



Opportunities for nature and people in socio-ecological systems

Professorship in Climate Change Scenarios in Vulnerable Regions

Man-made climate change is threatening nature and people. This professorship will focus on the quantification of regional climate change and its feedbacks with ecosystems, biodiversity and people, with a particular emphasis on vulnerable regions. It will model climate and its feedbacks and impacts at the kilometer scale, making use of observational information, to quantitatively estimate climate shifts and variability as well as associated risks for ecosystems, biodiversity, and the supply of water and other natural resources. Integrated in the Wyss Academy the professorship will advance the understanding of the interactions of climate, biodiversity, and natural resources in social-ecological systems, providing actionable scenarios for sustainable livelihoods and nature preservation.

Professorship in Co-design of Land Systems

Land systems hold the key for addressing the triple challenge of improving human well-being while halting biodiversity loss and mitigating and adapting to climate change. This professorship will address the stewardship and use of land in the contexts of global change in view of co-designing concrete pathways to reconcile demands of nature and people in the Wyss Academy's Regional Stewardship Hubs. This will yield knowledge on spatio-temporal land-system dynamics, on ecosystem-service providers and beneficiaries, and related winners and losers. Special consideration will be given to telecoupled land demands, the interactions between actors of unequal power and levers for sustainability transformations. Research will use empirical methods, such as comparative, survey or modeling approaches, and will engage with multiple stakeholders in co-design of future scenarios and exploring pathways towards multifunctional landscapes for nature and people.

Professorship in Governance Innovation

Despite global interconnectedness, human decision-making and institution-building is often fragmented, poorly coordinated, and inapt in dealing with pressing social and ecological challenges. This professorship concentrates on the analysis of complex human-environmental systems with focus on the potential for innovative governance solutions in the Wyss Academy's Regional Stewardship Hubs. It studies the role of the state and its interplay with other public and private stakeholders to affect the behavior of key agents of change from global to local levels. Integrated in the Wyss Academy, the professorship will advance the understanding of cross-sectoral and multilevel decision-making, and explore pathways toward coping with power disparities, technical, ecological and social changes. Special attention will be paid to identifying levers for sustainability transformations.

Sustainability transformations for nature and People

Professorship in ICT for Nature and People

Information and communication technologies (ICT) and digitization have a great potential for transforming social-ecological systems towards sustainable development. This professorship will develop and deploy ICT innovations to sense, transfer, store, process, and analyze data efficiently, securely, timely, and reliably for understanding and shaping human-environment dynamics in the Wyss Academy's Regional Stewardship Hubs. Examples might be mobile applications, remote sensing, machine learning, natural language processing, or distributed ledger technologies. The professorship will advance the development and application of ICT for increasing transparency, efficiency, participation, and accountability in the co-design of transformative pathways for nature and people between stakeholders from different sectors, places, and scales. To this end, the professorship will generate knowledge and tools on issues such as supply chain management, payment for ecosystem services, stakeholder involvement, citizen science, and others.

Professorship in Integrative Biodiversity Conservation Science

Pressures on biodiversity, natural habitats and protected areas are increasing, despite various conservation policies and measures, and they are compromising human wellbeing. This professorship will focus on the generation of conservation-relevant biodiversity knowledge and the deployment of innovative approaches that reconcile the needs to halt biodiversity losses with the promotion of local socio-economic development in the Wyss Academy's Regional Stewardship Hubs. The research will use empirical methods, such as survey, comparative, or modeling approaches, accounting for climate change and land-use scenarios. It will take a multifunctional and multistakeholder perspective toward promoting co-benefits for nature and people and providing actionable pathways for the inclusive stewardship of biodiversity, land, and climate.

Professorship in Political Economy

This professorship will focus on ways to steer actors towards innovative and sustainable forms of valuing nature. Integrated in the Wyss Academy, the successful candidate will lead a research group contributing to the overarching objective of providing actionable solutions and policies for sustainable livelihoods and the preservation of nature in the Wyss Academy's Regional Stewardship Hubs. The group will study mechanisms for transformation through behavioral, market-driven and institutional adjustments. This includes integrating various concepts of the valuation of nature and political economy perspectives such as studying how trade and market integration at national and global levels can meet sustainability objectives.