

# Marine Scientific Research

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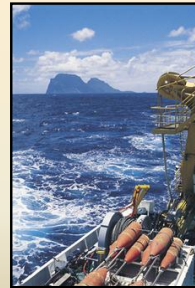
## SCOPE

- UNCLOS Regime for Marine Scientific Research (MSR)
- MSR in the EEZ
- Military Surveys, Hydrographic Surveys and MSR
- Regional Issues and Incidents

## UNCLOS Regime for MSR (UNCLOS Part XIII)

- MSR conducted exclusively for peaceful purposes (Art. 240)
- All State shall promote cooperation on MSR (Art. 244)
- MSR in the territorial sea is the exclusive right of the coastal State
- Subject to certain provisions, coastal State has jurisdiction over MSR in the EEZ and continental shelf
- UNCLOS does not define what constitutes MSR

## MARINE SCIENTIFIC RESEARCH



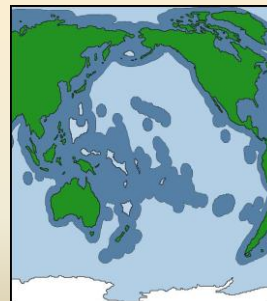
- Includes oceanography, marine biology, marine chemistry, fisheries research, scientific ocean drilling and coring, geological & geophysical surveying, etc
- Term used loosely to cover all forms of marine data collection
- Conducted by a variety of platforms (including ships, aircraft, buoys, AUVs and ROVs)

## ARGO System



- System of oceanic robotic probes providing real-time data for use in climate, weather, oceanographic and fisheries research

## MSR in the EEZ (UNCLOS Art. 246)



- Under jurisdiction of coastal State
- Coastal State has right to regulate, authorise and conduct MSR
- Coastal State should normally grant consent for "pure" MSR
- Implied consent regime (Art. 252)

## MSR AND HYDROGRAPHIC SURVEYS

- International law is clear on most issues associated with the conduct of marine MSR and hydrographic surveying.
- Require prior authorization of the coastal State in internal waters, the territorial sea (including by ships on transit passage) and archipelagic waters (including by ships exercising ASL passage)
- coastal States have the exclusive right to regulate, authorize and conduct MSR in their EEZ and on their continental shelf
- But what about hydrographic surveying?

## CSCAP Memorandum No. 6 on *The Practice of the Law of the Sea in the Asia Pacific* :

“Different opinions exist as to whether coastal State jurisdiction extends to activities in the EEZ such as hydrographic surveying and collection of other marine environmental data that is not resource-related or is not done for scientific purposes. While UNCLOS has established a clear regime for marine scientific research, there is no specific provision in UNCLOS for hydrographic surveying. Some Coastal States require consent with respect to hydrographic surveys conducted in their EEZ by other States while it is the opinion of other States that hydrographic surveys can be conducted freely in the EEZ.”

## CSCAP Memorandum No. 6 on *The Practice of the Law of the Sea in the Asia Pacific (cont.)*:

“The U.S. regards military surveying as similar to hydrographic surveying and thus part of the high seas freedoms of navigation and overflight and other internationally lawful uses of the sea related to those freedoms, and conducted with due regard to the rights and duties of the coastal State.”

## Arguments against hydrographic surveying being under coastal State jurisdiction:

- UNCLOS distinguishes between “research” and MSR on the one hand, and “hydrographic surveys” and “survey activities” on the other - referred to separately in the Convention
- Not part of the MSR regime in UNCLOS
- an internationally lawful use of the sea associated with the operation of ships, etc. in accordance with Article 58 of UNCLOS
- “survey”, “prospecting” and “exploration” are dealt with in other parts of UNCLOS, notably Parts II, III, XI and Annex III rather than Part XIII

## HYDROGRAPHIC SURVEYING

A *hydrographic survey* is defined as “A survey having for its principal purpose the determination of data relating to bodies of water. A hydrographic survey may consist of the determination of one or several of the following classes of data: depth of water, configuration and nature of the bottom; directions and force of currents; heights and times of tides and water stages; and location of topographic features and fixed objects for survey and navigation purposes.” (*International Hydrographic Dictionary*)

## Some Trends with Hydrography

- Close relationship with MSR
- Technological developments (LIDAR, GPS, ECDIS)
- Significance for economic development
- Responsibility of coastal State (SOLAS Reg. 9)
- Wide utility of hydrographic data



