



IUCN USA Regional Conservation Forum

June 25 2019

Report

The United States Regional Conservation Forum was hosted by the Smithsonian's National Zoo in its Conservation Pavilion and was attended by 90 participants representing 49 Members, all six Commissions and the Secretariat.

It opened with welcoming remarks from the Smithsonian Institute for Conservation Biology, the IUCN North America Office and the United States Department of State.

Christine Dawson from the Department of State noted that the US Government recognizes IUCN's value and appreciates its analysis and convening power; it is committed to supporting IUCN on the path to Marseille. She explained that the World Conservation Congress will help define objectives, define paths for conservation moving forward, and provide clarity on positions and priorities for post-2020 processes. She highlighted in particular the relevance of North American efforts and solutions to combatting conservation crimes (e.g. wildlife trafficking, illegal and unreported and unregulated fishing, illegal logging and illegal mining).

The Chair of the USNC, Christopher Dunn, gave a summary of the previous day's US National Committee annual meeting proceedings, highlighting in particular the message of hope. He summarized the discussions on: Earth Optimism; reports from the USNC subcommittees; IUCN engagement with the UN; motions and topics of interest; the importance of increased engagement with and membership of indigenous peoples organizations; and the inspiring remarks from Yves Frénot, Scientific Advisor at the French Embassy to the USA. He then introduced and welcomed the new USNC Executive Committee: Scott Hajost, Healy Hamilton, Jennifer Luedke, David Reynolds and Deb Hahn. He noted with appreciation that he will remain Chair and thanked the departing Executive Committee members.

IUCN Draft Programme

The draft IUCN Programme 2021-2024 was presented to IUCN USA Members by the Director of the North America Office, Frank Hawkins. The presentation and full detail can be viewed here:

https://portals.iucn.org/union/sites/union/files/doc/draft_programme_2021-2024_rcf_consultation_washington.pdf.

While Members expressed support for certain areas of the draft Programme, they raised several concerns around elements they perceived to be missing or lacking focus. Positive reactions included

appreciation for the focus on youth, engagement with urban environments and framing of the interconnectedness of nature and people. The following summarizes issues raised:

Drift from focus on species and protected areas

The most resounding feedback was a concern for the apparent drift from clearly prioritising species, biodiversity and protected areas within the framework of the Programme. Although they recognized these themes were embedded within the main Programme Areas, they called for clearer and distinct emphasis on biodiversity conservation and protected areas. Some also felt that the concept of ecosystem services had been lost within the Programme.

Root causes of biodiversity loss not sufficiently addressed

Members expressed concern that there was a lack of recognition and targeted action on the root causes of biodiversity loss and climate change. Some felt that IUCN should have a stronger stance on human population issues, energy, agriculture, industry, infrastructure and economic factors (e.g. subsidies) driving biodiversity loss.

Emerging critical issues not sufficiently covered

Several Members felt that there was not sufficient attention to emerging issues currently in the conservation discourse, such as plastics. Even if embedded within broader Programme Areas, they expressed that plastics should be a clear focus. Some also felt that disaster risk reduction was not sufficiently or distinctly highlighted.

Need for inspiration: tone and longer term vision

Several Members agreed that the tone and framing of the draft Programme lacked inspiration. They expressed that there seemed to be no clear vision or overarching goal for what the Programme would achieve. One Member noted “it read like a heavily negotiated UN text”. They expressed that for IUCN to stay relevant and at the forefront of conservation it would need to be more articulate and forceful in its statements. Members recommended a clear, concise and positive statement for what IUCN aims to achieve through the Programme, to help motivate and mobilize the Union in the next quadrennial.

Need for greater focus on indigenous peoples and conservation, justice and rule of law

Noting the creation of the new IPO category in Hawaii, Members¹ expressed that this Programme had the opportunity to build on this with a stronger and more defined and inclusive approach. Others also noted that the Programme should have a clearer focus on distributive justice and rule of law².

¹ No IPO Members were able to attend this event

² It was clarified that there is a strong focus on governance in the programme, including through the development and further application of the Natural Resource Governance Framework.

The session ended with broad understanding that the Programme was still in draft form and that their constructive inputs were requested in refining it before it goes to Council. IFAW offered to coordinate inputs from US National Committee Members.

A formal submission by WCS can be found in Annex 2.

Frank Hawkins gave a brief overview of the road ahead and main events coming up in 2020, culminating in the CBD COP15 in Kunming, China. He noted that comments in to the draft IUCN Programme is just the first step in shaping the outcomes in Marseille and Kunming.

Christine Dawson from the Department of State underlined the importance of this path and efforts not ending at the CBD COP. It is only the start of the post-2020 process and the opportunities will continue for contributing to IUCN's position and other efforts for the post-2020 framework.

A Member reminded the group that IUCN often sends emails consulting Members on its positions and encouraged them to participate in these processes.

