CONSERVATION AT A CROSS-ROADS

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Аңдатпа. Өзектілігі..............Мақсаты...........................
Түйінді сөздер: сөз, сөз, сөз, сөз, сөз.

Аннотация. Актуальность…………………Цель.......................
Ключевые слова: слово, слово, слово, слово, слово.

Abstract. Two visions of conservation have come from the UN's CBD. Kunming-Montreal recommends protection for 30% of the earths land by 2030 (imposing a top-down '30x30' approach). IPBES proposes that the dependence of close to a third of humans on wild living resources should be used to help achieve the Sustainable Development Goals of the United Nations. It is noted that taking these visions to extremes could result in 'Archology Earth' and 'Garden Earth' futures for the planet. Using automated guidance for a bottom-up approach may be more satisfactory both for conservation and governance more widely.
Keywords: Conservation, governance, decision-support, Arcology Earth, Garden Earth.

Before the development of agriculture, humans lived in families, clans, and larger tribes. Although forensic study of human remains provides evidence of lethal force between individuals throughout prehistory [1], governance that presumably involved local leadership (as in other primates) was adequate for species survival. Humankind endured until the increasing food supply from farming in fertile areas permitted large human settlements, leading to city-states, kingdoms and, in the last three millennia, to empires.

Larger aggregations involved many layers of governance vertically. Such vertical layers may have contributed to local stability, at least while horizontal communications on foot and horseback remained slow. Although imperial ambitions have created large-scale conflicts for several millennia, engendering mass-enslavement and genocide, ancient empires endured for generations. Rapid communication along rails, telegraph wires and by air has been associated with devastating global conflicts and the short-lived empires of the 20th century. To address the horrors of modern warfare, the nations and empires of the day came together in Paris in 1920, after the First World War, to create the League of Nations. The United Nations was created in 1945 after the League of Nations had failed to prevent the Second World War.

On issues for which actions are likely to benefit all parties (win-win situations), such as the global environment or human health, decisions made by global consensus of nation states can provide effective governance. The 1992 Convention on Biological Diversity (CBD) seems to be an example. On zero-sum issues (win-lose) and especially where factions form, global governance is less effective. Factional politics, enhanced by the rapid communication and tools to amplify opinions on the internet, also complicates vertical governance.

Sadly, despite a number of Conventions agreeing relatively easily at global level to safeguard the environment, including also the Conventions on International Trade in Endangered Species (CITES) and on Conservation of Migratory Species (CMS), the global environment remains under severe pressures. One reason for this is that, although governments may agree to legislation when working in English as a global language, informed by science-based institutions at global level and pressured by international NGOs, attempts to implement change at national or regional level often discover that local communities do not see things the same way.

At the 10th conference of Parties (CoP) in Nagoya, CBD parties created the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), to serve for conservation of biodiversity in a similar way to the Intergovernmental Panel on Climate Change (IPCC). In 2022, IPBES produced a different, more bottom-up approach to that taken by the 15th CoP of CBD, managed by Kunming and hosted in Montreal. Let's look at those decisions, but first let's look more closely at CBD.

The Convention on Biological Diversity[2]

The three objectives of CBD, to which 196 countries are signatories, are "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources". Article 8, 'in-situ conservation'. is the longest in the Convention, with 13 sections which require *inter alia* "a system of protected areas" and to "promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in their natural surroundings" and "develop or maintain necessary legislation and/or regulatory provisions for the protection of threatened species or populations". Article 9 then requires parties to "establish and maintain facilities for ex-situ conservation" and "adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats".

CBD defines sustainable use, in Article 2, as "the use of components of biodiversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations" and devotes two Articles to such use. In particular, "each Contracting Party shall, as far as possible and as appropriate" in Article 10 "Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements" and in Article 11 "adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity". CBD also places responsibilities on parties for sustainable use in a further 8 of 19 substantive Articles, through international cooperation (Article 5), integration into sectoral and cross-sectoral plans and policies (6), identification and monitoring (7), regulation within or outside protected areas (8), research and training (12), education and public awareness (13), technology transfer (16) and information exchange (17).

