

Threats to priority species of the Cape York Peninsula region.

On day one of the regional workshop, participants used their knowledge of individual species to identify the major and minor regional threats that are affecting each species (Table 2).

Table 2a. Threats to Cape York Peninsula NRM region priority plant species. a) Threat name (specific enough to act on), b) importance of the threat to the species: **M** = major importance, m = minor importance; c) how the threat impacts on the species; and d) threat details. RP = Recovery plan, AP = Action plan, SMP = Species management profile, TWN = technical workshop note.

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Aponogeton cuneatus</i>		Ferals - Pigs	M	Loss and / or removal of individuals	The movement and rooting of feral pigs removes individuals of this species and is a major threat.
		Weeds	M	Competition	Riparian and aquatic weeds, such as <i>Hymenachne</i> , can dominate the habitat and out-compete <i>A. cuneatus</i> .
		Linear infrastructure development	m	Loss and / or removal of individuals	The development of creek crossings can remove individuals of this species.
		Collectors	m	Loss and / or removal of individuals	The removal of individuals by collectors is a minor threat to the species.
<i>Aponogeton queenslandicus</i>	wire grass	Weeds	M	Competition	Riparian and aquatic weeds, such as <i>Hymenachne</i> , can dominate the habitat and out-compete <i>A. queenslandicus</i> .
		Ferals - Pigs	M	Loss and / or removal of individuals	The movement and rooting of feral pigs removes individuals of this species and is a major threat.
		Clearing of vegetation	m	Loss of habitat	The clearing of vegetation around freshwater bodies, where <i>A. queenslandicus</i> is found, is a minor threat to the species.
		Inappropriate grazing regimes	m	Loss and / or removal of individuals	The trampling and grazing of cattle at freshwater bodies, where <i>A. queenslandicus</i> is found, kills individual plants.
<i>Cajanus mareebensis</i>		Linear infrastructure development	M	Loss and / or removal of individuals	Some populations of <i>C. mareebensis</i> on Cape York are threatened by gravel pits, the development of which destroy individual plants. The development of gas pipelines are a potential threat.
<i>Crepidomanes aphlebioides</i>	filmy fern	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Weeds	m	Competition	Weeds can invade and dominate the habitat of <i>C. aphlebioides</i> and out-compete this species.
		Collectors	m	Loss and / or removal of individuals	The removal of individuals by collectors is a minor threat to the species.

Table 2a. Threats to Cape York Peninsula NRM region priority plant species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Cycas semota</i>		Weeds - Gamba grass	M	Competition	The invasion of gamba grass is a major threat to <i>C. semota</i> through competition, and also because it increases the fuel load for high intensity fires.
		Inappropriate fire regimes	M	Loss and / or removal of individuals	<i>C. semota</i> is probably fire resistant, but not for too high intensity fires. The presence of gamba grass increases the fuel load leading to extreme high intensity fires that can kill <i>C. semota</i> plants.
		Collectors	M	Loss and / or removal of individuals	<i>C. semota</i> is collected for a specialist market and the removal of plants is a major threat to the species.
		Clearing of vegetation	m	Loss and / or removal of individuals	As <i>C. semota</i> only occurs around Bamaga, any clearing of this habitat is a potential threat to the species.
<i>Cyathea exilis</i>		Inappropriate fire regimes	M	Loss and / or removal of individuals	<i>C. exilis</i> is vulnerable to fire incursion during the dry season, particularly so following the destocking of Bromley Station and consequent changes in fire management.
		Ferals - Pigs	m	Loss and / or removal of individuals	There is no direct evidence that feral pigs are a threat to <i>C. exilis</i> . However, given the nature of pig rooting damage, it is conceivable that pig rooting could cause population decline or loss.
		Small population size	m	Limited capacity to reproduce	<i>C. exilis</i> is known only from a single spring-fed creek system at the Glennie Tableland on former Bromley Station (Crown Reserve, now being managed by DERM). The number of individuals is unknown, but is probably less than 1000.
		Collectors	m	Loss and / or removal of individuals	<i>C. exilis</i> is vulnerable to collection from the wild by tree fern enthusiasts.
		Inappropriate grazing regimes	m	Loss and / or removal of individuals	Grazing is a possible threat to <i>C. exilis</i> . Although Bromley Station has been destocked, there is no fencing to prevent other cattle from wandering into the area.
<i>Dendrobium bigibbum</i>	Cooktown orchid	Collectors	M	Loss and / or removal of individuals	Plants have been heavily collected illegally and this species is under threat in some areas. This species recolonises areas after collection. Local and outside community people go to Cape York specifically to collect orchids recreationally.
		Urban development	m	Loss of habitat	Urban development is a minor threat to the Cooktown orchid.

