Underwater Explosive Remnants of War
A Global Problem

• Abandoned Explosive Ordnance (AXO)
  – Sea dumped ordnance
  – Ship and aircraft wrecks

• Unexploded Ordnance (UXO)
  – Naval mines
  – Ordnance fired during air and naval bombings
  – Littoral training areas / island targets
Shipwrecks

R. Monfils 2004
Excluding data from Japan and allies. Contamination also excluded from ground battles and naval bombardment.
Why is underwater ERW a problem?

• Direct hazard to coastal communities
  – Safety
  – Tourism

• Hazard to maritime activities
  – Commercial fishing / trawling
  – Ship anchoring
  – Recreational SCUBA diving

• Impact to development efforts:
  – Dredging, mineral exploration, and construction of bridges, pipelines, ports and other offshore projects

• Harvesting of explosives by extremist organisations

• Environmental impact
How is the problem being addressed?

- Prohibition on dumping of ordnance at sea
  - 1972 London Convention
- Assess extent of existing ERW contamination
  - THOR, SPREP, AMIO and historical records
- Build a consensus on need for remediation
  - IDUM, PIF, OSPAR, BOSB, MREMAR and others
- Develop risk-based approaches to mitigate
  - GICHD best practices guide for underwater ERW remediation
- Establish international standards for operations
  - IMAS for underwater ERW remediation
Where can states seek assistance?

- National underwater EOD units (military or police force)
- NGOs conducting underwater ERW remediation:
  - Golden West Humanitarian Foundation
  - Cleared Ground Demining
  - JMAS and others
- Commercial underwater UXO organisations:
  - Several organisations currently working in Europe and North America
- GICHD can advise and provide connections to organisations with relevant capabilities