

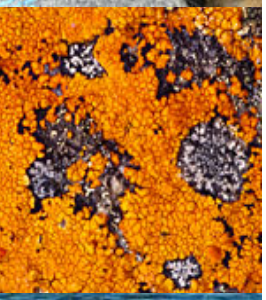

Science Division

"Discovering the nature of WA"

NGO Industry Environment Forum

4 December 2008

Neil Burrows

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Science Division - Mission

Knowledge acquisition

- Provide science and information to uphold effective conservation of biodiversity and sustainable development in WA

Knowledge communication

- Internal and external stakeholders

Knowledge uptake

- Provide advice and technical support to inform & guide policy and planning
- Improve management actions & outcomes

How?

Experimental research, survey, monitoring, global science network, adaptive management

Other services: Library, VHS, Biometrics, Herbarium, Information Systems (e.g., *FLORABASE, NATUREMAP*), Labs (incl. DNA), Education, Training

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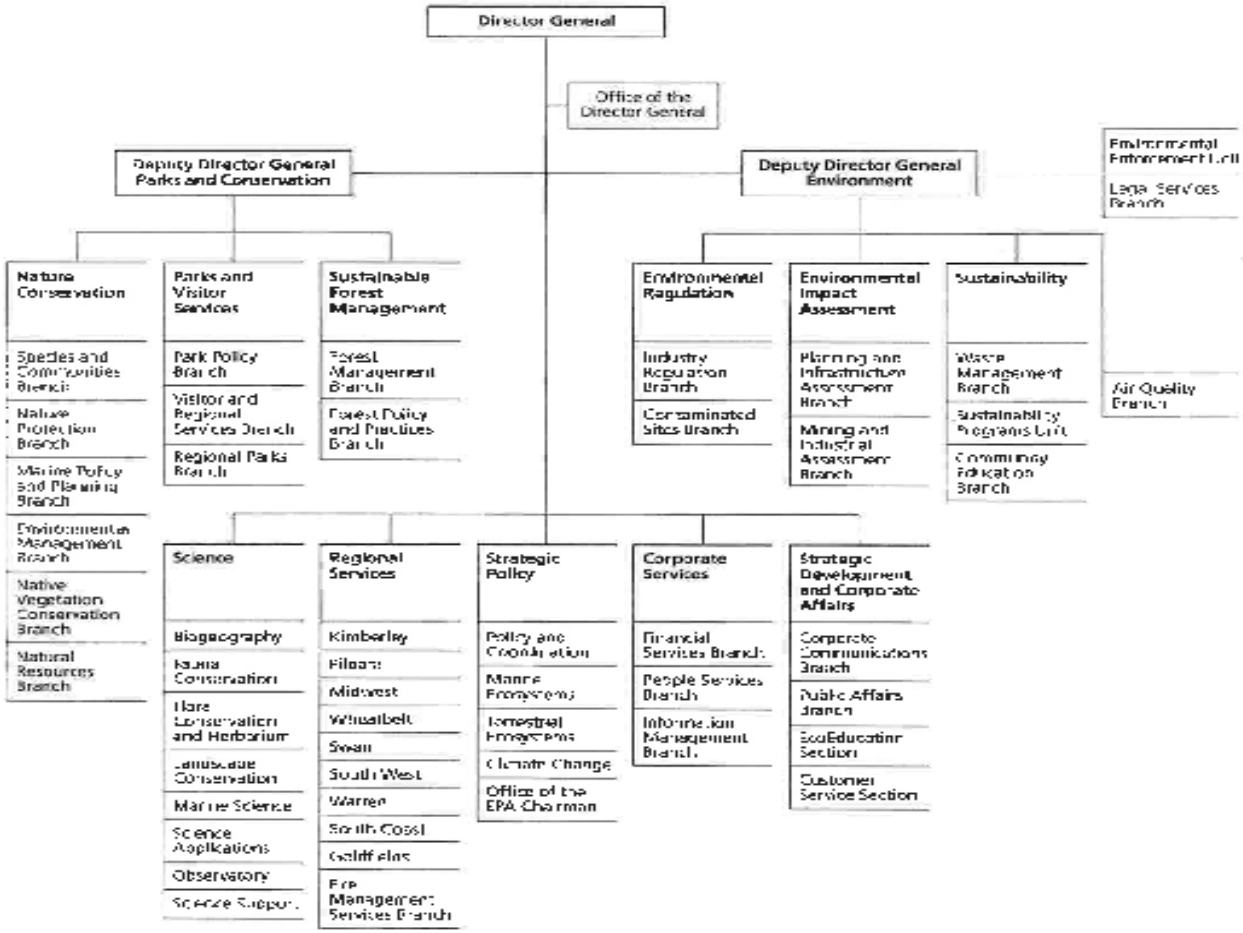
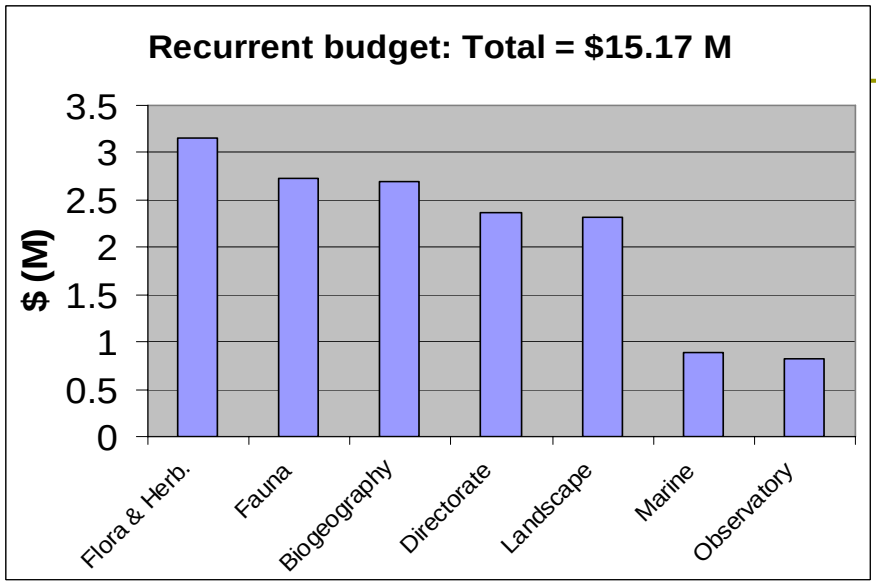
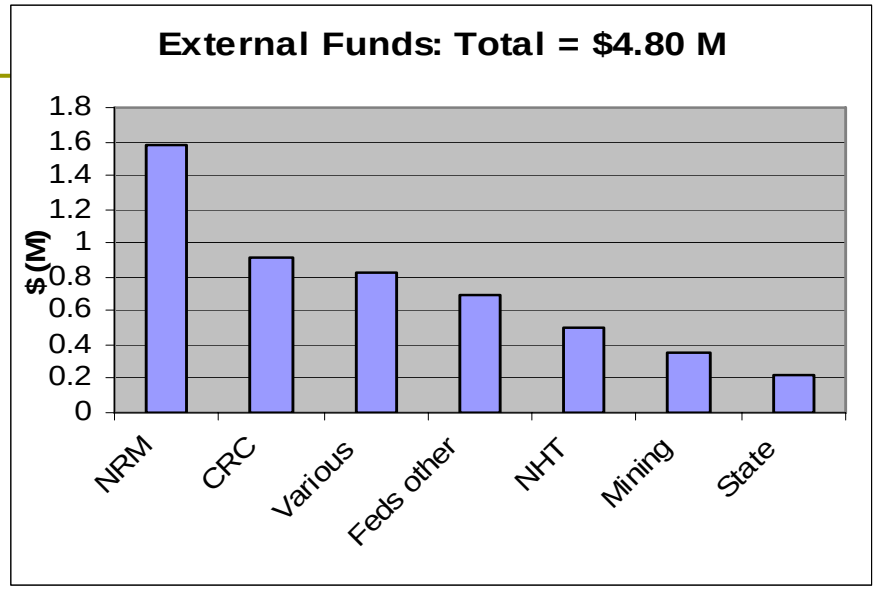
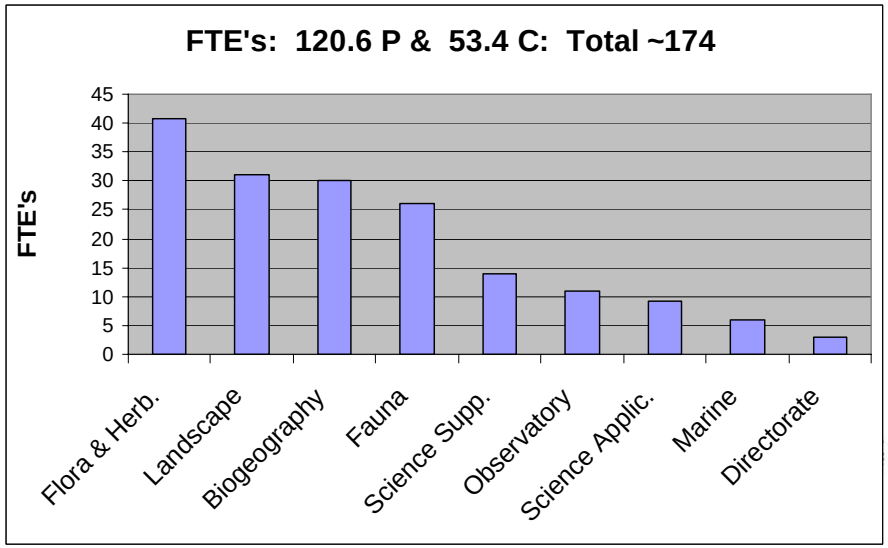
Department of Environment and Conservation organisation chart