World Conservation Congress

The Union Development Group (UDG) gave an overview of the upcoming World Conservation and preparations in its lead up. The presentation and full details can be found here:

[https://portals.iucn.org/union/sites/union/files/doc/en_iucn_congress_marseille_2020 -
_presentation_for_rcf_washington.pdf](https://portals.iucn.org/union/sites/union/files/doc/en_iucn_congress_marseille_2020_-_presentation_for_rcf_washington.pdf)

Enrique Lahmann highlighted in particular:

- IUCN has adopted 1300+ Resolutions and Recommendations since 1948 Congresses have had influence on conservation policies, development of treaties.
- Congress themes
- Congress structure –
 - Forum: Congress participants, June 12-15
 - Exhibition: open to general public, June 11-17
 - Members' Assembly, June 16-19 and
 - The Espace Generation Nature
- The Forum will consist of thematic stream sessions, campus, speaker pitches
- Location: the Congress will take place in several buildings
- 14k sq m of exhibit area to showcase work and innovation to the conservation community and the general public

- Biggest surface area available is 150 sq m
- Areas will be divided into thematic villages

The call for event proposals spanned May 5- July 17, 2019. This is followed by technical merit reviews (independent review by at least 2 volunteer reviewers), a strategic review by an advisory panel (with a diversity of perspectives, including from the host country). The final selection announcement is to be made October 31, 2019.

Comments and questions from Members included:

- *Many SSC commission members are concerned that the topic of species does not clearly fit in any of the themes.* UDG explained that there are many areas that encompass species issues in the themes, such as managing landscapes, conserving freshwater and climate change mitigation and adaptation.
- *For the 2016 Congress, Members could look at what events had been submitted to see if there was any overlap to collaborate on an event, will this be an option?* UDG explained that yes and there have been improvements in the website for this. Members can not only look for events but motions that have been submitted as well.
- *What is the process for securing engagement spaces and what are the prices?* UDG explained there is an [online system](#) for small spaces. For medium and large spaces, Members should approach Paola Geremicca paola.geremicca@iucn.org. Prices are listed in the [PowerPoint](#). UDG encouraged Members to form coalitions and get one shared space to cut costs and maximize efficiency.
- *Will Commissions have their own dedicated spaces?* Commissions also need to reserve and pay for spaces.
- *What is the plan for showcasing Commissions if there are no dedicated Pavilions?* For example, SSC are in discussions with partners (including the Smithsonian) and will likely get together with partners and share content. It will not be a SSC pavilion per se, but SSC will still be prominently featured as part of the coalition. This was encouraged as an approach. WCPA were planning the same.
- *How do we engage high-level media (there were few in 2016)? We need to identify key people in the media and invite them far in advance. Need to attract national, European and global news.* UDG clarified that IUCN is working on collaboration with groups such as National Geographic. They asked that if Members have media connections to help engage them. Invitations need to

be sent far in advance (from UDG) and UDG is in conversations with France (host country) on media presence.

- *With oceans being a key theme: is the Marine and Polar Program in charge of a large exhibition?* UDG clarified this was the case, but details on plans were forthcoming.
- *Livestreaming: more accessibility/recording: what thought has gone into these options?* UDG explained that some sessions will be recorded. Livestreaming will depend on the host but IUCN is in discussion with them. If so, they will also need to decide which events would be livestreamed.
- *While appreciating the energy and diversity, at the last Congress, there was sometimes there dance parties and drum circles while technical discussions were happening. Will there be better attention to sound in the organization around preparation?* UDG noted that although they cannot soundproof areas, they are working on this through a coordinated calendar and issue guidelines to prevent loud overlap with serious discussions.
- *Will hotels bookings be centralized?* At the time of the RCF, UDG was working on getting preferential rates. Information on the [Congress website](#) and is expected to open October 31st.
- *How can Members nominate individuals for awards?* UDG clarified there was a tab under “Exercise my rights” in individuals’ profiles on the Congress website. There is also an email awards@iucn.org. The deadline for nominations: September 30th.

UDG explained that efforts are being made to make this upcoming Congress fully sustainable using recyclable materials.

IUCN Motions Process

UDG continued by presenting on the motions process. The presentation with full detail can be found here: https://portals.iucn.org/union/sites/union/files/doc/motions_process_2020_for_rcfs_brief.pdf

The IUCN motions process has been critical in the environmental agenda, in treaties, bringing ideas to the forefront, the development of standards, and environmental rule of law.

Enrique Lahmann described that once the deadline for motions passes, the motions are assigned to a motions working group which decides which to recommend, combine and/or change. Council can also submit motions and these undergo the same review and voting process. If a Member finds that their

motion is similar or can add value to a Council sponsored motion, they are able to contact the motions focal point to discuss any merging.

The online discussion of motions is held between December 11th 2019 and March 11th 2020. The electronic voting occurs between April 29th and May 13th, 2020. Although not without challenges, online voting has been largely successful and allowed time for substantive discussions on particularly controversial or complex motions at the previous Congress.

