

# Establishing Biodiversity Damage resulting from GMOs

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## Abstract

This study examines the **definition of biodiversity damage** in the Nagoya-Kuala-Lumpur Supplementary Protocol on Liability and Redress for damage to biodiversity from GMOs (Supplementary Protocol). This research focusses on: (i) The **concept of biodiversity damage and the damage-related definitions** in the Supplementary Protocol, the Convention on Biological Diversity (CBD) and the Cartagena Protocol on Biosafety. (ii) the current status of the Supplementary Protocol and challenges of implementation.

## Discussion

What is **damage to biodiversity** in the context of Biotechnology?

- **Not economic damage** (loss of income)



E.g., Coexistence: when an organic farmer claims losses for GMO presence.

- **No personal injury** (loss of life or harm to health)



E.g., Allergenic pollen

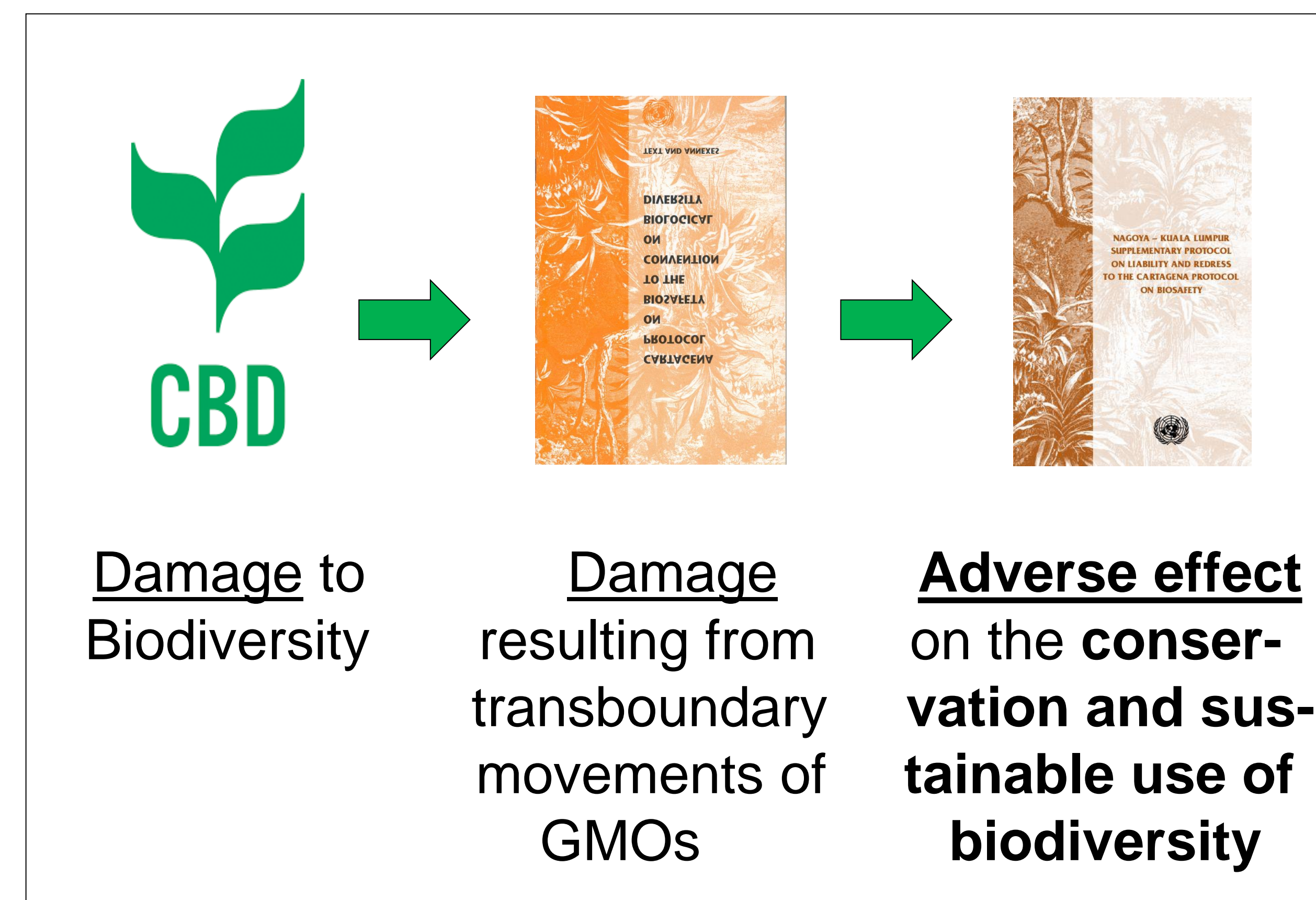
- Damage **to the environment per se**

### Legal definition:

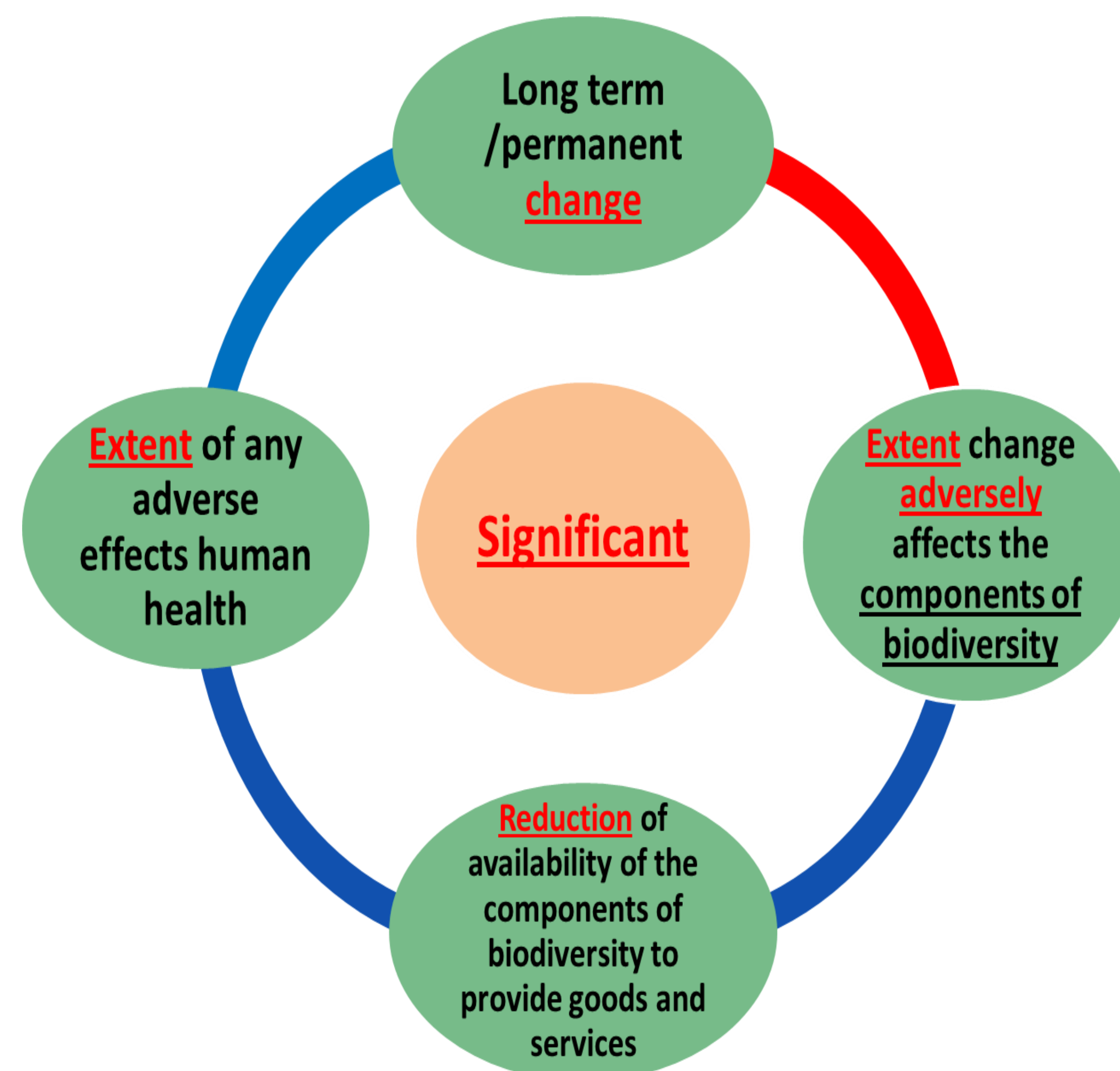
**An adverse effect on the conservation and sustainable use of biodiversity... that:**

- **Is measurable or observable taking into account, scientifically-established baselines...;** and is **significant.**