Staff and Budget Summary







Research Centres/presence

Albany, Bickley, Busselton, Dwellingup, Herbarium, Kensington, Kununurra, Manjimup, Woodvale

Significant Partnerships

- 72 Students (mostly PhD)
- 96 (56%) research projects with other agencies.

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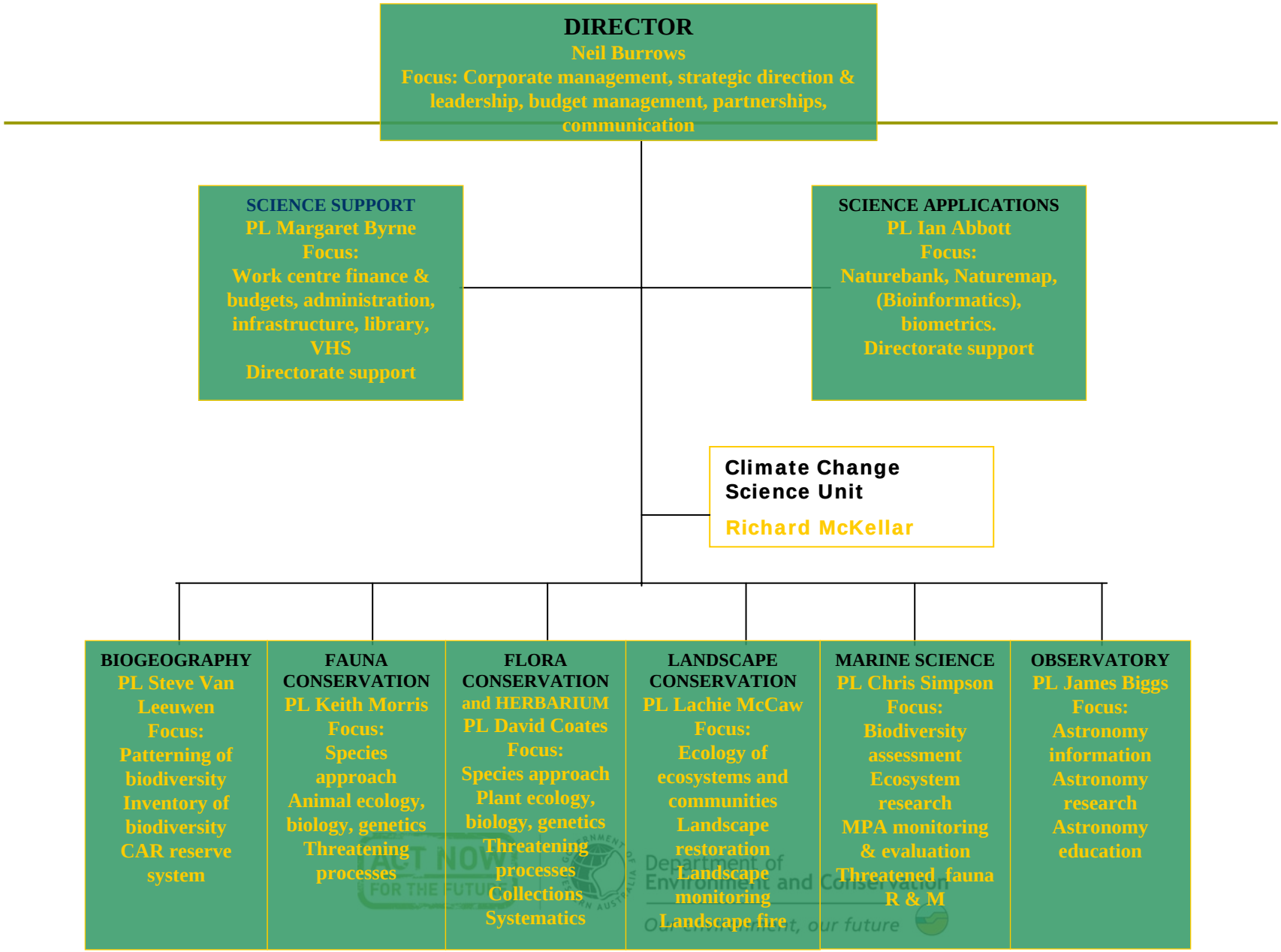
DIRECTOR
Neil Burrows
Focus: Corporate management, strategic direction & leadership, budget management, partnerships, communication
SCIENCE SUPPORT
PL Margaret Byrne
Focus:
Work centre finance & budgets, administration, infrastructure, library, VHS
Directorate support
SCIENCE APPLICATIONS
PL Ian Abbott
Focus:
Naturebank, Naturemap, (Bioinformatics), biometrics.
Directorate support
Climate Change Science Unit
Richard McKellar
BIOGEOGRAPHY
PL Steve Van Leeuwen
Focus:
Patterning of biodiversity
Inventory of biodiversity
