



Lama Lama Junior Rangers and Tangaroa Blue Foundation Marine Debris Clean Up, photo © H. Taylor / Tangaroa Blue.



Northern Australia
Environmental
Resources
Hub

National Environmental Science Programme

Recycling, rubbish and marine debris on Cape York

Wrap-up factsheet

Efforts, gaps and opportunities for three Cape York communities

This project looked at waste management issues in three remote communities on Cape York Peninsula—Lockhart River, Mapoon and Pormpuraaw (see map inside). All three of these communities are growing, with new housing being constructed in each community, as well as increasing numbers of visitors and tourists, all of which generate an increasing amount of waste. These communities also each collect and dispose of increasing amounts of marine debris from their beaches and estuaries on an ongoing basis. However, each community also faces unique local challenges to progressing waste management, which are explored in more detail on the following pages.

The research found that opportunities exist for a networked regional recycling effort which could reduce local waste and marine debris, generate new or repurposed resources and create new remote jobs and enterprises.

Of the participating case study communities, one was seen as the current best practice example of remote municipal waste management on Cape York Peninsula. This community has landfill waste separation, spill-proof storage of selected hazardous wastes, selected semi-coordinated recycling and opportunistic transfer of recyclables to external re-processors using existing supply transport operators, with particular effort going into larger pre-wet season transfers.

Outcomes of this project

- Current efforts, areas for improvement and potential solutions for marine debris, recycling and waste management in and around three case study communities were identified.
- Issues shared by the three communities include under-resourced municipal waste management, compliance with regulatory requirements, increasing retail and wholesale packaging and illegal dumping.
- All solutions will require locally tailored investments and brokering of informed solutions engaging all three tiers of government. This extends to the effective introduction of a proposed Queensland container refund scheme.
- Marine debris removal efforts recorded by the Australian Marine Debris Initiative (AMDII) in the three communities (to date) have involved 705 volunteers, who collected nearly half a million individual items of marine debris weighing nearly 40 tonnes.
- Sustained, repeated efforts to remove marine debris from remote coastlines substantially reduce debris loads and significantly cuts down on the on-going break-up of debris.

Lockhart River community case study

With a population of approximately 540, Lockhart River is about 770 km north of Cairns on eastern Cape York Peninsula. It is located in the Lockhart River Aboriginal Shire which is officially Queensland's most remote mainland local government area.

Key local findings relating to municipal waste:

- Other than selected re-use of some waste, recycling is not generally known of, nor practiced.
- Separation of hard waste by type is highly sporadic and only undertaken on an ad hoc basis.
- A staffed landfill site may assist with minimising the impacts of illegal dumping and fee avoidance.
- There is limited current capacity to meet regulatory compliance and waste data reporting requirements.
- Council and local businesses will need to collaborate strongly to bring in coordinated recycling.
- Everybody would need to be involved in developing locally viable container refund implementation.
- A number of smaller recycling initiatives can build the basis for community-wide recycling.
- Local Indigenous organisations are interested in hosting training for improved waste management.

Key local findings relating to marine debris:

- Voluntary marine debris removal activities currently consistently target only limited local areas.
- Sustained debris removal in these areas over time has demonstrably reduced marine debris loads.
- Marine debris removal activities coordinated by Tangaroa Blue arrange for the transfer of collected recyclable materials out of the Lockhart River area to diverse processors in southern destinations.
- Other areas are seeing a continuing gross accumulation of marine debris, due in part to inaccessibility. This could be improved by sustained, coordinated activity by local Aboriginal ranger groups or external volunteers.
- The project was not able to ascertain the current capacity of local organisations to assist with targeted marine debris removal, in particular the capacity of Aboriginal Ranger groups based at Lockhart River.
- Lockhart River Aboriginal Shire Council identifies the current lack of dedicated municipal land and sea management capacity as a significant constraint on its ability to better address biosecurity matters, including marine debris.