It was noted that a lack of financial resources, external issues, and coordination between stakeholders can hinder implementation of certain Resolutions. As called for by the previous Congress, a process to retire obsolete Resolutions was undertaken. These are still available to view as an archive but no longer have to be reported on.

IUCN Governance

John Robinson, IUCN Councillor, presented governance reforms under consideration in the IUCN Council. The presentation can be found here:

https://portals.iucn.org/union/sites/union/files/doc/presentation_on_governance_reforms_for_rcf_wit_h_speaking_notes_english_v18.06.2019.pdf

He spoke on (see presentation for full details):

1. Including subnational governments in IUCN's membership
2. Election procedures and inclusiveness of dependent territories
3. Establish an elected Indigenous Councillor position
4. Modification of the term "Regional Councillor"
5. Improvements to the motions process
6. Follow-up to the External Review of IUCN's governance

Discussions included:

Subnational government membership:

-In the US, given the number of States that would be considered sub-national, many questions arise as to how this would affect current voting weighting between categories of membership. Could it influence of government increase in proportion to non-government members? This came out as a concern. It was clarified that in the current proposal, the more subnational entities, the less the weight counts.

- Clarification that “territorial government” is not considered subnational in the current discussions
- Clarified that dues for subnational governments was not yet decided

Modification of term “regional councillor”

- Some pushback on change in nomenclature of “regional councillor” – noting regional technical role of individuals and not political motivations.

Changes in the Motions process

- Questions and some push back on whether a two-thirds majority would actually temper innovative forward-thinking resolutions and favor a more conservative approach. NB: Clarified that this change is proposed to be made after this coming Congress – not applicable to Marseille.

Regional Councillor from North America:

- Point made that, to date, all regional Councillors for North America have been men. Noted that a woman and/or indigenous and/or young Councillor would be a strong addition.

Discussions ensued on election of Regional Councillors and the diversity of processes on this globally. For the US, it was suggested that nomination of a Regional Councillor be discussed and jointly supported by US Members prior to the Congress, underlining the importance of having candidates with in depth knowledge on conservation and IUCN. Sue Lieberman from WCS was suggested by one Member as a strong candidate given her expertise, work at WCS and previous time at USFWS and her Commitment to IUCN. This was seconded by other Members and Sue confirmed she would run.

Synthetic Biology

Kent H. Redford from the IUCN Taskforce on Synthetic Biology and Biodiversity Conservation presented *Conserving Nature in an Unnatural World*, an overview of the issue of synthetic biology in conservation and on the development of an IUCN policy on biodiversity conservation and synthetic biology. The full presentation can be found here:

https://portals.iucn.org/union/sites/union/files/doc/synthetic_biology_presentation.pdf. More information can also be found here: <https://www.iucn.org/theme/science-and-economics/our-work/other-work/synthetic-biology-and-biodiversity-conservation>

Kent Redford noted that a motion will be put forward for adoption of a policy on synthetic biology in Marseille. He urged Members to think about context of how their work will be impacted by synthetic biology and to explore thoughts on a transition away from the notion that conservation outcomes will

come from decreased human interference and management. Conservation has been branching out into higher levels of human interference and technology, for example in efforts to de-domesticate animals to reintroduce them as wild species and moving rhinos from Africa to Australia. He quoted that 82% of endangered species will require ongoing human management. Synthetic biology, he noted, will have us asking *what nature do we want to conserve and how do we want to conserve it?*

To date, there has been little discussion on synthetic biology and conservation. However, synthetic biology is rapidly evolving and spreading. The US currently leads in using genome-editing technology but there is increased access to it worldwide. Largest investments for synthetic biology are in agriculture, e.g. to transform rice, increase micronutrients in existing crops, create new domestic crops, increase drought tolerance, increase disease resistance, etc. It is also used for human health and industrial production. However, its use is rapidly evolving and has unknown impact on land use, landscapes and ecosystems as well as the people who depend on them.

Resolution 086 from the 2016 Congress called for the development of IUCN Policy on the Intersection of Biodiversity Conservation and Synthetic Biology. A task force and technical subgroup were created. They recently published [Genetics Frontiers for Conservation](#): an assessment of synthetic biology and biodiversity conservation: technical assessment (a [summary and key messages](#) is also available). For this, they reviewed proposed applications for synthetic biology and went through a thorough peer review process. All responses were addressed. The publication fed into the draft policy (see Annex 3) which developed seeks to guide decisions on synthetic biology. Kent Redford expects this to be one of the most contentious motions at Congress.

Kent Redford noted it is important to engage the synthetic biology community with conservation community. The issue in conservation however is broader than the technology behind synthetic biology, it is heavily influenced by attitudes, beliefs, values and ethics. Kent Redford ended the presentation by asking challenging questions for the Members and the conservation community on notions of human interference in conservation, classification of species (e.g. wild versus synbio modified organisms) and synthetic biology applications within nature-based solutions. He concluded saying that synthetic biology will change the world and it is up to us to determine how.

