

Appendix Contents

- Appendix I Report on implementation of CEARAC Activities for 2005**
By Mr. Masanobu MIYAZAKI, Special Monitoring & Coastal
Environmental Assessment Regional Activity Centre, Japan
.....
- Appendix II Workplan of WG3(HAB) for the 2006-2007 Biennium**
By Mr. Hitoshi KIKAWADA, Special Monitoring & Coastal
Environmental Assessment Regional Activity Centre, Japan
.....
- Appendix III Workplan of WG4 (RS) for the 2006-2007 Biennium**
By Mr. Genki TERAUCHI, Special Monitoring & Coastal
Environmental Assessment Regional Activity Centre, Japan
.....
- Appendix IV Workplan for implementation of MALITA**
By Mr. Hitoshi KIKAWADA, Special Monitoring & Coastal
Environmental Assessment Regional Activity Centre, Japan
.....
- Appendix V NOWPWP CEARAC Activities and Budget for 2006-2007**
By Mr. Masanobu MIYAZAKI, Special Monitoring & Coastal
Environmental Assessment Regional Activity Centre, Japan
.....
- Appendix VI Marine Litter Activites(MALITA)**
Sustainable Management of Marine Litter
By Dr. Jeung Sook PARK, NOWPAP Regionl Coodonating Unit
.....
- Appendix VII By Dr. Dr. Leonid Mitnik, Satellite Oceanography Department**
V.I. Il'ichev Pacific Oceanological Institute, Far Eastern Branch,
Russian Academy of Sciences
.....

Report on Implementation of CEARAC Activities for 2005

NOWPAP/CEARAC

Outline of CEARAC Activity for 2005

- Organization of CEARAC 3rd FPM
- Preparation and Publication of the **National Reports** of WG3/WG4
- Preparation and Publication of the **Integrated Reports** of WG3/WG4
- Publication of CEARAC **Newsletter**
- Other Intersessional work; HAB and RS
- Cooperation and Coordination

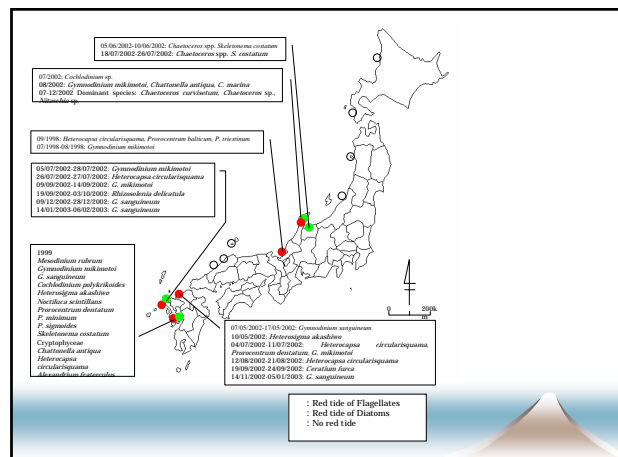


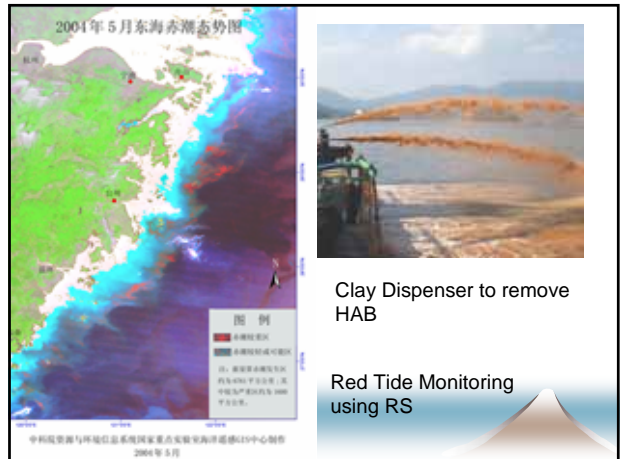
Main Achievements of 3rd CEARAC FPM (15-16 September 2005, Toyama)

- ◆ Report on implementation of CEARAC activities in 2004-2005
- ◆ Report on intersessional activities of NOWPAP WG3(HAB) and WG4(RS)
- ◆ Report on Draft Integrated Report on HAB and RS
- ◆ Discussion of proposed workplan and budget for CEARAC 2006-2007

National Report

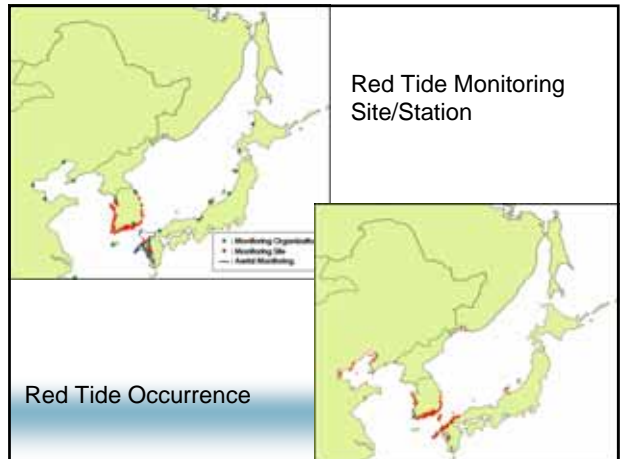
- ◆ Basis for common understanding by reporting present situation in the NOWPAP region
- ◆ Prepared and approved by each NOWPAP members
- ◆ Thank the experts of WG3/WG4 and their colleagues for their great contribution





Integrated Report

- ◆ Based on the National Reports
- ◆ WG3: To describe HAB problems in the NOWPAP region and to identify necessary future activities
- ◆ WG4: to describe the status of research and development on RS technology for the marine environment in the NOWPAP region and to identify necessary future activities



Publication

News Letter

UNEP
NOWPAP CEARAC

National Reports (WG3/4)

Integrated Reports (WG3/4)