Mapoon community case study

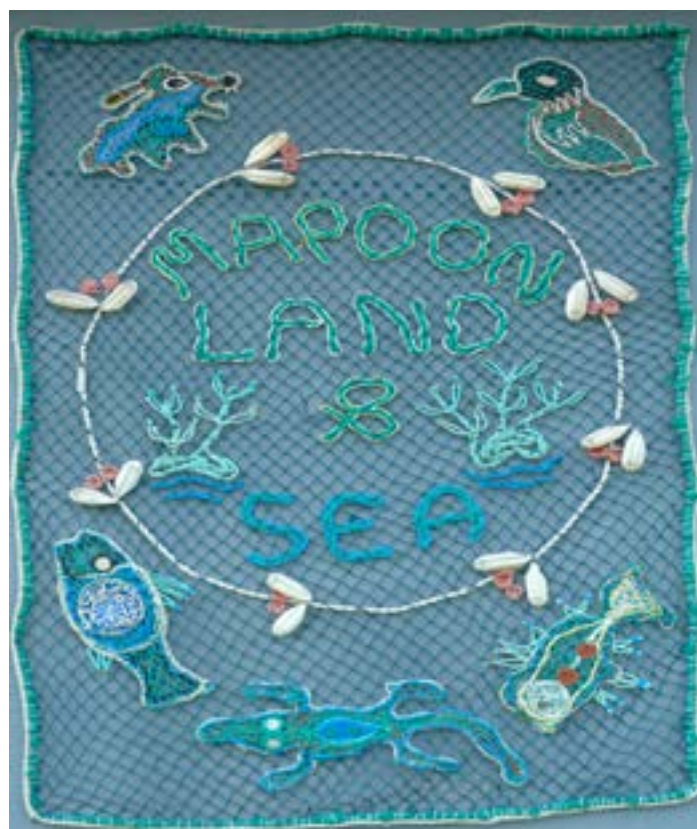
Located about 80 km north of Weipa on western Cape York Peninsula, Mapoon is considered the least populous of Queensland's remote Indigenous local government areas, with a population of approximately 293.

Key local findings relating to municipal waste:

- Illegal dumping is a critical problem.
- Community education needs to start in the schools—most adults will not change behaviours.
- Recycling could be a local enterprise if separation can be implemented in practice.
- Regionally located product stewardship arrangements and recycling initiatives need to be actively implemented, and not just advertised as available.

Key local findings relating to marine debris:

- Although ghostnets are now a high demand resource, no-one really wants to pay for them.
- Current plastics recyclers are predominately situated in south-east Queensland.
- Remote area debris removal requires substantial operational resources and logistical support.
- Local management of external volunteers is an additional impost requiring extra resources.
- Thick layers of plastic debris will accumulate but removing some volume every year will lower impacts over time.



Recycled ghostnet hanging at Mapoon Land & Sea Centre, Mapoon, photo RAIN Pty Ltd.

Pormpuraaw community case study

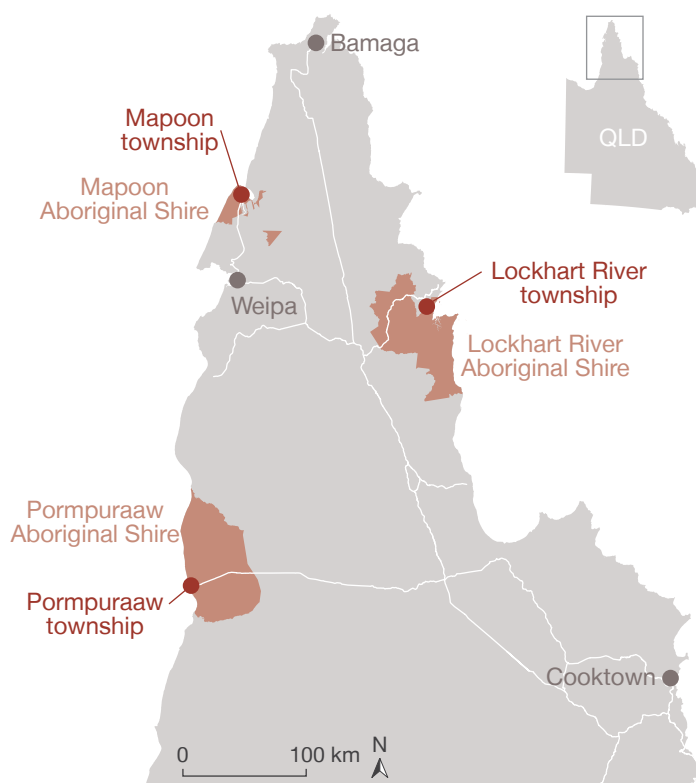
With a population of approximately 731, Pormpuraaw is located about 220 km west of the Peninsula Development Road, on the western side of Cape York Peninsula. Pormpuraaw currently benefits from relatively well-managed waste and debris management arrangements.

