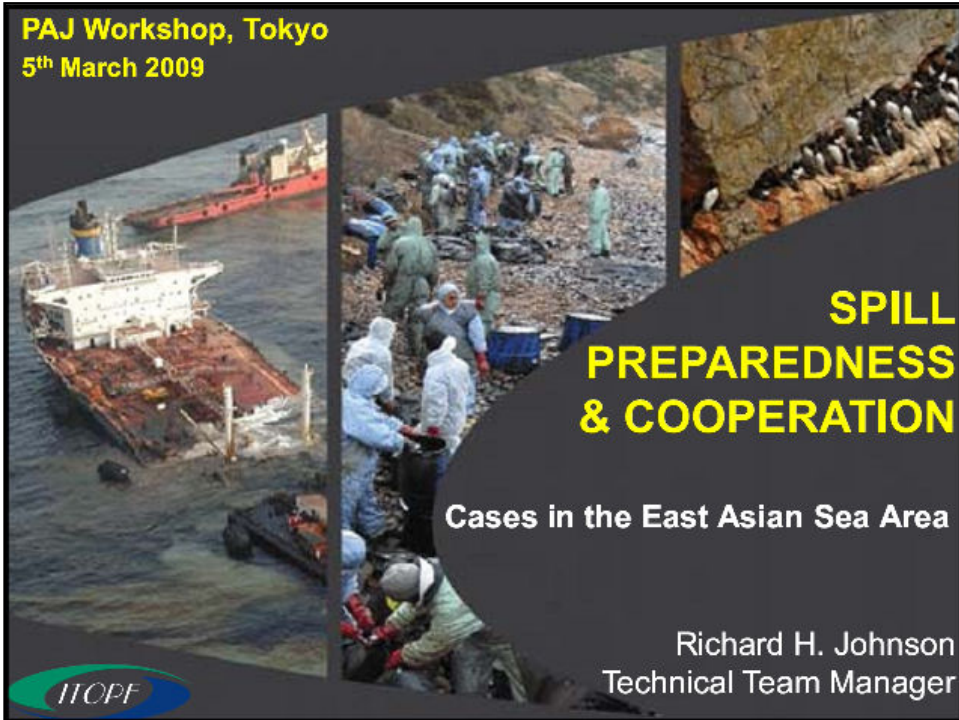


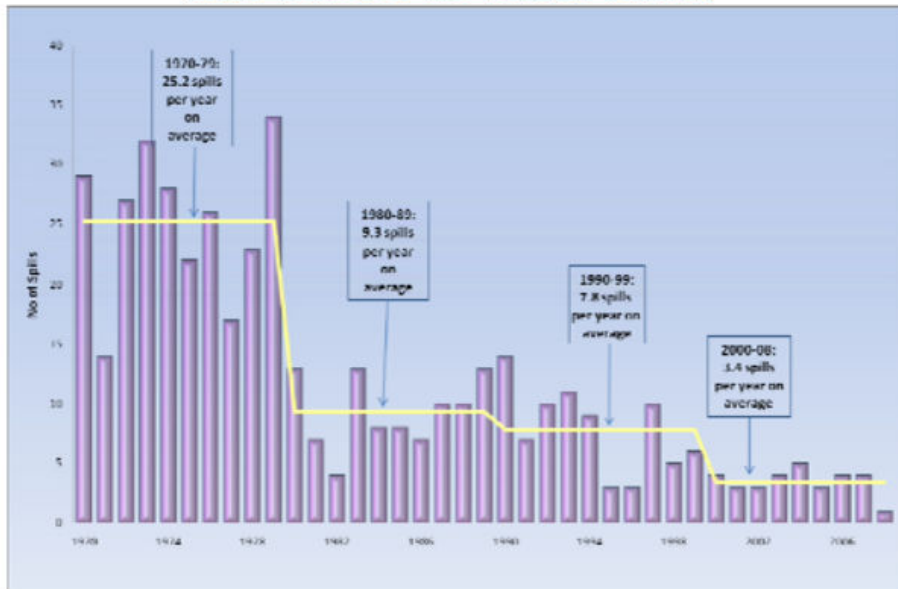
PAJ Workshop, Tokyo  
5<sup>th</sup> March 2009