CEARAC FPM, WG3/WG4 reports

Cochlodinium pamphlet

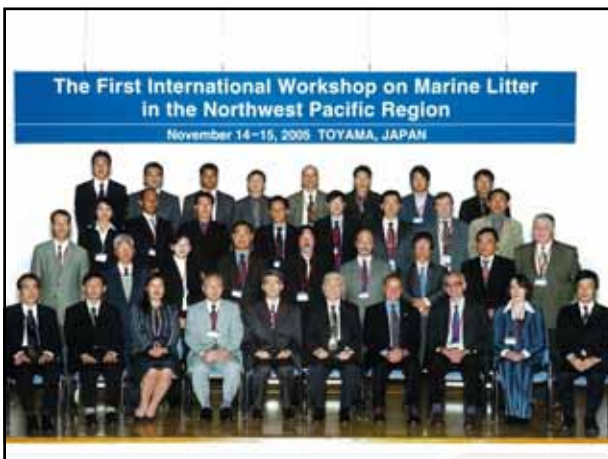


Homepage (Project)

<http://www.cearac-project.org/>

- ◆ **HAB Reference Database**
 - <http://www.cearac-project.org/wg3/hab-ref-db/>
- ◆ **Cochlodinium Homepage**
 - <http://www.cearac-project.org/wg3/cochlo-entrance/>
- ◆ **Portalsite for Ocean RS**
 - <http://www.cearac-project.org/wg4/portalsite>

- ◆ **Marine Environmental Watch Project**
 - <http://www.nowpap3.go.jp/jsw/eng/>
- ◆ **Website on Oil Spill Monitoring by RS**
 - <http://cearac.poi.dvo.ru/>



1st Marine Litter Workshop in Northwest Pacific Region

- ◆ Nov 14-15, 2005, Toyama, Japan
- ◆ Sponsor: Ministry of Environment of Japan and NPEC
- ◆ About 30 invited guests from the NOWPAP Region
- ◆ Exchange information on situation and activities about marine litter (i.e. simulation, monitoring, prevention, management and so on)
- ◆ First step to consider Marine Litter as a common international problem among NOWPAP Members



10th NOWPAP IGM

24-26 Nov. 2005, Toyama

- ◆ Approved the reports of the implementation of NOWPAP RACs during the 2004-2005
- ◆ Approved the workplan & budget for NOWPAP for the 2006-2007 biennium including US\$150,000 for CEARAC
- ◆ Approved the proposal on new directions of the NOWPAP RACs & RCU
- ◆ Also approved MALITA & GEF PDF-B

RAC	RESPONSIBILITIES and ACTIVITIES
CEARAC	<p>2004-2005:</p> <ul style="list-style-type: none"> • WG3 on Harmful Algal Blooms (HAB) • WG4 on Remote Sensing (RS) of the Marine Environment • National Reports on HAB and RS • Integrated Reports on HAB and RS <p>2006-2007:</p> <ul style="list-style-type: none"> • Working Groups on HAB and RS (continued) • Land Based Sources of Pollution (with other RACs) • Marine Litter (with other RACs) - might be linked with general waste management practices on land and with 3R (reduce, reuse, recycle) initiative

Activity	Responsibility for implementation	Proposed 2006-2007 Budget
DINRAC	DINRAC	150
CEARAC	CEARAC	150
MERRAC	MERRAC	150
POMRAC	POMRAC	150
Survey of National Legislation	RCU	10
Public Awareness	RCU	23
Coordination of RACs	RCU	20
MALITA	RCU	70
GEF PDF-B	RCU	100
Operation of RCU	RCU	110
Implementation of NOWPAP	RCU	110
Sub-Total		1,043
13% of the sub-total as programme Support Cost		136
TOTAL		1,179



CEARAC Budget and Expenditure for 2004-2005(1/3)

Activity	Date & Venue	In US\$	
		Budget	Expenditure
Organization of 2 nd FPM	Mar. 2004, Toyama	24,000	19,183
CEARAC Newsletter	Aug. 2004	2,000	2,005
Preparation of the National Report of WG3	June 2004-Mar. 2005	16,000	16,000
Preparation of the National Report of WG4	June 2004-Mar. 2005	16,000	16,000
Organization of 2 nd WG3 (HAB)	Nov. 2004, Qingdao	18,000	17,875
Organization of 2 nd WG4 (RS)	Oct. 2004, Beijing	15,000	13,838

CEARAC Budget and Expenditure for 2004-2005 (2/3)

In US\$

Activity	Date	Budget	Expenditure
Harmonization of the National Report of WG3	Summer 2005	3,000	2,750
Harmonization of the National Report of WG4	Summer 2005	3,000	2,750
Organization of CEARAC 3 rd FPM	Sep. 2005	23,000	22,544
CEARAC Newsletter	Summer 2005	2,000	1,863
Preparation of the Integrated Report of WG3	Throughout 2005	5,000	4,613
Preparation of the Integrated Report of WG4	Throughout 2005	5,000	4,613

CEARAC Budget and Expenditure for 2004-2005 (3/3)

In US\$

Activity	Date	Budget	Expenditure
Printing National/Integrate reports of HAB, RS	By the end of 2005	4,000	13,661
Intersessional work	Throughout 2004-2005	6,000	5,873
Cooperation and Coordination of CEARAC activities	Throughout 2004/5	8,000	6,432
TOTAL		150,000	150,000

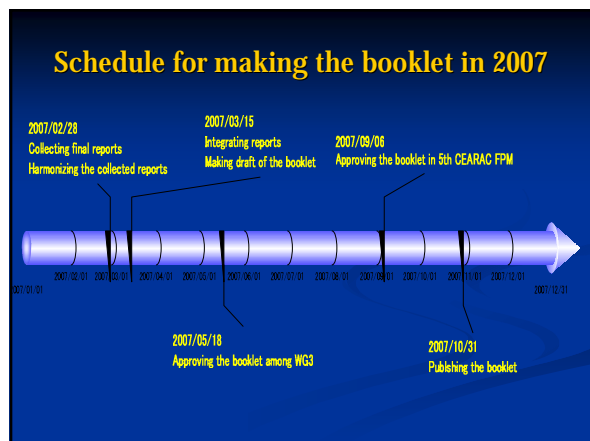
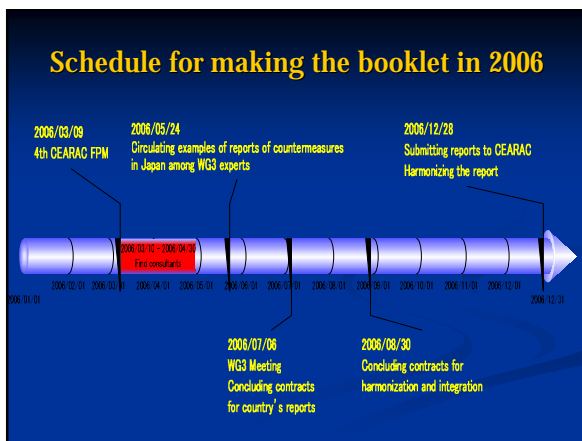