Key local findings relating to municipal waste:

- Landfill site operations are improved by having clearly delineated areas for separated mass contractor-generated waste and for general community waste.
- Currently observed best practice in this community includes the entire landfill site being enclosed in high standard exclusion fencing with locked access to contractor-specific waste disposal areas. General community waste areas are also lockable, with designated times in place for landfill access.
- Efforts to maintain separation at landfill sites definitively assists in extending a site's lifespan, and in pooling potential recyclables (e.g. old tyres, used car batteries, old cars, waste oils, pallets, crushed cans) for local re-use and/or periodic on-site shredding/baling/crushing for bulk back-loading.
- Back-loading (i.e. using delivery vehicles to take waste away) of priority toxic waste (e.g. waste oils, car batteries) and recyclables (e.g. pre-crushed and baled aluminium cans, baled cardboard) is achievable if well targeted and locally arranged with transport operators servicing remote community.
- Weather-proof storage for recyclables is required to amass viable recyclable back-load volumes.
- Reduction in single-use plastic bags is achievable where in-store alternatives are made available.
- High attrition rate of 'wheelie bins'.

Key local findings relating to marine debris:

- Illegal dumping by commercial fishing operators (and others) remains a costly problem, in particular its removal from very remote, ecologically sensitive regions.
- Local hot spots for marine debris include estuaries, river mouths and the lower reaches of local waterways. Major debris items of concern include refrigeration gas containers and steel bottles.
- Increasingly, marine debris is observed to be originating from domestic fishing vessels (e.g. empty oil and lubricant containers, plastic water bottles, broken fishing gear, storage containers, litter).
- Numbers of ghostnets arriving locally have been observed to have fallen in recent years—thought to be directly attributable to Indonesia adopting a zero-tolerance policy on illegal, unreported and unregulated fishing activities in its territorial waters, and to GhostNets Australia's coordinated collective efforts



