POLICY BRIEF

How can Biodiversity Strategy and Action Plans (BSAPs) incorporate genetic diversity and align with global commitments?

Conserving genetic diversity within species is vital for helping species adapt to environmental change, including climate change, invasive alien species, and pollution; promoting ecosystem resilience and recovery; and supporting societal needs. Here are 10 suggestions for including genetic diversity in commitments, actions, and policies in BSAPs, while meeting capacity needs.

The Kunming-Montreal Global Biodiversity Framework (GBF) provides motivation and opportunity to better incorporate genetic diversity into national and regional policies. GBF Goal A and Target 4 mandate that genetic diversity within and between populations of both domestic and wild species must be conserved, managed, monitored, and recovered. Indicators for reporting on genetic diversity are also a part of the Monitoring Framework, including Headline Indicator A.4. Parties to the CBD, local and regional institutions, and conservation organizations are invited to update or create Biodiversity Strategy and Action Plans (BSAPs) to plan, undertake, monitor, and review actions to achieve biodiversity goals and targets.

The suggestions below were developed to help ensure that the commitments, actions, and policies in BSAPs are effective in supporting genetic diversity, and that capacity needs are met. Suggestions come from reviewing 21 BSAPs from around the world. They are grouped in three focal areas noted in CBD/COP/DEC/15/6. More details and national examples can be found at the QR code below.

Ten suggestions for incorporating genetic diversity in BSAPs

Setting national targets

1. **Involve all stakeholders** using a whole-of-society, inclusive approach, including indigenous peoples and local communities, to achieve wider societal benefits.

2. **Set a comprehensive national target with the same components and ambition as the global target**, including genetic diversity within and between populations, and maintain adaptive capacity.

3. **Set national targets that are more ambitious and specific** such as including policy, legislation and planning/ strategies for genetic diversity.

4. **Identify the relevance of genetic diversity to achieving other targets** (e.g. Targets 2, 3, 6, 8, 9, 10, 11, 13) for synergistic action, monitoring, and reporting, to best utilize funds and resources.

Developing actions, policies and programs to meet targets, and noting finance and capacity needs

5. **Describe and commit to actions to maintain and restore genetic diversity,** such as translocations, reintroductions, restoring habitat connectivity, and active management of threats.

6. **Outline specific policy mechanisms, frameworks, and programmes that exist or will be put into place,** to facilitate positive action for genetic diversity.

7. **Identify current capacity, capacity/ financing gaps, and capacity building and long-term funding plans**, to facilitate capacity-building support services and collaboration.

Monitoring, review and assessment, including the use of indicators

8. **Describe existing and planned biodiversity monitoring programs, data, and evaluation and review,** to help genetic diversity monitoring make use of synergies with existing programs.

9. **Produce a plan for indicator calculation and reporting** - how and when data will be acquired, used and maintained over time; synergies with reporting on other targets; and responsible agencies.

10. **Review current knowledge on genetic diversity nationally/ locally, to inform policy-makers and the public,** including case studies of the use of genetic knowledge to guide management.

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Scan QR code for more detailed suggestions

What actions, policies, capacity building, and strategies can help genetic diversity?
What indicators are available?

ACTION
Helping small populations increase in size, enhancing connectivity, assessing genetic health issues like undesired hybridization and inbreeding, supporting local breeds, diversifying agriculture.

POLICY
Legal protection (e.g., of local breeds or of distinct populations) or strategic investment of resources (e.g., funding genetic monitoring programs, habitat restoration, or ex situ collections/populations or gene banks).

STRATEGIES OR PLANNING
Define priority species for genetic diversity monitoring, incorporate genetic diversity into spatial planning (including landscape connectivity), determine a plan for data collection and storage for genetic indicators, set timelines for capacity building, and publish reports on progress toward conserving and restoring genetic diversity.
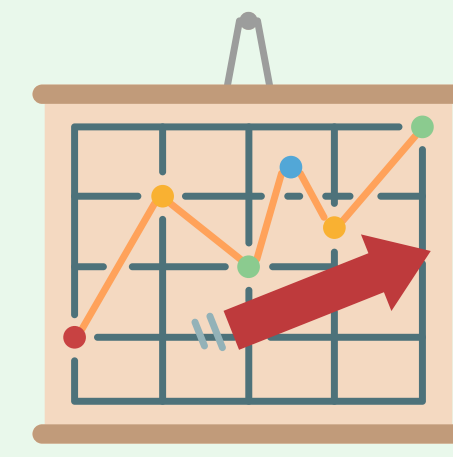
INDICATORS
GBF Headline Indicator: A.4 The proportion of populations within species with an effective population size > 500