Table 2a. Threats to Cape York Peninsula NRM region priority plant species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Dendrobium nindii</i>	blue orchid	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Clearing of vegetation	m	Loss of habitat	Clearing of vegetation is a minor threat, as most of this species' habitat has already been cleared for agriculture.
		Urban development Collectors	m m	Loss of habitat Loss and / or removal of individuals	Urban development is a minor threat to <i>D. nindii</i> . The remaining populations of <i>D. nindii</i> have suffered markedly from illegal collecting.
<i>Huperzia carinata</i>	keeled tassel fern	Small population size	M	Limiting capacity to reproduce	<i>H. carinata</i> only occurs in the McIlwraith Range of Cape York Peninsula. This small population size limits the capacity to reproduce and increases the risk of extinction through chance events.
		Collectors	m	Loss and / or removal of individuals	<i>H. carinata</i> is threatened by collectors. But this is becoming less of an issue as cultivated stock is starting to enter the market.
		Clearing of vegetation	m	Loss of habitat	Clearing of vegetation is a minor threat to the species.
<i>Huperzia phlegmaria</i>	coarse tassel fern	Collectors	M	Loss and / or removal of individuals	Non-sustainable legal collection practices and illegal collection are major threats.
		Clearing of vegetation	m	Loss of habitat	Clearing of vegetation is a minor threat to the species.
<i>Huperzia phlegmarioides</i>	layered tassel fern	Collectors	M	Loss and / or removal of individuals	A major threat to <i>H. phlegmarioides</i> is the unsustainable removal of individuals by collectors.
		Clearing of vegetation	m	Loss of habitat	Clearing of vegetation is a minor threat to the species.

Table 2a. Threats to Cape York Peninsula NRM region priority plant species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Livistona concinna</i>		Ferals - Pigs	M	Loss and / or removal of individuals	The movement and rooting of feral pigs removes individuals of this species and is a major threat, especially at Laura (by Lakefield National Park).
		Inappropriate grazing regimes	m	Loss and / or removal of individuals	The trampling and grazing of cattle can remove individuals of this species, especially at Laura (by Lakefield National Park).
		Urban development	m	Loss of habitat	The clearing of <i>L. concinna</i> habitat for urban development in Cooktown Shire is a minor threat.
		Inappropriate fire regimes	m	Loss and / or removal of individuals	Inappropriate fire regimes in and around Lakefield National Park and Laura are a minor threat to the species.
<i>Myrmecodia beccarii</i>		Collectors	M	Loss and / or removal of individuals	The Illegal collecting of plants is a major threat to the species. Plants are also destroyed by butterfly collectors who extract Apollo jewel lycaenid butterfly larvae (<i>Hypochrysops apollo apollo</i>) from the plants.
		Urban development	M	Loss and / or removal of individuals	The clearing of habitat for urban development near Cooktown is a major threat to the species as it removes individuals and habitat.
		Inappropriate fire regimes	m	Loss and / or removal of individuals	Changes in fire regime are a minor threat to the species.
<i>Phyllanthera grayi</i>		Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Inappropriate fire regimes	m	Loss of habitat	Changes in fire regime are a minor threat to the species.
<i>Pisonia grandis</i>		Disease	M	Loss and / or removal of individuals	Scale insects threaten some island populations (e.g. Southern Great Barrier Reef islands). Individuals are threatened by die-back associated with a scale insect and exotic ants. Scale insect is a global threat. Scale-ant complexes are a problem that has wiped out ~10-15% of east coast <i>Pisonia</i> forests.
<i>Sarcochilus hirticalcar</i>	harlequin orchid	Small population size	M	Limited capacity to reproduce	<i>S. hirticalcar</i> is restricted to the southern end of Mcllwraith Range. This small population size limits the capacity to reproduce, and increases the risk of extinction through chance events.
		Collectors	M	Loss and / or removal of individuals	A major threat to <i>S. hirticalcar</i> is the removal of individuals by illegal collection.
<i>Teucrium ajugaceum</i>		Linear infrastructure development	M	Loss of habitat	<i>T. ajugaceum</i> usually occurs with <i>Cajanus mareebensis</i> , and a major threat for this species is the development of gravel pits (and development around Musgrave), which destroy individual plants.
		Road maintenance	m	Loss of habitat	Removal or disturbance as part of road maintenance is a minor threat to the species.
		Inappropriate fire regimes	m	Loss and / or removal of individuals	Inappropriate fire regimes are a minor threat, as this species responds well to fire, but inappropriate fire regimens in the CY NRM region are in flux.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species. a) Threat name (specific enough to act on), b) importance of the threat to the species: **M** = major importance, **m** = minor importance; c) how the threat impacts on the species; and d) threat details. RP = Recovery plan, AP = Action plan, SMP = Species management profile, TWN = technical workshop note.

