

Table S1: List of intervention options with descriptions, the relevant demographic outcome that the intervention addresses, and an indication of their impact on humans. Direct impact (D) refers to the presence of the intervention directly impacting turtles, while the indirect (I) impact refers to indirect impact on turtles (i.e., directly impacts the human behaviour or turtle environment). Threat categories are: marine debris (DEBR), altered onshore and nearshore light conditions (ON SH), modification to beaches (MOD), introduced animals (non-native animals) (INT A), sea level rise (SLR), and increasing temperature (beach and ocean) (TEMP). The vulnerability categories include: Sensitivity (S), Exposure (E) and Adaptive capacity (AC). The types of actions include: Education (EDU), On ground action (ACTION), and Policy/legislation (POL/LEG).

Intervention	Intervention description	Direct/indirect impact	Demographic outcome	Threat category	Vulnerability category	Type of action*
Aid natural selection	Focus protection on early maturing (less than 20 years) turtles and their nests to increase population.	D	Reduce age at maturity	TEMP	S	EDU
Artificially incubate eggs offsite	Collect eggs from beach and incubate offsite.	D	Boost egg survival	TEMP	E	POL/LEG
Cool nests with electrical cooling tubes	Cool individual nests with electrical equipment to hatch both males and females.	D	Change hatchling sex ratio	TEMP	S	EDU
Cool turtle nests with shade	Cool turtle nests with shading using canopies of solid canvas or mesh.	D	Change hatchling sex ratio	TEMP	S	EDU
Disease management and treatment	Treat turtles with infections and diseases (e.g. removing tumours).	D	Increase adult survival	TEMP	S	EDU
Enhance beach depth with sand nourishment and re-profiling	Enhance beach depth (e.g. with sand nourishment) to reduce salt water flooding of nests.	I	Boost egg survival	SLR	S	EDU
Exclude 4WD activity from colony areas	Prohibit 4WD activity from nesting areas.	I	Boost egg survival	MOD	E	POL/LEG
Exclude feral animals from nesting areas	Exclude feral animals from nesting areas (e.g. fencing out pigs and foxes).	I	Boost egg survival	INT A	E	POL/LEG
Exterminate feral animals in areas around colonies	Exterminate feral animals in/around nesting areas (e.g. shooting or poisoning).	I	Boost egg survival	INT A	E	POL/LEG
Genetic intervention	Intervene genetically so females breed earlier and more often (e.g. via gene editing).	D	Reduce age and maturity	TEMP	S	EDU

Intervention	Intervention description	Direct/indirect impact	Demographic outcome	Threat category	Vulnerability category	Type of action*
Improve condition of feeding grounds	Improve condition of feeding grounds by banning dredging.	I	Increasing nesting attempts per year	MOD	AC	ACTION
Kill predatory fish living under jetties	Harvest predatory fish living under jetties to minimise hatchlings being preyed upon.	I	Boost hatchling survival in water	MOD	E	POL/LEG
Lavage animals to remove plastics	Flush the stomachs of large flatback turtles to remove large plastics.	D	Increase adult survival	DEBR	AC	ACTION
Lights off for jetties and houses	Turn lights off on jetties and ships during hatching season (where safe to do so).	I	Boost hatchling survival in water	ON SH	E	POL/LEG
Minimise disturbance on feeding grounds	Protect feeding areas by excluding all vessel activity within the area to minimise disturbance and maintain a high density of the soft-bodied invertebrates favoured as food.	I	Boost female breeding frequency	MOD	S	EDU
Modify sand composition	Changing the density of sand to better reflect the density that is preferred by nesting turtles can create additional suitable nesting areas.	I	Improve area size suitable for nesting	MOD	AC	ACTION
Nest guarding when hatching	After the turtle hatchlings emerge from nests, threats they face on their way to the water's edge can be reduced by people guarding their path.	I	Boost hatchling survival to water	INT A	S	EDU
Reduce fishing mortality	Seasonal fishing bans in regions where adult turtles are present to prevent the occasional capture of adult turtles in fishing gear.	I	Increase adult survival	MOD	AC	ACTION
Reduce fishing mortality with net bans in region	Impose seasonal fishing bans in areas where juvenile turtles are present.	I	Increase juvenile survival	MOD	AC	ACTION
Reduce local disturbance (beach and water)	Reduce disturbance by restricting beach and water activities within a 5 km radius of the nesting beach.	I	Increasing nesting attempts per year	MOD	E	POL/LEG