After Article 14 on 'Impact Assessment and Minimizing Adverse Impacts', the remaining substantive Articles (15-19) broadly cover access to genetic resources and benefit sharing. Despite the similar attention paid to each of the three objectives within the text of CBD, regulations for conserving biodiversity have focussed more on protection of areas and of species, including ex-situ conservation of species and environmental impact assessments, and less on sustainable use and benefit-sharing. To raise awareness of the conservation potential from sustainable use, in 2004 CBD adopted the Addis Ababa Principles and Guidelines for Sustainable Use (AAPG). Similar hopes for implementation of CBD's 3rd pillar saw agreement in 2010 on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.

This 2010 agreement, also known as the Nagoya Protocol joined the creation of IPBES as another major decision from the CBD's 10th Conference of Parties. IPBES has taken a strong interest in Indigenous People and Local Communities (IPLCs) and their Indigenous and Local Knowledge (ILK), together with other bottom-up considerations. On that basis, a five-year process led, in July 2022, to the Assessment Report on the Sustainable Use of Wild Species[3]. Then, after a delay and change of venue due to Covid-19, in December 2022 came the adoption by CBD's 15th Conference of Parties of the Kunming-Montreal Global Biodiversity

Framework[4] which set 23 targets for protection and restoration of biodiversity. These are considered further here, after summarising the activities of IUCN's Sustainable Use Groups and, in particular, of the European Sustainable Use Group (ESUG) during the period concerned.

Struggling for recognition of Conservation through Sustainable Use

IUCN, the International Union for Conservation of Nature (www.iucn.org), was created in 1948 to bring together states (of which there are now 86 members) and non-government organisations (now >1,250 NGOs including 58 affiliates and 27 indigenous groups). Together with hundreds of staff and 16,000 volunteer experts organised in seven Commissions, these work to fulfil a programme of work set by the World Conservation Congress each quadrennium. Two large groups, of 650-850 members, work on sustainable use of wild species and the ecosystems on which those species depend. A group on Sustainable Use and Livelihoods (SULi, established 2011) bridges two Commissions, on Species Survival (SSC) and Environmental Economic and Social Policy (CEESP), while a group on Sustainable Use and Management of Ecosystems (SUME, established 2014) is in the Commission on Ecosystem Management (CEM). The European Sustainable Use Group (ESUG, https://esug.sycl.net), formerly a region in global Sustainable Use Specialist Group (SUSG, 1997) of SSC, was constituted in 2002 as an NGO to manage its own project finances and continues, as an IUCN member, to support SULi & SUME.

Whereas SULi and SUME are open to any applicants with adequate academic or management experience, the 137 ESUG members in 58 countries worldwide are invited to help run project work, typically as country coordinators. ESUG has run several projects for UNEP, the European Union, IUCN and the International Association for Falconry and Conservation of Birds of Prey (IAF). IUCN itself was responsible for the processes that started CBD, CMS and the European Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention), as well as the Ecosystem Approach and AAPG within CBD.

In 2002, ESU(S)G (then a specialist group of IUCN) was invited by Bern Convention to prepare a paper on "Innovative approaches to sustainable use of biodiversity and landscape in the farmed countryside"[5] for a UNEP conference. The paper pointed to the potential of certifying food products for conservation purposes and to the potential for internet-based decision-support for improving farm incomes through sustainable use of wild species, as a supplement (or alternative) to the controversial food-production subsidies of that time. The work with Bern Convention led also to adoption by the Bern Convention of European Charters on the potential for biodiversity conservation from Hunting (2007), from Recreational Fishing (2011) and from Gathering Fungi (2014). Prepared by Scott Brainerd of ESUG, all are accessible at https://esug.sycl.net/13/work-on-conserving-by-using. A charter is a document that agrees responsibility of government towards citizens, effectively conferring rights, as well as responsibility of citizens. Thus, the Bern Charters not only have guidelines for hunters, anglers and gatherers but also for regulators, with the intention that regulations encourage those who benefit from sustainable use of biodiversity to enhance the conservation of biodiversity. In effect, charters encourage positive actions taken at local level rather than just protecting against negatives. They favour "do" at least as much as "don't", with bottom-up as much as top-down.

