NOWPAP MERRAC

Northwest Pacific Action Plan
Marine Environmental Emergency Preparedness and Response
Regional Activity Centre
(C/O: KRISO, Daejeon, Republic of Korea)
Website - http://merrac.nowpap.org

UNEP IMO

Marine Pollution Preparedness and Response to Oil and HNS Spill Incidents in the Northwest Pacific Action Plan Region

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NOWPAP MERRAC

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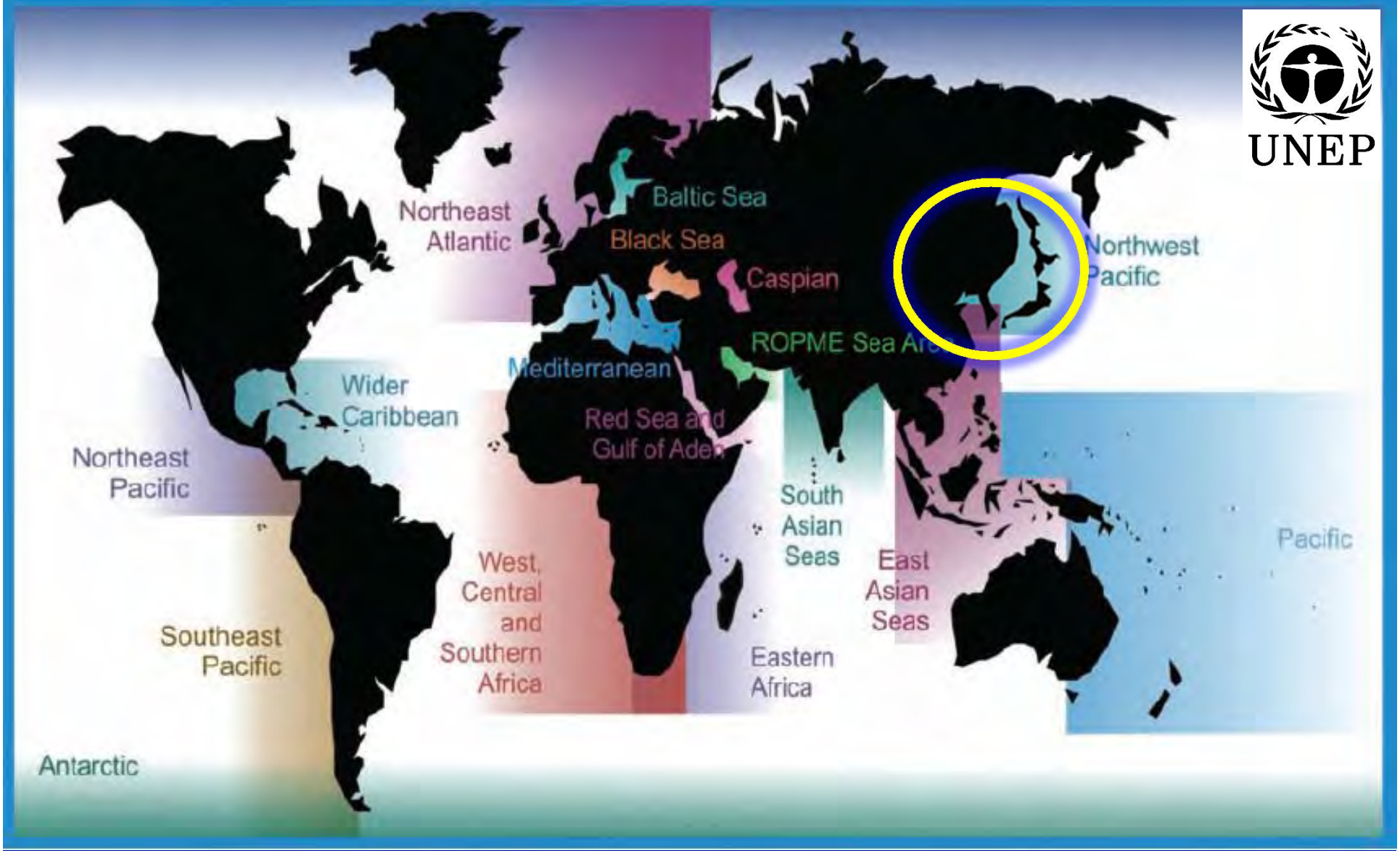
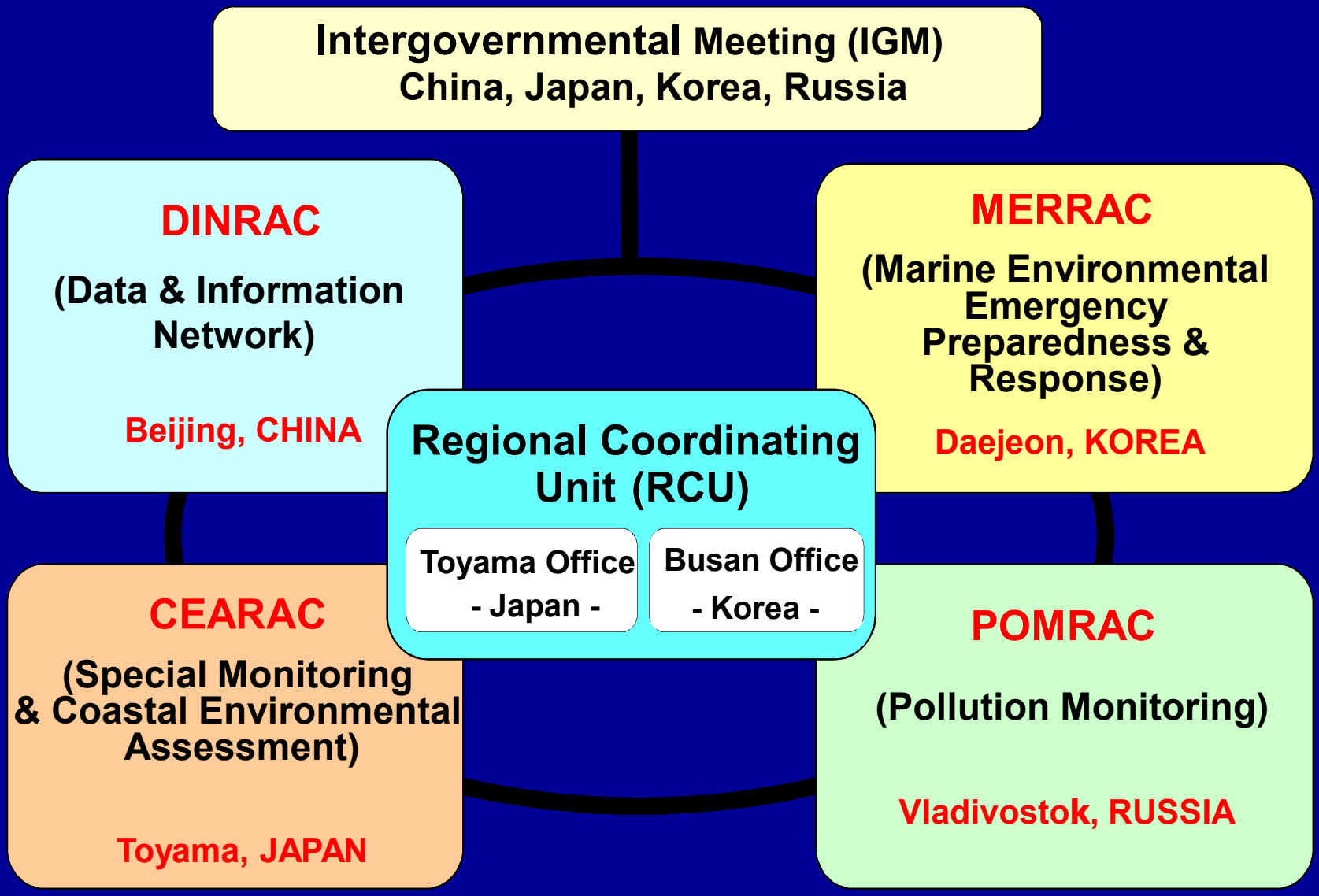
NOWPAP – UNEP's Regional Seas Programme