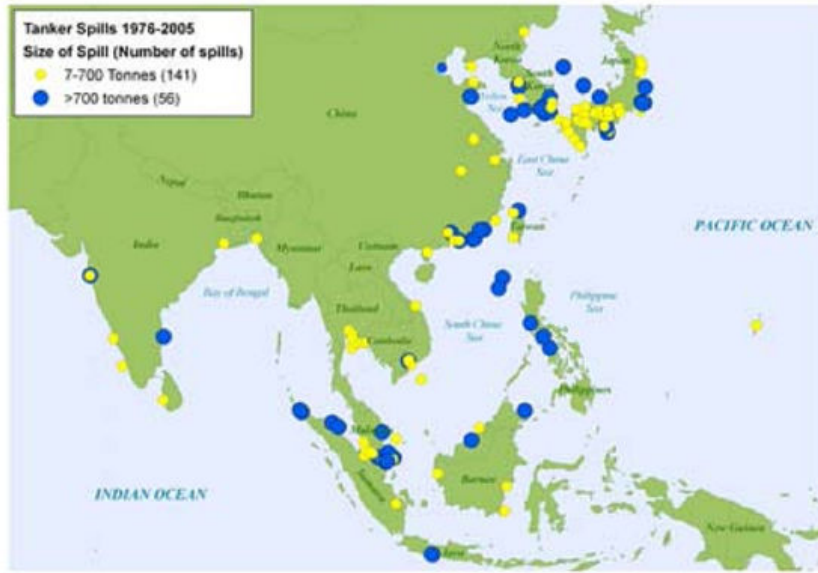
## OIL TANKER SPILLS: A 35 YEAR TREND



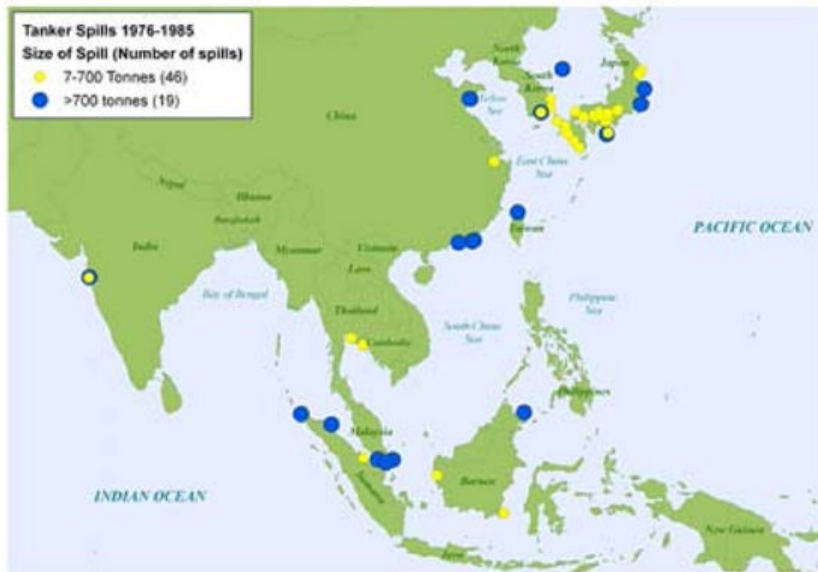
### NUMBER OF OIL SPILLS OVER 700 TONNES