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Molluscs					
Helicarionidae CY 6	red dome glass-snail	Inappropriate fire regimes	M	Loss and / or removal of individuals	Although the appropriate fire regime this species requires is not currently known, any fire can destroy the few remaining individuals that occur in a single known population on a limestone outcrop south of the Palmer River.
Hydrocenidae CY 4	Palmer River microturban	Inappropriate fire regimes	M	Loss and / or removal of individuals	Although the appropriate fire regime this species requires is not currently known, any fire can destroy the few remaining individuals that occur in a single known population on a limestone outcrop north of the Palmer River.
Butterflies and moths					
<i>Hypochrysops apollo apollo</i>	Apollo jewel (Wet Tropics subspecies)	Collectors	M	Loss and / or removal of individuals	The major threat to the Apollo jewel (Wet Tropics subspecies) are butterfly collectors, who extract butterfly larvae from plants and destroy the plants in the process.
		Urban development	m	Loss of habitat	Urban development is a minor threat to the species.
		Ferals - Exotic ants	m	Loss of habitat	A minor threat to the Apollo jewel (Wet Tropics subspecies) is the replacement of the host plant commensal ant with the large-headed ant (<i>Pheidole</i> sp.), which may not tend butterfly larvae. However, there is a lack of information about this threat.
<i>Trisyntopa scatophaga</i>		Inappropriate grazing regimes	M	Competition	The larvae of the moth <i>Trisyntopa scatophaga</i> feeds on the faecal pellets of golden-shouldered parrots. As its life cycle is dependent on the golden-shouldered parrot, it shares the same threats as the parrot. Inappropriate grazing regimes are a major threat to the golden-shouldered parrot, as intense cattle (and pig) grazing can contribute to a shortage of seeds (on which the parrot feeds) that occurs annually in the early wet season.
		Ferals - Pigs	M	Loss of habitat	Feral pigs are a major threat to golden-shouldered parrot, on which the moth <i>Trisyntopa scatophaga</i> is dependent. Feral pigs are a major threat to the golden-shouldered parrot, as intense pig (and cattle) grazing can contribute to a shortage of seeds (on which the parrot feeds) that occurs annually in the early wet season. Feral pigs can also destroy the termite mounds that are nesting sites for the parrots and house the larvae of <i>Trisyntopa scatophaga</i> .
		Inappropriate fire regimes	M	Loss of habitat	Inappropriate fire regimes are a major threat to golden-shouldered parrot, on which the moth <i>Trisyntopa scatophaga</i> is dependent. One result of the change in inappropriate fire regimes has been an increase in the density of woody plants, notably broad-leaved teatree (<i>Melaleuca viridiflora</i>). This appears to have increased the vulnerability of the parrots to predation during the wet season and while nesting. The second effect has been the development of a coarser mosaic of burning histories, which is thought to decrease the chances of dispersing parrots finding suitable habitat in the wet season.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Butterflies and moths (continued)					
<i>Trisyntopa scatophaga</i> (continued)		Weeds - Gamba grass	m	Habitat degradation	Gamba grass is a minor threat to golden-shouldered parrot, on which the moth <i>Trisyntopa scatophaga</i> is dependent. Gamba grass occurs on and adjacent to golden-shouldered parrot habitat on Kalinga Station. It poses a significant, though currently minor, threat through change of vegetation composition and structure, leading to a loss of nesting, feeding and roosting sites, and loss of food supply. There is concern that this could become a major threat.
Spiders					
<i>Selenocosmia strenua</i>		Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other region, a watching brief is required to ensure the stronghold population is maintained in the region.
		Collectors	m	Loss and / or removal of individuals	A minor threat to <i>S. strenua</i> is the collection of individuals for the pet trade. The type locality is from Somerset (near the northern tip of Cape York), but the range of the reaches as far south as the Iron Range. However, there is uncertainty on the impact of the threat of collection in the CY NRM region and how much collecting would make a difference to abundant populations.
Crustaceans					
<i>Cherax cartalacoolah</i>	a freshwater crayfish	Mining	M	Habitat degradation	The major threat to this freshwater crayfish is a mining lease over its only habitat, which is a few freshwater streams in sand dunes on Cape Flattery, north of Cooktown.
		Ferals - Pigs	m	Habitat degradation	Feral pigs may be degrading the habitat for this species, which is restricted to a few freshwater streams in sand dunes on Cape Flattery, north of Cooktown.
		Inappropriate grazing regimes	m	Habitat degradation	Cattle may be degrading the habitat for this species, which is restricted to a few freshwater streams in sand dunes on Cape Flattery, north of Cooktown.
Marine fish					
<i>Dasyatis fluviorum</i>	estuary stingray	Recreational fishing	M	Loss and / or removal of individuals	Although the estuary stingray is not deliberately targeted by recreational fishing, it is still a major threat to the species as individuals are killed as bycatch.
		Water quality	m	Habitat degradation	Water quality is a threat at only a few locations and in the wet season when heavy rains increase the run-off into rivers.
		Commercial fishing	m	Loss and / or removal of individuals	Commercial fishing is a minor threat, as estuary stingray is not a target species (with 0.2% as bycatch).