## Implications

- Now difficult to sustain an argument that hydrographic surveying in the EEZ should be outside the jurisdiction of the coastal State
- Possible rules should rest both on the *purpose* or *intent* of collecting data and the *utility* of the data
- no longer sufficient to say that data collection for military purposes is outside the jurisdiction of the coastal State simply because it is intended for military purposes.
- *But* some data collected for military purposes may have no commercial or economic value

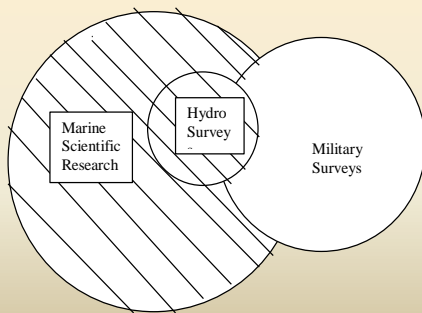
## MILITARY SURVEYS

USNS  
BOWDITCH



- Marine data collection for military purposes (importance for ASW, submarine ops, MCM, etc) – “military surveys” in US and “military data gathering” in UK
- Can include hydrographic, oceanographic, geological, geophysical, chemical, biological and acoustic data
- intended for use by the military not by the general scientific community

## The Overlap between Marine Scientific Research, Military Surveys and Hydrographic Surveying



## Regional Issues and Incidents

- MSR is increasing in the region for resource exploitation, oceans management and military purposes (e.g. oceanographic research for submarine ops and ASW)
- Some aspects of the UNCLOS MSR regime, particularly in the EEZ, are contentious
- An increase in the number of incidents in the region is likely

## April 2001 Incident between USN EP3 & Chinese fighter in China's EEZ off Hainan



- US argued unrestricted freedom of overflight
- China contended that such freedom was not absolute to the point of endangering its security
- China claims some actions in the EEZ have “hostile intent” and are harmful to the peace, security and good order of the coastal State

## DPRK “spy ships” in Japanese waters



- Major incident in Dec 2001 - vessel initially detected in Japan's claimed EEZ
- “Hot pursuit” by JCG to China's claimed EEZ where vessel was sunk with the loss of all hands
- Japan seeking wider control over the EEZ?

## MILITARY SURVEY INCIDENTS



HMS SCOTT

- China took military action and lodged protests over the “military survey” operations by USNS BOWDITCH (AGS-21) in the Yellow Sea in 2000 and 2002
- In 2001, India lodged protests with the US and the UK over violations of its EEZ by BOWDITCH and HMS SCOTT

## Incident on 8 March 2009 involving USNS *Impeccable* and Chinese vessels



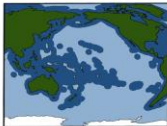
USNS Impeccable

- Incident occurred 75 nm South of Hainan
- China alleged the *Impeccable* broke international and national laws without China’s permission.
- US claimed vessel was exercising its freedoms of navigation in an EEZ



### Guidelines for Navigation and Overflight in the Exclusive Economic Zone

EEZ Group 21



16 September 2005  
Tokyo, Japan

Ocean Policy Research Foundation

Available at:  
<http://www.sof.or.jp/en/report/index.php>

## Prospective Guidelines (1)

- Coastal State consent should normally be granted to MSR in the EEZ conducted purely for scientific purposes
- Collection of data that has utility for resource exploration, conservation and management is entirely under the jurisdiction of the coastal State
- The potential economic value and utility of marine data to the coastal State is a basic criterion in determining whether the collection of such data should be under the jurisdiction of the coastal State

## Prospective Guidelines (2)

- Hydrographic surveying should only be conducted in the EEZ with the permission of the coastal State
- In the interests of the safety of navigation, Coastal State consent for hydrographic surveying should normally be granted unless the surveys fall within one of the categories in UNCLOS Article 246(5)
- Guidelines also apply to aircraft, AUVs, ROVs, etc. conducting research or collecting data in an EEZ

## CONCLUSIONS

- The rights to conduct hydrographic surveys and military surveys in an EEZ are essentially different
- The arguments for military surveys in the EEZ being outside the jurisdiction of the coastal State may be stronger than those for hydrographic surveying
- Greater regional agreement on these issues would be useful