Workplan of WG3 for the 2006-2007 Biennium

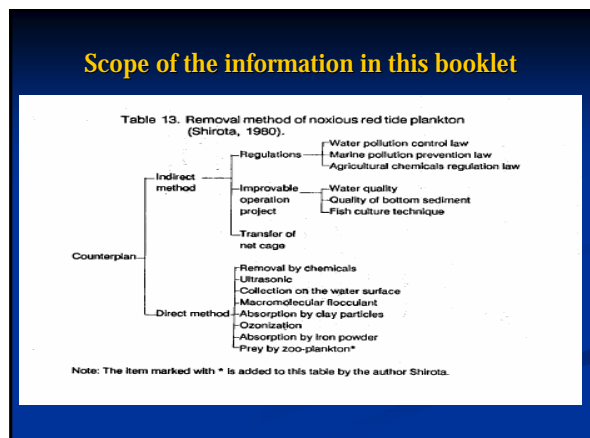
CEARAC

Workplan of WG3 in 2006 and 2007

	2006	2007
CEARAC FPM	(Mar)	(Sep)
WG3 Meeting	(Summer)	
Development of HAB-database	• Collection of articles about countermeasures	• Collection of articles about countermeasures
Information dissemination	• Newsletter • (HAB Reference Database) • (<i>Cochlodinium</i> HP) • (<i>Cochlodinium</i> Pamphlet)	• Newsletter • (HAB Reference Database) • (<i>Cochlodinium</i> HP) • (<i>Cochlodinium</i> Pamphlet)
Identification and analysis of Important scientific issue	• Collection of information about countermeasures against <i>Cochlodinium</i> red tides	T.B.D.
Promotion of Mitigation	• Survey of countermeasures to terminate or mitigate red tides	• Issue of 'Booklet of Countermeasures to terminate or mitigate Red Tides'



- ### Outline of Booklet of Countermeasures to Terminate or Mitigate Red Tides
1. Introduction
 2. Countermeasures against red tides in the NOWPAP Region
 - 2.1. Situation of red tides in the NOWPAP Region and necessity of development of countermeasures
 - 2.2. Countermeasures against red tide in the NOWPAP Region
 - 2.3. Countermeasures against red tide causative species
 3. Countermeasures against red tides in the world
 4. Summary
 - Reference



1. Introduction

- Purpose of the booklet.
- Brief overview of countermeasures against red tides.
- Scope of the information in this booklet.

2.1. Situation of red tides in the NOWPAP Region and necessity of development of countermeasures

- Explanations of the situation of red tides in the NOWPAP Region, based on the National Reports and the Integrated Report.
- Explanations of damage to aquaculture and fisheries in the NOWPAP Region referred to the National Reports, the Integrated Report and related literature.
- Necessity of countermeasures against red tides

2.2. Countermeasures against red tide in the NOWPAP Region

- Brief explanations on termination and mitigation after red tides emergence (refer to difference between preventive measures and countermeasures)
- Introduction of each countermeasure
 - 2.2.1 Chemical methods (hydrogen peroxide, organic acid, surface-active agent, copper sulfate, ozone emergence, etc)
 - 2.2.2 Physical methods (ultrasonic waves, cavitation, etc)
 - 2.2.3 Biological methods (algacidal bacteria, pray on animals, etc)
 - 2.2.4 Others (clay spraying, communication system after emergence, avoidance of culture rafts, feed withdrawal, ballast water treatment, recovery vessel of red tides, etc)

2.3. Countermeasures against red tide causative species

- Classification of countermeasures by red tides causative species in a chart (matrix by species names and countermeasures)
 - Red Tides causative species -
Genus *Chattonella* (*C. antique*, *C. marina*), *Cochlodinium polykrikoides*
Karenia mikimotoi, *Heterocapsa circularisquama*,
Heterosigma akashiwo, Diatom red tides, etc

3. Countermeasures against red tide in the world

- Introduction of countermeasures against red tides in the world except for the NOWPAP Members. Countermeasures used in the Mediterranean and the United States could be introduced.

* If possible, difference between methods in the world and those in the NOWPAP Region.

4. Summary

- Classifying features on case studies mentioned above in a chart
- Showing problems and prospects of each method as much as possible
- Proposing preferable methods which is environmental friendly and considering ecosystem

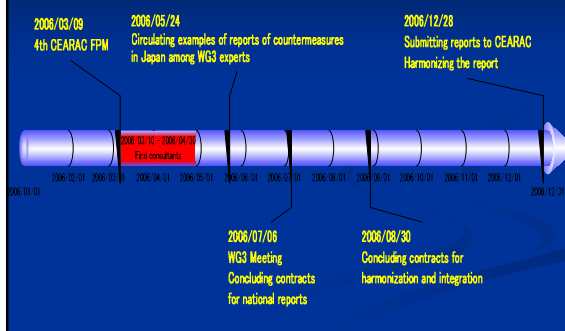
Format of information on a countermeasure

- 1) Name of countermeasure
- 2) Implementing agency (cited literature)
- 3) Target species
- 4) Implementing water area
- 5) Dates of Implementation of the methods
- 6) Capacity of Application
- 7) Method/Mechanism
- 8) Outcomes
- 9) Influence to Ecosystem/Environment
- 10) Others

Tasks before WG3 Meeting

- To find and recommend a consultant for each country's report.
- To make some reports on countermeasures in each countries in order to discuss a format of report and estimate amounts of tasks.
- To report how many countermeasures which can be reported for the booklet.