CAR reserve system
FAUNA CONSERVATION
PL Keith Morris
Focus:
Species approach
Animal ecology, biology, genetics
Threatening processes
FLORA CONSERVATION and HERBARIUM
PL David Coates
Focus:
Species approach
Plant ecology, biology, genetics
Threatening processes
Collections
Systematics
LANDSCAPE CONSERVATION
PL Lachie McCaw
Focus:
Ecology of ecosystems and communities
Landscape restoration
Landscape monitoring
Landscape fire
MARINE SCIENCE
PL Chris Simpson
Focus:
Biodiversity assessment
Ecosystem research
MPA monitoring & evaluation
Threatened fauna R & M
OBSERVATORY
PL James Biggs
Focus:
Astronomy information
Astronomy research
Astronomy education

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Science Division annual research activity report

2007 – 2008

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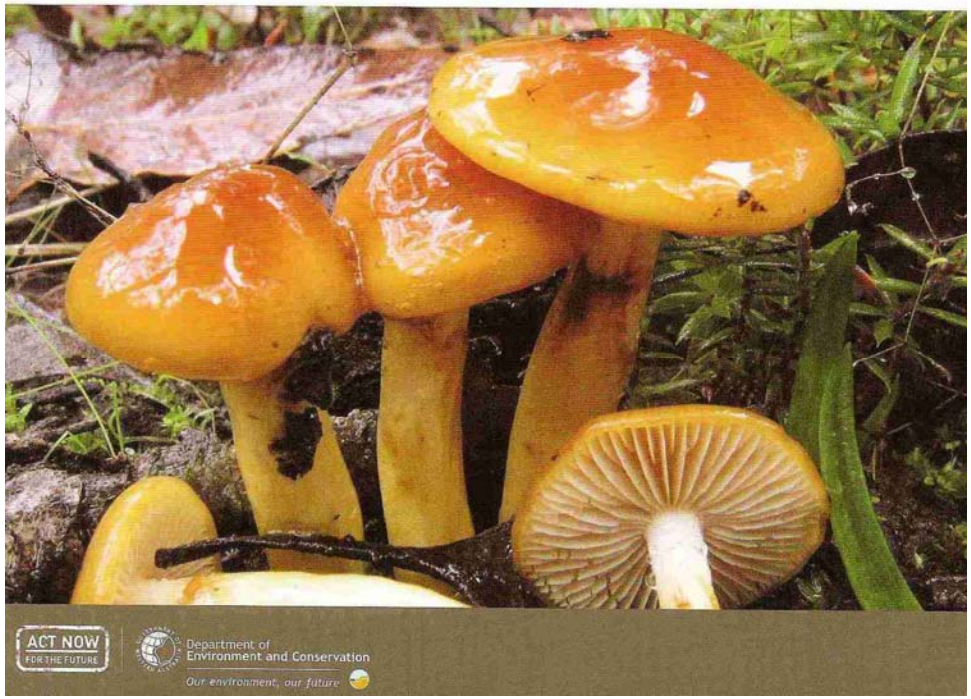
Science Division