## Approach



## Conceptual Model to determine a significant adverse effect

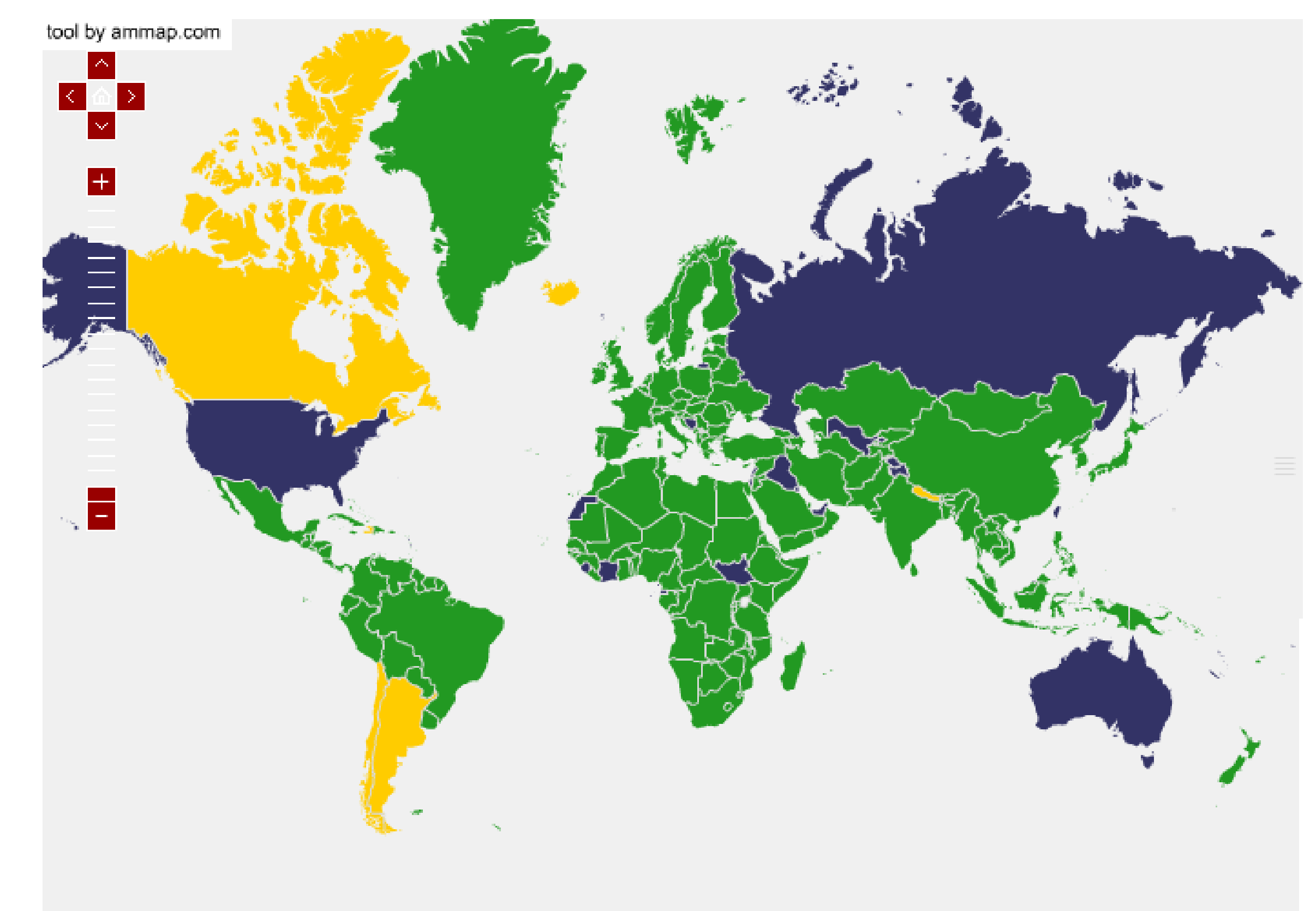


## Key concepts to keep in mind

- The difference between environmental changes and adverse effects (**not every change is an adverse effect**)
- The difference between adverse effects and Damage (**not every adverse effect is damage**)<sup>1</sup>

## Conclusions

- The importance of scientifically-established baselines, indicators, guidelines
- Interregional workshops recognized the crucial role of biodiversity baselines to undertake monitoring and evaluation.
- Management strategies and mitigation measures<sup>2</sup> based on conservation resources.
- Useful concepts of the Nagoya S. Protocol.
- Parties to the Cartagena Protocol: **170**



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\*Available at [http://en.biosafetyscanner.org/mappa\\_cartaghena.php](http://en.biosafetyscanner.org/mappa_cartaghena.php)

- Parties to the Supplementary Protocol: **37** (three left to enter into force)



## Bibliography

1. BARTZ, R., HEINK, U., & KOWARIK, I. (2010). Proposed Definition of Environmental Damage Illustrated by the Cases of Genetically Modified Crops and Invasive Species. *Conservation Biology*, 24(3), 675-681.
2. SHIBATA, A. (2014). *International liability regime for biodiversity damage : the Nagoya-Kuala Lumpur supplementary protocol*. Milton Park, Abingdon, Oxon: Routledge.