



Michelle DePrenger-Levin
Manager of Conservation Programs
deprengm@botanicgardens.org

DENVER BOTANIC
GARDENS

THE BIODIVERSITY PLAN

For Life on Earth

THE BIODIVERSITY PLAN

Kunming-Montreal Global Biodiversity Framework

Convention on Biological Diversity



1. *Reducing threats to biodiversity (Targets 1 to 8)*
2. *Meeting people's needs through sustainable use and benefit-sharing (Targets 9 to 13)*
3. *Tools and solutions for implementation and mainstreaming (Targets 14 to 23)*

THE BIODIVERSITY PLAN

Kunming-Montreal Global Biodiversity Framework



Global Strategy for Plant Conservation



Convention on
Biological Diversity

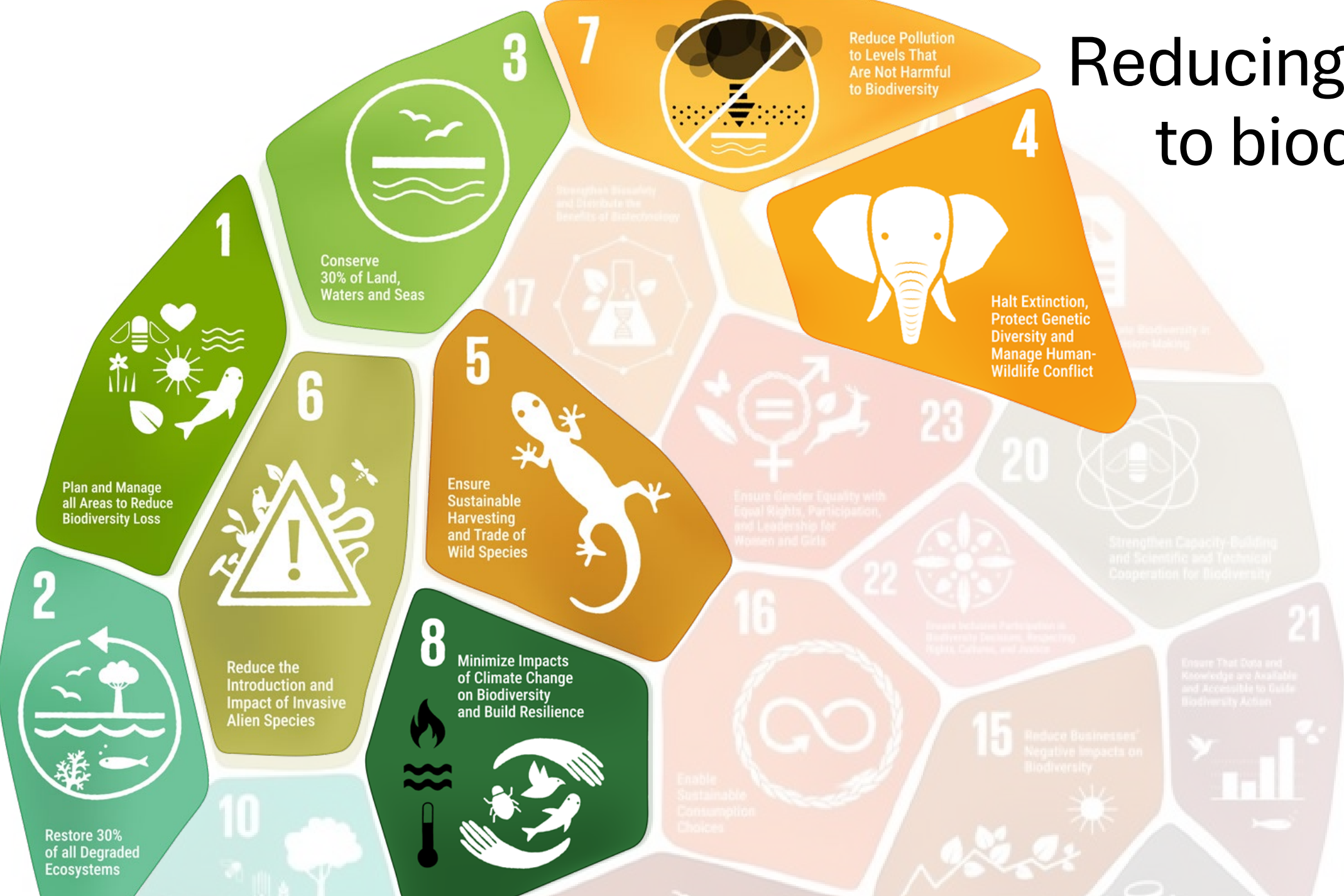
CoP16: 2020-2030

Voluntary Complementary Actions

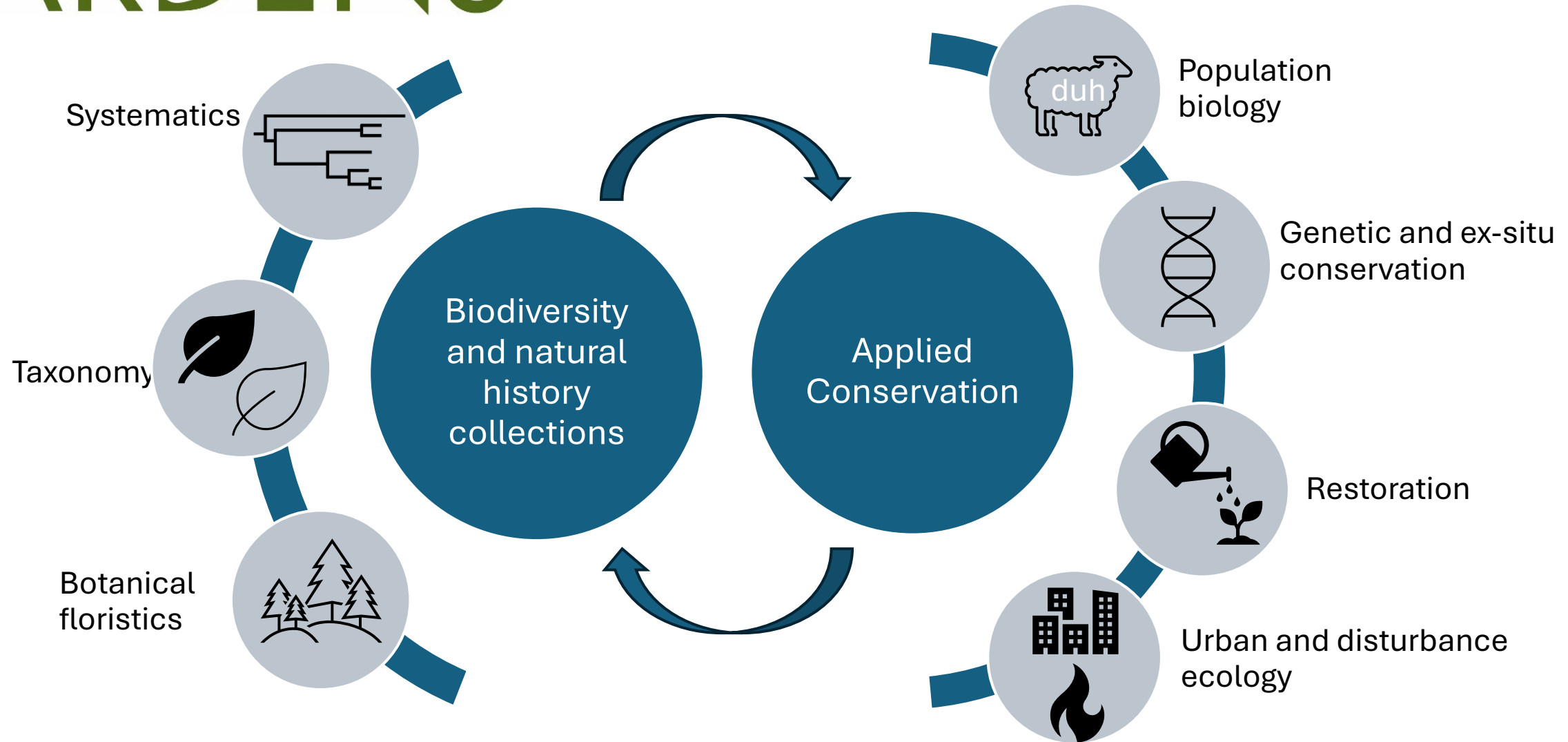
“Without plants, there is no life. The functioning of the planet, and our survival, depends upon plants.”

