BROADENING THE COVERAGE OF BIODIVERSITY ASSESSMENTS

The need for a broader view of biodiversity
To date, major conservation decisions and species-based indicators of biodiversity change have only included data on a restricted subset of species, and do not take into consideration the majority of biodiversity. The breadth of information provided to inform important global objectives like the various targets to reduce biodiversity loss, needs to be improved upon. Assessing the larger groups of less well-known organisms presents a major challenge, and a comprehensive survey of extinction risk for whole groups is often not feasible.

A new approach
A new approach has been developed that takes a large random sample of particular species groups – just as when forecasting election results, a poll of voters is taken. This allows the determination of overall conservation status for a group, the broad-scale mapping of patterns of threat, the identification of the main drivers of threat, and shows what key actions are required to address decline in the group. This approach will lead to a better understanding of the status of global biodiversity, by incorporating data on vertebrates, invertebrates, and plants.

Groups being assessed to broaden our understanding of biodiversity.
Evaluating trends in biodiversity
By conducting conservation assessments at regular intervals, changes in the threat status of species can be used to monitor trends in extinction risk. Using the sampled approach, the IUCN Red List Index is a global biodiversity indicator that can integrate vertebrate, plant and invertebrate species from the terrestrial, freshwater, and marine systems.

Status of the world’s terrestrial vertebrates
Combining new assessments of reptiles, with the mammal amphibian and bird data, presents the most accurate picture of globally threatened terrestrial vertebrates hitherto. Twenty four percent of terrestrial vertebrates are threatened with extinction and, worryingly, the regions that have the most threatened species are usually the least well understood.

The distribution of reptile threat
Assessment of a representative sample of reptiles has determined that at least 18% of species are threatened with extinction. The Indo-Malayan realm has the greatest diversity of reptile species, but also suffers high levels of deforestation and over-exploitation, resulting in the highest concentration of threatened species. However, the Neotropical realm, in particular the Caribbean islands and central South America, contains the most species with an extremely high risk of extinction (i.e., Critically Endangered).

First globally representative invertebrate groups on the IUCN Red List
At least 16% of freshwater crabs are threatened with extinction and the majority of these are restricted-range species. The relatively high threat level of this group is thought to be a result of life history traits such as low reproductive output alongside human-induced fragmentation of their freshwater habitats.

Varying levels of threat
Freshwater groups of many taxa are, on average, at higher risk than their terrestrial counterparts. However, habitat loss and degradation is the largest threat to all non-marine groups around the world. Where habitat loss is the primary cause of decline it could be assumed that there is a positive correlation between declines in vertebrate and non-vertebrate populations. Where threats such as exploitation or pollution exist, trends between different species in the same ecosystem will not necessarily be the same.

Delivery by 2010
By the year 2010, coverage of the IUCN Red List will have expanded to include coverage of eight groups of invertebrates, more than doubling current invertebrate coverage. The results of the IUCN Red List Index will provide a species-based biodiversity indicator that is much more broadly representative of global biodiversity than anything previously available.