## REGIONAL TANKER SPILLS (1976-2005)



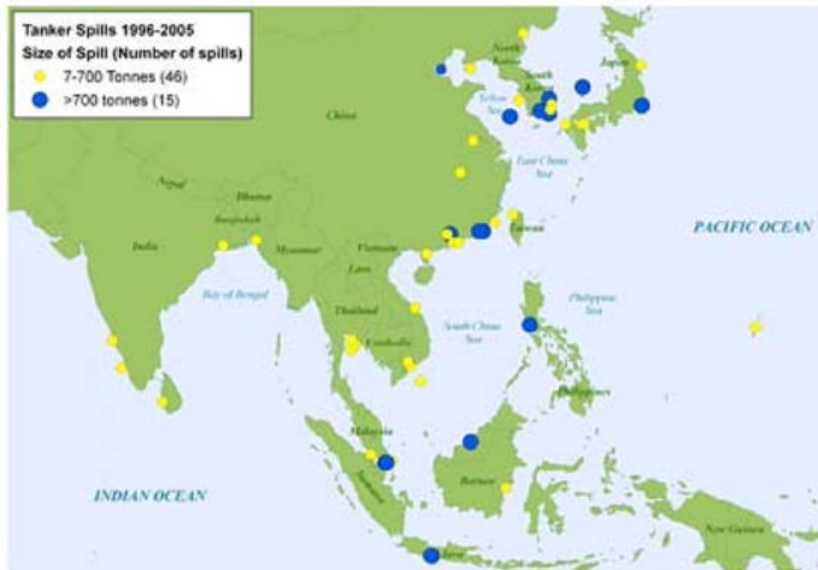
## REGIONAL TANKER SPILLS (1976-1985)



## REGIONAL TANKER SPILLS (1986-1995)



## REGIONAL TANKER SPILLS (1996-2005)



## Outside Assistance

- Big events usually need outside assistance
- Frequency is such that not many countries capable of acting alone
- Tier System, from local up to regional/global calling on other States and Industry stockpiles/services
- SEA EMPRESS –assistance from the Netherlands (Regional agreement – Bonn Agreement)
- PRESTIGE – numerous vessels from all over Europe
- NAKHODKA – Russian vessels. But exercised together?
- Contingency plans and experienced personnel
  - eg AMOCO CADIZ, ERIKA & PRESTIGE
  - eg AEGEAN SEA, PRESTIGE

HEBEI SPIRIT



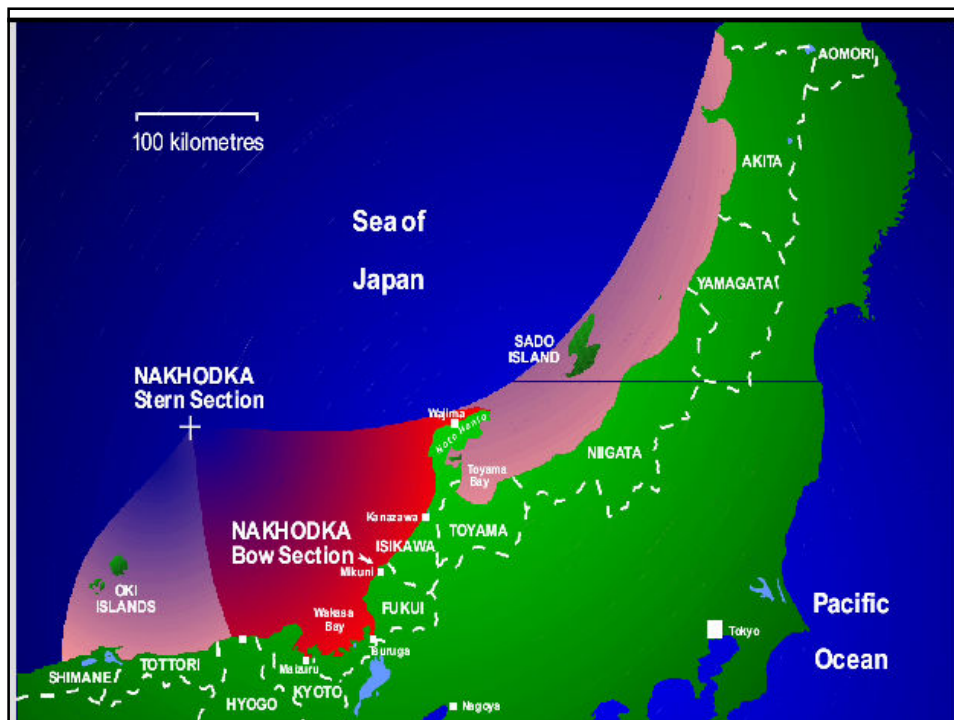
NAKHODKA





# NAKHODKA

- 2nd January 1997
- 70 miles NE of Oki Islands, Sea of Japan
- 13,159 GT, passing tanker - broke in two
- Fuel oil as cargo
- 6,200 tonnes spilled immediately
- Proportion of 2,800 tonnes spilled from bow, which later stranded on shore at Mikuni
- Sunken stern - original estimates were 3 -15m<sup>3</sup>/day leaking
- 1,000km of coastline oiled, 10 Prefectures