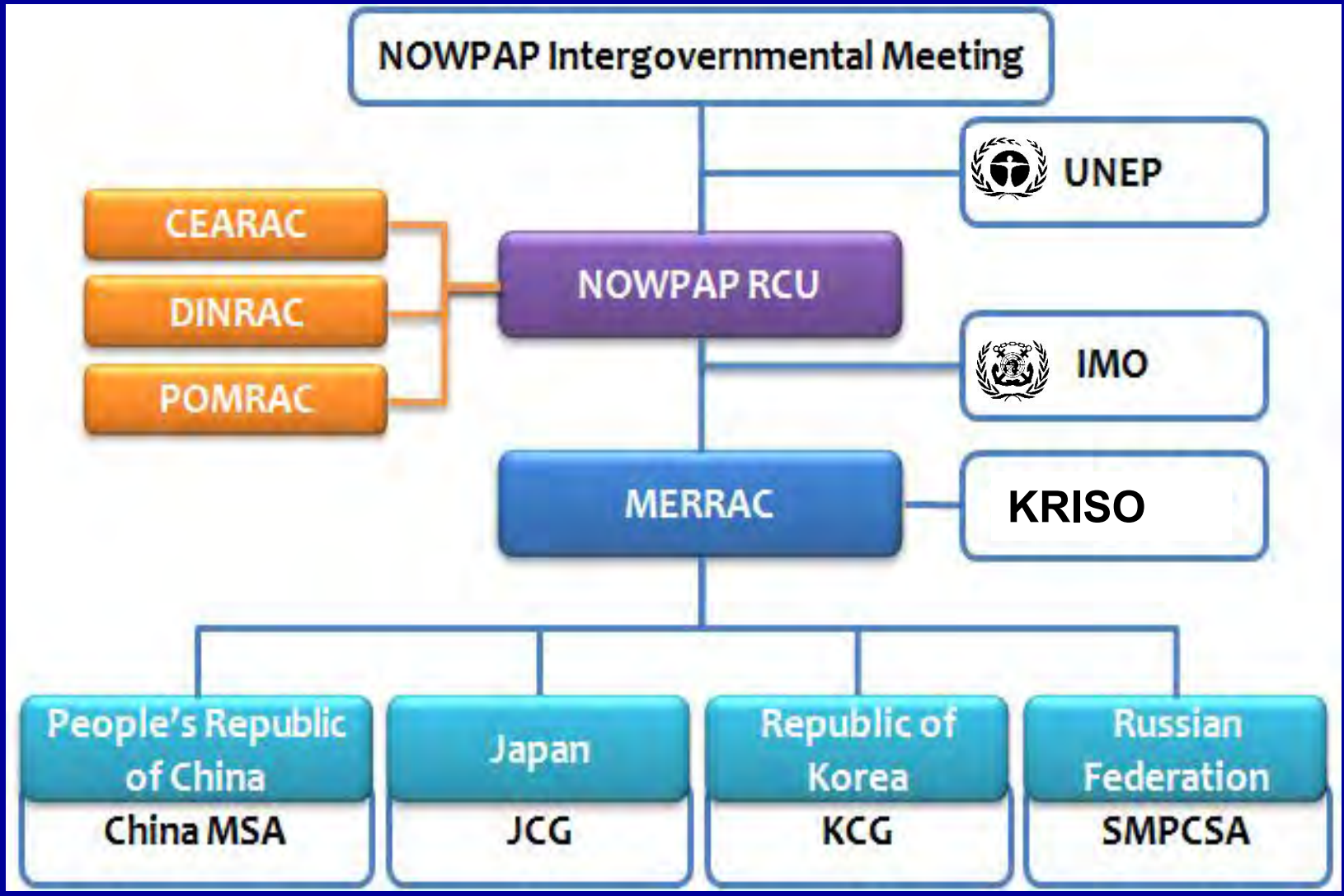


adopted by China, Japan, R. Korea, Russia in 1994

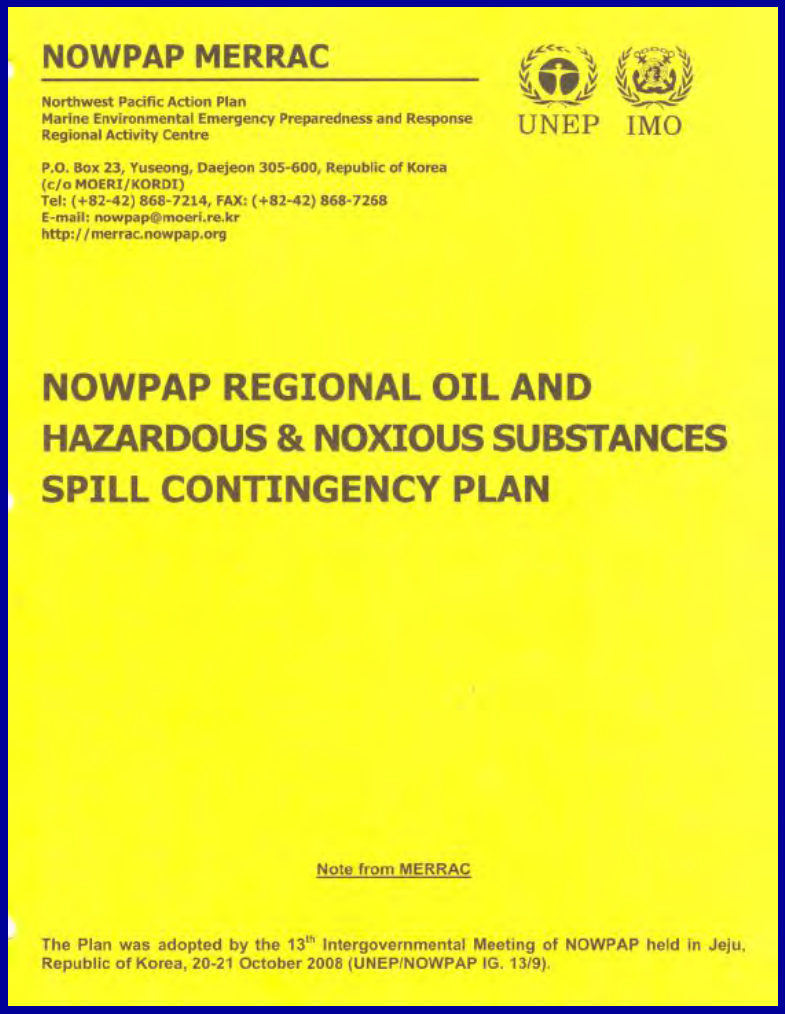
NOWPAP structure



Institutional Arrangement of MERRAC



NOWPAP Regional Oil and HNS Spill Contingency Plan (RCP)



- To provide a framework under which NOWPAP Members can co-operate at the operational level in responding to major oil and HNS spill incidents
- Adopted originally by 8th NOWPAP IGM in 2003 as a technical and operational guidelines for regional co-operation during major oil spill in NOWPAP sea
- HNS has been added to this existing Plan & its Resolution adopted by 13th IGM in 2008
- MERRAC is the secretariat for the administration and co-ordinatnion of the RCP in co-operation with members