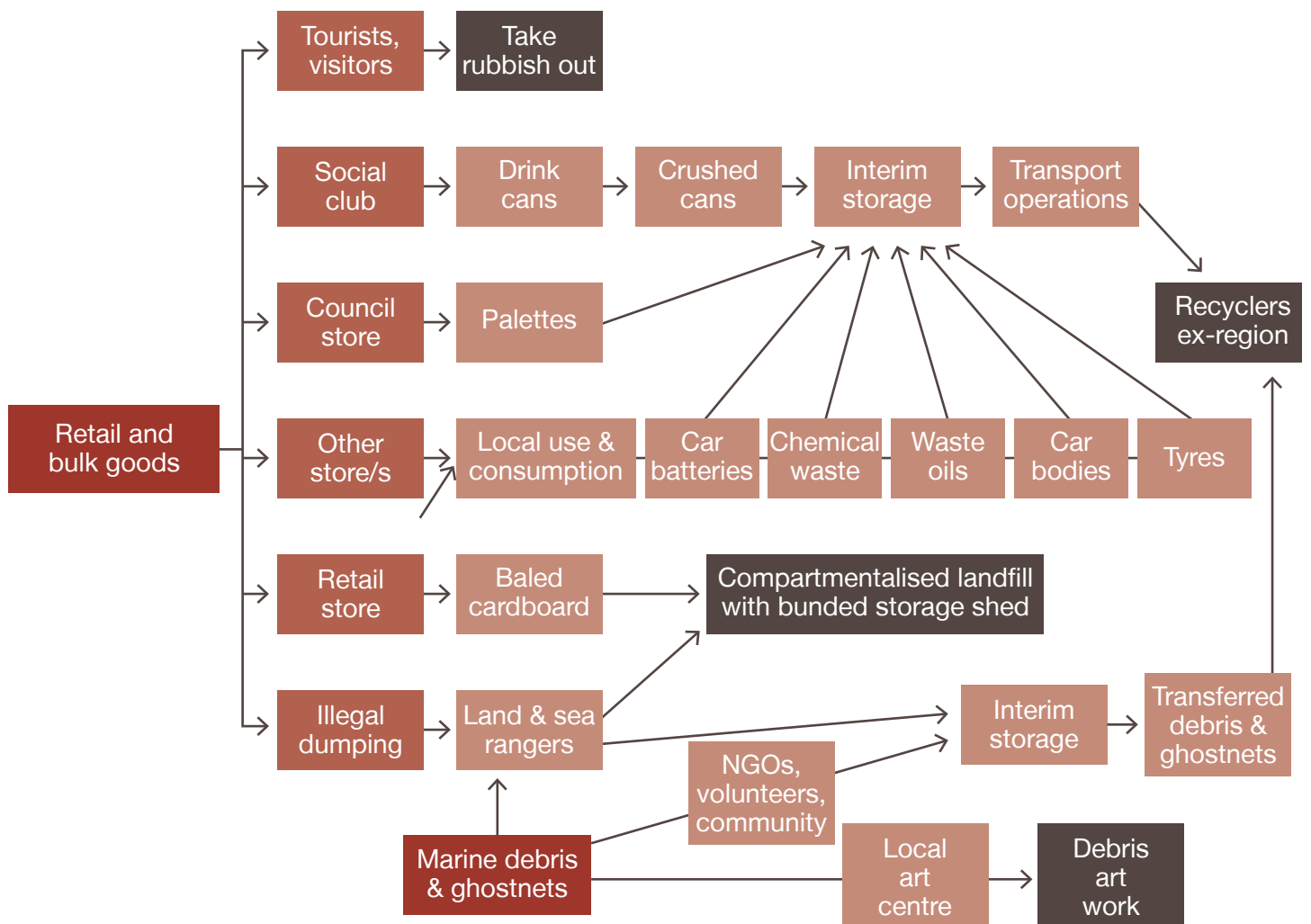
Locations of the three case study communities.

across northern Australia to remove nets over more than a decade and their encouragement of behavioural change in net/debris disposal in neighbouring community fisheries.

- Not many entanglements are observed locally. Where entanglement evidence is observed in locally removed nets, bones are predominately old, with distressed and deceased animals not present.
- Ghostnets and marine debris (amongst other waste) are increasingly important resources for local artists employed by Pormpuraaw Arts & Culture Centre Inc. Individual artworks can attract high prices in contemporary national and international art markets. There is now an acute local shortage of ghostnets which is seeing local artists retrieving safely useable waste from the local landfill. For example, contractor waste (high tensile steel cable) is being used to build new structural artworks.



Best practices implemented in Pormpuraaw include crushing and baling aluminium cans prior to transfer, Pormpuraaw Aboriginal Shire, photo RAIN Pty Ltd.



Optimised recycling practice in Cape York Peninsula case study communities.



The amounts of marine debris on beaches can be extreme, photo © H. Taylor / Tangaroa Blue.

Further information

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Visit: www.nespnorthern.edu.au

This factsheet and the full report 'Remote recycling, rubbish and marine debris management in north Australia needs strong helping hands' are available from: <http://www.nespnorthern.edu.au/projects/nesp/waste-and-marine-debris-in-remote-northern-australian-communities>



The NAER Hub, NAILSMA and RAIN recognise the traditional custodians of the participating communities and thank all those who generously gave their time and support to the project.



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