

lessons learnt from conservation science, practice and project management and translate them into a business context.

The guidelines propose a four-stage approach to develop a corporate-level biodiversity strategic plan: (1) identifying priority pressures and dependencies across company operations and supply chains, and the most important species, habitats and ecosystem services to protect; (2) defining company ambitions through a vision, goals, objectives and strategies; (3) choosing scalable, linked indicators to monitor delivery of company ambitions; and (4) implementing strategies, collecting data against a monitoring plan, and using and sharing data to facilitate adaptive management.

A key element is the pressure–state–response–benefit indicator model, which has become central to biodiversity monitoring for conservation projects and the Sustainable Development Goals. This model allows companies to measure progress along their theories of change and to demonstrate how their actions lead to outcomes and impacts. A unique feature of the IUCN approach is that it encourages companies to name the species, habitats and ecosystem services they will focus on, a level of specificity that will ultimately enhance the feasibility and measurability of their ambitions and the quality of their monitoring. The guidelines also act as a toolkit by explaining how existing business guidelines, standards and tools can be applied in the different stages of developing and implementing a corporate-level biodiversity strategic plan.

This work was a unique collaboration between the IUCN Species Survival Commission Species Monitoring Specialist Group, the IUCN Global Business and Biodiversity Programme, and companies from various sectors, especially Alcoa, Boskalis and Nespresso, who helped test and shape the guidelines. IUCN now encourages other companies to work with it to roll out and further test the guidelines. It is hoped this simple, stepwise process will encourage more companies to engage with nature and to see that doing so is less daunting than they thought.

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### Increasing knowledge of the world's trees

The pace of publishing IUCN Red List assessments for trees has increased dramatically, with a total of 28,676 tree assessments, 19,087 of which were published during December 2018–December 2020. Trees comprise nearly one-third of

all threatened species on the IUCN Red List, and, although it is valuable to have so many tree species assessed, it is alarming that so many are at risk of extinction. Assessments for the Global Tree Assessment were undertaken by botanists worldwide, coordinated by Botanic Gardens Conservation International and the IUCN Species Survival Commission Global Tree Specialist Group following a strategic approach set out in 2015 (*Oryx*, 49, 410–415).

A particular focus has been to prioritize assessments of endemic tree species of the most biodiverse countries, including Brazil, Colombia, Indonesia and Papua New Guinea, and the complete assessment of all 3,118 tree species of Madagascar, of which 2,904 (93%) are endemic. The latter was a collaborative effort involving Kew Madagascar Conservation Centre, Missouri Botanical Garden Madagascar Program, the University of Antananarivo, the IUCN Species Survival Commission Madagascar Plant Specialist Group, and other botanists. Priorities for conservation have been identified, and 63% of Madagascar's endemic trees are considered threatened with extinction.

In addition to the published IUCN Red List assessments, all other tree species now have either an IUCN Red List assessment awaiting formal review, a provisional assessment or a published national or regional Red List assessment. For the first time we have a comprehensive global overview of the status of trees and of each individual species. Data already published indicate that at least 26% of the world's 58,500 tree species are threatened with extinction. The target now is to ensure that all tree species have an up-to-date assessment published by 2023.

In the meantime, the priority is to scale up conservation action for those tree species we know are threatened with extinction. A combination of ex situ and in situ approaches will be employed, with major efforts to incorporate threatened trees into ecological restoration and tree planting initiatives.

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### 500th Critically Endangered Jamaican rock iguana released into the wild

Caribbean rock iguanas *Cyclura* spp. are categorized as threatened on the IUCN Red List, with the endemic Jamaican rock iguana *C. collei* categorized as Critically

Endangered, primarily because of the effects of habitat conversion and invasive alien species. This species was considered extinct by the 1940s but was rediscovered in 1990 in the Hellshire Hills, a tropical dry forest ecosystem in south-east Jamaica. This galvanized the local and international zoo and conservation community, resulting in a successful recovery programme.