Schedule for making the booklet in 2006



Tasks for a consultant

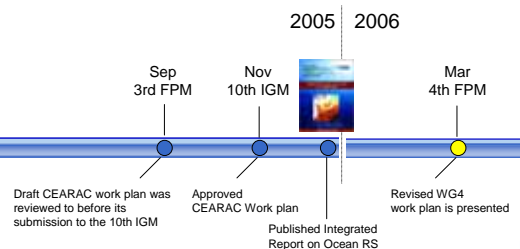
- To collect information on countermeasures against red tide in her/his country.
- To make reports on each countermeasure by following a proposed format.
- To send the reports to CEARAC, FPs, WG3 experts.
- To collect information on HABs in the NOWPAP Region for HAB Reference Database.
- To make tables for the database by the format approved in 2003. The hired consultants are required to submit the tables to CEARAC by the end of 2006.

Work Plan of NOWPAP WG4 for the 2006-2007 Biennium

CEARAC
March 8, 2006

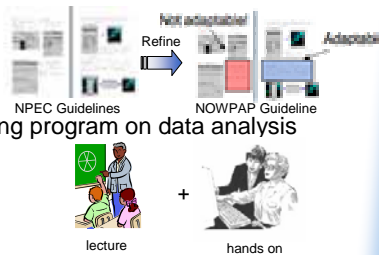
1. Background

WG4 work plan was prepared in the basis of suggestions proposed in the Integrated Report.



2. Work plan of WG4 for 2006-2007

- Activities under WG4 framework
 - ◆ 2.1 Refinement of NPEC Guidelines



- ◆ 2.2 RS training program on data analysis

2. Work plan of WG4 for 2006-2007

- Activities supported by NPEC
 - ◆ 2.3 Further development of RS information Network



- ◆ 2.4 Joint activities with IOC/WESTPAC ocean color project



- ◆ 2.5 Search of other possible usage of the satellite remote sensing

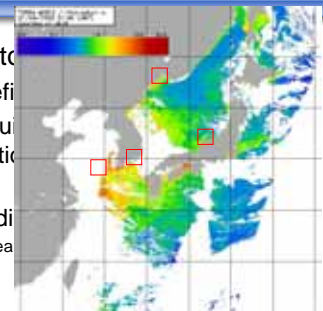


2.1. Refinement of guideline

- Objectives and background
 - ◆ A draft guideline for monitoring of eutrophication in coastal area using satellite data (NPEC guideline) was made by NPEC for NOWPAP Members to **share the lessens learned from Toyama Bay Project.**
 - ◆ Refinement of NPEC guideline is necessary to make it more useful for other NOWPAP Members towards cooperative monitoring.

2.1. Refinement of guideline

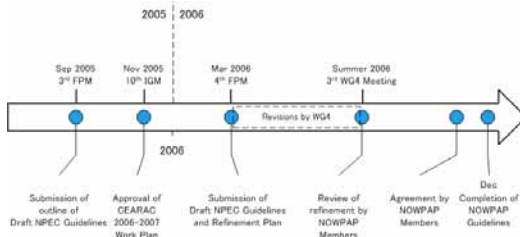
- Works assigned to
 - ◆ To review and refine
 - ◆ To localize the guideline including translation
 - ◆ To add case studies
 - Selecting one area in each countries.



The above work may be conducted under MoU between WG4 experts and CEARAC.

2.1. Refinement of guideline

- Schedule



2.2 RS training on data analysis

- Objectives and background
 - National Report of China and Russia pointed out **the needs of remote sensing training**.
 - Capacity building** of NOWPAP Members are one of the mission assigned to CEARAC.
 - To promote the use of Ocean RS data for preservation of marine and coastal environment.



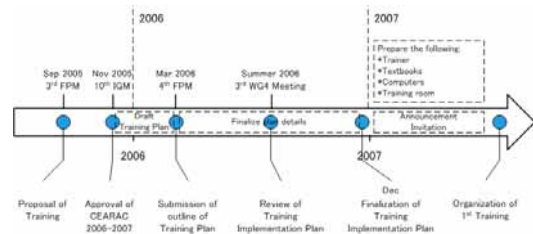
2.2 RS training on data analysis

- Works assigned to WG4
 - To review and approve the implementation plan of the training.
 - Training schedule
 - Program contents
 - Training texts
 - To cooperate with CEARAC to arrange the organization of the training



2.2 RS training on data analysis

- Schedule



2.3 Further development of RS information network

- Objectives and Background
 - Establishment of publication database
 - Keep tracking of new publications is essential to understand the latest trends and findings
 - Establishment of digital library
 - RS information network should continue to be well developed to support WG4 activities.
 - Incorporating existing RS related website into digital library

2.3 Further development of RS information network

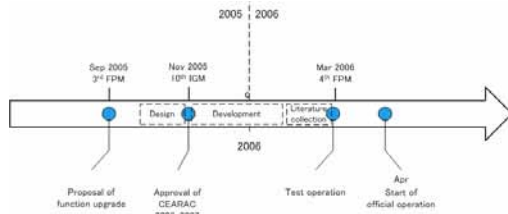
- Publication database



Website search Publication search
User interface of publication search function

2.3 Further development of RS information network

- Schedule



2.4 Joint activities with IOC/WESTPAC ocean color project



- Seeking possibility of cooperation in
 - Organizing Workshops
 - Exchanging information about RS information network and NEARGOOS and so on

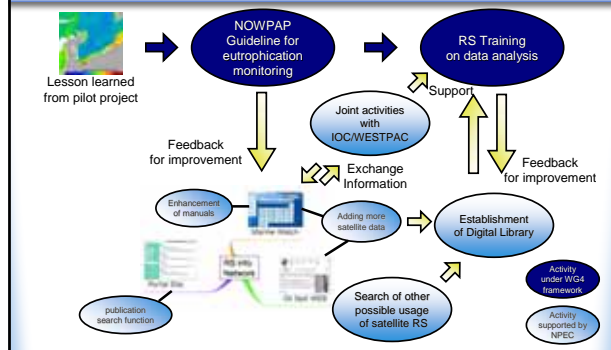
2.5 Search of other possible usage of satellite remote sensing

- Besides eutrophication and oil spill, National Report proved that more issues can be understandable by remote sensing

NPEC will study possibility of monitoring other phenomena by remote sensing, which might be useful for the future activities of WG4.

