



# AdaptLog Intervention Category Glossary

A product from Climate Systems National Environmental Science Program (NESP) project 2.7  
*Climate-effective management for threatened species and protected places.*

## a) Providing resources or altering habitat

- Provision of food or water
- Fire management
- Hydrological regime manipulation
- Habitat manipulation
- Terrestrial and riparian restoration or renovation
- Coastal and marine restoration or renovation
- Soil management

## b) Moving individuals or genes

- Conservation introductions outside of historic range
- Reinforcement and reintroduction within historic range
- *Ex situ* conservation
- *In situ* reproductive or survival manipulation
- Genetic rescue or management

## c) Non-target organism interference

- Interspecific species management
- Disease management



## d) Event related

- Response to extreme event
- Preparation for extreme events

## e) Planning or approach

- Indigenous management practices
- Landscape planning and management

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	Intervention Category	Description	Examples	Hint
<b>a) Providing resources or altering habitat</b>				
	<b>Provision of food or water</b>	Provision of biotic resources <i>in situ</i>	Supplementary feeding; Providing artificial water sources (drinkers, ponds); Feeding abandoned juveniles.	<p>If provision of abiotic resources e.g. shade – assign <i>Habitat manipulation</i></p> <p>If large-scale manipulation ensuring connectivity or health of freshwater waterways – assign <i>Hydrology restoration or management</i></p>
	<b>Fire management</b>	Using fire to protect natural or cultural values. Applying appropriate fire regimes to an ecosystem.	Reducing fuel loads around wombat burrows or threatened plant communities; Implement an appropriate fire regime in high-value habitat or refuge area to promote and maintain habitat persistence.	If responding to Bushfire – assign <i>Response to extreme event</i>

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### Hydrological regime manipulation

Modification of the hydrological regime of a site.

Allocating 'water for the environment' in flow regime accounts/budgets; Control bores/groundwater in a way that benefits species/ecosystems.

If small-scale e.g. artificial pool construction – assign *Habitat manipulation*; or maintaining water drinkers – assign *Provision of food or water*; or if restoring features other than hydrological regime (e.g. vegetation, soil) then assign – *Terrestrial and riparian restoration*



### Habitat manipulation

Modification or engineering of natural habitat and abiotic resources (e.g. shelter, wind, sun, rain).

Provision of artificial nests, structures or shelters; Watering mound nests in drought to create good nest ambient temperatures/humidity.

If hydrological engineering of landscape – assign *Hydrology, engineering, restoration or management*  
If doesn't alter abiotic resources (e.g. build fence) – assign *Population enhancement by in situ breeding or survival manipulation*

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### **Terrestrial and riparian restoration or renovation**

Assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (Society for Ecological Restoration). Including rehabilitation, revegetation, rewilding, restoring ecosystem services, and the design of these endeavours.

Revegetating areas on private property affected by flooding and clearing; Planting of cuttings of Mountain Plum-pine taken from surviving plants following the Mt Blue Cow 2003 fires; Climate-adjusted provenancing; Replant feeding habitat of red-tailed black cockatoo; Strategic habitat restoration based on climate models and where will be valuable climate refugia for particular species; Enhancing/supporting pollinator species such as increasing pollen and nectar sources or reducing the use of harmful substances; Riverbank stabilisation plantings.

Involves on-ground intervention i.e. planting a tree. If change in land use, policy or regulation – assign *Landscape planning and management including providing climate refugia*

If hydrological engineering of landscape – assign *Hydrology, engineering, restoration or management*

If marine or coastal environments – assign *Coastal and marine restoration*



### **Coastal and marine restoration or renovation**

Assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (Society for Ecological Restoration). Including rehabilitation, revegetation, rewilding, restoring ecosystem services, and the design of these endeavours.

Oyster reef restoration; kelp restoration; beach foreshore nourishment.

If terrestrial or riparian/freshwater environments – assign *Terrestrial and riparian restoration*

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**Soil management**

Land management practices that target the health and conservation of soils.

Could include actions that improve acidification, compaction, erosion, salinity, or fertility. Soil amelioration techniques; Reduce run-off after heavy rainfall.

	Intervention Category	Description	Examples	Hint
<b>b) Moving individuals or genes</b>				



**Conservation introductions outside indigenous range**

Move individuals to establish at a new site where the species has not historically occupied. This category includes conservation introductions outside indigenous range, comprising of assisted colonisation and ecological replacement.

Create an insurance population of birds on a predator free island that species has never occupied; Introduction to outside of known range, site selection based on climate model.

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### Reinforcement and reintroduction within indigenous range

Move individuals to supplement existing population or re-establish previously occupied but currently extinct site. This category includes reinforcement and reintroduction within a species' historic range. Population enhancement by restocking or re-introducing individuals for density-dependent breeding or survival objectives.

Move captive-bred or wild individuals to increase numbers at existing site. Moving individuals closer together or increasing density through reinforcement or reintroduction to historic range, to facilitate breeding, survival or other density-dependent outcomes. Maintain higher densities of mangroves to enhance rates of sediment accretion; moving individuals closer together to facilitate breeding.

If individuals taken into care temporarily between rescue and release – assign *Ex-situ conservation (including breeding and release)*



### Ex-situ conservation

Short-term *ex situ* holding of individuals or maintaining a captive breeding population which may include artificial breeding activities. This category includes propagation or breeding and release e.g. (1) rescue/return, (2) rescue/breed/return, or (3) rescue/breed/hold. Individuals are returned to same site.