Comments and questions included:

Are there examples of government assessments of these issues? The assessment found that most countries have a legal framework that applies to synthetic biology – whether through GMOs or nature conservation. There are a lot of existing law/legal frameworks that are applicable. Some countries are considering how existing governance structures apply to new biotechnology. Synthetic biology is problematic because people talk about different things when they refer to it. Synthetic biology will

challenge existing structures because it is expanding rapidly and will challenge how we conceive of governance.

The presentation did not mention de-extinction. Any thoughts on it? Although this has captured media attention, synthetic biology is relevant to much more than de-extinction (e.g. agriculture). Conservation community would do a disservice if we focus on only on de-extinction applications.

What about epistatic effects? Limited reference due to lack of evidence-based info.

What can synbio do about plastic pollution? A lot of work is being done, particularly on bioplastics and microorganisms that can eat plastic. However, there is also concern that it may get out of control.

IPBES – Panel Discussion on recent Global Assessment

The RCF ended with a panel discussion on IPBES. Nicholas MacFarlane, Scientist and Technical Advisor for IUCN opened it on behalf of Flore Lafayede Micheaux, IUCN IPBES Programme Officer, with an introductory presentation that can be found here:

https://portals.iucn.org/union/sites/union/files/doc/macfarlane_ppt_presentation_rcfs_ipbes_session_-_5_min.pdf

Dr. Pamela McElwee, Associate Professor of Human Ecology, Rutgers, presented on the IPBES Global Assessment. The presentation can be found here:

https://portals.iucn.org/union/sites/union/files/doc/ipbes_global_assessment_rcf_usa_2019.pdf. She noted that the Global Assessment aimed to build on regional assessments and meant to be policy relevant not policy prescriptive. The summary for policymakers focused on drivers of loss and the report attempted to rank them. A key message was to not only focus on biodiversity but also on nature's contributions to people (NCP) and determine which ones are steady, increasing or declining. Most are declining, other than production of food, energy and raw materials used by people. The report also looked at advances towards SDGs and Aichi Biodiversity Targets and confirmed slow progress. It stresses that we cannot neglect the role of nature in moving forward with SDG achievements and we need to think about ways to achieve synergies across targets and goals for sustainable development, biodiversity and climate change. It also points out that we need to radically reconfigure our economic systems to tackle these issues and that we cannot continue with business as usual. It examined policy options, such as eliminating some subsidies while creating positive incentives, without being policy prescriptive.

Pam McElwee concluded with intersections of IPBES key messages with IUCN priorities:

- Food production and conservation goals: complementary and interdependent
- Sustainable fisheries: integrated management on land, in freshwater and oceans
- Land-based climate change mitigation: attention to trade-offs
- Nature-based solutions in cities: crucial for global sustainability
- A key constituent of sustainable pathways is the evolution of global financial and economic systems to build a global sustainable economy

Panelists: Sir Robert (Bob) Watson (former IPBES Chair), Kristen Walker-Painemilla (CEESP Chair), Angel Andrade (CEM Chair)

Bob Watson presented the following points for discussion:

- If we start to manage land/manage climate: extinctions can be avoided
- We cannot look at climate change, biodiversity or land degradation in isolation. Different government departments tackle these issues separately. We need to consider them together in conjunction with human needs
- Lack of synergies at international policy level: UNFCCC, Ramsar, CITES and others need to work more closely together
- Broad issues of lack of trust between government and private sector
- Individual behavior change is also needed

Angela Andrade underlined that the report creates a sense of urgency and stresses the need for synergies. She noted that:

- Species occur in ecosystems: we need larger focus on ecosystem integrity. The Red List of Ecosystems is highly applicable for saving species
- We need to mainstream nature-based solutions and address conservation and degradation issues in an integrated manner.
- CEM and partners are working on principles and standards for nature-based solutions
- In any interventions or changes in policy for conservation, we must be sensitive to cultural issues
- Address issues of value and economic systems

Kristen Walker-Painemilla made a call to action for IUCN and its Members:

- IUCN has all of the cogs in the wheel to respond to these challenges. How will we respond to these issues as a collective? We have the science and the knowledge systems – how do we bring these together?
- We [as constituents of IUCN] need to not just criticize the new Programme – but come up with solutions and bring these to the Congress

Questions asked to the panel:

What thoughts on the role of microbes? We generally do not think about microbes when we think about species. IPBES did not consider them. We might need a parallel document that covers microbial world. The report also did not cover soils.

On species, climate change and protected areas: We are missing most of the Aichi targets. Most species occur outside protected areas. There is a need for more connectivity within and between landscapes. We must take climate change and people into account in formulation on targets (how can we ask for more aggressive targets when we cannot meet our current ones?).

On behavioral change: There is a focus on Nature for All. What is the next campaign for nature that needs to come out of the IUCN?

Balancing rational self-interest and love of nature: how do you get both? We have to appeal to self-interest to point out that long-term viability requires sustainability. If people see a threat to human health/security they may be prompted to act. We need transformational change, even if most people have intrinsic love of nature – these issues will boil down to self-interest.