Detection of cold water mass Comparison with fish catch Salinity estimation

3. Future Prospects



3. Future Prospects

- As a result, WG4 contribute to
 - capacity building of NOWPAP Members
 - penetrating RS technology into our daily life for preservation of marine and coastal environment

Workplan for implementation of MALITA

CEARAC

Activities designated to CEARAC for MALITA

- Development of regional and national strategies on integrated management of marine litter (No.9)
- Development and implementation of long-term regional and national monitoring programmes on land-based ML, including formats for data gathering and storage (No.12-1)
- Formulation and implementation of awareness and education campaigns for general public, various groups within the tourism sector, industry, municipal authorities, local communities (No.13-1)
- Preparation of brochures in English for the purpose of promoting public awareness on the reduction of ML (No.15)

Activities designated to CEARAC for MALITA

- Preparation of brochures in Japanese for the purpose of promoting public awareness on the reduction of ML (No.15-1)
- Development of sectoral guidelines for management of marine litter for tourism, costal construction, recycling (No.16-2)
- Development of responsible citizenship guidelines for children and youth (No.19-1)
- Practical demonstration through awareness raising campaigns in selected destinations and with selected tourism campaigns (No.19-2)

Comparison among monitoring methods

Purposes of this work is to find advantages and disadvantages of monitoring methods already implemented by Japanese organizations and to identify methods suitable for long-term monitoring in the NOWPAP Region among them for the first stage of an investigation of monitoring methods of marine litter in the NOWPAP Region.

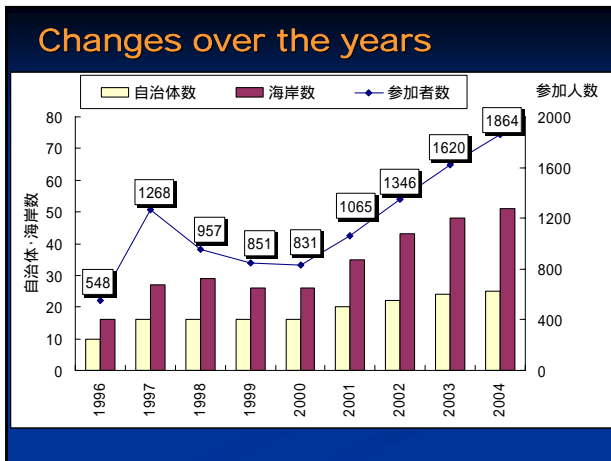
3 monitoring methods for marine litter are compared, which have been used by:

- Northwest Pacific Environmental Cooperation Center (NPEC)
- The Ocean Conservancy (which organizes ICC Campaign)
- Japan Environmental Action Network (JEAN)

Methods for Research of Washed-up Litter along Coasts in the Northwest Pacific Region

Outline of the Research (since 1996)

- Purpose:
 - To grasp the state of marine litter in coastal areas of the NOWPAP Region
 - To raise the public awareness about the importance of the marine environment protection.
- Partners:
 - Local governments of the four countries (China, Japan, Korea and Russia).
- Number of participants:
 - About 1,800 including school children, volunteer groups, local government officials and so on.
- Areas:
 - 51 beaches along coasts of the NOWPAP Region.



The Method

- 1 Plastic
- 2 Rubber
- 3 Formed Styrene
- 4 Paper
- 5 Cloth
- 6 Glass/Ceramics
- 7 Metals
- 8 Other artificial objects

Images of the Research

Determine areas of the research: A 10m by 10m area is marked on the beach.

Collect objects: Children are shown collecting litter. One child says, "There are so many things. Where did they come from?" Another says, "Really? I wonder where."

Separate the objects: Objects are sorted into categories: Plastic, Formed Styrene, Glass/Ceramics, Rubber, Paper, Cloth, Metals, and Other Artificial.

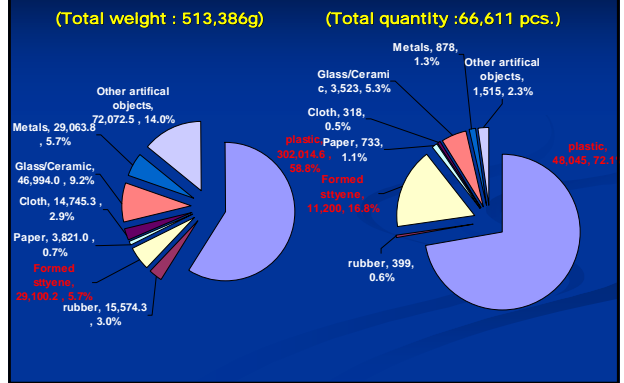
Weigh and counts objects and table values: A child weighs a piece of plastic, saying, "It weighs plastic with 150 g". Another child says, "Oh, What's that?"



Research in Japan



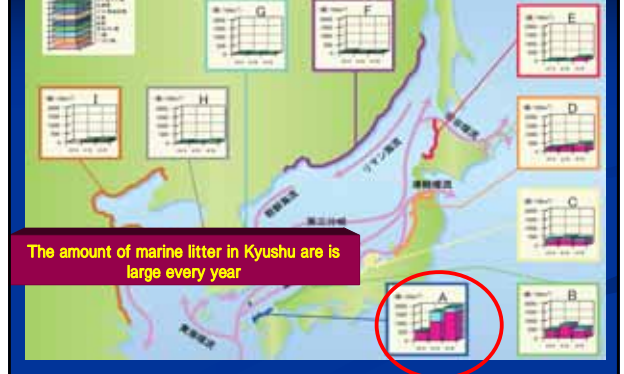
Research results in 2004



Research Result (2002 ~ 2004)

Year	Total Qty. & Total weight	Average Qty. (pcs./100m ²)	Average Weight (g/100m ²)
2002	42,433 pcs. 494kg	237 pcs./100m ²	2,951g/100m ²
2003	70,652 pcs. 378kg	427 pcs./100m ²	2,133g/100m ²
2004	66,611 pcs. 513kg	402 pcs./100m ²	2,846g/100m ²

Average quantity per 100m² by area (2002 ~ 2004)