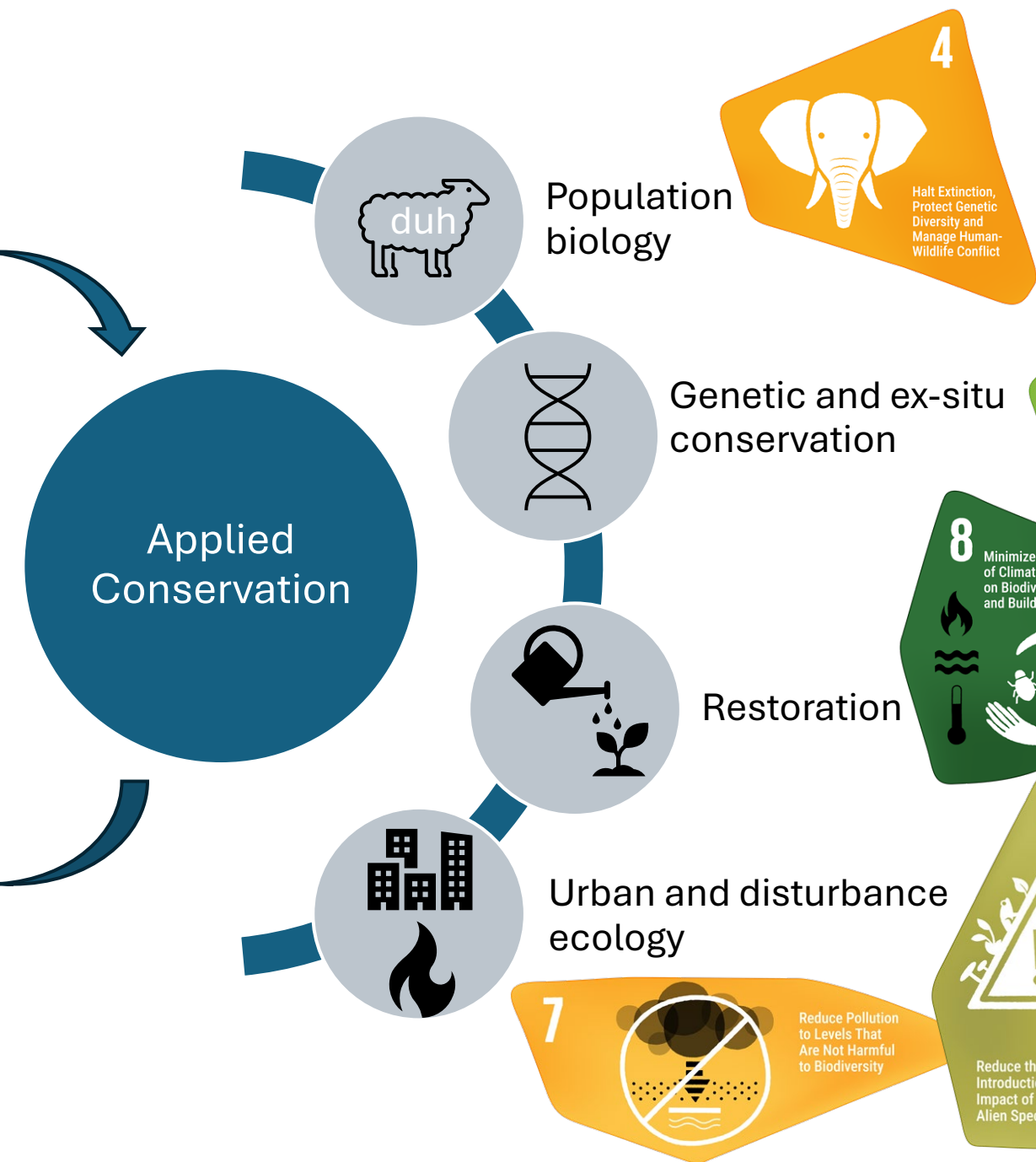
The Strategy seeks to halt the continuing loss of plant diversity.