## HEBEI SPIRIT

- 7 December 2007
- Taean, Republic of Korea
- Fully Laden - 264,000 tonnes  
(Iranian Heavy, Upper Zakum, Khafji, Kuwaiti Export crudes)
- Around 10,800 tonnes spilled
- HOSCO (Hong Kong)
- Skuld P&I Club
- 1992 IOPC Fund
- ITOPF mobilised immediately













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## HEBEI SPIRIT

- Largest spill of recent years
- Korea's largest spill ever
- Wide geographic spread
- Socio-economic impact
- Extensive fisheries & mariculture
- National Marine Park
- Tourist interests

## AT SEA RESPONSE

- Korean Coast Guard
- Korean Navy
- KOEM (Private company)
- >100 response vessels
- Dispersant spraying
- Containment and recovery
- Involvement of fishing boats
  - with sorbents (1,500 units)





**INTERNATIONAL ASSISTANCE  
- INDUSTRY**

**INTERNATIONAL ASSISTANCE  
- GOVERNMENT**

**NOWPAP – North West Pacific Action Plan**  
(China, Japan, Republic of Korea, Russia)

| <b>Country</b> | <b>Resource</b>   |
|----------------|---|
| China          | 1 expert Shanghai MSA<br>65t of chemical & absorbents (20t on 14 <sup>th</sup> Dec)   |
| Japan          | Japanese International Cooperation Agency (JICA) sent 6 experts – JCG and Japanese Disaster Relief (JDR) - <i>15<sup>th</sup> - 23<sup>rd</sup> Dec</i><br>40t absorbent (19 <sup>th</sup> Dec) |
| Russia         | 50t absorbent   |

IMO supported MERRAC



## INTERNATIONAL ASSISTANCE - GOVERNMENT

### Outside Region Assistance

| Country                              | Resource  |
|--------------------------------------|---|
| USA                                  | 4 experts – 2 x Coastguards & 2 x NOAA (SSC)  |
| United Nations & European Commission | 10 experts – OCHA (Office for Coordination Humanitarian Affairs), UNEP, MIC (Monitoring & Information Centre – <i>15<sup>th</sup> - 22<sup>nd</sup> Dec</i> ) |
| Canada                               | 6 Experts – Environment Canada to assist training in shoreline surveys / clean up   |

## ITOPF

### Shipping industry co-operation

- Mobilised immediately, on-site next day
- Remained continually on-site through to June (6 months). 2-3 people for first months
- >700 mandays in first year
- ITOPF's largest spill in terms of days on-site
- Claims assesment continues for foreseeable future



## SHORELINE RESPONSE

Main Oiling in Taean County

- 21 contractors
- City governments
- Huge manual clean-up effort
- Villagers / fishermen  
up to 10,000 / day
- Volunteers  
> 50,000 / day
- Military
- > 1 million mandays in six weeks







## VOLUNTEERS

- Asset or liability?
- Encouraged or prohibited?
- Control and supervision
- Own agenda
- Inexperienced / untrained
- Safety and welfare / PPE
- Logistics / transporting / feeding
- Human spirit
- Efficient / useful work
- Free?





