中英文资助领域描述

“变化地球的生物多样性”项目建立在“生物多样性多维度”和“生态与进化交叉”等项目的基础上，该项目支持使用综合方法来理解生物多样性动态变化（即生物多样性的范围、结构和相互作用的变化）与不断变化的环境条件（包括气候变化）下功能性生物多样性之间的联系。生物多样性是地球上最复杂的特征之一，对人类的生存非常重要。当前快速且持久的物种丧失速率需要科学界提出新知识，阐明有机体的功能多样性与环境变化互作的机制。受资助的项目应当在环境变化背景下，推动建立对生物多样性持续地丧失、获得、维护和重组的全面认识。项目还应能够考虑过去和现在的生态和进化过程，以增进对各种环境变化下生物多样性功能的理解。

“变化地球的生物多样性”研究领域包括，但不限于以下内容：

1. 变化地球上与生物多样性相关的基本原则。
2. 生物多样性动态变化和功能多样性之间的相互作用和反馈范围。
3. 在不断变化的环境下，生物多样性功能方面的变化如何触发种群、物种、系统发育、群落和生态系统层面的响应。
4. 生态系统层面事件与气候和地质过程之间的相互联系，以及它们与变化环境中生物多样性功能方面变化的关系。
5. 与变化地球上生物多样性动态变化和功能多样性有关的概念和理论发展。

The Biodiversity on a Changing Planet (BoCP) program is based on Dimensions of Biodiversity program and The Intersection of Ecology and Evolution program. It supports projects using an integrative approach to understand the connections biodiversity dynamics (i.e. shifts in scope, structure, and interactions of biodiversity) and functional biodiversity under changing environmental conditions, including climate change. Biodiversity is one of the most complex features on the earth and is very important for human survival. The current rapid and lasting rate of species loss requires the scientific community to propose new knowledge about how the functional biodiversity interacts with environmental change. Granted projects could pursue development of a synthetic understanding of the continual loss, gain, maintenance, and reorganization of biodiversity on a changing planet. They could also consider past and current ecological and evolutionary processes to enhance understanding of biodiversity function under various types of environmental change.

Examples of research areas include, but are not limited, to:

* Understanding fundamental principles related to shifting biodiversity on a changing planet.
* Understanding the range of interactions and feedbacks between biodiversity dynamics and functional biodiversity.
* Understanding how functional biodiversity change may trigger population-, species- phylogenetic- community-, and ecosystem-level responses, under changing environments.
* Understanding the interconnection between ecosystem-level events and climatic and geological processes, and their relationship to functional changes in biodiversity in a changing environment.
* Conceptual and theory development pertaining to shifting biodiversity dynamics and functional biodiversity on a changing planet.

These examples are illustrative only. Proposals may focus on any of these areas, a combination of these areas, or topics outside of these areas.