- Joint response operation in case of major spill
- Information sharing on oil and HNS spills (POLREPs, etc)
- MERRAC Focal Points and CNA Meeting
- Expert Meetings on specific technical issues
- Joint trainings and exercises (DELTA, BRAVO, etc)

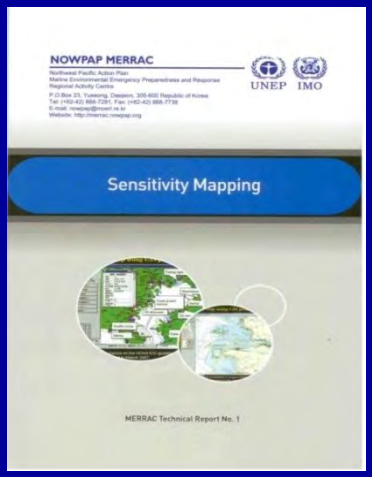
<17th MERRAC FPM
Daejeon, Korea, 2014>

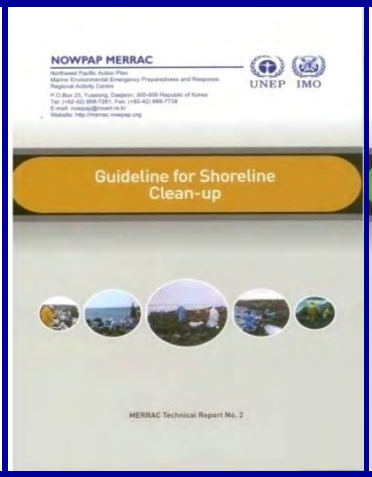
<18th MERRAC FPM
Busan, Korea, 2015>

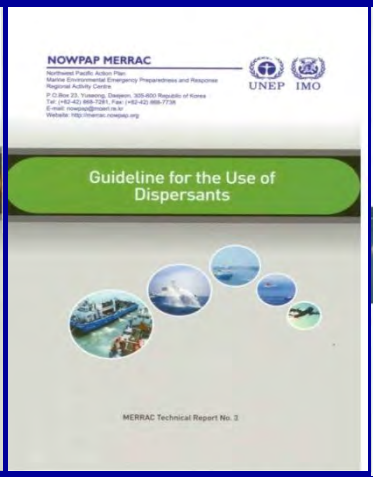
<2009 MERRAC EM
Hokkaido, Japan

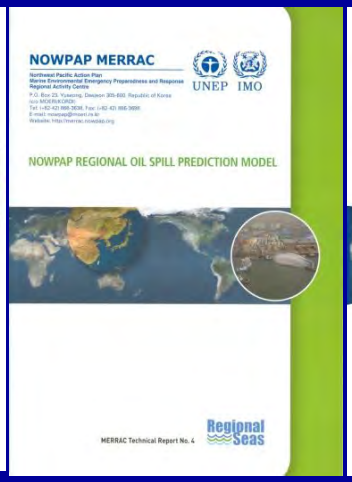
<NOWPAP DELTA Exercises>

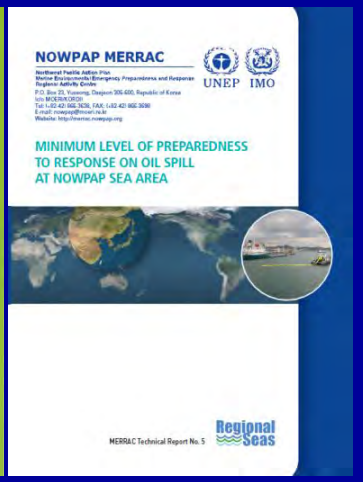
Implementation of MERRAC specific projects