Reducing threats to biodiversity



DENVER BOTANIC GARDENS





Halt Extinctions, Protect Genetic Diversity

- Ensure extinction risk/conservation status is known
- Seed collections

Minimize impact of climate change

- Genetically and biologically appropriate use of native species

Conserve 30%

- Document and monitor genetic diversity

Restoration

- Genetically appropriate material



Invasives and Pollution

- Green stormwater infrastructure
- Tracking species in the Gardens

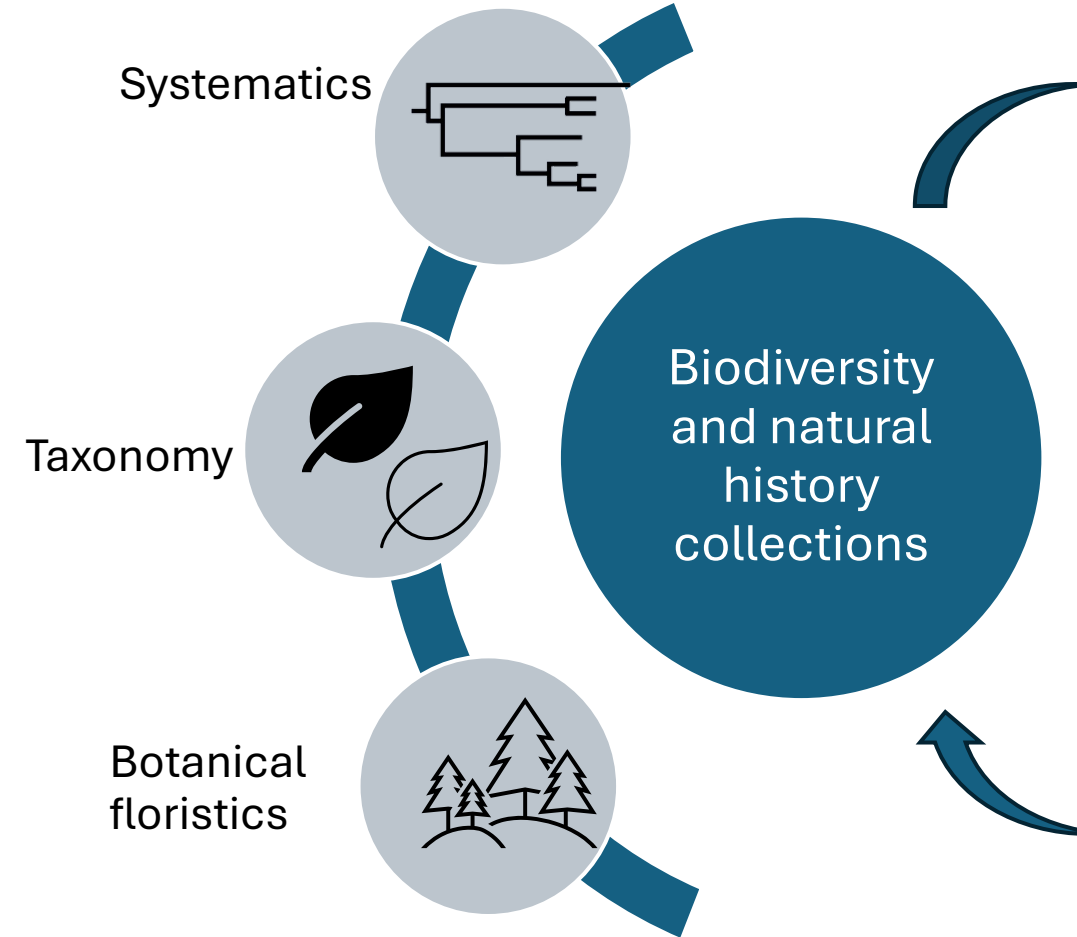
Plan and Manage all Areas

- Identify and Map all plant species



Reduce impact of Invasive Species

- Early warning, monitoring and tracking
- Address the impact of invasive species on plant diversity