In turn, these projects stimulated successful bids for European Union projects. The first, on Governance and Ecosystem Management for Conservation of Biodiversity (GEMCONBIO, 2006-8), showed across 32 case studies the over-riding importance for conservation (and for sustainability of using ecosystem services) of leadership with expert knowledge and the application of adaptive management [6]. Empowering local people for adaptive management were main recommendations in CBD's Ecosystem Approach and AAPG, because local flexibility is needed to handle the socio-environmental complexity of maintaining sustainable

use. The second project confirmed a GEMCONBIO estimation, that private spending on ecosystem-based activities exceeded €60 billion/year and was thus greater than agricultural subsidies which, at that time, were just starting to introduce a second pillar intended to benefit biodiversity through what became known as Payments for Ecosystem Services (in this case Public PES). The main thrust of the second project, TESS (2008-11), was to design an online Transactional Environmental Support System, TESS [7].

The rationale behind TESS was reported in Moscow in 2009 [8]. It was felt that top-down regulation and subsidised production lacked flexibility, even given varying local land conditions and topography, for cultured landscapes diverse enough to enhance biodiversity. This view was supported by drastic declines in flora and fauna especially on farmland. An SUSG vision of the time was for a "biodiversity friendly mosaic of land uses driven by the livelihoods that are derived from sustainable use of wild living resources, instead of landscapes with small islands of biodiversity in a sea of agriculture" [9]. Managers of land and species were found to be making a myriad individual decisions which added up to change local environments. However, all the decisions were channelled by the same regulatory envelope and the same economic drivers: public subsidy and supermarkets. As foreseen in CBD's Ecosystem Approach and AAPG, local communities need to be empowered, as well as enlightened and guided to manage the environment, but also, where necessary, motivated by adaptive governance and private payment for ecosystem services. TESS therefore proposed that:
➢ central planners can collate complex knowledge and incentives to assist local decisions;
➢ they need local information to monitor and adapt their knowledge and incentives policy;
➢ local managers must also gather local information to make and monitor their decisions;
➢ they can exchange local information for more complex knowledge that benefits livelihoods.

TESS partners used local studies to find what information government at the lowest level (in effect IPLCs) needed for planning and what information local people could provide. Local communities wanted more detailed maps of species/habitats than were available and much more information on likely socio-economic consequences of decisions. Local people were very good at providing detailed maps and enjoyed it when given good guidance. The principle of exchanging local knowledge for guidance from higher level, in a virtuous cycle for local adaptive management while higher levels could use knowledge of local decisions to optimise adaptive governance, is also probably sound. However, a TESS would need to be used almost universally by managers of land and species to give the coverage needed by central planners. The huge volume of local-centre exchanges would need to be online because there are simply not enough experts. A TESS would work only if it met social requirements, by being not merely user-friendly and user-attractive but also socially integrated. A follow-on project to investigate social motivations by building and scaling up a system was considered too ambitious to be funded at the time.

Nevertheless, TESS partners had devised a way to speed uptake of an eventual environmental support system, by getting people across Europe thinking of the community-based mapping that it would require, and by surveying them about what the resulting system needed to do. For this a website was launched in 23 languages - www.naturalliance.eu - which still attracts about 5000 visitors a year. In the early years of Naturalliance there were nearly as many visits in Russian as in English. CMS, IAF and BirdLife International then worked with ESUG to launch www.sakernet.org for information and survey in five Asian languages, again with English and Russian the most popular. This 2015 site rapidly broke visitor targets, so IAF commissioned the first true network, in which a hub in 18 languages linked to satellites in national languages to promote restoration of farm biodiversity with the grey partridge (*Perdix perdix*) as its flagship. However, the www.perdixnet.org network of 2017 attracted only 4 managers to run satellites and fewer visitors than the previous network, which was also upgraded. Then, in April 2019,

www.naturalliance.org was launched for IUCN, as a hub to network in 54 languages with local communities worldwide. There are already 43 languages and 38 satellites.

