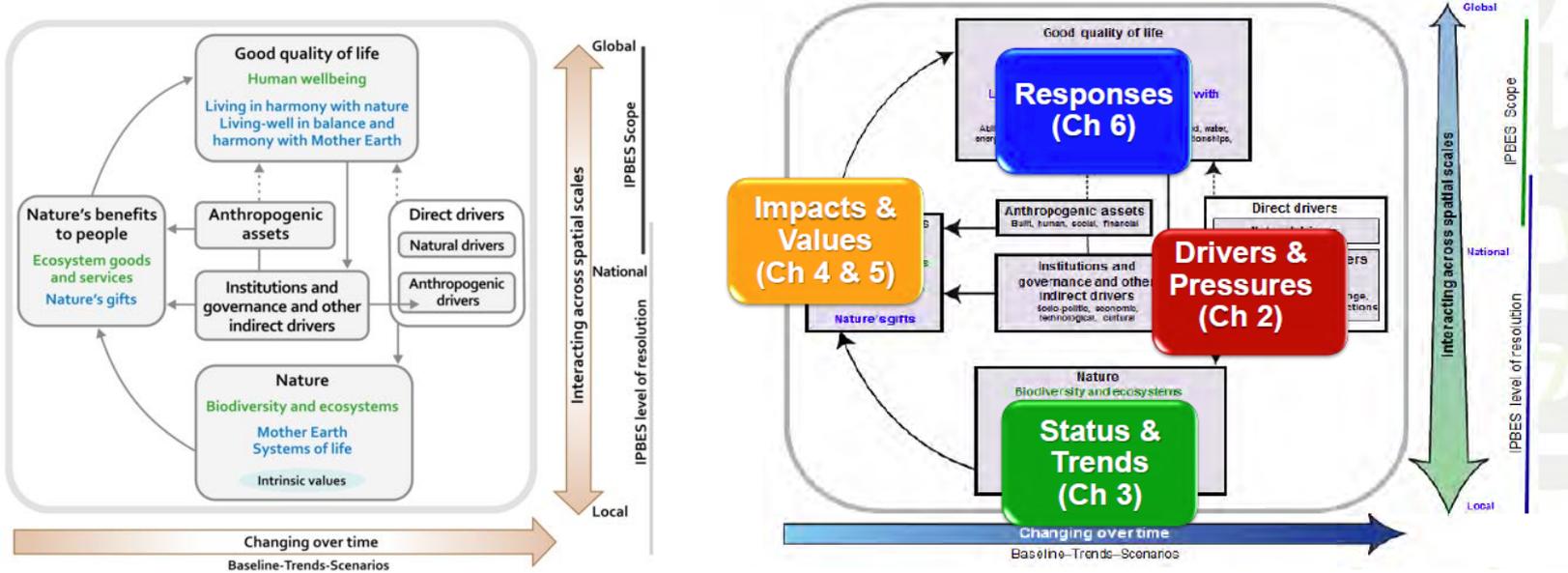


[http://www.de-ipbes.de/media/content/SETTELE\\_IPBES\\_Pollination%2028%20Jan%202016%20General%20Experience\\_for\\_release\\_red.pdf](http://www.de-ipbes.de/media/content/SETTELE_IPBES_Pollination%2028%20Jan%202016%20General%20Experience_for_release_red.pdf)

