

**BIODIVERSITY IN THE ANTHROPOCENE:
GEOGRAPHICAL PATTERNS, ESCALATING BIODIVERSITY LOSS,
DRIVERS OF DECLINE, AND CONSERVATION EFFORTS¹**

**BIODIVERSITÄT IM ANTHROPOZÄN:
GEOGRAPHISCHE MUSTER, ESALIERENDER VERLUST
BIOLOGISCHER VIELFALT, URSACHEN DES RÜCKGANGS
UND ERHALTUNGSMASSNAHMEN**

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SUMMARY

Biodiversity is in sharp decline at many scales, declining faster than at any time in human history. On the other hand, it is of inestimable value for humans and their well-being since it safeguards ecosystem functioning and secures the provisioning of ecosystem services on which human civilization is utterly dependent. The global distribution of biodiversity is highly uneven. Striking contrasts are to be observed between the incredible diversity of tropical plants and animals and the much less diverse floras and faunas in temperate regions and higher latitudes. Evolution, speciation, immigration, extinction, and ecological interactions are fundamental processes underlying the latitudinal gradient of species richness. Recent global assessments of the status and trends of biodiversity and ecosystem services consistently showed that in the wake of the 'Great Acceleration' the rate of decline of biodiversity has increased dramatically. Around 1 million species currently face extinction. The current global rate of species extinction is at its highest level in 65 million years and at least tens to hundreds times higher than it has averaged over the past 10 million years. Thus, we find ourselves in the sixth mass extinction in the history of the Earth. Population declines, species extinctions and the associated erosion of ecosystem services are systemic problems in the Anthropocene to be attributed to direct drivers, with changes in land and sea use, direct exploitation of resources, climate change, pollution, and invasion of alien species having the largest global impact. These direct drivers are again linked to indirect drivers related to developments in economy, politics and society. Since none of the global biodiversity conservation targets has been achieved to date, urgent and concerted efforts

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