SAVE THE PLANET, EAT MORE SPECIES: FOOD BIODIVERSITY IN A CHANGING CLIMATE

Background

Loss of food biodiversity - the diversity of plants and animals grown for food production - is reaching critical levels. Human diets that used to involve a wide variety of plants and animals have gradually shifted to a diet composed of mostly processed foods and a limited number of species. However, diversity in food is associated with higher micronutrient adequacy of diets, and from a conservation point of view, diets based on a wide variety of species put lower pressure on single species.

Scope of the thesis

Using an existing and extensive dataset, the student will evaluate indicators for the assessment of food biodiversity in diets that are relevant for nutrition epidemiology and research on sustainability of human diets in general.

Although species diversity indices are established in ecology and biodiversity research, these indicators have not been applied in the context of diet and association with health outcomes. Conceptual reformulation is therefore needed in order to obtain nutritionally meaningful results. An additional technical challenge is the identification and definition of an appropriate similarity measure to be integrated in the diversity indicator, so that a clear and simple indicator of nutritional quality of the most benefit to decision makers/stake holders can be derived.

Further reading: Lachat C, et al. (2017) Dietary species richness as a measure of food biodiversity and nutritional quality of diets. Proceedings of the National Academy of Sciences of the USA.

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