Disposal of obsolete warships
- charting the challenges

CMDR Steve Cole, RANR
Navy Environment Manager
Navy Strategic Command
Canberra
Case Study – ex FNS Clemenceau

- Decommissioned 1997 disposed of for scrapping in France.
- 2003 – Navy resumed vessel from Spanish company.
- Two year legal battle in French courts.
- Vessel towed to India for scrapping 2005.
- Passage through Suez canal delayed by Egyptian Govt.

- 3 month tow.
- Indian Government challenged the entry of the vessel.
Case Study – ex FNS Clemenceau

- French Navy argued that vessel not subject to Basel Convention as it is a warship.
- Court challenge reignited in France over poorly estimated asbestos content ca. (220-550 tonnes).
- French president ordered vessel to be returned to France.
- Returned to France May 2006 after tow around Africa.

Clemenceau currently being dismantled in the United Kingdom.

Greenpeace protester aboard Clemenceau
Disposal of obsolete ships

- Management issues.
- Disposal options.
- Future.

ex – USS Coral Sea (CV 43)
Old ships by nature are obsolete technology.

Contain a range of hazardous materials and polluting chemicals.

Ships often in poor material state.

Closed compartments create toxic gas hazards.

Inactive vessels deteriorate rapidly without ongoing crew maintenance.

Military vessel awaiting final disposal
Disposal issues - biosecurity

- Hull biofouling accumulates rapidly on inactive vessel.
- May affect ability to move ship to destination.
- Authorities may require the vessels hull to be cleaned.
- Bird wastes create biohazard, and can encourage vermin infestation.
Disposal issues - site contamination

- Biocide leaching from antifouling paints can cause site contamination.
- Delamination of antifouling paint and deck/uppers paint will cause sediment contamination.
- Rainwater runoff and waste discharges can contaminate site and surrounding waters.

ex-Royal Navy vessel *Sir Lancelot*. 
Disposal issues - maintenance

- Ship must be maintained ready for tow.
- Cannibalisation for spares can lead to ship becoming unseaworthy even for tow, limiting disposal options.
- Security risk from vandalism (fire, flood, OHS).
- Need for ongoing monitoring of lines and bilges.
- Emergency response planning.

or this will happen…
Disposal options

- Sale/gift for refit/reuse.
- Museum.
- Scrapping.
- Sea dumping (artificial reef, dive wreck, target).

USN mothballed fleet
- some 350 vessels for disposal
- many in poor material state
Old ships with obsolete technology. Most are beyond economic reuse. Refit and reconfiguration is costly. Successful reuse is rare for military vessels.

Sale or gift for refit/reuse

- ex- HMAS Jervis Bay as ferry
- ex- HMAS Stalwart at Alang Bay
Museum vessels

- Limited potential due to large maintenance costs.
- Only iconic vessels, and in very small numbers.
- Some risks if proponent fails.

Ex- HMA Ships *Vampire* and *Onslow* in Sydney
Almost all ocean going vessels are scrapped in third world countries regardless of origin.

Currently 50% of ships scrapped at Alang Bay in India.

Recycling rate is high but environmental cost is too.

Ships being scrapped in Pakistan
Ship scrapping

- Working conditions are hazardous and unhealthy.
- Worker accident rate is high.
- Local environmental impacts are high.
- Cost effectiveness is marginal.

- but Pakistan gets 70% of steel from scrapping ships.
Disposal of obsolete vessels - Scrapping

- Basel Convention regulates the import and export of hazardous material.
- Designed to protect workers and the environment in third world countries receiving ships.
- Scrapping is costly and resource intensive if environmental and health risks are addressed.
- Significant proportion of vessel ends up as landfill.
- High cost and low return on investment.

ex – HMA Ships Whyalla and Cessnock
Disposal of obsolete vessels - Scrapping

- Scrapping in-country can be done cost effectively and in a compliant manner.
- Novel solutions can substantially reduce costs.

Bow of ex-MV *Fedra* scrapped at Gibraltar in 2008
Disposal of obsolete vessels - Sea dumping

- Disposal of vessels at sea may be done for a range of reasons including:
  - Commonly for re-use as a dive site or fish attracting device.
  - (rarely) to reduce environmental risks during an emergency.
  - (rarely) if no other disposal option available.
  - (rarely) for target practise.

- In all cases the requirements of the London Convention must be met.

ex – HMAS Brisbane
Sea dumping of ships - Advantages

- Sea dumping as dive wrecks or fish attracting devices remains a cost effective method of disposal.
- Vessel takes on new role as tourist destination with significant revenue potential for local economy.
- Represents a recycling option to a new use.
- Vessel retains heritage values in new role.

Ex- HMAS Swan, Perth WA
Sea dumping of ships - Disadvantages

- Limited control over process.
- Highly contentious decision on final recipient.
- Only suitable for “iconic” vessel such as destroyers.
- Defence retains interest - significant reputation issues

Ex- HMAS PERTH, Albany WA
Sea dumping of ships - Preparation

- High cost of preparation – ca. $6-7 million for a frigate.
- Safety of divers crucial.

Removal of entanglement hazards.
Sea dumping of ships - Preparation

Removal of access hazards.

Enlargement of compartment exits.  
Removal of internal bulkheads and buoyant material.
Disposal of obsolete vessels - Future

- Incorporate Environmental Compliance during build......

- Cradle to grave holistic management approach.
- “Hazardous materials register” to facilitate disposal.
- Management of cultural heritage significance.
Disposal of obsolete warships

QUESTIONS?