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Marine fish (continued)					
<i>Glyphis glyphis</i>	Bizant River shark	Commercial fishing	M	Loss and / or removal of individuals	Commercial net fishing is a major threat to Bizant River shark. It is likely that there is a slow continuing decline within the species' current range due to pressures on juvenile barramundi gill-netting (in estuaries). Offshore shark nets and long-lines take the adults. There is a shark long-line fishery in the Gulf of Carpentaria.
		Recreational fishing	M	Loss and / or removal of individuals	Recreational fishing is a major threat to Bizant River shark with hot spots at Port Musgrave, Ducie and Wenlock Rivers and on the east coast in Princess Charlotte Bay. It is likely that that there is a slow continuing decline within the species' current range due to pressures such as recreational fishing.
		Dredging	m	Habitat degradation	Dredging at Port Musgrave is a minor threat to the species.
		Small population size	m	Limited capacity to reproduce	Bizant River shark is thought to have low fecundity (inferred from the typically low fecundity of similar sized carcharhinids and the fact that the known approximate size at birth is quite large, thus a large litter is simply not possible), which makes it susceptible to population declines.
		Unsustainable hunting	m	Loss and / or removal of individuals	Traditional hunting, and bow hunting, is a minor threat to the species.
		Foreign fishing	m	Loss and / or removal of individuals	Foreign fishing is a minor threat to the species.
<i>Pristis clavata</i>	dwarf sawfish	Commercial fishing	M	Loss and / or removal of individuals	Any commercial or recreational fishing in coastal and estuarine habitats within the range of this species will continue to threaten its survival. This includes shark net fishery, trawl fishery (offshore northern prawn fishery and exploratory fish-trawl fishery) and gill net fishery (inshore coastal habitat).
		Unsustainable hunting	M	Competition	Bow hunters have been a major threat to this species, particularly in the Weipa area.
		Foreign fishing	m	Loss of habitat	Foreign fishing is a minor threat to dwarf sawfish as it is not a target species.
		Recreational fishing	m	Loss and / or removal of individuals	There is some recreational and trophy fishing for the long rostrum of dwarf sawfish.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Reptiles					
<i>Caretta caretta</i>	loggerhead turtle	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Fishing gear	m	Loss and / or removal of individuals	Entanglement in active as well as discarded fishing nets (ghost nets), gear and hooks, including gill nets and crabbing equipment, is a minor threat for the species.
<i>Chelonia mydas</i>	green turtle	Ferals - Pigs	M	Disruption of breeding	Feral pigs prey on eggs and hatchlings.
		Commercial fishing	M	Loss and / or removal of individuals	A major threat to green turtle is commercial fishing, where turtles are caught as bycatch in N3 and N9 inshore gill net fisheries.
		Unsustainable hunting	M	Loss and / or removal of individuals	Traditional hunting is a major threat to green turtle, with mature turtles hunted during the day and eggs collected at night. There is localised unsustainable take that is causing local extinctions. Traditional elders are frustrated with the unsustainable levels of hunting.
		Water quality	m	Habitat degradation	Water quality is a minor threat to green turtle, with increased sedimentation of rivers possibly reducing seagrass growth, which is a major food source for this species. There is also the possibility that run-off from mines, and spillage from the transport of mined material, is introducing toxins into the water.
		Dredging	m	Loss of habitat	Dredging is a minor threat at Albatross Bay, Weipa.
		Ferals - Wild dogs / Dogs	m	Loss and / or removal of individuals	Wild and domestic dogs can prey on eggs and hatchlings.
		Boat strike	m	Loss and / or removal of individuals	Boat strike is a minor threat at localised areas.
		Marine debris	m	Loss and / or removal of individuals	The ingestion of plastic film, balloons, fishing line and hooks, which can cause death, and the entanglement of turtles in discarded fishing nets are a minor threat to the species.
Foreign fishing	m	Loss and / or removal of individuals	Foreign fishing is a minor threat to the species.		