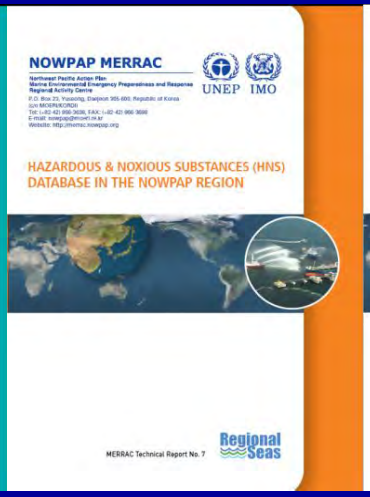


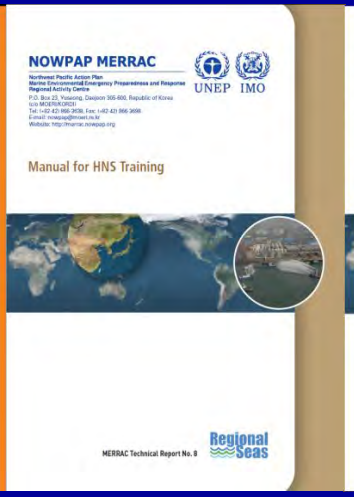












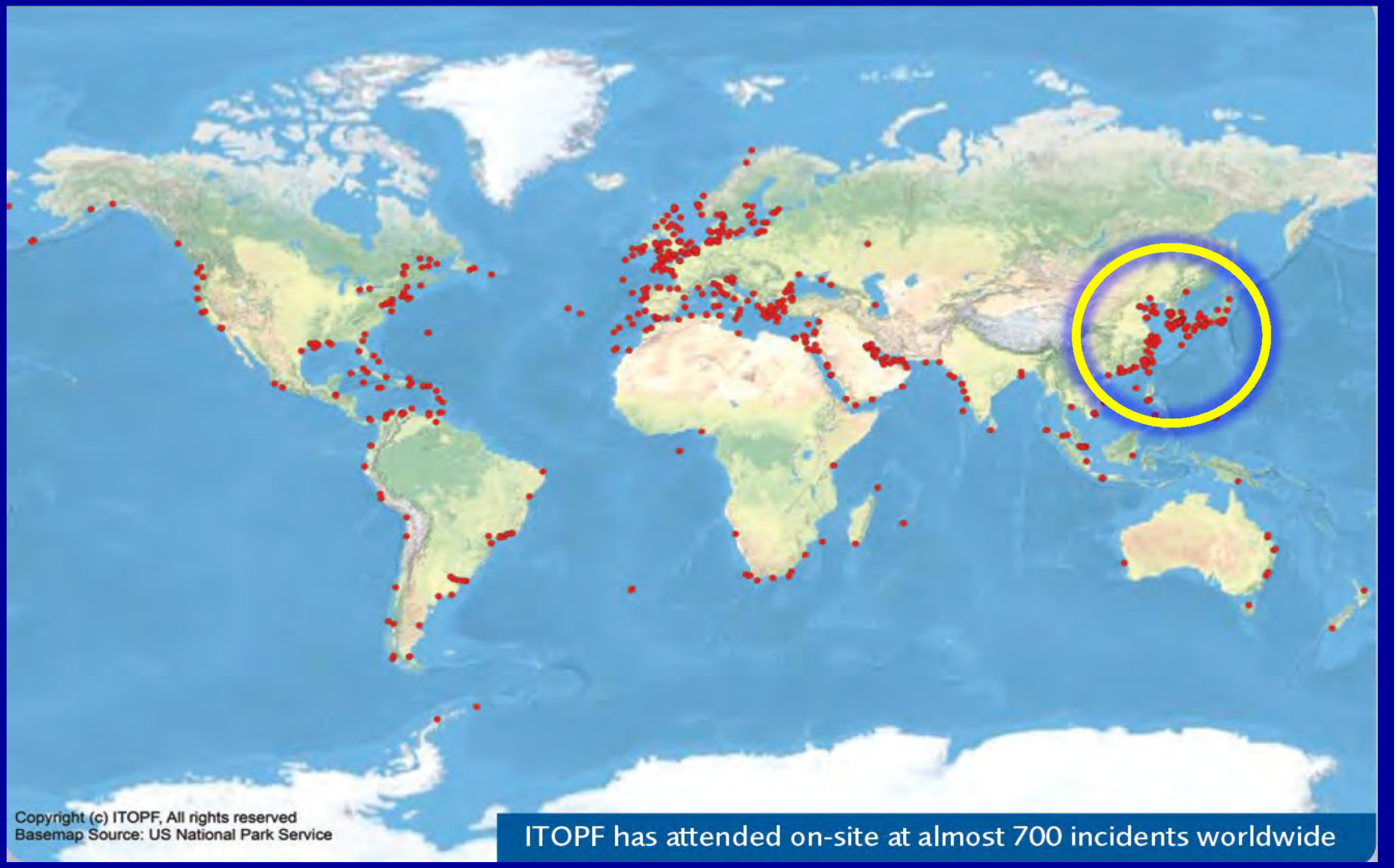
Collection and dissemination of information

http://merrac.nowpap.org

- Information on Focal Points and Organizations
- Database on Response Equipment
- National Laws Related to the Use of the Response Equipment