On conservative estimates for species extinction: discounted insects (considering insect apocalypse)
We were conservative and linked much of the report to food and water security to show transformations and projections.

On IUCN and local engagement - IUCN is not top-down; it does have a global role but engages at regional, national and local levels. Suggestion that every country should have a national committee to address national and, as possible, subnational concerns collectively. A strength of IUCN is convening government and non-government organizations [at multiple levels].



U.S. Regional Conservation Forum Agenda

June 25, 2019

Smithsonian National Zoo, Conservation Pavilion

<https://nationalzoo.si.edu/visit/zoo-map>

8:30 – 9:15 – Opening Session

- Welcome from Marshall P Jones, Senior Advisor to the Director and Smithsonian Institution IUCN Focal Point, National Zoological Park, Smithsonian Conservation Biology Institute
- Welcome and objectives – Frank Hawkins, Director, IUCN North America Office
- US Government State Department – Christine Dawson
- Introduction of participants – Frank Hawkins
- Objectives and agenda – Frank Hawkins

9:15-9:30 – US National Committee – Report of previous day’s meeting - Christopher Dunn, Chair, USNC

9.30-11:00 – Presentation and discussion of IUCN Draft Programme 2021-2024- Frank Hawkins
Structured Feedback from members to the draft 2021-2024 Programme
Members given opportunity to guide IUCN’s evolving position on the post 2020 global biodiversity framework

11.00 Coffee Break

11:15-12:30 – Overview and preparations for Congress –
Enrique Lahmann, Global Director, Union Development Group and
Sarah Over, Communications Manager, Union Development Group from IUCN Headquarters

Forum

Themes
Types of events
Calls for contributions

Members Assembly

Governance
Motions process (including
online consultations) Resolutions
and responsibility across
constituents

Key Deadlines Leading up to the World

Conservation Congress 12:30 – 1:30 – Lunch

1:30 – 2:00 IUCN Governance – John Robinson, IUCN US Councilor, Executive Vice President, Conservation & Science, Wildlife Conservation Society

Motions
Regional Councilor nomination process

2:00-2:30 Resolutions of regional importance – updates and next steps (USNC)

2:30-3:30 Synthetic Biology- presentation by **Kent Redford**, author of IUCN's recent report, followed by Q&A (copies of IUCN report “Genetic frontiers for conservation” available on site)

3:30 3.45 Coffee break

3.45- 5:00 Panel Discussion- the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) report- what does it mean for the world, and what can IUCN members do?

Chair and Moderator: **John Robinson**, IUCN Regional Councilor-US

- Video: Introduction to IPBES - 2 minutes
- Context, outcomes of IUCN-IPBES partnership and perspectives: **Nicholas Macfarlane** – 5 minutes
- Presentation of Global Assessment: **Pamela D McElwee** – 15 minutes
- Panel discussion: **Bob Watson (past IPBES Chair)**, **Kristen Painemilla-Walker**, Chair, Commission on Economic, Environmental and Social Policy, **Angela Andrade**, Chair, Commission on Ecosystem Management
 - Introductory Statements (5 minutes each)
 - Moderated question: What can IUCN members do to support the recommendations of the Assessment? (10 minutes)
- Question and Answer session with members (25 minutes)
- Wrap up (moderator; 5 minutes)

5:30 – 6.00 – Wrap Up

6.30 – 8.00 Reception – Conservation Pavilion

ANNEX 2 – WCS comments submitted

The following are the comments of the Wildlife Conservation Society on the “Draft IUCN Programme 2021-2024”.

We had endeavored to draft line-by-line, section-by-section comments, but we have decided to send general comments instead. We are very disappointed in the Draft IUCN Programme, and believe it needs a complete rewrite, to more effectively capture the strengths of IUCN and to more effectively meet the needs and expectations of the IUCN members—and most significantly, to more effectively enable IUCN and its members to take strong actions to address the current biodiversity crisis.

The Draft Programme does a fairly good job of addressing several issues outside of the traditional remit of IUCN, but falls short on the core mission and values of IUCN. Whilst there is a fairly good discussion of the urgency of issues, threats, and drivers of biodiversity loss, the Draft Programme is exceedingly unambitious. It lacks a clear biodiversity vision, with clear conservation outcomes.

The Draft Programme seems disproportionately focused on agriculture and production landscapes, and less on intact ecosystems that can effectively help deliver on IUCN's mission, and help ensure the persistence of biodiversity. We would like to see a programme that highlights why and how the protection and retention of intact ecosystems (terrestrial, freshwater, and marine) are critical to the conservation of biodiversity, with clear outcome-oriented targets. The Draft Programme also short-changes species conservation—it is barely mentioned. Whilst it does mention the need to avoid species extinction, it is very limited, and is focused on avoiding extinction (when there is a species focus at all) as opposed to ensuring that healthy species populations function in their natural ecosystems. The IUCN Species Survival Commission, Species Programme, and IUCN Red List of Threatened Species, are at the heart of IUCN, and are key to IUCN's global effectiveness, and its brand, yet are seriously downplayed in this Draft Programme.