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Reptiles (continued)					
<i>Egernia rugosa</i>	yakka skink	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Ferals - Cats	m	Loss and / or removal of individuals	Feral cats can prey on individuals.
		Urban development	m	Loss of habitat	An outlier population in Endeavour Valley (behind Cooktown) is threatened by urban development.
<i>Eretmochelys imbricata</i>	hawksbill turtle	Ferals - Pigs	M	Disruption of breeding	Feral pigs prey on eggs and hatchlings.
		Unsustainable hunting	M	Loss and / or removal of individuals	Traditional hunting and egg collection is a major threat to the species, with eggs favoured for human consumption.
		Marine debris	M	Loss and / or removal of individuals	The entanglement of turtles in discarded fishing nets and the ingestion of plastic film, balloons, fishing line and hooks are a major threat to the species.
		Commercial fishing	m	Loss and / or removal of individuals	The bycatch of individuals in the N3 and N9 inshore gill net fisheries is a minor threat to the species.
<i>Lepidochelys olivacea</i>	olive ridley turtle	Ferals - Pigs	M	Disruption of breeding and / or resting	Feral pigs prey on eggs and hatchlings, with particular hot spots from Mapoon north and east coast to Shellburn Bay.
		Marine debris	M	Loss and / or removal of individuals	The entanglement of turtles in discarded fishing nets and the ingestion of plastic film, balloons, fishing line and hooks are a major threat to the species.
		Unsustainable hunting	M	Loss and / or removal of individuals	Traditional hunting and egg collection is a major threat to the species, with eggs favoured for human consumption.
		Commercial fishing	m	Loss and / or removal of individuals	The bycatch of individuals in the N3 and N9 inshore gill net fisheries is a minor threat to the species.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Reptiles (continued)					
<i>Natator depressus</i>	flatback turtle	Unsustainable hunting	M	Disruption of breeding	Traditional hunting and egg collection is a major threat to the species, with eggs favoured for human consumption.
		Ferals - Pigs	M	Loss and / or removal of individuals	Feral pigs prey on eggs and hatchlings
		Marine debris	M	Loss and / or removal of individuals	The entanglement of turtles in discarded fishing nets and the ingestion of plastic film, balloons, fishing line and hooks are a major threat to the species.
		Ferals - Wild dogs / Dogs	m	Loss and / or removal of individuals	Wild and domestic dogs can prey on eggs and hatchlings.
<i>Varanus semiremex</i>	rusty monitor	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Ferals - Cats	m	Loss and / or removal of individuals	There is no direct evidence of predation by cats, but there is circumstantial evidence based on stomach content of feral cats caught on Cape York Peninsula, including reptile remains.
Birds					
<i>Artamus cinereus normani</i>	black-faced woodswallow (Cape York Peninsula)	Inappropriate fire regimes	M	Loss of habitat	Changes in fire regime have a major impact on the habitat of black-faced woodswallow (Cape York Peninsula), which is a species that requires storm-burning (i.e. lighting fires after the first storms) of their habitat.
		Inappropriate grazing regimes	M	Loss of habitat	The inability to regulate cattle and to manage fuel loads is a major threat for this species.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Birds (continued)					
<i>Casuarius casuarius johnsonii</i> (southern population)	southern cassowary (southern population)	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Ferals - Pigs	m	Disruption of breeding and / or resting	Feral pigs possibly destroy nests. This needs to be verified.
		Urban development	m	Loss of habitat	Urban development around Cooktown is a minor threat.
		Ferals - Wild dogs / Dogs	m	Loss and / or removal of individuals	Dog attacks on cassowaries are known to cause injury and death, and their presence potentially affects cassowary feeding, movements and behaviour. Dogs are present where this species occurs; however, their impacts are unquantified.
		Disease	m	Loss and / or removal of individuals	The respiratory disease aspergillosis is a minor threat to this species.
<i>Climacteris picumnus melanotus</i>	brown treecreeper (Cape York Peninsula)	Inappropriate fire regimes	M	Loss of habitat	Extensive dry season fire can burn all habitat for the brown treecreeper (Cape York Peninsula), and do not leave refuges of unburnt trees, which this species needs, to feed on the insects under the bark. The extent and frequency of fires are important considerations.
		Weeds - Gamba grass	M	Increased heat intensity during fires	Gamba grass is a major threat to this species as it increases the heat intensity and impact of fires.
<i>Erythrorichis radiatus</i>	red goshawk	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Weeds	m	Habitat degradation	Weeds are a minor threat to foraging habitat, as weeds in riparian zones (e.g. rubber vine) would alter the fire regime, which would threaten the nesting habitat.
<i>Esacus magnirostris</i>	beach stone-curlew	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Recreation / tourism	m	Disruption of breeding and / or resting	Beach-stone curlews are sensitive to human disturbance, but this threat only affects one or two beaches on Cape York Peninsula, which are near Cooktown.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Birds (continued)					
<i>Neochmia phaeton evangelinae</i>	crimson finch (white-bellied subspecies)	Inappropriate fire regimes	M	Loss of habitat	Changes in fire regime are a major threat to the species, especially fires that would be extensive enough to remove all habitat along the Laura River and Magnificent Creek. However, rare but extensive late dry season fires may have been responsible for restricting the finch's range to small segments of creek bank.
		Inappropriate grazing regimes	M	Loss of habitat	Cattle grazing around wetlands is a major threat to the crimson finch (white-bellied subspecies) as it alters the habitat and reduces food availability for the finch. This species requires abundant seeding grasses year round.
		Ferals - Pigs	m	Loss of habitat	The movement and rooting of feral pigs can alter habitat for this species.
		Weeds - Rubber vine	m	Loss of habitat	Rubber vine (<i>Cryptostegia grandiflora</i>) has been smothering native vegetation along the Mitchell River and may have caused disappearance of crimson finch (white-bellied subspecies) along parts of the Laura River.
<i>Neochmia ruficauda clarescens</i>	star finch (northern subspecies)	Inappropriate grazing regimes	M	Loss of habitat	High levels of cattle numbers can trample habitat, particularly in areas of long grass used for breeding in the wet season and for shelter in the dry season. The grazing regime of cattle can also facilitate the invasion of weeds.
		Ferals - Pigs	M	Loss of habitat	High levels of pig numbers can trample habitat, particularly in areas of long grass used for breeding in the wet season and for shelter in the dry season.
		Inappropriate fire regimes	m	Loss of habitat	For star finch (northern subspecies) there is currently an inadequate fire regime, as fires are not late enough in the year.
		Weeds	m	Loss of habitat	Woody weeds are a minor threat to star finch (northern subspecies) where they invade the habitat structure for the species and change the vegetation structure.
		Weeds - Rubber vine	m	Loss of habitat	Rubber vine is a minor threat to star finch (northern subspecies) where it invades the habitat for the species and changes the vegetation structure.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Birds (continued)					
<i>Psephotus chrysopterygius</i>	golden-shouldered parrot	Inappropriate grazing regimes	M	Competition	A shortage of food occurs annually in the early wet season and this can be made worse by intense cattle (and pig) grazing. Cattle affect the parrot by reducing seed production by wet season grasses and reducing the fuel load, particularly in the habitat used by the parrots when breeding.
		Ferals - Pigs	M	Loss of habitat	A shortage of food occurs annually in the early wet season and this can be made worse by intense cattle (and pig) grazing. Feral pigs can also destroy the termite mounds that the birds use for nesting sites.
		Inappropriate fire regimes	M	Loss of habitat	One result of the change in fire regime has been an increase in the density of woody plants, notably broad-leaved teatree (<i>Melaleuca viridiflora</i>). This appears to have increased the vulnerability of birds to predation during the wet season and while nesting. The second effect has been the development of a coarser mosaic of burning histories, which is thought to decrease the chances of dispersing parrots finding suitable habitat in the wet season.