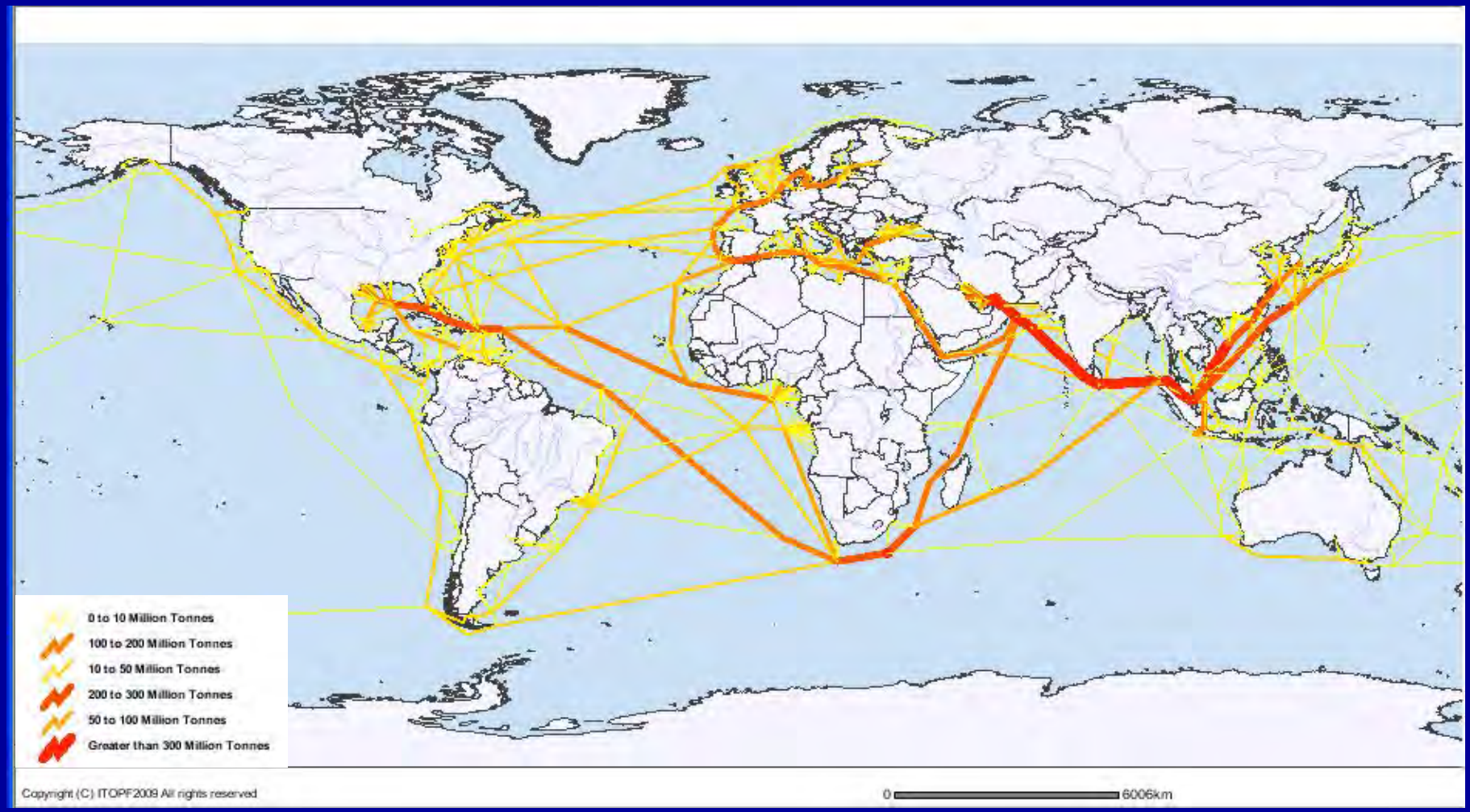
2. Risks of Oil & HNS Spills in the NOWPAP Region

Oil and HNS Spill Incidents (ITOPF, 2012)



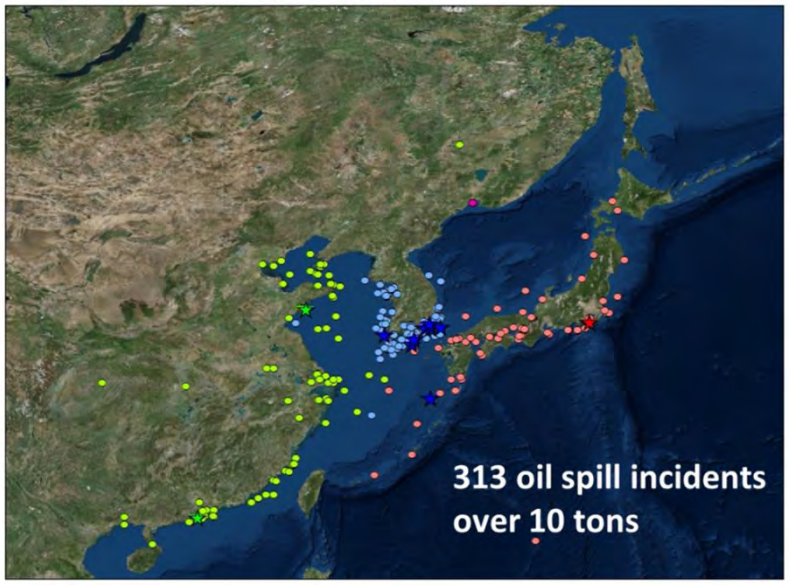
- NOWPAP sea is regarded as one of hot spot areas in the world…