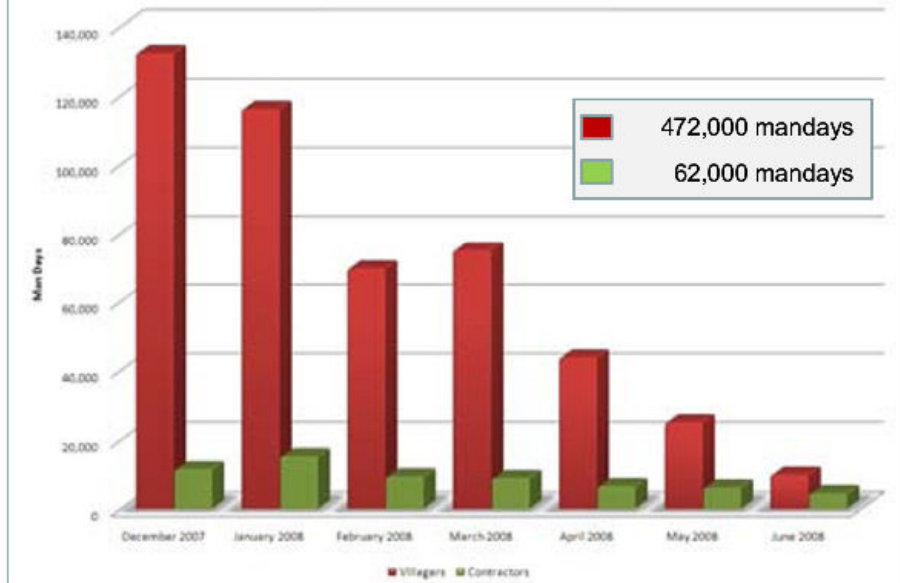






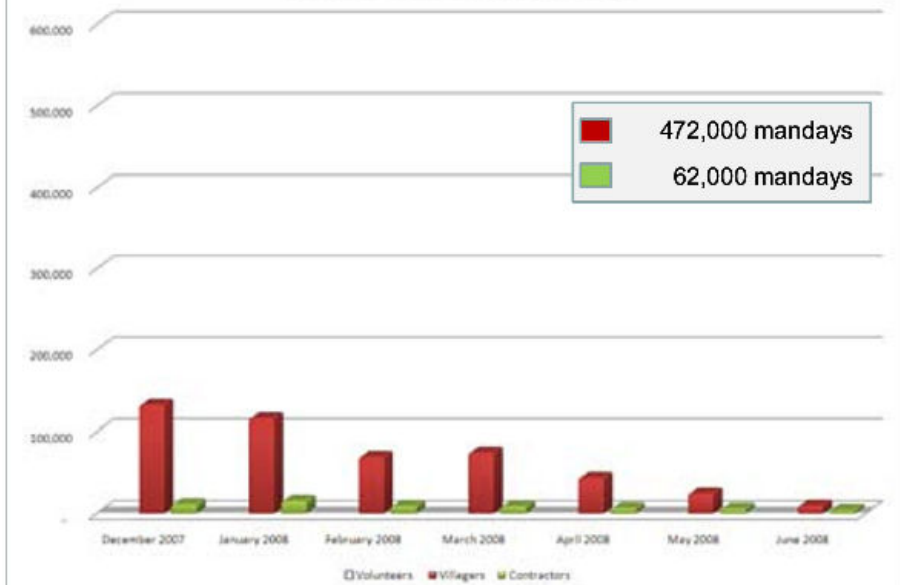
# HEBEI SPIRIT

Personnel involved in cleanup

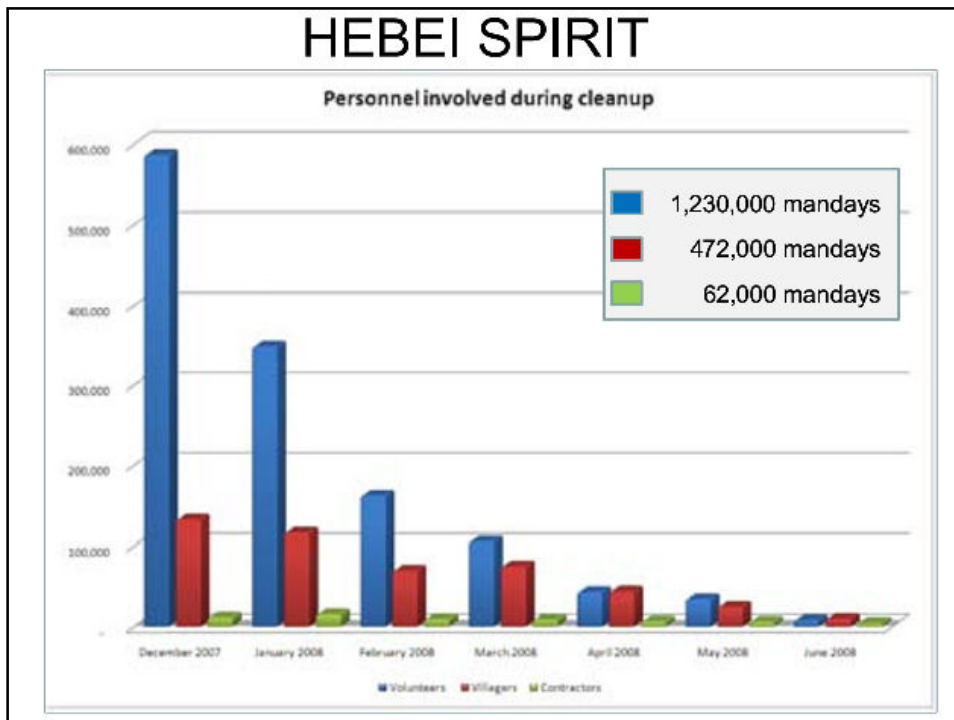


# HEBEI SPIRIT

Personnel involved during cleanup



# HEBEI SPIRIT

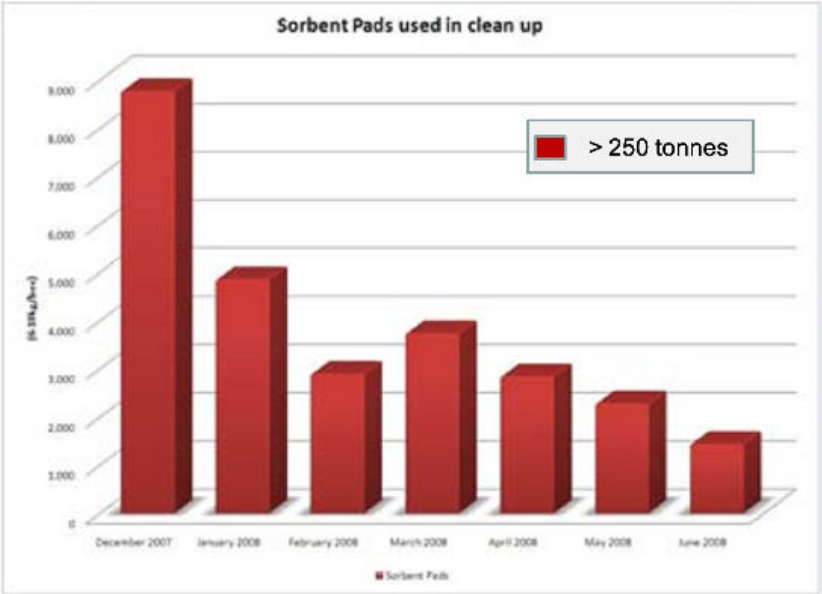








# HEBEI SPIRIT





Rock / pebble wiping



How clean is clean?



## Recommendations for clean up



Tilling

## Recommendations for clean up



Surfwashing







## More harm than good?



Mallipo Beach - 17<sup>th</sup> Dec. 2007

# FISHERIES & MARICULTURE

Last fishing restrictions lifted on 1<sup>st</sup> Sept 2008









## ISSUES DISCUSSED

- International Co-operation
  - Regional Agreement (NOWPAP) and other State assistance. Operational multilateral agreements
  - Govt & Industry cooperation (ADDS pack - dispersant)
- Technical Issues
  - huge manual workforce
  - villagers & volunteers (non-professionals)
  - sorbent and rag use
- Clean up criteria
  - techniques
  - how clean is clean?
  - Political vs technical? Compensation