Other activities



NOWPAP/CEARAC Activities and Budget for 2006-2007

NOWPAP/CEARAC

10th NOWPAP IGM 24-26 Nov. 2005, Toyama

- ◆ Approved the reports of the implementation of NOWPAP RACs during the 2004-2005
- ◆ Approved the workplan & budget for NOWPAP for the 2006-2007 biennium including US\$150,000 for CEARAC
- ◆ Approved the proposal on new directions of the NOWPAP RACs & RCU
- ◆ Also approved MALITA & GEF PDF-B

Activity	Responsibility for implementation	Proposed 2006-2007 Budget
DINRAC	DINRAC	150
CEARAC	CEARAC	150
MERRAC	MERRAC	150
POMRAC	POMRAC	150
Survey of National Legislation	RCU	10
Public Awareness	RCU	23
Coordination of RACs	RCU	20
MALITA	RCU	70
GEF PDF-B	RCU	100
Operation of RCU	RCU	110
Implementation of NOWPAP	RCU	110
Sub-Total		1,043
13% of the sub-total as programme Support Cost		136
TOTAL		1,179

Outline of CEARAC Activities for 2006-2007

- Organization of CEARAC 4th & 5th FPM and 3rd joint WG3/WG4 Meeting
- Publication of CEARAC Newsletter
- Intersessional work; HAB, RS, ML, State of the Marine Report of the NOWPAP Region, and so on
- Cooperation and Coordination

Relating Activity (NPEC & CEARAC)

- ◆ 4th International Workshop on Marine Remote Sensing in the Northwest Pacific Region
 - Summer 2006, Busan
- ◆ International Workshop on Marine Litter in the Northwest Pacific Region
 - 2nd Autumn/Winter 2006, Japan
 - 3rd Autumn/Winter 2007, Japan

Draft CEARAC Budget for 2006-2007(1/2)

Activity	Date & Venue	In US\$
		Budget
Organization of CEARAC 4 th FPM	Mar. 2006, Toyama	23,000
Organization of CEARAC 5 th FPM	Sep. 2007, Toyama	23,000
Organization of 3 rd joint Meeting of WG3/WG4	Summer 2006, Toyama	30,000
Publication of CEARAC Newsletter	Summer 2006, 2007	4,000

Draft CEARAC Budget for 2006-2007 (2/2)

In US\$

Activity	Date & Venue	Budget
WG3 (HAB)		
Booklet of Case Studies of Mitigation of Red Tides	2006 2007	12,000 14,000
WG4 (RS)		
Guideline Training	2006 2007	15,000 15,000
MALITA	Throughout 2006-2007	19,500
Intersessional Work	Throughout 2006-2007	6,000
Cooperation and Coordination of CEARAC Activities	Throughout 2006-2007	8,000
TOTAL		169,500





Marine Litter Activity (MALITA) Sustainable Management of Marine Litter




Presented by Dr Jeung Sook PARK
NOWPAP Regional Coordinating Unit


Marine Litter (Debris)

Any persistent,
manufactured and processed
solid material
discarded, disposed of and abandoned
in the marine and costal environment


lying on beaches and shores



floating on the water surface



mixed in the water column
and even on the seabed



Quantities of Marine Litter

1997 US Academy Science and other Estimations and Surveys



the total input of marine litter into the oceans, worldwide, at approximately **6.4 million tonnes per year**

8 million items to enter oceans and seas every day, about 5 millions of which are thrown overboard or lost from ships



over 13,000 pieces of plastic litter are floating on every square kilometer of ocean surface

plastics, 89% of marine litter observed floating on ocean surface in the North Pacific



20th International Coastal Cleanup Campaign

Join us for this year's Cleanup (September 17, 2011)



Scientific Monitoring Protocol

The Ocean Conservancy would like to thank our major sponsors for making the International Coastal Cleanup possible.

The Ocean Conservancy
Advocates for wild, healthy oceans

U.S. Environmental Protection Agency

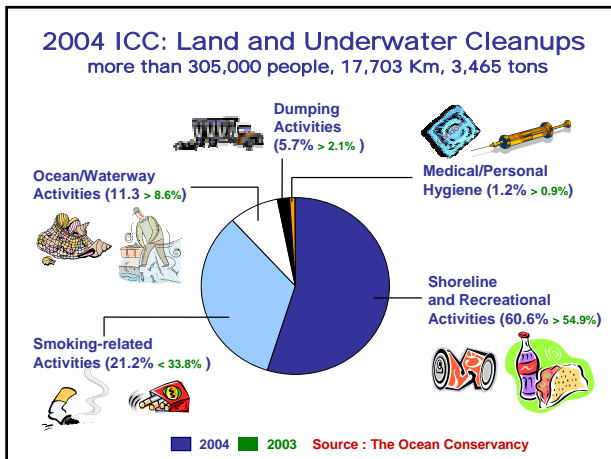


Asia International Coastal Cleanups

- Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam

Japan Environmental Action Network since 1998
Korea Marine Rescue Center since 2001





Results from the 2004 ICC:

Debris items	Total Number	Percent (%)
Cigarettes/Cigarette Filters	1,292,154	18.2
Food Wrappers/Containers	768,148	10.8
Caps/Lids	606,906	8.6
Plastic Beverage Bottles (<2 l)	531,085	7.5
Bags	498,184	7.0
Glass Beverage Bottles	472,999	6.7
Cups/Plates/Forks/Spoons	321,927	4.5
Beverage Cans	311,035	4.4
Straws/Stirrers	285,273	4.0
Tobacco Package/Wrappers	174,271	2.5
Totals	5,261,982	74.1

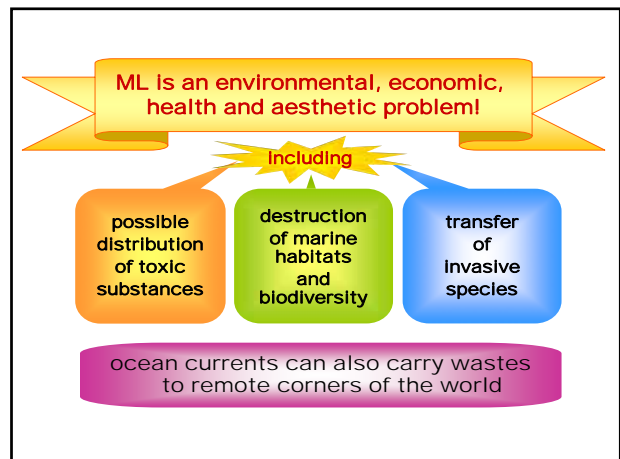
Source : The Ocean Conservancy

Main land-based sources

- municipal landfill (waste dumps) located on the coast
- riverine transport of waste from landfills or other sources along rivers and other inland waterways
- discharge of untreated municipal sewage, including storm water and occasional overflows
- industrial facilities: solid waste from landfills and untreated waste water
- tourism (recreational visitors to the coast; beach-goers)

