



William J. Sutherland, Lynn V. Dicks, Nancy Ockendon, Silviu O. Petrovan and Rebecca K. Smith (dir.)

What Works in Conservation 2018

Open Book Publishers

3.10 Habitat restoration and creation

Publisher: Open Book Publishers

Place of publication: Cambridge

Year of publication: 2018

Published on OpenEdition Books: March 21, 2019

Series: OBP collection

Electronic EAN: 9791036524547



<http://books.openedition.org>

Electronic reference

3.10 *Habitat restoration and creation* In: *What Works in Conservation 2018* [online]. Cambridge: Open Book Publishers, 2018 (generated 16 novembre 2023). Available on the Internet: <<http://books.openedition.org/obp/6419>>. ISBN: 9791036524547.



The text only may be used under licence CC BY 4.0. All other elements (illustrations, imported files) are "All rights reserved", unless otherwise stated.

3.10 Habitat restoration and creation

Based on the collated evidence, what is the current assessment of the effectiveness of interventions for habitat restoration and creation?	
Beneficial	<ul style="list-style-type: none"> ● Restore or create forests ● Restore or create wetlands and marine habitats: restore or create inland wetlands
Likely to be beneficial	<ul style="list-style-type: none"> ● Restore or create grassland ● Restore or create traditional water meadows ● Restore or create wetlands and marine habitats: restore or create coastal and intertidal wetlands
Unknown effectiveness (limited evidence)	<ul style="list-style-type: none"> ● Restore or create shrubland ● Restore or create wetlands and marine habitats: restore or create kelp forests ● Restore or create wetlands and marine habitats: restore or create lagoons
No evidence found (no assessment)	<ul style="list-style-type: none"> ● Restore or create savannahs ● Revegetate gravel pits

Beneficial

● Restore or create forests

Thirteen of 15 studies from across the world found that restored forests were similar to in-tact forests, that species returned to restored sites, that species recovered significantly better at restored than unrestored sites or that bird species richness, diversity or abundances in restored forest sites



increased over time. One study also found that restoration techniques themselves improved over time. Nine studies found that some species did not return to restored forests or were less common and a study found that territory densities decreased over time. A study from the USA found that no more birds were found in restored sites, compared with unrestored. One study investigated productivity and found it was similar between restored and intact forests. A study from the USA found that planting fast-growing species appeared to provide better habitat than slower-growing trees. *Assessment: beneficial (effectiveness 65%; certainty 76%; harms 0%).*

<http://www.conservationevidence.com/actions/360>

● Restore or create wetlands and marine habitats (inland wetlands)

All eleven studies from the USA and Canada found that birds used restored or created wetlands. Two found that rates of use and species richness were similar or higher than on natural wetlands. One found that use was higher than on unrestored wetlands. Three studies from the USA and Puerto Rico found that restored wetlands held lower densities and fewer species or had similar productivity compared to natural wetlands. Two studies in the USA found that semi-permanent restored and larger wetlands were used more than temporary or seasonal or smaller ones. *Assessment: beneficial (effectiveness 70%; certainty 65%; harms 0%).*

<http://www.conservationevidence.com/actions/366>

Likely to be beneficial

● Restore or create grassland

Three of 23 studies found that species richness on restored grasslands was higher than unrestored habitats, or similar to remnant grassland, and three found that target species used restored grassland. Two studies from the USA found that diversity or species richness fell after restoration or was lower than unrestored sites. Seven studies from the USA and UK found high use of restored sites, or that such sites held a disproportionate proportion of the local population of birds. Two studies found that densities or abundances were lower on restored than unrestored sites, potentially due to drought conditions in one case. Five studies found that at least

some bird species had higher productivities in restored sites compared to unrestored; had similar or higher productivities than natural habitats; or had high enough productivities to sustain populations. Three studies found that productivities were lower in restored than unrestored areas, or that productivities on restored sites were too low to sustain populations. A study from the USA found that older restored fields held more nests, but fewer species than young fields. Three studies found no differences between restoration techniques; two found that sowing certain species increased the use of sites by birds. *Assessment: likely to be beneficial (effectiveness 45%; certainty 70%; harms 0%).*

<http://www.conservationevidence.com/actions/361>

● **Restore or create traditional water meadows**

Four out of five studies found that the number of waders or wildfowl on UK sites increased after the restoration of traditional water meadows. One study from Sweden found an increase in northern lapwing population after an increase in meadow management. One study found that lapwing productivity was higher on meadows than some habitats, but not others. *Assessment: likely to be beneficial (effectiveness 65%; certainty 50%; harms 0%).*

<http://www.conservationevidence.com/actions/363>

● **Restore or create wetlands and marine habitats (coastal and intertidal wetlands)**

All six studies from the USA and UK found that bird species used restored or created wetlands. Two found that numbers and/or diversity were similar to in natural wetlands and one that numbers were higher than in unrestored sites. Three found that bird numbers on wetlands increased over time. Two studies from the UK found that songbirds and waders decreased following wetland restoration, whilst a study from the USA found that songbirds were more common on unrestored sites than restored wetlands. *Assessment: likely to be beneficial (effectiveness 65%; certainty 55%; harms 3%).*

<http://www.conservationevidence.com/actions/367>



Unknown effectiveness (limited evidence)

● Restore or create shrubland

Three studies from the UK, USA and the Azores found local bird population increases after shrubland restoration. Two studies investigated multiple interventions and one found an increase from no birds to one or two pairs. One study from the UK found that several interventions, including shrubland restoration, were negatively related to the number of young grey partridges per adult bird on sites. *Assessment: unknown effectiveness — limited evidence (effectiveness 25%; certainty 20%; harms 3%).*

<http://www.conservationevidence.com/actions/364>

● Restore or create wetlands and marine habitats (kelp forests)

One study in the USA found that the densities of five of the nine bird species increased following kelp forest restoration. *Assessment: unknown effectiveness — limited evidence (effectiveness 60%; certainty 15%; harms 0%).*

<http://www.conservationevidence.com/actions/368>

● Restore or create wetlands and marine habitats (lagoons)

One study in the UK found that large numbers of bird species used and bred in a newly-created lagoon. *Assessment: unknown effectiveness — limited evidence (effectiveness 61%; certainty 20%; harms 0%).*

<http://www.conservationevidence.com/actions/369>

No evidence found (no assessment)

We have captured no evidence for the following interventions:

- Restore or create savannahs
- Revegetate gravel pits