Early surveys, conducted by the Jamaican Iguana Recovery Group, a consortium of local and international stakeholders, chaired by Jamaica's National Environment and Planning Agency, identified two communal nesting areas frequented by the relict population. Nest site monitoring in 1991–1992 found only six adult females nesting in these depressions. In 1993 a population viability analysis outlined subsequent interventions that continue today, including nest site protection, habitat and iguana monitoring, and control of invasive alien species. These activities focused on the nesting areas, expanding the iguana's core protected area to c. 2 km<sup>2</sup>. However, despite recovery efforts, depredation by invasive alien species continues, reducing natural recruitment to unsustainable numbers.

Concurrent with field activities in the Hellshire Hills is a head-start programme at the Hope Zoo in Kingston, Jamaica. Each year as the new cohort of wild iguanas hatch, a subset is transferred to the head-start facility, where they can grow to a size at which they are better able to defend themselves against invasive alien species before being returned to Hellshire.

After 30 years of effort and intensive head-start improvements in recent years, resulting in a reduced 4.5 years in captivity (7–15 years historically), the programme reintroduced the 500th individual in March 2021 and is on track to release the 1,000th individual to Hellshire by 2026. Future plans include reintroducing Jamaican rock iguanas on the Goat Islands, part of their historical range. The Goat Islands were recently saved from detrimental development and are now slated to become a sanctuary. Fundraising is underway for the first phase of the project, eradicating invasive alien species and restoring habitat.

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## Conservation Leadership Programme 2021 Team Awards announced

In April, the Conservation Leadership Programme (CLP) announced the winners of its 2021 Team Awards, which will provide support for 22 teams of early-career conservationists leading critical projects on globally threatened

species. These local biodiversity champions will receive project funding worth a combined total of USD 437,405, thanks to support from Arcadia—a charitable fund of Lisbet Rausing and Peter Baldwin.

As part of the award, one member from each team will participate in CLP's international Conservation Leadership & Management course, which aims to bolster trainees' careers by building their professional skills and peer-to-peer networks. For the second consecutive year, the course will be held online, followed by an in-person reunion when it is safe to do so. The awardees will also benefit from long-term mentoring from experts working within the conservation sector and will join CLP's global alumni network to gain access to learning resources, grants, and other key information to further sustain their future as conservation leaders.

This year's award-winning projects will take place in Asia and the Pacific, Latin America and Africa, undertaking research and conservation action for threatened species, including the black softshell turtle *Nilssonina nigricans*, red panda *Ailurus fulgens* and lion-tailed macaque *Macaca silenus* in India; blue-winged goose *Cyanochen cyanoptera* in Ethiopia; sand-dune lizard *Liolaemus multimaculatus* in Argentina; and horseshoe crab *Tachypleus tridentatus* in Indonesia. Other marine-related projects will focus on conserving coral reefs in Brazil and the last remaining population of the Ganges river dolphin *Platanista gangetica* in Nepal.

Two Conservation Leadership Awards (USD 50,000 each) were granted this year. These 2-year projects will support CLP alumni to build on their previous work and ensure long-term conservation outcomes. One project will expand its conservation work on the Togo slippery frog *Conraua derooi* from Ghana into Togo, and the other will continue conserving threatened endemic bat species in Viet Nam.

To view a full list of the funded projects, visit [conservation-leadershipprogramme.org/our-projects/latest-projects-2021](https://conservation-leadershipprogramme.org/our-projects/latest-projects-2021).

The Conservation Leadership Programme was initiated in 1985 and is a partnership between BirdLife International, Fauna & Flora International and the Wildlife Conservation Society.

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## Establishment of community-led fish conservation zones in Meghalaya and Manipur, India

In India there is no formal framework for community-based protection of freshwater ecosystems, unlike in some South-east Asian countries, such as Laos and Myanmar, where community co-managed models of freshwater fish conservation have been successfully implemented. Driven