Meeting people's needs

10



Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Fisheries, and Forestry

11

Restore and Enhance Nature's Contributions to People



12



Plan Urban Areas for Human Well-Being and Biodiversity

13



Share Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge

9



Manage Wild Species Sustainably

Restore nature's contribution to people

- Urban trees

Urban Areas

- Highline Canal



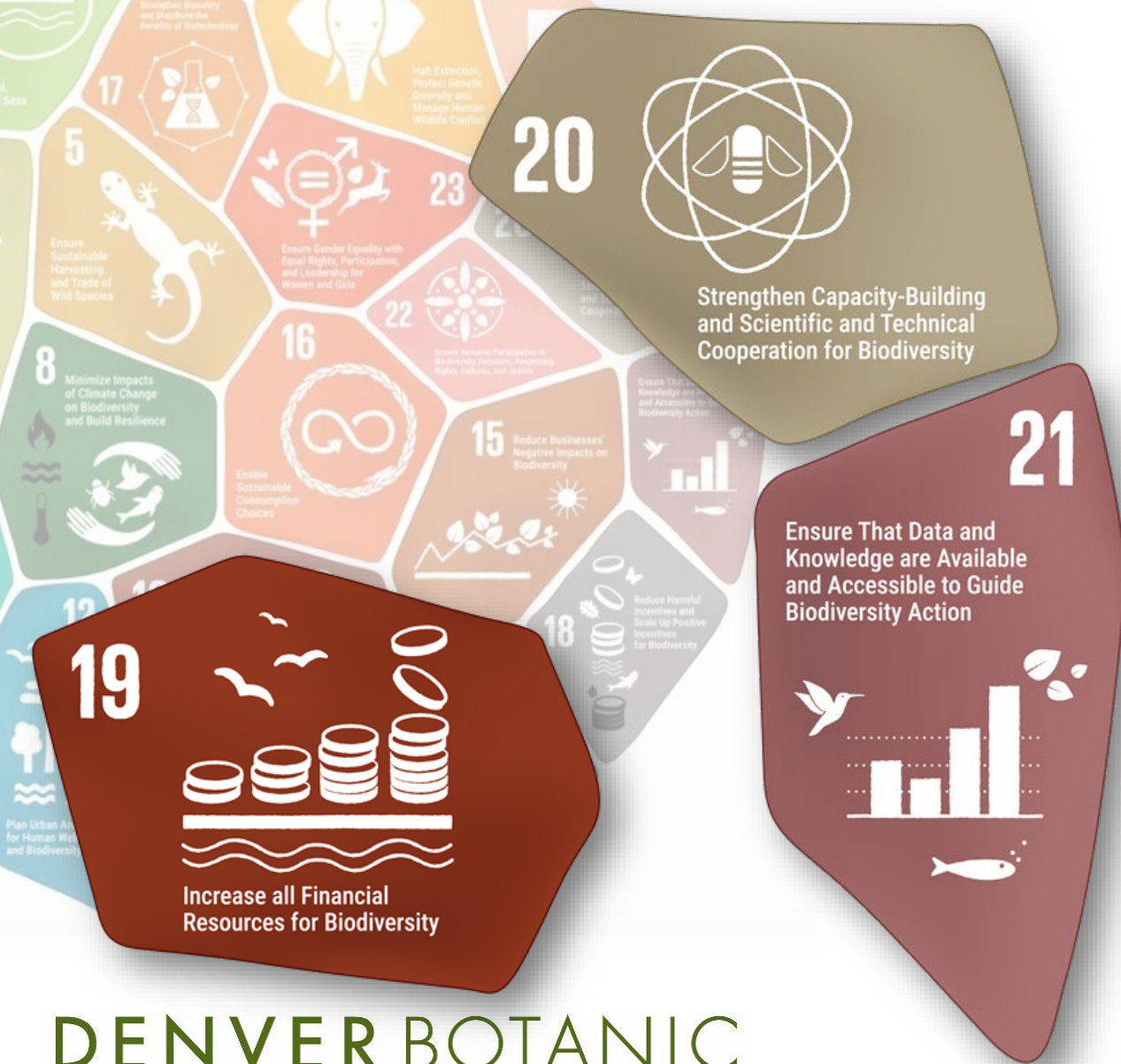
DENVER BOTANIC
GARDENS

BIODIVERSITY PLAN

Global Biodiversity Framework

Tools and solutions for implementation





20



Strengthen Capacity-Building and Scientific and Technical Cooperation for Biodiversity