Component and complementary indicators: Number of plant and animal genetic resources for food and agriculture secured in medium- or long-term conservation facilities; Proportion of populations maintained within species; Genetic diversity scorecard for wild species; Comprehensiveness of conservation of socioeconomically as well as culturally valuable species; Proportion of local breeds classified as being at risk of extinction
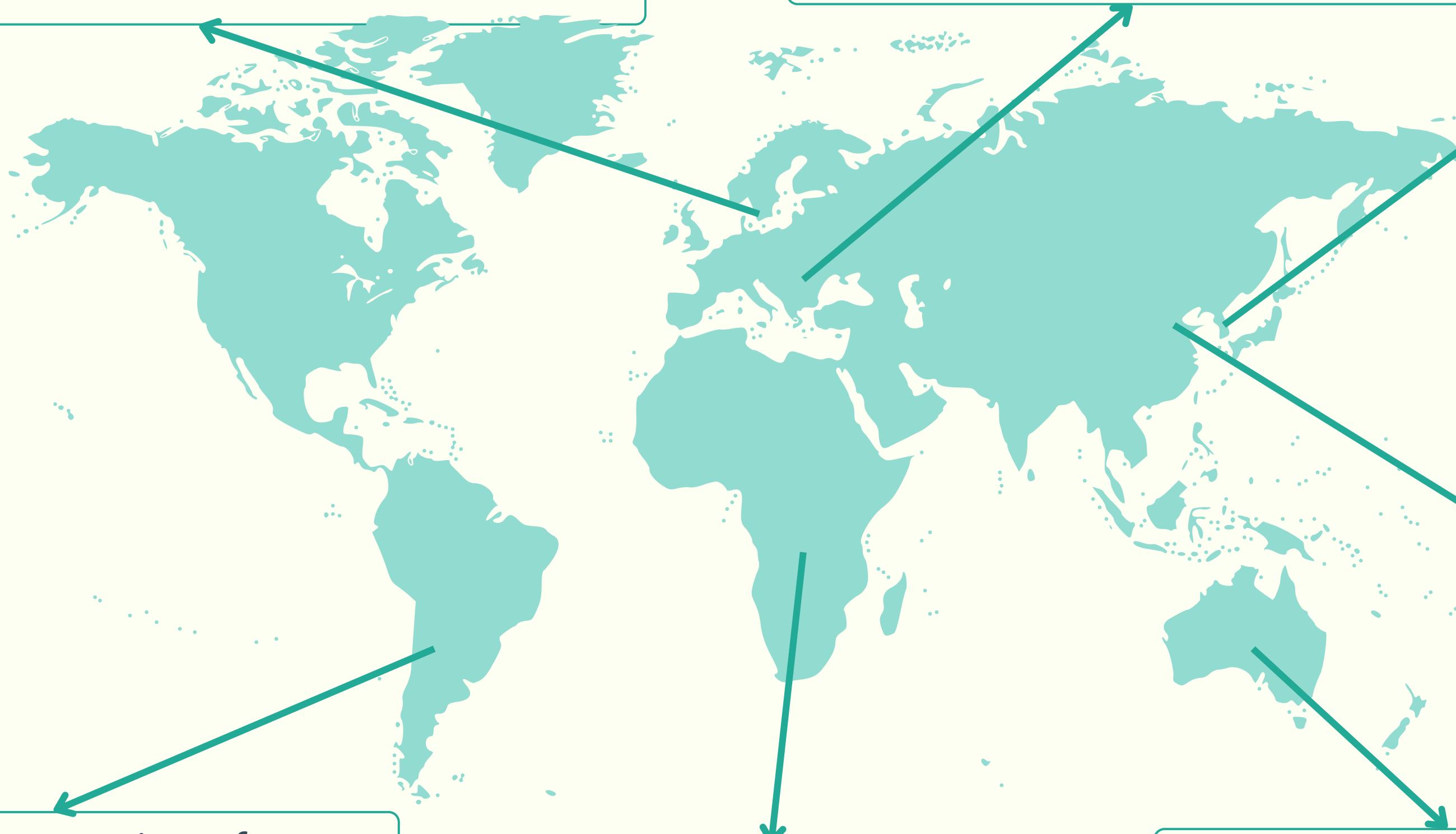**NB: none of these require DNA based data*

National examples (NBSAPs)

Below are several quotations from draft or completed NBSAPs or similar documents, with text referring to the importance of genetic diversity or actions, policy, outcomes or monitoring. These are not the only examples identified – see the publication for a more complete list, from 21 countries. Click the QR code below!

Sweden (internal agency document): the number of populations of native wild species has been maintained... the proportion of those populations with effective population sizes greater than 500 has increased (targets and indicators).

Serbia: integrate ecological corridors, as part of identified Trans-European Nature Network to prevent genetic isolation (commitment to action)

Korea: trial research to identify and monitor on a regular basis the genetic diversity of endangered species, endemic species and species with high economic value. Use the results for group conservation by species and as scientific evidence to support the identification of priority species for management, listing/delisting of endangered species and selection of species to be introduced for recovery (monitoring)

Cambodia: development and strengthening of capacity for using DNA based methods for species identification and genetic diversity studies, and for parentage, population structure and ecosystem health (commitment to action, and capacity)

Argentina: conservation of genetic variability, which is crucial for the demographic viability of sub-populations, and their connectivity and distribution throughout Argentina's ecoregions (statement of outcomes needed)

SADC: establish and strengthen regional and national institutions for planning and implementing measures, and tracking the effectiveness of interventions in terms of conservation of genetic diversity. (policy and strategy)

Australia: to survive accelerating climate change, species will need to maintain large, genetically diverse populations to adapt (statement of outcomes needed)

for more support, visit CoalitionForConservationGenetics.org

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Scan QR code for more detailed suggestions and more examples