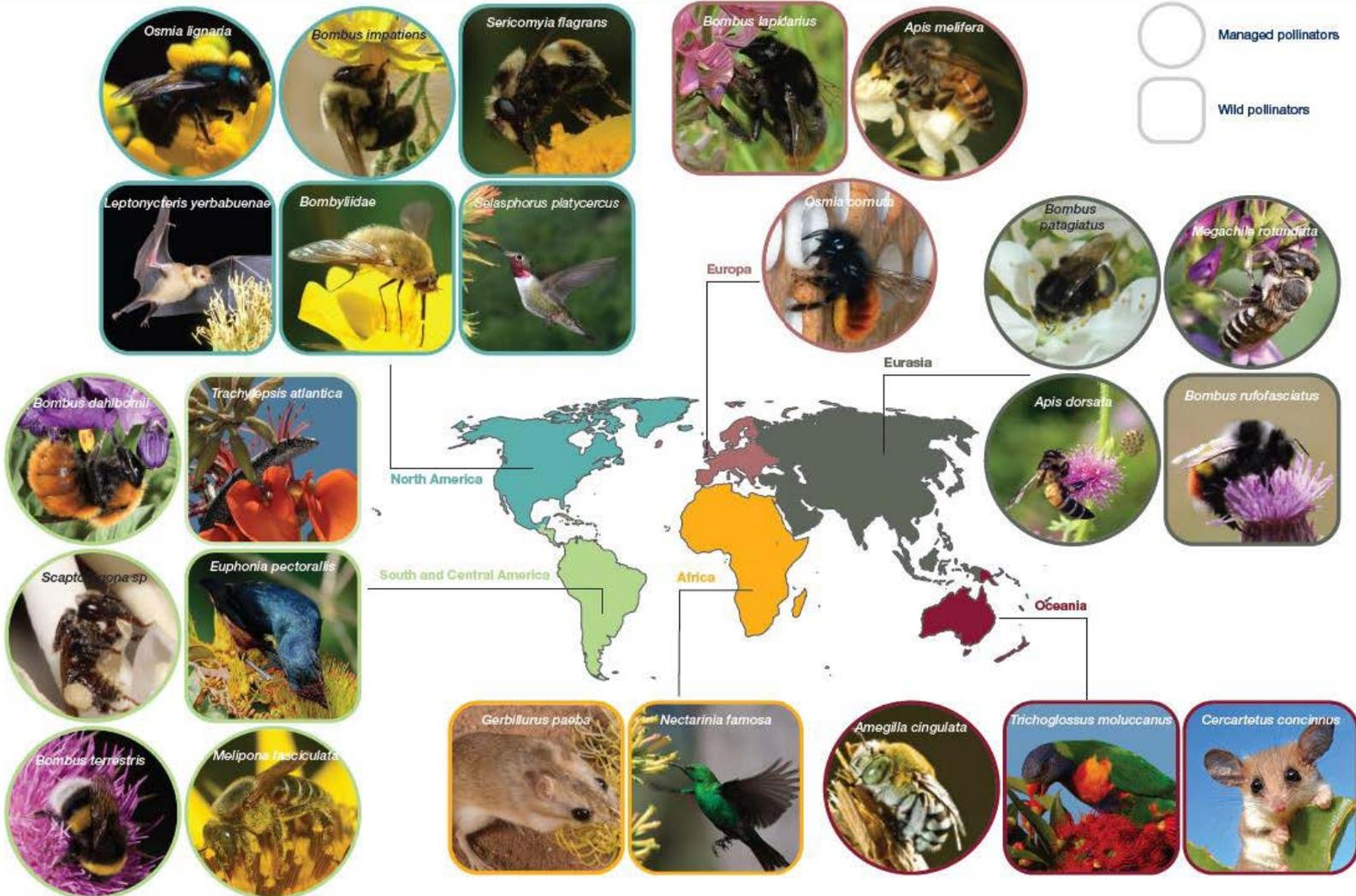
~90 experts from all regions and 29 countries:

- 2 Co-chairs: Simon Potts (UK) and Vera Fonseca (Brazil)
- 17 Coordinating Lead Authors
- 44 Lead Authors
- 13 Review Editors
- 1 Technical Support Coordinator (UN)

# Conceptual Framework and Pollination Assessment



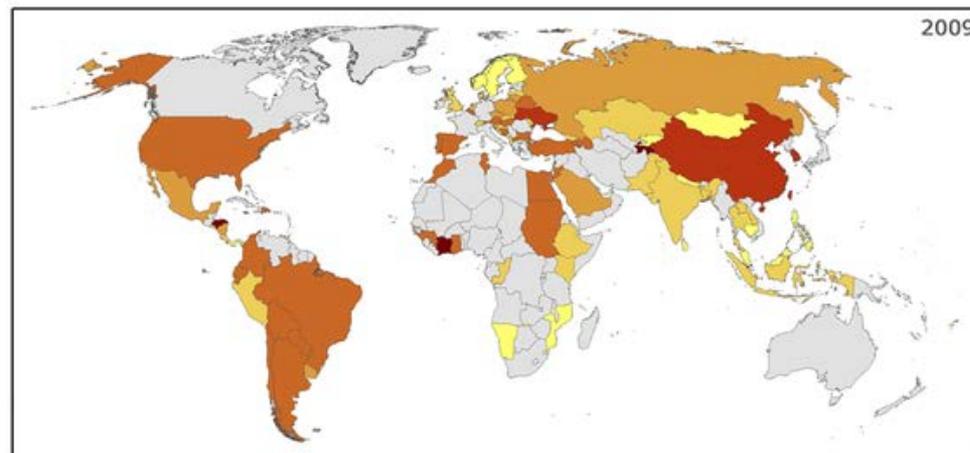
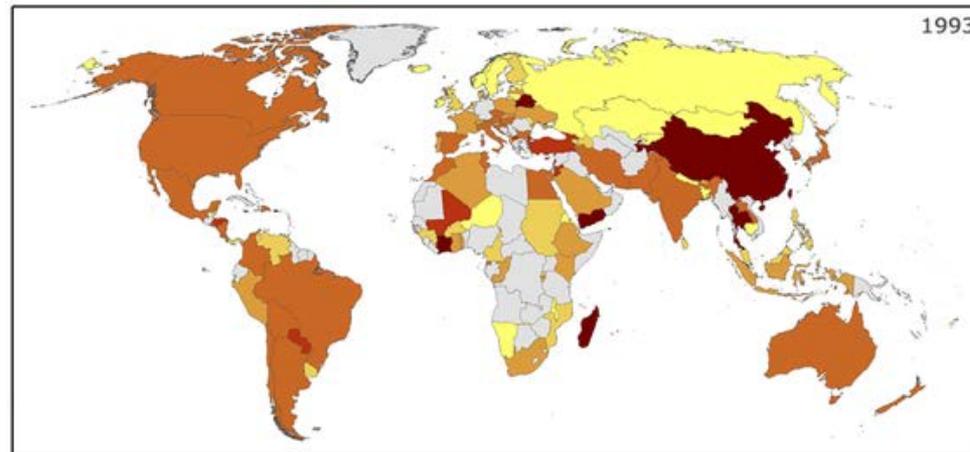
# Pollinators are diverse