21

Ensure That Data and Knowledge are Available and Accessible to Guide Biodiversity Action



19



Increase all Financial Resources for Biodiversity

DENVER BOTANIC GARDENS

Increase Financial Resources

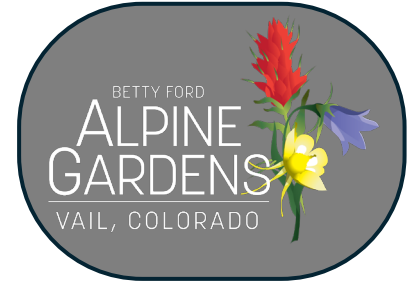
- Symposium
- Conservation Leadership Summit

Capacity

- Developing efficient monitoring
- Alpine Strategy

Best Available Data

- Public awareness, accessible information
- Community science

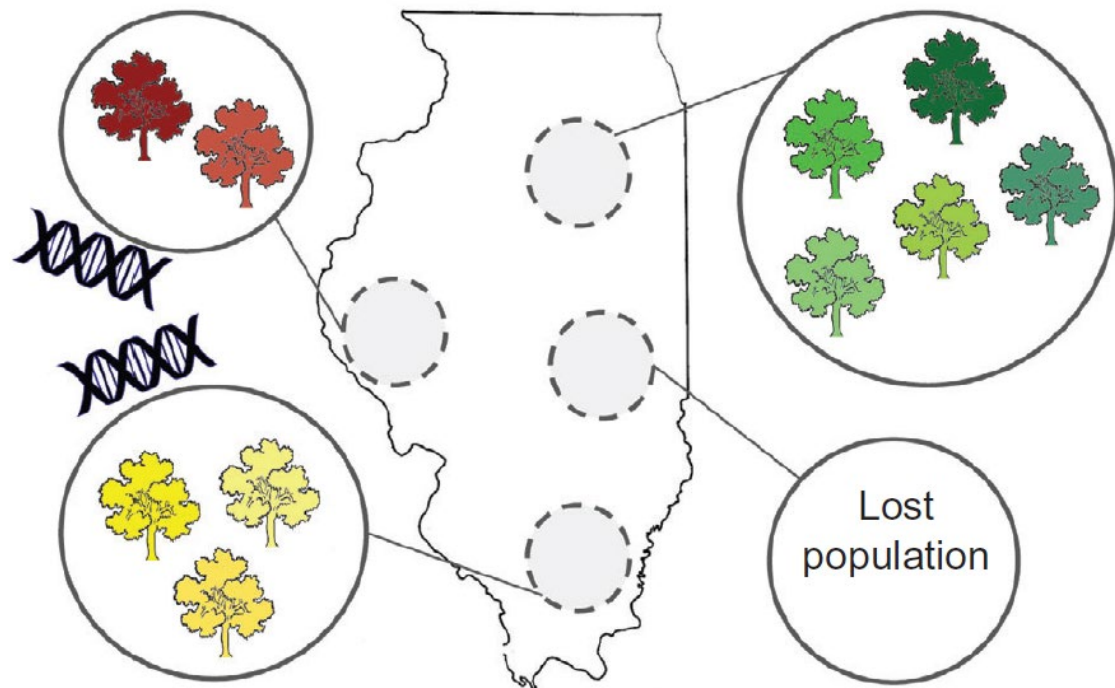


Track Progress



- 1 Plan and Manage Risks to Reduce Biodiversity Loss
- 2 Restore 30% of all Degraded Ecosystems
- 3 Conserve 30% of Land, Waters and Seas
- 4 Halt Extinction and Manage Human-Wildlife Conflict
- 5 Ensure Sustainable Harvesting and Trade of Wild Species
- 6 Reduce the Introduction and Impact of Invasive Alien Species
- 7
- 8 Minimize Impacts of Climate Change on Biodiversity and Build Resilience
- 9 Manage Wild Species Sustainably
- 10 Enhance Biodiversity and Sustainability in Agriculture, Aquaculture, Forestry, and Food Security
- 11 Restore and Enhance Nature's Contributions to People
- 12 Plan Urban Areas to Enhance Well-Being and Biodiversity
- 13
- 14 Share Beneficial Genetic Resources and Traditional Knowledge
- 15 Reduce Business and Financial Risks to Biodiversity
- 16 Enable Sustainable Consumption Choices
- 17 Strengthen Biosafety and Distribute the Benefits of Biotechnology
- 18 Reduce Harmful Incentives and Scale Up Positive Incentives for Biodiversity
- 19 Increase all Financial Resources for Biodiversity
- 20 Strengthen Capacity-Building and Scientific and Technical Cooperation for Biodiversity
- 21 Ensure that Data and Knowledge are Available and Accessible to Guide Biodiversity Action
- 22 Ensure Inclusive Plans, Biodiversity Decisions, Rights, Cultures, and Justice
- 23 Ensure Gender Equality with Equal Rights, Participation, and Leadership for Women and Girls





Indicator 1. Proportion of populations large enough to maintain genetic diversity	Indicator 2. Proportion of populations still exist (not lost)	Indicator 3. Species monitored with DNA data (y/n)?