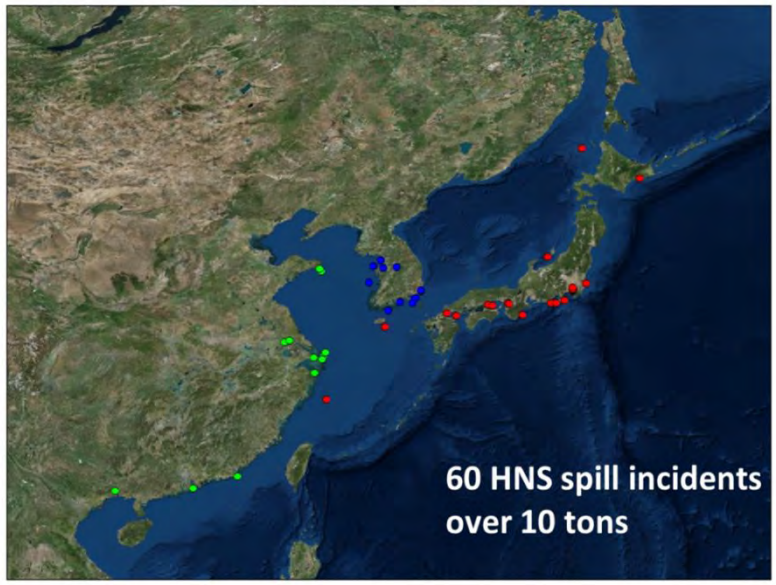
Volume of oil traffic & major sea routes (ITOPF, 2011)



- Due to rapid economic growth & extension of trade, the quantity of Oil & HNS transported is dramatically increasing, including the NOWPAP sea area...

Location of Oil and HNS Spill Incidents (1990-2014)





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Statistics on Oil and HNS Spill Accidents ('90-'14)

Category	No. of Oil Spills	No. of HNS Spills
Major Spills (>1,000 tons)	15	8
Intermediate Spills (50~1,000)	154	26
Small Spills (<50)	several thousand	7 (>10tons)
Unknown	1	14

(Source: MERRAC website, merrac.nowpap.org)

Kill by Oil Spill, by Richard Mock (1991)

Nakhodka Oil Spill Incident (’97. 01)

- The Russian Tanker Nakhodka (from Shanghai to Petropavlovsk) with a cargo of 19,000t of Medium Fuel Oil broke up in heavy seas some 110 km north-east of the Oki Island in the East Sea
- **6,200t of oil spill**
- Largest oil spill in Japan- Establishment of the Response capacity

Hebei Spirit Oil Spill Incident ('07. 12)

Position	Shipname	Year	Location	Spill size (tonnes)
1	ATLANTIC EMPRESS	1979	Off Tobago, West Indies	287,000
2	ABT SUMMER	1991	700 nautical miles off Angola	260,000
3	CASTILLO DE BELLVER	1983	Off Saldanha Bay, South Africa	252,000
4	AMOCO CADIZ	1978	Off Brittany, France	223,000
5	HAVEN	1991	Genoa, Italy	144,000
6	ODYSSEY	1988	700 nautical miles off Nova Scotia, Canada	132,000
7	TORREY CANYON	1967	Scilly Isles, UK	119,000
8	SEA STAR	1972	Gulf of Oman	115,000
9	IRENES SERENADE	1980	Navarino Bay, Greece	100,000
10	URQUIOLA	1976	La Coruna, Spain	100,000
11	HAWAIIAN PATRIOT	1977	300 nautical miles off Honolulu	95,000
12	INDEPENDENTA	1979	Bosphorus, Turkey	94,000
13	JAKOB MAERSK	1975	Oporto, Portugal	88,000
14	BRAER	1993	Shetland Islands, UK	85,000
15	AEGEAN SEA	1992	La Coruna, Spain	74,000
16	SEA EMPRESS	1996	Milford Haven, UK	72,000
17	KHARK 5	1989	120 nautical miles off Atlantic coast of Morocco	70,000
18	NOVA	1985	Off Kharg Island, Gulf of Iran	70,000
19	KATINA P	1992	Off Maputo, Mozambique	67,000
20	PRESTIGE	2002	Off Galicia, Spain	63,000
131	HEBEI SPIRIT	2007	Taean, Republic of Korea	11,000

@ITOPF

- A crane barge being towed by a tug collided with *M/V Hebei Spirit*
- **10,900t of crude oil** spilled, around **70km of the Taean shoreline** impacted
- Near the port of Daesan on **the Yellow Sea Coast of Taean County** of ROK
- Recorded as **Korea's largest spill, damage worth USD 700 billion**
- **Heaviest contamination** within a National Marine Park

Bohai Bay Oil Spill (’11. 6)

- A state owned oil pipeline belonging to China exploded off the coast of Dalian (China)
- **1,500t of crude oil** spilled into the Yellow Sea
- Spills in offshore often lead to catastrophic disasters (i.e. DWH in USA)
- Preparedness for the spills in the offshore units

