NEWS FROM AFRICAN PROTECTED AREAS

NAPA 212

CONSERVING NATURE IN AFRICA



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In the face of a changing world, can we really afford not to reconnect our landscapes?

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Ecological connectivity is not just a strip of vegetation linking two areas. It is a dynamic property of landscapes...

EDITO



Is ecological connectivity just an option?

By geoffroy MAUVAIS
IUCN-Papaco coordinator

Join our new tutorial on connectivity on ***mooc-conservation.org***



I live in a 38,000-hectare nature reserve in southern Africa. It is a beautiful territory, rich in wildlife, but entirely fenced. The animals living here depend closely on the condition of their environment: the availability of water, the quality of grazing, vegetation and, more generally, the fragile balance of ecosystems.

So, what happens when the climate changes, droughts become more severe or more frequent, storms grow more violent, and an El Niño event further exacerbates these challenges? The risks are considerable: habitat degradation, biological invasions, water shortages, food scarcity, weakened animals, and the emergence or resurgence of diseases such as anthrax. In a fenced reserve, animals simply cannot move elsewhere to find the conditions they need.

Of course, we can take action. We can purchase fodder and dietary supplements, restore or develop additional water points, and move certain animals to other areas. But these interventions are costly, limited in scope, and cannot sustainably replace the natural functioning of the ecosystem. They may sometimes buy us time, but they do not solve the underlying problem.

The real solution is to give nature more space. To allow animals to move to areas where water, food and ecological conditions are temporarily more favourable. To maintain exchanges between populations. To give wildlife the opportunity to adapt to change rather than forcing animals to survive in an environment that has become unsuitable.

Otherwise, we face the very real risk of losing iconic species, such as rhinos amongst others.

In our case, this means exploring ways to improve connectivity with the surrounding territories, which are also often fenced, and with neighbouring Marakele National Park. It means looking beyond administrative boundaries and property fences to approach conservation at the scale of a living landscape, where animal movements and ecological processes do not stop at the boundaries drawn on our maps.

What applies to this reserve applies, to varying degrees, to protected areas around the world. In the face of climate change, biodiversity will need to move, colonise new habitats, maintain genetic exchange and respond to shifting ecological conditions. No matter how well managed, a protected area will struggle to withstand these pressures if it remains isolated within a fragmented landscape.

Ecological connectivity is therefore about much more than wildlife corridors. It is an essential condition for resilience: the ability of species and ecosystems to absorb disturbances, adapt and continue functioning despite change.

For a long time, we have sought to protect nature by designating areas and strengthening their boundaries. We must now also learn how to reconnect them, working with neighbouring territories, communities, landowners and other managers. This is an ecological challenge, but also a human, institutional and political one.

So, in the face of a changing climate and ecosystems under increasing pressure, can we really afford not to reconnect our landscapes?



OUR ONLINE COURSES: MOOCS, TUTORIALS AND ESSENTIALS

Our 10 MOOCs, 4 Essentials and 9 Tutorials are always open and available!



MOOC Conservation is the platform that hosts IUCN-Papaco's online training courses, developed in partnership with the Senghor University, in Alexandria (Egypt).

See you on:

www.mooc-conservation.org

THE MOOCS
THEME-BASED TRAINING

MOOC BUNDLE FOR THE ONLINE CERTIFICATE

The following MOOCs must be completed to sit the exam and obtain the Online certificate in protected area conservation:


PROTECTED AREA MANAGEMENT


ECOLOGICAL MONITORING


LAW ENFORCEMENT


SPECIES CONSERVATION


VALORISATION OF RESOURCES AND SUSTAINABLE TOURISM


NEW TECHNOLOGIES


MARINE PROTECTED AREAS

Learn more about the online certificate here
Next date: 2nd of December 2026 for English speakers

OTHER MOOCS AVAILABLE ON MOOC-CONSERVATION.ORG


GOVERNANCE OF PROTECTED AREAS


COMMUNITIES AND CONSERVATION


THE ONE HEALTH APPROACH

TUTORIALS
TECHNICAL TRAINING


NATURE CONSERVATION EDUCATION
For teachers, educators, parents, etc., to provide them with the tools and methods they need to teach the children in their care about nature conservation...