		Weeds - Gamba grass	m	Habitat degradation	Gamba grass occurs on and adjacent to golden-shouldered parrot habitat on Kalinga Station. It poses a significant, though currently minor, threat through change of vegetation composition and structure, leading to a loss of nesting, feeding and roosting sites, and loss of food supply. There is concern that this could become a major threat.
<i>Sternula albifrons</i>	little tern	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.
		Ferals - Pigs	m	Disruption of breeding and / or resting	Feral pigs prey on the eggs at little tern nests.
Mammals					
<i>Dasyurus hallucatus</i>	northern quoll	Inappropriate fire regimes	M	Habitat degradation	Inappropriate fire regimes are a major threat to northern quoll, especially when fires kill female, non-sedentary quolls in breeding season. Gamba grass is starting to spread, and contributes to the threat of fire as it creates high intensity fires and crown fires 2 metres high (in the Northern Territory).
		Ferals - Cane toads	M	Loss and / or removal of individuals	The quoll population is greatly reduced by the first population wave of toads that spread into an area. However, some quolls survive.
		Disease	m	Loss and / or removal of individuals	The risk of disease, such as toxoplasmosis transmission from cats, is sporadic and localised. This threat is mainly focused around Lakefield National Park and communities.
		Baiting	m	Loss and / or removal of individuals	Quolls can eat 1080 baits that are targeted at wild dogs. However, in NSW quoll numbers have gone up after dogs were knocked out. Around Mapoon, dogs moved in after pig numbers were reduced.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Mammals (continued)</i>					
<i>Dugong dugon</i>	dugong	Seagrass dieback	M	Loss of food resources	Seagrass is a major food source for dugong, and the dieback of seagrass is possibly caused by increased water turbidity and low light levels, mining, trawling, land clearing, land reclamation and dredging. Stressed plants are then more susceptible to disease. Dieback has also been linked to persistent plumes of turbid water resulting from cyclone and flood activity. Starving dugongs seen in the Southern Gulf NRM region were possibly linked to the ephemeral nature of seagrass. Weather events can also impact on seagrass, and there is also evidence that dugongs will move to other locations in search of seagrass during such events (e.g. movement from Hervey Bay to Moreton Bay). Feral pig damage to wetlands (e.g. Kendall, along Keerwee) increases sedimentation, and possibly this sediment smothers seagrass.
		Unsustainable hunting	M	Loss and / or removal of individuals	There is traditional hunting of dugong in the CY NRM region. Elders recognise the issue of unsustainable hunting and have provided advice, but some younger hunters are not following this advice. In the football off-season, the hunting increases. Hunters also come in from the Torres Strait. Traditional knowledge and hunting is currently being documented by Balkanu Traditional Knowledge Recording Project.
		Boat strike	m	Loss and / or removal of individuals	Boat strike on dugong does occur in the Weipa area, but more so on turtles.
		Foreign fishing	m	Loss and / or removal of individuals	Foreign fishing is a minor threat to dugong.
		Marine debris	m	Loss and / or removal of individuals	Entanglement in ghost nets are a minor threat to dugong.
		Commercial fishing	m	Loss and / or removal of individuals	Acoustic alarms being trialled to reduce the impacts of commercial fishing on dugong. Trials have been conducted on pingers and concluded that pingers are unlikely to alienate dugongs from crucial habitats or reduce dugong mortalities in fishing nets. There are a lot of protected areas around the coast, so there is not much commercial fishing in those areas. Average dugong relative density in the remote north is seven times higher than the urban coast.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Mammals (continued)</i>					
<i>Kerivoula papuensis</i>	golden-tipped bat	Inappropriate fire regimes	M	Habitat degradation	Changes in fire regime are a major threat to golden-tipped bat as they impact on foraging habitat.
		Ferals - Cats	m	Loss and / or removal of individuals	Feral cats can prey on golden-tipped bat, as the species forages and roosts close to the ground.
<i>Macroderma gigas</i>	ghost bat	Inappropriate fire regimes	M	Loss of food resources	Changes in fire regime are a major threat to ghost bat. In recent times population declines could be attributable to prey lost through habitat modification by fire (from The Action Plan for Australian Bats, 1999).
		Inappropriate grazing regimes	m	Loss of food resources	Inappropriate grazing regimes are a major threat to ghost bat. In recent times population declines could be attributable to prey lost through habitat modification by livestock (from The Action Plan for Australian Bats, 1999).
		Ferals - Cats	m	Loss of food resource	Feral cats can compete with ghost bats for the same prey species. In recent times population declines could be attributable to competition for prey with feral cats (from The Action Plan for Australian Bats, 1999).
		Dereliction of mines	m	Loss of habitat	The closure of mines, for public safety, or the reworking of old mines, can threaten roosting habitats in these mines (from The Action Plan for Australian Bats, 1999).
		Barbed-wire	m	Loss and / or removal of individuals	The barbed top strand of wire on fences can snag individual bats.
<i>Murina florium</i>	tube-nosed insectivorous bat	Inappropriate fire regimes	M	Loss of habitat	Changes in fire regime are a major threat to tube-nosed insectivorous bat.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
Mammals (continued)					
<i>Orcaella heinsohni</i>	Australian snubfin dolphin	Foreign fishing	M	Loss and / or removal of individuals	Foreign fishing is a long-term threat for Australian snubfin dolphin. Foreign boats use dolphin as bait, with dolphins being shot or speared for bait (most likely opportunistic). Dolphin mortalities have also been recorded at the bottom of set cord nets for catching rays.
		Urban development	m	Habitat degradation	Urban development is a long-term threat on this species. At Weipa there is a possibility of future coastal development.
		Mining	m	Habitat degradation	Waste from mining can degrade the water quality and possibly impact on Australian snubfin dolphin. There is possible bauxite expansion from Aurukun to Weipa, where there could be potential bauxite export points.
		Acoustic noise pollution	m	Habitat degradation	The effects of acoustic noise pollution may have impacts on this species, with sources from seismic exploration, blasting and naval surveys (currently the navy is updating all its charts, but the effect of the sonar is not known). There is also percussion sound seismic exploration, which is mainly on western Cape York from Aurukun to Mapoon.
		Marine debris	m	Loss and / or removal of individuals	Entanglement in ghost nets and impacts from other marine debris are a minor threat to this species.
		Fishing nets	m	Loss and / or removal of individuals	Inshore and off-shore gill-netting (commercial) are a minor threat to this species.
<i>Pteropus conspicillatus</i>	spectacled flying-fox	Inappropriate fire regimes	M	Loss of food resources	Changes in fire regime are a major threat to spectacled flying-fox, with high intensity fires in dry country impacting on the trees on which they feed (such as eucalypts).
		Killed by people when encountered	m	Loss and / or removal of individuals	There is possible shooting of individuals in orchards and at colonies.
		Barbed-wire	m	Loss and / or removal of individuals	The barbed top strand of wire on fences can snag individual bats, and there are deaths of unknown numbers of spectacled flying-fox.
<i>Rhinolophus philippinensis</i>	greater large-eared horseshoe bat	Mining	M	Loss of habitat	The greater large-eared horseshoe bat are known from a number of roost sites in abandoned mines, some of which were destroyed when old exits were closed during site remediation. A considerable number of abandoned mine sites currently exist in far northern Queensland.
		Inappropriate fire regimes	M	Loss of habitat	Changes in fire regime are a major threat to golden-tipped bat as they impact on habitat.