We also note that the Draft Programme is virtually silent on wildlife trafficking, which is a key threat to biodiversity, as articulated in the recent IPBES report, and certainly is recognized by IUCN Members across the globe. It appears only once in the document, in reference to governance reforms.

It is also rather unclear as to the intended audience or implementers are of this Draft Programme—the IUCN Secretariat, IUCN Commissions, IUCN Members, or whom? It should be made clear.

Finally, one issue that is missing is the post-2020 global biodiversity framework, after its adoption at CBD CoP15 in October 2020. We believe that the IUCN Programme 2021-2024 should amplify the global biodiversity framework in some way.

We would like to see a revised programme that:

- Represents a strong conservation vision and call to action, reflecting the urgency of the biodiversity crisis;
- Represents a strong ambitious programme that IUCN members can rally around, and that reflects the mission of IUCN to “influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable”;
- Highlights IUCN’s role in species conservation, with strong, outcome-based elements—including significant attention to combatting wildlife trafficking at all levels of the trade chain;
- Highlights IUCN’s role in the science of protected areas and other effective area-based conservation measures, with strong, outcome-based elements;
- Is built around the IUCN Commissions, as the core strength of IUCN and its members
- Includes work on combatting wildlife trafficking/illegal wildlife trade (including flora and fauna);
- Is built around conservation outcomes—and not around themes; and
- Is ambitious and inspirational, and which IUCN Members can rally around and commit to.

Thank you very much for your consideration.

IUCN Policy on Synthetic Biology and Biodiversity Conservation

V: 22 February, 2019

I. PURPOSE STATEMENT

The purpose of this policy is to guide decisions relating to the potential use of synthetic biology (including engineered gene drive) and the direct and indirect impacts that these technologies might have on biodiversity and its conservation, sustainable use, and fair and equitable sharing of the benefits it provides to people. The policy is based on a technical assessment³ and uses definitions established in the glossary therein and in the Annex to this document. The application of this policy is intended to minimize the potential risks and maximize the potential benefits posed by synthetic biology to the conservation of biodiversity.

II. AUDIENCE FOR POLICY

The audience of this policy is all constituent parts of IUCN, including Members, Commissions, Secretariat, Council, and National and Regional Committees. This policy is therefore intended to guide the work of IUCN Member organisations, Commission members, Secretariat staff, Council and National and Regional Committees. The policy is also intended to inform others involved or interested in synthetic biology (including engineered gene drive) within and beyond the conservation community.

III. SCOPE OF POLICY

This policy covers all aspects of the application of the tools and technologies of synthetic biology (including organisms, components, and products developed using synthetic biology, and including engineered gene drive), in relation to their possible negative and positive impacts on biodiversity at genetic, species, and ecosystem levels, on the conservation and sustainable use of biodiversity, and on the fair and equitable sharing of the benefits it provides to people.

IV. CONTEXT OF THIS POLICY

Global, regional, and national conservation measures promoting biodiversity conservation have resulted in some successes, but biodiversity continues to decline globally. To address certain threats to biodiversity, new tools are needed for effective conservation and sustainable use of

³ “Genetic Frontiers for Conservation: An Assessment of Synthetic Biology and Biodiversity Conservation” available at: <https://doi.org/10.2305/IUCN.CH.2019.05.en>

biological diversity that complement existing ones. The field of synthetic biology is developing rapidly, with multiple implications, both potentially negative and potentially positive, for biodiversity conservation. More generally, the increasing field of synthetic biology poses potential risks and benefits to a large number of domains, including food security, agriculture, trade, health, energy, and climate. As a result, synthetic biology is now the focus of national and international policy discussions including: regulation of new plant breeding techniques; development of systems for tracing intellectual property rights and benefits from the information and traditional knowledge relating to genetic resources; consideration of a new legal instrument on marine biodiversity in areas beyond national jurisdiction; and exploration of the regulatory and other issues surrounding synthetic biology products as surrogates in the international wildlife trade.

Synthetic biology's development relates fundamentally to the conservation and sustainable use of biodiversity and fair and equitable sharing of its benefits. And like many other conservation interventions, synthetic biology raises questions about the extent to which biodiversity should be altered. These are all issues of central importance not only to the IUCN constituency but also to the Convention on Biological Diversity (CBD), other biodiversity-related conventions including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the UN 2030 Agenda for Sustainable Development. However, there is a lack of agreement regarding the implications and applications of current developments in synthetic biology, both direct and indirect, for biodiversity conservation, and the prospects of future developments. In addition, multiple existing governance structures are relevant to synthetic biology, but synthetic biology raises questions and challenges for these frameworks. There is a pressing need for authoritative, balanced guidance that can help conservation organizations, governments, indigenous peoples, and local communities, researchers, and companies reach understanding of the associated risks and opportunities before starting to consider how these risks and opportunities should be addressed.