A Strategic Plan for Biodiversity Conservation Research

2008 – 2017



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G1: Understand composition of, & patterning in, terrestrial & marine biodiversity

- Develop a 10 year strategic plan for regional scale Biological Survey
- BIF surveys
- Kimberley islands & mainland biological survey
- SW forests biological survey (FMP)
- Develop a Biological Survey Information System (BioSIS)

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G1: Understand composition of, & patterning in, terrestrial & marine biodiversity

- South Coast and Kimberley marine biol surveys
- Resolve taxonomy of undescribed plants including molecular techniques
- Veg information management system including a new veg map for WA
- Reserves biological database
- DNA extraction and storage
- An electronic "Flora of WA"

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G2: Understand threats to biodiversity and develop management options to ameliorate threats

- Climate change impacts
- Restoration ecology
- Develop and implement prioritised research strategy for threatened taxa (Recovery Plans)
- Invertebrate and fungi conservation
- Integrated extension of WS into the rangelands
- Role of fire in ecosystems

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G2: Understand threats to biodiversity and develop management options to ameliorate threats

- Biosecurity: weeds, cat, camel, pig, goat, cane toad
- Resolve the conservation status of threatened and priority species and ecological communities
- DNA Library (threatened taxa)
- Social research (visitor impacts)

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G3: Monitor & evaluate the condition & trends of species, populations & communities in terrestrial & marine ecosystems

- Develop framework & protocols (criteria and indicators) for resource condition monitoring:
  - Climate change
  - Fire
  - Vegetation condition
  - Landscapes, ecosystems, species
  - Effectiveness of management actions

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G4: Provide scientifically-based concepts and tools for best practice management of biodiversity

- Framework for designing a CAR reserve system (marine & terrestrial)
- Monitoring framework & protocols
- Protected areas biological database
- A new vegetation map for WA
- Tools & protocols for adaptive management
- Continue to contribute to policies, guidelines, management plans, advice

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G5: Improve knowledge of how people respond to, and interact with the natural environment

- Visitor usage patterns
- Criteria & indicators – sustainable tourism
- Community attitudes & perceptions
- Community engagement models, including Traditional Owners

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G6: Promote & facilitate the uptake of research findings and communicate the contribution of science to biodiversity conservation

- Regional partnerships
- Science ambassadors program
- Scientific & popular publications
- Science incorporated into policies and practices
- Science Communication officer
- Initiate and participate in adaptive management programs

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Key supporting strategies

- Recruit and retain versatile, skilled, motivated staff
- Integrated and multi-disciplinary teams of skilled & enthusiastic people
- Best practice research methodology, reporting, publishing and communication
- Strategic partnerships
- Corporate biological data and information systems

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Partnerships

- Internal
  - Nature Conservation Service Steering Group
  - Regional science ambassadors
  - Regional Services - adaptive management programs
  - Communication, liaison and advice
- External
  - Universities
  - CSIRO
  - Corporate sector
  - NRM Groups
  - Indigenous land councils
  - Community-based conservation groups
  - Other State and Fed gov't departments

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Operational challenges

- Staff recruitment & retention
  - staff expertise to meet future challenges
  - brain drain - retirements, resignations
  - build and maintain viable science presence in regional areas
- Funding base
  - Collaborations & partnerships
- Political and community support for;
  - conservation & the environment
  - science

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OVER SIZE

Thank You