WORDS OF CONSERVATION
An interactive glossary with 100 essential words and expressions you need to know if you want to conserve nature and understand PA management...


MANAGEMENT PLANNING OF PROTECTED AREAS
A step-by-step guide to organising the preparation, implementation and evaluation of your protected area management plan...


HUMAN-WILDLIFE CONFLICT
A simple method for understanding, anticipating and responding to conflicts between humans and wildlife...


RESTORATING PROTECTED AREAS
A practical guide explaining the different steps to follow to prepare, restore and assess a damaged PA...


SUSTAINABLE FINANCE FOR PROTECTED AREAS
How to sustain your protected area and develop a powerful business plan...


MANGROVE RESTORATION
A practical guide to plan, implement and assess, step by step, your mangrove restoration project...


CAREERS IN CONSERVATION
A practical guide to plan and prepare your future job in nature conservation...

And of course, our brand new tutorial, presented in this NAPA:
ECOLOGICAL CONNECTIVITY

MOOC CONSERVATION IS SUPPORTED BY THE
FONDS FRANÇAIS POUR L'ENVIRONNEMENT MONDIAL

A NEW TRAINING COURSE COMING EARLY NOVEMBER!

TUTORIAL ON ECOLOGICAL CONNECTIVITY

NEW COURSE COMING IN NOVEMBER

Eco-connectivity tutorial: **linking protected areas so that wildlife can move freely!**



An elephant does not stop at the boundary of a park. Neither does a wildebeest, nor a sea turtle, nor a river. Yet our protected areas are still too often viewed as isolated islands. Roads, fences, intensive farming: little by little, the corridors are closing off, and with them the ability of ecosystems to sustain themselves and recover.

Our new Connectivity tutorial invites you **to shift your perspective: from the isolated protected area to the living network.** Across four modules, you will discover what a connected landscape really is (and why it does not need to be intact to be so), how connectivity plays out at various scales, and what practical measures managers can take. The course is based on the **IUCN guidelines** for the conservation of connectivity, and draws particularly on experiences from Africa: the KAZA transboundary landscape, the veterinary fences in northern Botswana, the W-Arly-Pendjari complex and the Mozambique Channel. Practical details: free, online, at your own pace, with short videos, diagrams and quizzes. Designed to be accessed on a computer or smartphone, even with a limited internet connection. Let's get started!

👉 **Starts on 9 November. Register now at ECOLOGICAL CONNECTIVITY**

ONLINE CERTIFICATE - NEXT EXAM ON 2 DECEMBER 2026

Have you completed our MOOCs and gained valuable knowledge? Get it recognised! The **Online Certificate in Protected Area Conservation is an academic qualification** awarded by Senghor University – a real asset for your CV and your career.

The exam is open to anyone who has successfully completed our seven required MOOCs since 2024. Join us online on 2nd December at 08:00 UTC, with a fully charged computer and an internet connection.

Still missing one or two MOOCs? They're free and available at any time: get started for the next session!

👉 Are you eligible? Check and apply HERE.

2026
MOOC CONSERVATION CALENDAR

2nd of December: Online certificate exam for English speakers
>> Click here to learn more and apply!

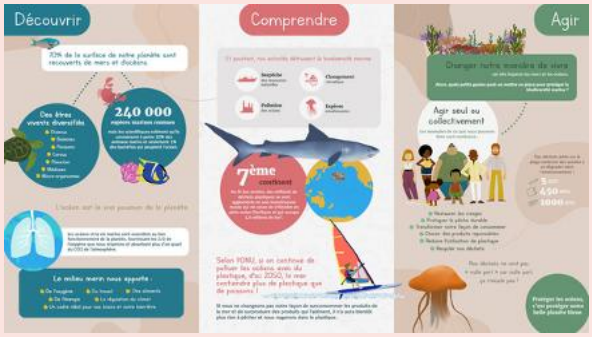
YOUTH CONSERVATION

DEDICATED RESOURCES FOR CHILDREN AND YOUNG PEOPLE TO RAISE AWARENESS AND INSPIRE THEM TO TAKE ACTION!