As a response to these challenges, IUCN Members adopted Resolution WCC-2016-Res-086 at the 2016 World Conservation Congress⁴. Titled “*Development of IUCN policy on biodiversity conservation and synthetic biology*” the Resolution called on the Director General and Commissions to undertake an assessment to:

“examine the organisms, components and products resulting from synthetic biology techniques and the impacts of their production and use, which may be beneficial or detrimental to the conservation and sustainable use of biological diversity and associated social, economic, cultural and ethical considerations, and to recommend how IUCN, including its Commissions and Members, could approach the topic of synthetic biology and engage in ongoing discussions and deliberations with the synthetic biology community.”

⁴ <https://portals.iucn.org/library/node/46503>

And with urgency to:

“assess the implications of Gene Drives and related techniques and their potential impacts on the conservation and sustainable use of biological diversity as well as equitable sharing of benefits arising from genetic resources, in order to develop IUCN guidance on this topic, while refraining from supporting or endorsing research, including field trials, into the use of gene drives for conservation or other purposes until this assessment has been undertaken.”

While requesting that the assessment:

“be based on scientific and empirical evidence and subject to peer review by an independent panel of experts to be appointed by the Director General”

It also requested the Director General and Commissions to:

“seek the necessary support and resources, including technical support and capacity building, for the assessment to be undertaken”

The action mandated in these four clauses has been completed with the publication of *“Genetic Frontiers for Conservation: An Assessment of Synthetic Biology and Biodiversity Conservation”*⁵. The assessment was conducted under the authority of an IUCN Synthetic Biology and Biodiversity Conservation Task Force, representative of the IUCN Commissions and Secretariat, as mandated by Resolution WCC-2016-Res-086.

Finally, WCC-2016-Res-086 called on IUCN Council, based upon the recommendations of the assessment, to:

“develop an IUCN policy to guide the Director General, Commissions and Members on biodiversity and nature conservation in relation to synthetic biology.”

This IUCN Policy is delivered herein.

V. PRINCIPLES

The following principles underpin IUCN’s **Policy on the Intersection of Biodiversity Conservation and Synthetic Biology**:

⁵ <https://doi.org/10.2305/IUCN.CH.2019.05.en>

- **Biodiversity conservation imperative.** Given ongoing declines in the state of biodiversity, synthetic biology applications (including engineered gene drive), both those designed to achieve conservation outcomes and those designed for other purposes but that have biodiversity implications, should be implemented in a way that is consistent with the conservation and restoration of biodiversity and its equitable and sustainable use, in alignment with IUCN's mission.
- **Stakeholder participation.** The effective participation of stakeholders, at the relevant level, should be ensured in decision-making about specific synthetic biology applications (including engineered gene drive), both those designed to achieve conservation outcomes and those designed for other purposes but with biodiversity implications. Such an approach should be adopted at all stages of development and deployment, with periodic reviews and open constructive dialogue. The values, belief systems, and worldviews of stakeholders should be taken into consideration in such decision-making process.
- **Respect for rights, beliefs, and cultures.** The rights of indigenous peoples and local communities over their traditional territories, sacred sites, customary laws, and species populations should be respected.
- **Free, prior, and informed consent.** When considering the potential introduction of any form of synthetic biology (including engineered gene drive) into their traditional territories, sacred sites, and species populations, the free, prior, and informed consent of indigenous peoples and local communities should be obtained in accordance with applicable laws.
- **The precautionary approach.** In the context of biodiversity conservation and synthetic biology (including engineered gene drive), it is necessary to apply the Precautionary Approach as set out in Principle 15 of the 1992 Rio Declaration on Environment and Development⁶ and noted in Resolution WCC-2004-RES-075 "*Applying the Precautionary Principle in environmental decision-making and management*" adopted by the 2004 IUCN World Conservation Congress⁷.
- **Evidence** that informs decision making should draw upon multiple sources and types of knowledge and expertise, including local and indigenous knowledge and the many disciplines of science.
- **Dialogue between conservationists and synthetic biologists.** Assessments on the directions and impacts of synthetic biology (including engineered gene drive) for conservation should be the result of constructive dialogue conducted among those involved in conservation and those directly involved in the technology. Experts in biodiversity conservation and sustainable use should take the responsibility to engage with experts in technology and *vice versa* to ensure all relevant players are involved in knowledge generation, co-design of development and application, identification of potential impacts, and decision-making on implementation.

⁶ <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>

⁷ <https://portals.iucn.org/library/node/44361>

VI. POLICY

IUCN recognizes that synthetic biology applications (including engineered gene drive), whether or not specifically designed to address conservation issues, could have negative or positive impacts for biodiversity conservation, sustainable use, and fair and equitable sharing of benefits. It is IUCN's position that potential uses of synthetic biology need to be decided upon on a case-by-case basis, attending to the specific context and application, and taking into account the views of all concerned stakeholders, including indigenous peoples and local communities, operating with equitable access to all relevant information, and informed by the Precautionary Approach. This policy is intended to avoid or minimize any potential negative biodiversity outcomes, and, in the event that a particular synthetic biology application is deemed acceptable for implementation, to maximize the potential for augmenting or complementing existing conservation approaches.