3. Level of preparedness and response in the NOWPAP region & future challenges

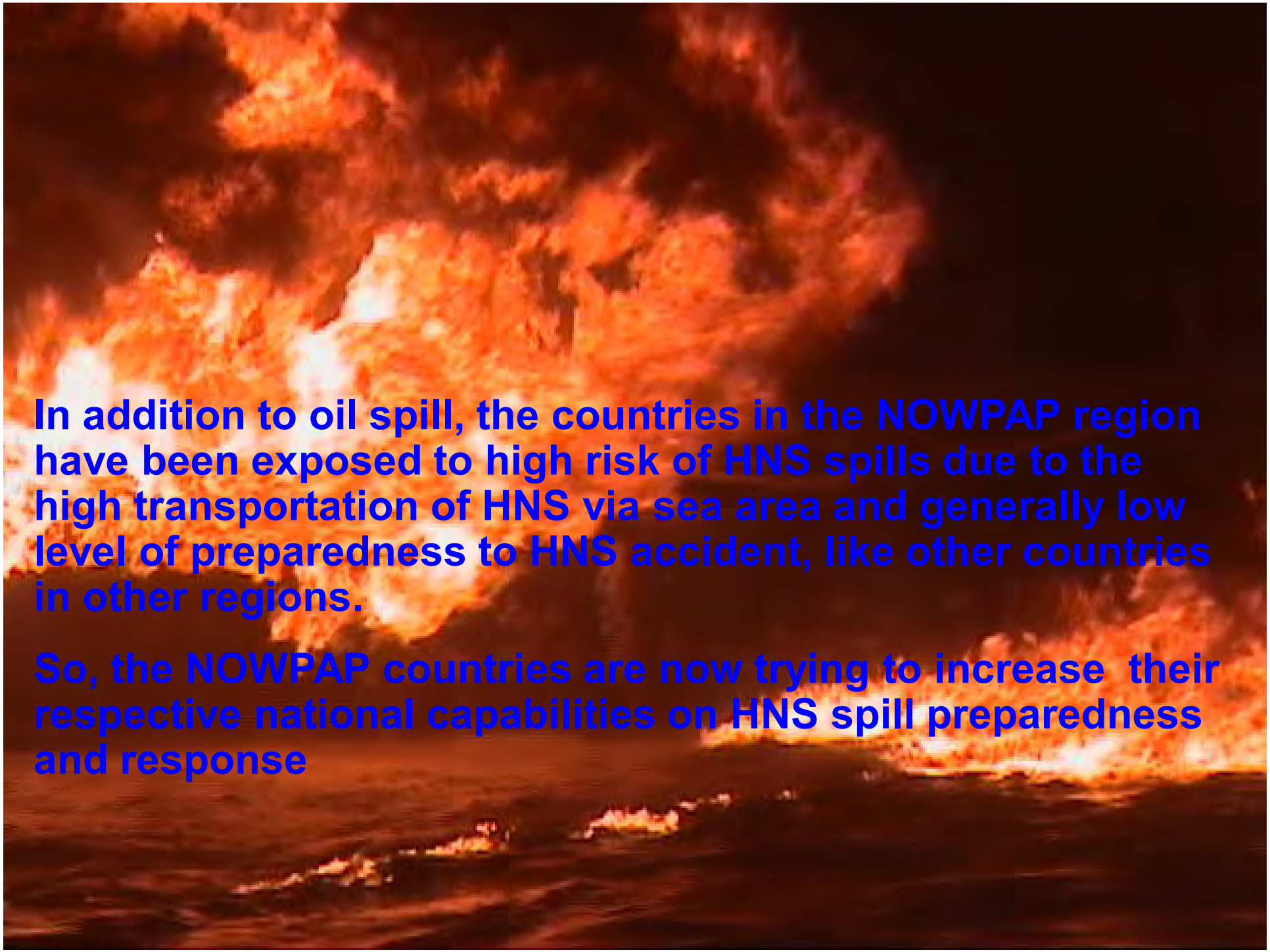
NOWPAP member states' activities for the preparedness and response against oil spills:

- Establishment of legal and institutional systems including their respective National Contingency Plans (NCP)
- Expansion of response resources such as equipment and manpower, etc
- Conduction of training and exercise
- Development of scientific and technological methodologies to ensure efficient response operation
- Regional/bilateral cooperation (IMO-OPRC, NOWPAP/MERRAC, NPCGF-ER working group, etc)

But, need to improve continuously

Future challenges in oil pollution preparedness and response in the NOWPAP region

- Prompt and early assessment of the status oil spill (especially amount of spilled oil) ;
- Exact numerical modelling for of spilled oil, especially applicable under bad weather;
- Establishment of reliable and/or scientific guidelines for response operation and its termination (to avoid over-response works)
- Net environmental benefit analysis for dispersant uses
- Health and Safety issue for responders, volunteers and residents
- Long-term environmental monitoring after the spill, etc.



In addition to oil spill, the countries in the NOWPAP region have been exposed to high risk of HNS spills due to the high transportation of HNS via sea area and generally low level of preparedness to HNS accident, like other countries in other regions.

So, the NOWPAP countries are now trying to increase their respective national capabilities on HNS spill preparedness and response

Oil & HNS

	Oil	HNS
Preparedness and response	Well understood	Difficult/ depend on substance
Substances	Some uniformity in properties and behaviors	Wide variety: Different behavior depending on substances
Hazards (Human health)	Low	Significant
Equipment	Same equipment	Different depending on substances

Different skills, expertise, approach and equipment needed for Oil and HNS

4. Conclusions

- Risks of oil and HNS spills area relatively high in the NOWPAP Region,
- The NOWPAP members have tried to increase the level of preparedness and response to the spill accidents under their respective well-designed national contingency plan.
- However, they are now facing a lot of challenges to overcome, especially including how to prepare to and response for HNS spill. It is strongly requested that academia supports their approaches continuously in the NOWPAP region.


Save Our Sea
From Marine Pollution
- Thank you -
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