On the Youth Conservation environmental education platform, you will find dedicated resources tailored to children and young people, available in a variety of formats to suit different needs. Everything is 100% free and open access, and the content is offered in several languages, including national and regional languages. Please feel free to share widely to help educate, raise awareness, and inspire younger generations to take action!



Tailored video learning pathways



Clear, illustrated posters



Audio content available on Spotify and YouTube

YOUTH CONSERVATION - VOICES FROM THE FIELD

MADAGASCAR: YOUTH CONSERVATION LEAFLETS IN THE FIELD WITH THE ICMB.

During the school holidays, the Institute for the Conservation of Madagascar Biodiversity (ICMB) used Youth Conservation resources to raise awareness amongst 110 young people about the protection of lemurs and their habitat.

The participants were aged between 10 and 21, with very different levels of education. Ten volunteers from the local community supervised the programme, which comprised three parts:

- awareness-raising sessions on biodiversity;
- a visit to a conservation site for the grey bamboo lemur (Hapalemur griseus);
- the creation of a nursery, to put theory into practice.



To facilitate the sessions, the team made use of the Youth Conservation leaflets. As they were unable to print them, they used the digital versions instead. “They were extremely useful in helping us present the awareness-raising messages in a simple and visual way,” explains the ICMB. “The participants particularly appreciated the visuals and the information they contained.”

The NGO also gave each child a school kit (pens, coloured pencils, exercise books).
This experience illustrates the aim of the Youth Conservation resources: free, easy-to-use tools that those working on the ground can adapt to suit their resources. All the leaflets can be downloaded from youth-conservation.org.





ECOLOGICAL CONNECTIVITY: OUR NEW TUTORIAL
UNDERSTANDING AND MANAGING CONNECTED LANDSCAPES

This NAPA presents a short summary of our new online course, available on ***www.mooc-conservation.org***

Why is connectivity important?

Protected areas are essential for biodiversity conservation, but they do not function as islands. Species may use multiple sites for feeding, breeding, or accessing water; populations exchange individuals and genes; and seeds, pollen, water, and nutrients move beyond administrative boundaries. Ecological connectivity refers to the ability of a landscape to enable these movements, exchanges, and processes.



It must be considered at the scale relevant to the species and ecological processes concerned, from neighboring habitat fragments to vast transboundary landscapes and marine environments. Connectivity becomes particularly important when agriculture, infrastructure, urbanization, resource extraction, or climate change alter landscapes.

Module 1 - Understanding ecological connectivity

Structural connectivity describes the spatial arrangement and physical continuity of habitats. Functional connectivity refers to the actual ability of a species or ecological process to move between those habitats. A continuous habitat visible on a map does not necessarily mean that an animal can successfully move through it; conversely, some species can cross a fragmented landscape if it remains sufficiently permeable. Functional connectivity depends on species characteristics, behavior, barriers, and habitat quality.

Connectivity promotes access to resources, migration and seasonal movements, genetic exchange, recolonization following local extinctions, and ecological processes such as pollination and seed dispersal. It can also facilitate adaptation to climate change by allowing organisms to move toward more suitable environmental conditions.

Plants are just as concerned as animals: pollen, seeds, and propagules disperse through wind, water, or animal vectors. However, connectivity is not always beneficial; it can also facilitate the spread of diseases or invasive species.



Its value must therefore be assessed within the specific context.

Module 2 - Different forms of connectivity



An ecological corridor, such as a gallery forest, valley, river, vegetation strip, or restored habitat, facilitates movement between habitats, but it is only one form of connectivity. In many African landscapes, connectivity relies instead on a mosaic of savannas, forests, wetlands, woodlots, grazing lands, and extensively cultivated areas. Permeability describes how easily species can move through this mosaic and varies according to species requirements and human land uses.