In 2021, colleagues in Greece - who had organised GEMCONBIO and TESS - created a sixth bid for a TESS to up-scale successful conservation work from farm and community level to landscapes and regions. Work in UK had already showed how networks of farmers were an excellent basis for such up-scaling [10], but only two of nearly 100 bids were funded. However, a follow-on bid with 20 partner organisations in 2022 was successful. A PROactive approach for COmmunities to enAble Societal Transformation) launched in November 2023 to run for three years, coordinated by ESUG. PRO-COAST will research how to create Transition Communities by addressing motivations for nature conservation based on human culture and diversity considerations. It will start projects in nine coastal areas of Europe, with motivations based mainly in sustainable use (of cultural and productive services from wild species and their ecosystems), with preparations for low-cost roll-out online. The work will include more satellite-site facilities in local languages. It will also build web-services, to deliver decision support for conservation through sustainable use in exchange for local data used to make the decisions. The work of ESUG therefore continues, but what about international attitudes to sustainable use?

An IPBES Assessment and the Kunming-Montreal Process

Released in Bonn at the 9th Plenary of IPBES in July 2022, the Assessment Report on Sustainable Use of Wild Species has 1148 pages. A 34-page "Summary for Policymakers" immediately makes clear that billions of people in all regions of the world rely on and benefit from using more than 70,000 wild species for food, medicine, energy, income. and many other purposes, notably as fuel, for 2.1 of the 8 billion humans. More than 1 person in 3 relies on wild species overall, including 70% of the world's poorest people. In richer countries, wild species contribute to food variety, health, and recreation, while nourishment comes mainly from farming. People everywhere depend on nature for healthy air and water, and hence on healthy ecosystems. Farming is essential to feed the world. However, cultivation must not become so intensive that it damages the ability of ecosystems generally to keep us healthy.

Our use of wild species is broadly sustainable for gathering and recreational hunting on land. It is less so when we depend on wild animal species for food, especially where farms and other developments convert so much land that ecosystems support less wildlife. The sustainability of some marine fisheries became low but is improving after a period of excessive use which caused fish stocks to decline. Mapping such engagement to the Sustainable Development Goals (SDGs) indicates that increased sustainability and efficiency in use of wild species resources could improve effectiveness, by 40-80%, for 11 of the 17 SDGs. Billions of local people need help with this through adaptive management and flexible governance.

In the Kunming-Montreal process of December 2022, the third of 23 targets is to "Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories." This gives, in effect, tolerance of sustainable use in conservation areas covering double the previous targets for land and water, although it does

recognise "other effective area-based conservation measures" (OECMs) which are taken to include areas in which conservation is motivated and managed through sustainable use activities.

It seems so much easier to implement conservation through protection than through sustainable use. Sustainable use needs skilful local management, with lots of positive actions to maintain and restore species and habitats. Strict protection can be especially attractive for governments: why bother with lots of little regulations and incentives when one signature, a line on a map and few legal convictions will suffice? For organisations representing extractive users of wild resources, continual spending is needed on educating practitioners and encouraging them in activities that benefit the public and biodiversity. In contrast, a protection organisation needs only a couple of big donors to fund a campaign at a time when practitioner reputations are low.

However, those who see ever-increasing protection as the best solution need to keep their minds open. For a start, people need food and, even in wealthy countries, rural people need jobs. The actions of local people in rural communities not only affect their environment but also have an effect at the ballot box, with the ability to swing elections if there seems little to choose between political factions in other respects. Rural communities can also be the worst affected by changing climate.

Scientists are increasingly running assessments of future scenarios. One idea is a "Garden Earth" in which strictly protected areas remain extensive enough to maintain good populations of species that are most at risk from humans and cultivation, while most other land is subject to other effective area-based conservation measures, include sustainable use to promote diversity wherever possible. A very different alternative is a strict division of the earth's surface into as much protected area as possible but otherwise intensive cultivation or other exploitation. In this case, costs of living rurally will be made unaffordable by limited supply of housing in protected areas or alternatively by health problems from intensive agriculture in the cultivated areas. This could well lead to extreme urbanisation or most efficiently, and perhaps further motivated by climate change, to increasingly enclosed urban systems as an "Arcology Earth". One wonders which scenario would preserve biodiversity best. Who, on average, will pay most to secure biodiversity? Those who live among it and benefit from it daily, or those who have never come to appreciate it?

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