Main sea-based sources

- merchant shipping, ferries and cruise liners
- fishing vessels
- military fleets and research vessels
- pleasure craft
- offshore oil and gas platforms
- aquaculture including fishing farming installations



- ### UNEP Milestones
- 1972: UNEP established after UN Conference on the Human Environment
 - 1973: Conventions on International Trade In Endangered Species of Wild Fauna and Flora (CITES)
 - 1975: Mediterranean Action Plan (first of 13 regional action plans under the UNEP RSP)
 - 1979: Bonn Conventions on Migratory Species
 - 1985: Vienna Conventions for the Protection of the Ozone Layer
 - 1987: Montreal Protocol on Substances that Deplete the Ozone Layer
 - 1988: Intergovernmental Panel on Climate Change (IPCC) established to assess information related to human-included climate change
 - 1989: Basel Convention on the Transboundary Movement of Hazardous and Other Wasters
 - 1992: Convention on Biological Diversity
 - 1995: Global Programme of Action (GPA) launched to protect marine environment
 - 1998: Rotterdam Convention on Prior Information Consent
 - 2000: MaimD Declaration (a call for action by the first Global Ministerial Environment Forum)
 - 2000: Millennium Declaration (environmental sustainability listed as one of eight MDG)
 - 2001: Stockholm Convention on Persistent Organic Pollutants (POPs)
 - 2002: Word Summit on Sustainable Development reaffirms UNEP's central role in international effort to achieve sustainable development
 - 2005: Bali Strategic Plan for Technology Support and Capacity Building adopted by UNEP Governing Council mandating national level support to developing countries
 - 2005: World Summit emphasizes key role of environment in sustainable development

GPA Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

UNEP started in 1982 addressing issues related to impacts on the marine environment from land-based activities

More specifically, the GPA aims at:

- 1 Identify and assess problems related to:
 - nature and severity of problems
 - contaminants
 - physical alteration
 - source of degradation
 - pollution concerned areas
- 2 Establish priorities for action by assessing the five factors
- 3 Set management objectives for priority problems for source categories and areas affected
- 4 Identify, evaluate and select strategies and measures
- 5 Develop criteria for evaluating the effectiveness of strategies and measures



2004 World Environment Day
"Wanted! Seas and Oceans: Dead or Alive?"

The marine environment is facing challenges that, if not addressed immediately and effectively, will have profound implications for sustainable development.

"**Nitrogen** overload from fertilizers is creating a growing number of oxygen-starved "dead zones" in coastal waters across the globes."

"**Marine litter** is killing up to a million seabirds and 100,000 sea mammals and turtles each year."

"Moreover, despite the growing reach and intensity of commercial fishing operations, total global fish catch is declining. Nearly three quarters of world fish stocks are being harvested faster than they then reproduce." - **Overfishing**

Resolution 1 of the 9th IGM (Busan, 2004)

Recognizes the importance and urgent need to establish and develop an activity on Marine Litter in NOWPAP region while avoiding duplication with existing global agreements and through consultations with other international agencies and organizations in the region,

Decides that the newly established RCU will take a lead on developing the Marine Litter activity and that the coordinator of NOWPAP will closely with RACs and how to proceed with this activity,

Agrees that a programme of work and approaches budget for this activity should be developed by the RCU for the next biennium, based on consultation between NOWP Focal Points, the RACs and the planned 'Intersessional Workshop', and be presented by the RCU for consideration by the Tenth Intergovernmental Meeting.

Recommendation 2 of Intersessional Workshop (Seoul, 2005)

Taking into account the proposal on the Sustainable Management of Marine Litter in the NOWPAP region presented by the secretariat (UNEP/NOWPAP IS. 1/4) with appreciation,

Being aware of the urgent need to develop and initiate a new project on marine litter in the region,

Recommends that NOWPAP RCU will develop and implement the Marine Litter project in close cooperation with the four RACs and newly nominated marine litter national focal points of the Member States,

Requests the secretariat to present the current draft proposal for discussion at the Tenth Intergovernmental Meeting in Toyama, Japan on 24-25 November 2005 with more detailed description of the four RACs' responsibilities as well as a workplan to be implemented, taking into the comments and concerns raised by NOWPAP Member States,

Resolution 4 of the 10th IGM (Toyama, 2005)

Being aware of the urgent need to develop an integrated management of marine litter in the NOWPAP region,

Noting recommendation 2 on marine litter initiatives in the NOWPAP region discussed and agreed at the NOWPAP Intersessional Workshop (UNEP/NOWPAP IS. 1/6),

Approves the revised project proposal on marine litter activity (UNEP/NOWPAP IG. 10/6),

Requests the NOWPAP RCU to start this activity as soon as possible in close cooperation with the NOWPAP RACs, UNEP and other international organizations and programme involved,

Requests the NOWPAP member states, RACs and marine litter Focal Point of each member to make utmost effort and fully support the implementation of this project schedule.