Areas that are not strictly protected can contribute to connectivity if their management remains compatible with ecological functions. Examples include agroforestry systems, extensive pastoralism, sustainable forest management, and the maintenance of riparian vegetation. At larger scales, conservation landscapes combine parks, reserves, community lands, concessions, and productive areas. The KAZA landscape in southern Africa illustrates this approach: connectivity depends on the complementarity of different land uses and on coordinated management, rather than on a single corridor.

Module 3 - Threats to connectivity

Fragmentation transforms a continuous habitat into smaller and more isolated patches. Populations then experience reduced access to resources, fewer movements, and lower rates of genetic exchange, increasing their vulnerability. Agricultural and urban expansion, land-use change, resource extraction, and linear infrastructure all contribute to fragmentation.
Roads, railways, canals, and fences may act as barriers, increase mortality, or alter movement patterns. Their impacts depend on their location, design, and the species involved. Wildlife crossings are only effective when appropriately located and connected to habitats and movement routes actually used by animals.

Climate change alters temperatures, hydrological regimes, and habitat distributions. Some species must move to find suitable conditions, but such movements become increasingly difficult in fragmented landscapes. Mountain species and habitat specialists may be particularly vulnerable when movement opportunities are limited.

Pressures often accumulate. A road, a fence, agricultural expansion, and drought may collectively reduce landscape functionality more than each pressure acting alone. It is therefore essential to anticipate cumulative effects and preserve existing functional connections, which is generally easier and less costly than restoring them once they have been lost.





Module 4 - Maintaining and restoring connectivity

Assess and prioritize

Clearly define what needs to remain connected, whether species, populations, habitats, or ecological processes. Then identify biodiversity core areas, strategic connections, stepping-stone habitats, bottlenecks, and threats. Assessment combines mapping, field data, species monitoring, and local knowledge. Ecologically important connections cannot be reduced to lines easily drawn on a map.

Select appropriate solutions

Depending on the context, actions may include protecting intact habitats, restoring degraded areas, maintaining rivers and their associated vegetation, improving the permeability of agricultural or pastoral lands, adapting fences, planning road networks, or constructing wildlife crossings. Priority should be given to preventing the disruption of existing connections and integrating measures across the broader landscape.

Engage stakeholders

No single manager controls an entire connected landscape. Decisions made by communities, farmers, livestock keepers, landowners, local authorities, road agencies, extractive industries, researchers, and sometimes multiple states all influence connectivity. It is necessary to understand stakeholder interests, coordinate decisions, seek shared benefits, and manage conflicts. Connectivity is as much a territorial development project as it is a conservation project.

Monitor, evaluate, and adapt

Monitoring verifies whether species are using connections, whether habitats remain functional, whether threats are changing, and whether agreements are being implemented. Results should be used to refine management actions. Adaptive management involves assessing, acting, monitoring, learning, and adjusting interventions whenever required.

A few concepts we deal with in the tutorial

Landscape: a set of habitats, ecosystems, land uses, and human activities interacting at a given scale.
Ecological connectivity: the ability of a landscape to allow movement, genetic exchange, and ecological processes.
Functional connectivity: the actual ability of organisms or ecological processes to move through a landscape.
Ecological corridor: a landscape element that facilitates movement between habitats.
Fragmentation: the division of a habitat into smaller and more isolated patches.
Landscape mosaic: a combination of natural habitats and human-used lands whose complementarity supports connectivity.
Landscape permeability: the ease with which a species can move across a landscape.
Conservation landscape: a territory where protected areas, sustainably managed lands, and inhabited areas collectively contribute to conservation.
Ecological resilience: the capacity to withstand disturbances, adapt, and continue functioning.
Adaptive management: an approach based on monitoring, learning, and regularly adjusting actions.



Modelling tools: supporting decision-making

Geographic Information Systems (GIS) and modelling tools can identify potential corridors, difficult-to-cross areas, bottlenecks, and priority conservation zones. Common approaches include least-cost path analysis, circuit theory, connectivity graphs, and dispersal models. Examples include Circuitscape, Linkage Mapper, Conefor, and Omniscape. These tools help test hypotheses, but they do not automatically determine the best solution. Their outputs must always be validated against field observations, monitoring data, and local knowledge.