0.33	0.75	1

Hoban et al. 2023. Conservation Letters

Genetic Data



Ecological Niche Modelling

ODEX | Home | Map | My Projects | My Group | Terms & Conditions | Contact Us | Help

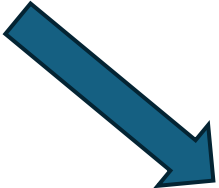
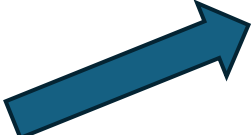
Switch Basemap Add Resources Create Project ROI Report

Layers Make a Map Feature Search

- Piceance Bladderpod (*Physaria parviflora*)
- Pagosa Bladderpod (*Physaria pruinosa*)
- Cushion Bladderpod (*Physaria pulvinata*)
- Rollins' Twinpod (*Physaria rollinsii*)
- West Silver Bladderpod (*Physaria scrotiformis*)
- Montrose Bladderpod (*Physaria vicina*)
- Alcove Bog-orchid (*Platanthera zothecina*)
- Rocky Mountain Cinquefoil (*Potentilla rupinco*)
- Porter Feathergrass (*Ptilagrostis porteri*)
- Parish's Alkali Grass (*Puccinellia parishii*)
- Arizona Willow (*Salix arizonica*)
- Weber Saussurea (*Saussurea weberi*)
- Colorado Hookless Cactus (*Sclerocactus glaucu*)
- Mesa Verde Cactus (*Sclerocactus mesae-verda*)
- Ute Ladies' Tresses (*Spiranthes diluvialis*)
- James' Telesonix (*Telesonix jamesii*)
- Sun-loving Meadowrue (*Thalictrum heliophilu*)
- Juniper Tumble Mustard (*Thelypodopsis junip*)
- Northwestern Thelypody (*Thelypodium panic*)
- Fendler's Townsend-daisy (*Townsendia fendle*)
- Smooth Easter Daisy (*Townsendia glabella*)
- Rothrock Townsend-daisy (*Townsendia rothro*)

Map showing Grand Junction area with green shaded regions. Labels include: McInnis Canyons National Conservation Area, Grand Junction, Grand Mesa National Forest, Dominguez Escalante National Conservation Area, Gunnison Gorge National Conservation Area, West Divide, and routes 6, 70, 141.

Next Steps



BOTANIC GARDENS
CONSERVATION INTERNATIONAL



THE BIODIVERSITY PLAN

Kunming-Montreal Global Biodiversity Framework



Goals for 2050

- Protect and Restore
- Prosper with Nature
- Share Benefits Fairly
- Invest and Collaborate

DENVER BOTANIC
GARDENS



**BOTANIC
GARDENS**
CONSERVATION
INTERNATIONAL