Table 2b. Threats to Cape York Peninsula NRM region priority animal species (continued).

Species name	Common name	a) Threat name	b) Priority	c) Threat impacts	d) Threat details
<i>Mammals (continued)</i>					
<i>Saccolaimus nudicluniatus</i>	bare-rumped sheath-tail bat	Inappropriate fire regimes	M	Loss of habitat	There are very few records of bare-rumped sheath-tail bat as this species is very rare. However, as the species roost in hollows (it is a tree spout-rooster) and fire has a function in creating tree-spouts, the species' roosting habitats could be impacted on by fire. Given the threatened status of this species, fire is a likely major threat
<i>Sousa chinensis</i>	Indo-Pacific humpback dolphin	Foreign fishing	M	Loss and / or removal of individuals	Foreign fishing is a long-term threat for Indo-Pacific humpback dolphin. Foreign boats use dolphin as bait, with dolphins being shot or speared for bait (most likely opportunistic). Dolphin mortalities have also been recorded at the bottom of set cord nets for catching rays.
		Urban development	m	Habitat degradation	Urban development is a long-term threat for this species. At Weipa there is a possibility of future coastal development.
		Mining	m	Habitat degradation	Waste from mining can degrade the water quality and possibly impact on Indo-Pacific humpback dolphin. There is possible bauxite expansion from Aurukun to Weipa, where there could be potential bauxite export points.
		Acoustic noise pollution	m	Habitat degradation	The effects of acoustic noise pollution may have impacts on this species, with sources from seismic exploration, blasting and naval surveys (currently the navy is updating all its charts, but the effect of the sonar is not known). There is also percussion sound seismic exploration, which is mainly on western Cape York from Aurukun to Mapoon.
		Marine debris	m	Loss and / or removal of individuals	Entanglement in ghost nets and impacts from other marine debris are a minor threat to this species.
		Fishing nets	m	Loss and / or removal of individuals	Inshore and off-shore gill-netting (commercial) are a minor threat to this species.
<i>Tapozous australis</i>	coastal sheath-tail bat	Potential decline in stronghold populations in the region	M	Loss and / or removal of individuals	No major threats were identified for this species in the CY NRM region. However, as this is a priority species for Queensland and is threatened in other regions, a watching brief is required to ensure the stronghold population is maintained in the region.