The six key questions for managers

1. What needs to remain connected?

Identify the relevant species, populations, habitats, and ecological processes.

2. Where is connectivity most important?

Identify core areas, strategic connections, stepping stones, and bottlenecks.

3. What are the main threats?

Assess current and future pressures, particularly their cumulative impacts.

4. Who should be involved?

Identify stakeholders who influence landscape management and development decisions.

5. Which actions are the priority?

Select interventions that are useful, feasible, acceptable, and proportionate to available resources.

6. How will success be measured?

Define indicators, monitor outcomes, learn from experience, and adapt management accordingly.

Conclusion - Rethinking landscapes

Ecological connectivity is not simply a corridor or a strip of vegetation linking two protected areas. It is a dynamic property of landscapes that enables species and ecological processes to function. It may rely on corridors, landscape mosaics, sustainably managed areas, networks of protected areas, rivers, or marine processes. Connectivity is threatened by fragmentation, land-use change, infrastructure development, climate change, and the accumulation of multiple pressures.

Managers must look beyond the administrative boundaries of their protected areas, understand the broader landscape, identify strategic connections, engage stakeholders, select realistic solutions, and monitor results. Protected areas are the cornerstones of conservation; connectivity allows them to function as a living network.



QUOTE OF THE MONTH

"Only a well-connected network of protected areas can ensure the long-term survival of species and adaptation to climate change."

Hilty et al. (2020), Guidelines for conserving connectivity through ecological networks and corridors, IUCN

READING OF THE MONTH

GUIDELINES FOR CONSERVING CONNECTIVITY THROUGH ECOLOGICAL NETWORKS AND CORRIDORS,

BY HILTY AND AL. (2020)



In an increasingly fragmented world, isolated protected areas are no longer enough: they must be connected. This IUCN reference work provides **a clear and practical framework for identifying, managing and officially recognising ecological corridors, with a view to establishing truly functional ecological networks**. Through 25 case studies, it demonstrates that connectivity is essential not only for the survival of migratory species and adaptation to climate change, but also for the ecosystem services on which local communities depend.

An indispensable tool for protected area managers, decision-makers and anyone wishing to move from 'patch-based' conservation to 'network-based' conservation.

IN THE NEWS

5 MAJOR NEWS IN THE CONSERVATION WORLD

. African wildlife: an 80% decline since 1970, but glimmers of hope

WWF's Living Planet Report 2026 reveals that monitored wildlife populations in Africa have fallen by 80% over 50 years. Yet, where local communities are involved in management, wildlife is recovering — a strong signal for community-based conservation. 🔗 Mongabay | Ecofin

Nigeria: 4,000 illegal miners evicted from the country's largest national park

A military operation evicted illegal gold miners from Gashaka-Gumti National Park, Nigeria's largest. But the real question remains: how to sustain protection in the face of economic pressures? 🔗 Mongabay

3. Global biodiversity: 2030 targets still far from being met

The State of Biodiversity Action report warns that, at the current pace, only 26% of terrestrial ecosystems and 12% of marine ecosystems will be protected by 2030. An urgent call to turn commitments into concrete action. 🔗 Channel Africa

South Africa: CapeNature expands protected areas by 44,231 hectares

The agency added 44,231 ha to the Knersvlakte reserve and signed 16 management agreements with private landowners, while earning its 10th consecutive clean audit. Proof that expansion and good governance can go hand in hand.

🔗 Getaway

5. Southern Africa: better mapping of wetlands to better protect them

A regional workshop (South Africa, Angola, Botswana, Namibia) laid the groundwork for shared wetland inventories, essential for biodiversity and water security. "A wetland that is not mapped is a wetland that cannot be protected."

🔗 SANBI

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To contribute to a NAPA (article or publication on protected areas, cover photo, job offer, etc.), contact us at moocs@papaco.org.

THE OPINIONS EXPRESSED IN THIS LETTER DO NOT NECESSARILY REFLECT THOSE OF IUCN