# Market Value

Vulnerability: National dependency of the agricultural GDP on pollination

- The annual market value of the 5–8 per cent of production that is directly linked with pollination services is estimated at \$235 billion–\$577 billion worldwide
- The importance of animal pollination varies substantially among crops, and therefore among regional crop economies



Lautenbach et al., 2012



# Status and trends in pollination

- The volume of production of pollinator-dependent crops has increased by 300 per cent over the last five decades
- Pollinator- dependent crops have experienced lower growth and lower stability of yield than pollinator-independent crops
- Production declines when pollinators decline
- Wild pollinators, for some crops, contribute more to global crop production than do honey bees



# Drivers of Decline

- Landuse change
- Intensive agricultural management
- Pesticide use
- Environmental pollution
- Invasive alien species, pathogens and pests
- Climate change



<https://lowcountryhummingbirds.files.wordpress.com/2012/04/dmc-gh2-60661-ruby-throate-copy.jpg>



# 23 Key messages

**10) Wild pollinators have declined in occurrence and diversity (and abundance for certain species) at local and regional scales in North West Europe and North America.**

**14) The abundance, diversity and health of pollinators and the provision of pollination are threatened by direct drivers that generate risks to societies and ecosystems.**

**16) A number of features of current intensive agricultural practices threaten pollinators and pollination. Moving towards more sustainable agriculture and reversing the simplification of agricultural landscapes offer key strategic responses to risks associated with pollinator decline.**

**21) Bees suffer from a broad range of parasites, including Varroa mites in western and eastern honey bees. Emerging and re-emerging diseases are a significant threat to the health of honey bees.**



# Uptake by the Convention on Biological Diversity (CBD)

The CBD at its 13th Conference of the Parties (COP 13, December 2016 in Cancun, Mexico) the CBD transformed the key messages into options for active action and encouraged all Parties to implement them. This was the strongest form of uptake that the CBD can offer.

E.G.:

**21) Bees suffer from a broad range of parasites, including Varroa mites in western and eastern honey bees. Emerging and re-emerging diseases are a significant threat to the health of honey bees.**

*To improve hygiene and control of pests (including the Varroa mite and the Asiatic wasp, *Vespa velutina*) and pathogens in managed pollinator populations.*

**16) A number of features of current intensive agricultural practices threaten pollinators and pollination**

*To promote diversity of habitats and production systems in the landscape through, inter alia, support to ecologically based agriculture (including organic agriculture) and diversified agricultural systems (such as forest gardens, home gardens, agroforestry, crop rotation and mixed cropping and livestock systems), and through conservation, management and restoration of natural habitats, to enhance the extent and connectivity of pollinator-friendly habitats.*



**Conclusion:  
IPBES has done its work, now it  
is the responsibility of policy  
makers to enhance the  
implementation.**



# The methodological assessment report on **SCENARIOS AND MODELS OF BIODIVERSITY AND ECOSYSTEM SERVICES**

*Decision makers in Governments, private sector and civil society want more robust information regarding plausible futures of biodiversity and ecosystem services. They want to understand how the drivers impacting biodiversity and ecosystem services might evolve in the future, and what the consequences might be for biodiversity, ecosystem services and nature's benefits to people. They also want to understand the implications of different policy choices on biodiversity and ecosystem services, and how to achieve policy targets.*





# Key findings

**2.2) Different policy and decision contexts often require the application of different types of scenarios, models and decision-support tools, so considerable care needs to be exercised in formulating an appropriate approach in any given context.**

**2.3) No single set of scenarios and models can address all pertinent spatial and temporal scales, and many applications will require linking of multiple scenarios and models dealing with drivers or proposed policy interventions operating at different scales.**

**2.5) All scenarios and models have strengths and weaknesses, and it is therefore vital that their capacities and limitations be carefully evaluated and communicated in assessment and decision processes. Sources and levels of uncertainty should also be evaluated and communicated.**

**3.4) Uncertainty associated with models is often poorly evaluated and reported in published studies, which may lead to serious misconceptions – both overly optimistic and overly pessimistic – regarding the level of confidence with which results can be employed in assessment and decision-making activities.**

