Mission statement

The mission of our IUCN Specialist Group is to promote the conservation of chytrids, downy mildews, myxomycetes and zygomycetes.

Projected impact for the 2017-2020 quadrennium

By the end of 2020, we envision a substantial advance in understanding extinction risks for certain ecological groups of myxomycetes (slime moulds), chytrid, zygomycete, downy mildew and particular species. One of the most important aspects of evaluating possible impacts of climate change and anthropogenic influence is to demonstrate that changes are occurring in the distribution of particular species. In future research, at least two possible effects of climate change and other negative impacts should be clearly distinguished. First, the negative impacts on composition of species assemblages, which does not necessarily threaten particular species, must be assessed. Second, the negative impacts on a single species, which may well be threatened and thus would warrant inclusion on Red Lists, needs to be evaluated. In addition, promotion of conservation activities for neglected groups of living organisms will provide the general vision of nature processes functioning; in particular, attention needs to be focused on discovering the role of chytrids, zygomycetes, downy mildews, and myxomycetes in people's lives and their relationships with other species. Furthermore, the conservation action network of experts and amateurs will expand.

Targets for the 2017-2020 quadrennium

Assess

Red List: complete assessment of 100 species of myxomycetes (slime moulds).

Research activities: (1) study climate change impacts on myxomycetes, chytrid, zygomycete, downy mildew; (2) analyse population trends, threats, and assess species using the IUCN Red List criteria and determine conservation actions for chytrids, zygomycetes, downy mildews, and slime moulds.

Plan

Policy: promote the conservation of different groups of living organisms that were not considered to be in danger before, but are in need of protection today.

Network

Capacity building: train professionals on how to carry out Red List assessments.

Synergy: organise a network of specialists and stakeholders for discussing conservation problems for "lower fungi" and for exchange of successful protection measures.

Communicate

Communication: advance conservation activity for chytrids, zygomycetes, downy mildews and slime moulds.

Activities and results 2018

Assess

i. We carried out preliminary Red List assessment of 10 tropical myxomycete species from genus *Physarum* based on field expedition material from Seychelles and Martinique. Ten species were

i. Five publications were produced, including scientific publications which analysed conservation problems, climate change, environmental safety, species identification, human impact, heavy metals accumulation, mountain and tropical ecosystems in the context of “lower fungi”; a guidebook for field work; and an identification book. For the characterisation of the ecological niche, 19 bioclimatic variables were used and obtained from the Wordclim database (www.worldclim.org/). For each model, the extreme values of radiative forcing (FR) were used (as proposed by the IPCC: 2.6 W/m2 for a mitigation scenario, and 8.5 W/m2 for a pessimistic scenario). Predictive models of the potential distribution of 11 species of myxomycetes were obtained in different climatic scenarios and the contribution of the bioclimatic variables to the potential distribution of the species was determined. (KSR #43)

ii. We made three field studies and scientific analyses of myxomycete assemblages in tropics, mountain and mangrove ecosystems. The project “Inventories of fungal and functional taxonomic groups” was carried out in three Cuban wetlands: (1) Managed Resources Protected Area Ciénaga de Zaps) Moc1aonzadistct dv1 (s o)-035 Tw T[0.003 Tc -0.033r ss