Key considerations for applying this policy include:

- **Case-by-case decision-making.** Decisions about the development or use of synthetic biology (including engineered gene drive) should be made on a case-by-case basis, using the Principles framing this Policy. This analysis should cover societal and environmental risks and benefits, as relevant to the technique or application in question, as well as to the specific context in which it is deliberately applied or that might be affected by applications applied elsewhere.
- **Applications of synthetic biology intended for conservation benefit.** Synthetic biology applications (including engineered gene drive) could be pursued with the intention of directly achieving conservation goals, including both the abatement of current threats to biodiversity and the restoration of biodiversity towards a recovered state. Such applications must be considered and governed in the context of existing conservation tools, comprehensive risk assessment, societal discussion of the specific conservation goals in question, and potential effectiveness or lack thereof of the application in achieving these goals⁸.
- **Applications of synthetic biology intended for purposes other than conservation.** Synthetic biology (including engineered gene drive) will likely be applied most often for purposes that are not directly motivated by biodiversity conservation goals. Nevertheless, those responsible for the design, development, and approval of such applications should consider and account for the impacts of their work on conservation goals and sustainable use of biodiversity, and approval should not be given if biodiversity conservation goals are placed at risk. The conservation community itself should actively take part in review of such applications along with relevant stakeholders.

⁸ For detailed discussion see Technical Assessment: <https://doi.org/10.2305/IUCN.CH.2019.05.en>

- **Staged assessment of risks and benefits.** Risk assessments provide essential evidence to inform decision making. While recognizing that existing governance structures incorporate risk assessments, synthetic biology (including engineered gene drive) should only be considered after a case-by-case risk and benefit assessment is conducted, which may include socio-economic impacts. The potential risks and benefits of a synthetic biology application (including engineered gene drive) might only become apparent as that application matures. To reduce the likelihood of an inappropriately early or late decision, it is desirable to have a staged decision-making process, in which evidence is discussed at each stage in a transparent manner. The various stages and formats of the synthetic biology development and application in question need to be considered, including laboratory research, contained trials, field trials, environmental releases, and production methods.
- **Governance.** Given the pace of development, there is potential for existing governance regimes to become dissonant with new techniques and applications related to synthetic biology (including engineered gene drive). The development of governance arrangements should reflect the principles presented above and be adaptable to encompass changing technologies, as well as the accessibility to those technologies. Appropriate governance development should be guided by broad and regular horizon scanning of genetic and other relevant emerging technologies, based on agreed processes that ensure consistency and encourage engagement across stakeholders.
- **Knowledge gaps and research needs.** There are significant gaps in knowledge to evaluate risks and benefits of synthetic biology (including engineered gene drive) to conservation and to the social, economic, cultural, and ethical aspects of potential applications. Filling these gaps is necessary for informed and robust decision making. This will require identification of research needs in different areas, provision of training for specialists (especially in developing countries, in particular the least developed countries and countries with economies in transition), and implementation of a research agenda that identifies and addresses gaps in methodologies, technologies, tools, and knowledge. Such work will also advance collaboration by bridging the disciplinary differences between conservationists, biotechnologists, and those conducting relevant social and cultural research, and better align their outcomes to the mission of IUCN.
- **Potential introduction of moratoria.** While this Policy does not call for a general moratorium on synthetic biology (including engineered gene drive), there could be situations in which moratoria on the release of specific synthetic biology application are warranted (e.g. in the absence of a robust risk assessment framework and/or governance structures in a particular region/country that do not support the principles and policy outlined in this document). Specific guidance would need to be developed on the data needs/requirements to determine if/when a moratorium might be introduced, how it would be implemented, and how it could be removed for a particular application.

Definitions

(Drawn from Technical Assessment)

Biodiversity: biological diversity, “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems” (Convention on Biological Diversity).

Gene drive: A phenomenon of biased inheritance in which the ability of a genetic element to pass from a parent to its offspring through sexual reproduction is enhanced, leading to the preferential increase of a specific genotype that may determine a specific phenotype from one generation to the next, and potentially throughout a population. A gene drive element is a heritable element that can induce gene drive, such that the gene drive element is preferentially inherited. Gene drive elements may be referred to as gene drive systems or simply “gene drives.”

Risk: The likelihood and severity of a potential adverse effect. For example, if the likelihood of an adverse effect occurring is high, but the severity of the adverse effect is very low, the overall risk will be low. If, however, the severity of the adverse effect is extremely high, even a low probability of it occurring may still be considered a large risk.

Risk assessment: The structured process for analyzing risk.

Synthetic biology: a further development and new dimension of modern biotechnology that combines science, technology and engineering to facilitate and accelerate the understanding, design, redesign, manufacture and/or modification of genetic materials, living organisms and biological systems (Convention on Biological Diversity).