Major threats to priority species

On day two of the regional workshop, species were grouped by major threats (Table 3).

Table 3. Major threats to priority species in the Cape York Peninsula region, grouped by related threat categories. The number of priority species affected by each major threat is shown in brackets after the major threat. Also shown is the page number each threat appears on, in this document. Note that colour used in the action tables corresponds with the colour of the category threats are grouped under in Table 3. Note: Some threats cross over more than one threat category (e.g. recreational fishing may cross over 'Coastal and marine' and 'Water').

Threat category	Major threats to priority species and numbers of species affected by threat (in brackets)	Page number
Land	Ferals – Cane Toads (1)	34
	Ferals - Pigs (10)	36
	Inappropriate fire regimes (16)	42
	Inappropriate grazing regimes (5)	50
	Linear infrastructure development (2)	55
	Mining (2)	58
	Urban development (1)	60
	Weeds - Gamba grass (2)	62
Coastal and marine	Foreign fishing (2)	66
	Marine debris (3)	67
	Seagrass dieback (1)	69
Water	Commercial fishing (3)	71
	Recreational fishing (2)	75
	Unsustainable hunting (6)	77
Land and water	Collectors (10)	81
	Disease (1)	85
	Potential Decline in stronghold populations in the region (12)	86
	Small population size (2)	90
	Weeds (2)	92