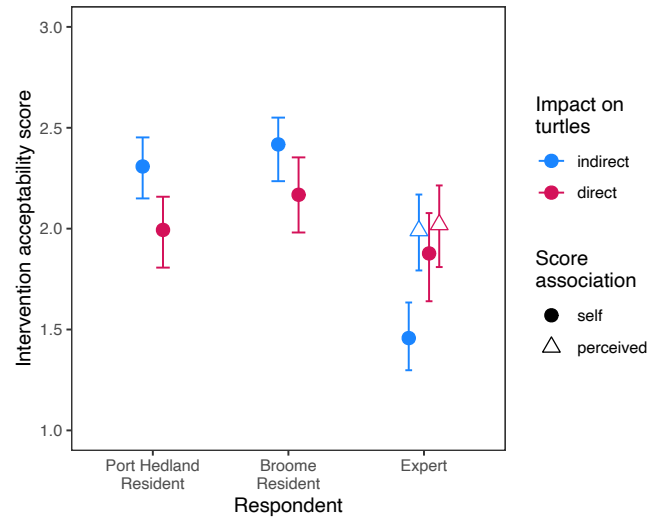
Intervention	Intervention description	Direct/indirect impact	Demographic outcome	Threat category	Vulnerability category	Type of action*
Replace existing sand with lighter coloured sand	Replace dark beach sand with light sand to lower nest temperature to hatch both males and females.	I	Change hatchling sex ratio	TEMP	S	EDU
Translocate nests to better locations on same beach	Move eggs or nests to location on the same beach where hatching success is higher.	D	Boost egg survival	SLR	E	POL/LEG
Transport hatchlings offshore (collected from nests)	Collect hatchlings directly from the nest and transport them offshore to avoid predators.	D	Boost hatchling survival to water	ON SH	S	EDU
Transport hatchlings offshore (collected from waters edge)	Collect hatchlings from the waters edge and transport them offshore to avoid predators.	D	Boost hatchling survival in water	ON SH	S	EDU

* Most interventions require more than one type of action but here we only indicate the first-step-action to allow for general categorisation

Table S2: Different assumptions about converting community scores to high medium and low scores.

Number of observations for residents	Wide interval for medium category	CURRENT interval (used in model)	Narrow interval for medium category
	L<=2 3<=M<=8 H>=9	L<=3 4<=M<=7 H>=8	L<=4 5<=M<=6 H>=7
Low	201	285	344
Medium	1012	693	434
High	687	922	1122

A: Wide



B: Narrow

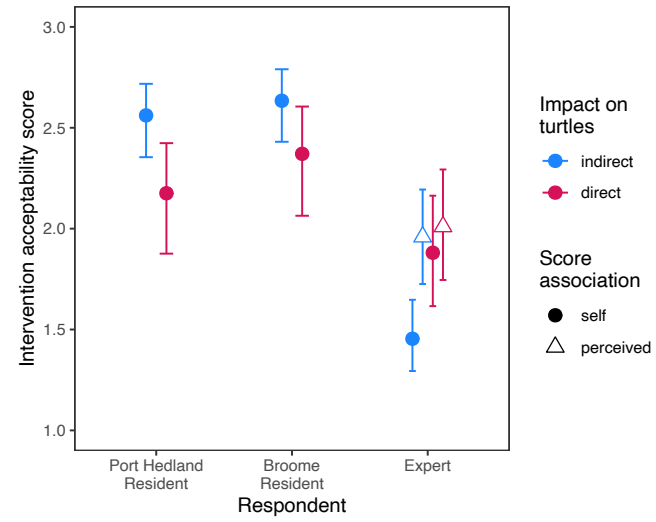


Figure S1: Predicted intervention acceptability scores when adopting the wide (A) and narrow (B) categorisations presented in SM Table 2