Ensure a suitable seed collection is maintained as a reliable form of insurance against the loss of genetic diversity should the species' habitat be destroyed; Keeping and breeding individuals at a Zoo; Transportation of juvenile wild, Orange-bellied Parrots into captivity over the winter to boost chances of survival; Rescue and rehabilitation of abandoned young.

If individuals not held between rescue and release, or returned to different site – assign either *Conservation introductions outside indigenous range* or *Reinforcement and reintroduction within indigenous range*

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### ***In situ* reproductive or survival manipulation**

Interventions that aim to increase reproductive or survival demographic parameters *in situ*. Does not alter biotic or abiotic resources.

Overturning female turtles on beach to increase survival; Fencing clifftops to reduce mortality from falling; Putting eggs back that fall out back in nest; Head-starting/hand-rearing *in situ*; Rescued eggs from inconveniently located nests (next to airport runway) placed with foster parents instead of old technique of hazing birds and destroying eggs; Transporting individuals along their migration route to increase survival; Installing shelters/bridges/fences to reduce mortality from roads.

If restocking or re-introducing individuals for density-dependent breeding or survival objectives – assign *Population enhancement (increase density)*



If altering abiotic conditions – assign *Habitat manipulation*



### **Genetic rescue or management**



Moving genes from one population to another to increase the overall genetic diversity and minimize inbreeding. Or other genetic-related interventions.

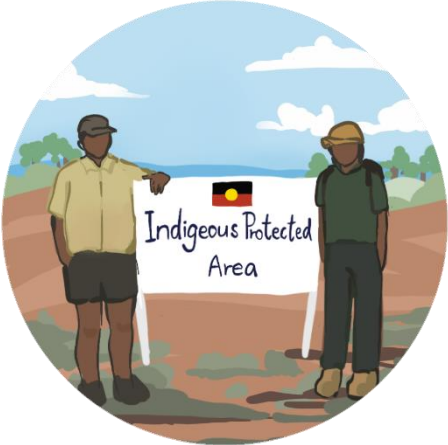

Wild-cross breeding between two populations of Mountain pygmy-possums to produce genetically more robust young (Genetic rescue); Introduce captive bred individuals into wild populations.

	Intervention Category	Description	Examples	Hint
<b>c) Non-target organism interference</b>				
	<b>Interspecific species management</b>	Reducing negative interactions with other species. Can be either native or introduced species, reduce pressure by controlling interspecific species.	Poison baiting, trapping, fencing to exclude domestic stock, dingoes, wild dogs, foxes and cats; Collar trees to exclude ground predators.	
	<b>Disease management</b>	Interventions that treat or manage disease.	Spraying vegetation with phosphite for <i>Phytophthora</i> ; Vaccinating albatross chicks against Avian influenza; Biosecurity measures.	



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	Intervention Category	Description	Examples	Hint
d) Event related				
	<p><b>Response to extreme event</b></p>	<p>Interventions that occur in response to an emergency and/or extreme event, e.g. reducing negative impacts during or after a flooding, bushfire, or heatwave event.</p>	<p>Relocation of species in advance of a bushfire; caring for injured wildlife; Extra resources mobilised on catastrophic-risk fire days, artificially elevating moisture levels around refugia; Clearing debris accumulated after major flood events for Davies' Waxflower; Stabilising riverbanks to reduce runoff and soil degradation.</p>	
	<p><b>Preparation for extreme events</b></p>	<p>Pre-emptive activities that occur before an extreme event e.g. bushfire, flood, heatwave, to lessen its impact. Including planning or activities that aren't on-ground interventions.</p>	<p>Creating firebreaks around important trees or natural assets; Translocating to an area where volcanic eruption risk is lower; Develop an early warning system to alert managing authorities to extreme weather events and enable coordinated response.</p>	

	Intervention Category	Description	Examples	Hint
<b>e) Planning or approach</b>				
	<b>Indigenous management practices</b>	Indigenous-led climate adaptation and conservation of culturally significant species and places for climate change.	Reinstate Indigenous fish traps and fish weirs to benefit the ecology and morphology of the river and floodplains; Reinstate Indigenous fire management practices; Indigenous-led conservation of culturally significant species threatened by climate change; Translocation of species to Indigenous Protected Area.	
	<b>Landscape planning and management</b>	Change of land use, policy or regulations, including to provide climate refugia. Connectivity interventions to promote landscape connectivity and establish and maintain connectivity between populations.	Landscape-scale planning for climate refugia; Prohibition of development activities in high value refugia habitat; Increasing management activities in areas identified as climate refugia; Managing the landscape to create microhabitats and refugia; Modifying farming practices; Connectivity interventions.	If involves on-ground action is included or no mention of future climates – assign <i>Terrestrial and riparian restoration or renovation</i>

Illustrations by [My Blue Planet Art & Design](#)

Please cite decision support documentation for AdaptLog as: Mason, Claire; Hartog, Jason; Boulter, Sarah; Hobday, Alistair; Melbourne-Thomas, Jess; Styger, Jenny; & van Putten, Ingrid (2024): Decision support documentation for AdaptLog. CSIRO. Service Collection. <http://hdl.handle.net/102.100.100/659364?index=1>

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