Work Plan of NOWPAP MALITA

- Initiation (1-6)
- Implementation (7-10)
- Building Ownership and Partnership (11)
- Information and Outreach (12-15)
- Sectoral Activities (16-19)
- Fundraising (20-21)

Regional Action Plan (22-23)



MALITA Initiation

2005/2006

1. Nomination of National Focal Points
2. Preparation of draft MALITA proposal
3. Presentation at Intersessional Workshop
6. Presentation at IGM
4. Existing Data and Information (2006)
5. Revised Proposal : Review Legal Instruments and Programmes of Members (2006)

MALITA Implementation

2006

7. Preparation of ML document
8. NOWPAP ML Regional Meeting (June)
9. Regional and National Strategies: Integrated Management
10. Join ICC Campaign (September)

Building Ownership and Partnerships

11. Approaches to Civil Societies and all major Stakeholders

Marine Litter in NOWPAP region

RCU: Draft MALITA Documents

NFPs: Legal Instruments and Programmes, Existing Data and Information

Campaign Civil Society and Stakeholders: Meetings (UNEP, RCU, NFPs, RACs)

Sectoral Guidelines: Regional and National Strategies on Integrated Management, Long-term Monitoring Programme, Waste Management Policies/Systems

Port Reception and Service Public Awareness: Draft Regional Action Plan

Funding

- Basic Activities by NOWPAP Trust Fund
- High Cost Initiatives
- Regional Investment
- other International
- National Activities

2005 UN GA: Agenda 75 Oceans and the law of sea Articles 65 - 68

UNEP GEP Medium-size Project
- a few pilot regions : still funded by NOWPAP Trust Fund, UNEP and National Funds

UNEP GEF Medium Size Project

- Review of relevant legal instruments and programmes
- Collection and review of existing data and information
- Development of Regional Action Plans on marine litter
- Building ownerships and partners with private sector and other stakeholders including NGOs
- Informational and outreach
- Fundraising (identification and approach to potential funding sources)

United Nations Environment Programme Regional Seas Programme since 1974

13 Regional Action Plans and 5 Partner Programmes

NOWPAP

Black Sea, East Asian Seas, East Africa, The ROPME Sea Area, Mediterranean, Northeast Pacific, Northwest Pacific, Red Sea and Gulf of Aden, South Asian Seas, South Pacific, South Pacific, South-East Pacific, West and Central Africa and Wider Caribbean, Antarctic, Arctic, Baltic, Caspian, North-East Atlantic

Conventions and Agreements related to Marine Litter Activity

- UN Convention on the Law of the Sea
- Agenda 21 and Johannesburg Plan of Implementation
- London Convention 1972 and the 1996 Protocol
- MARPOL Convention 73/78 Annex V
- Basel Convention
- Convention on Migratory Species
- GPA for the Protection of the Marine Environment from Land-based Activities
- FAO Code of Conduct for Responsible Fisheries
- CBD, with the Jakarta Mandate

Major reasons that Marine Litter problem appears to Increase worldwide

1. deficiencies in the implementation and enforcement of existing international and regional environmental related agreements, as well as national regulations and standards
2. littering practice from the shipping sector
3. lack of land-based infrastructure to receive litter
4. lack of awareness among main stakeholders

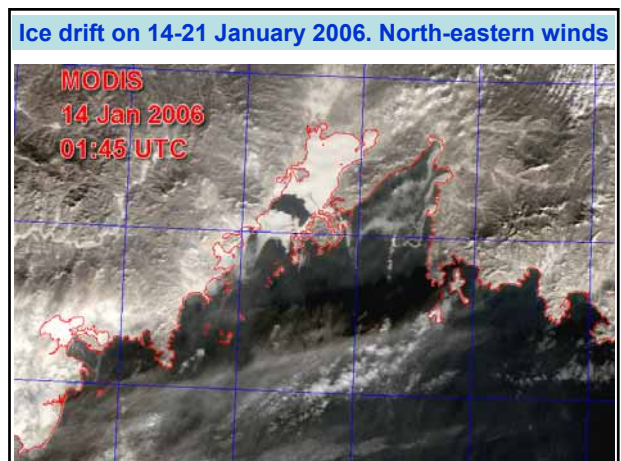
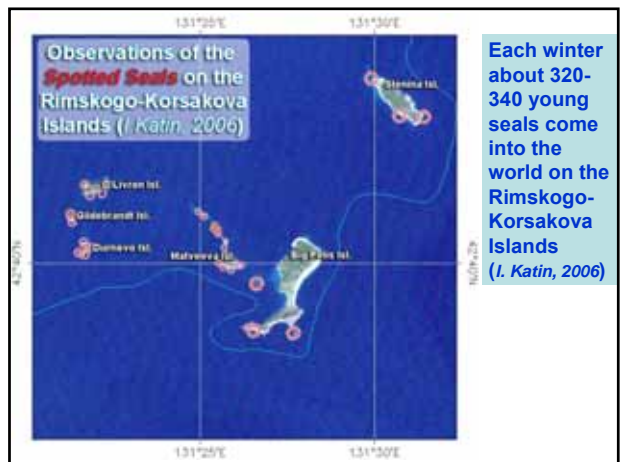
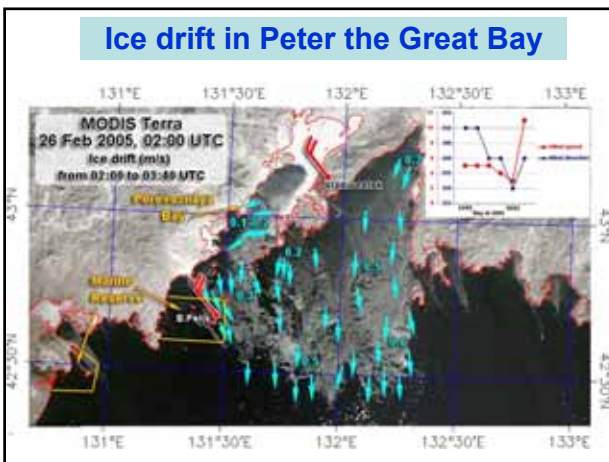
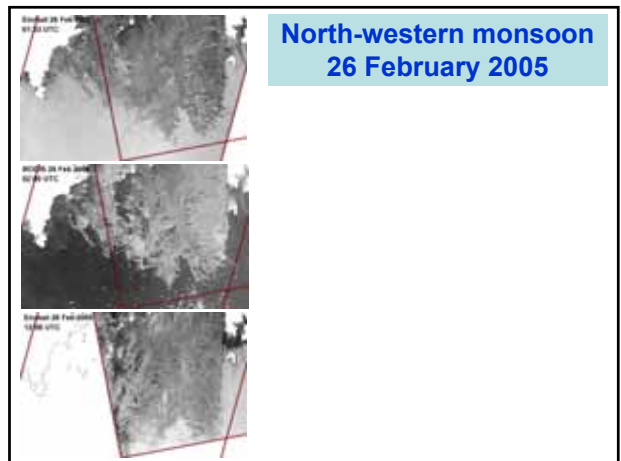
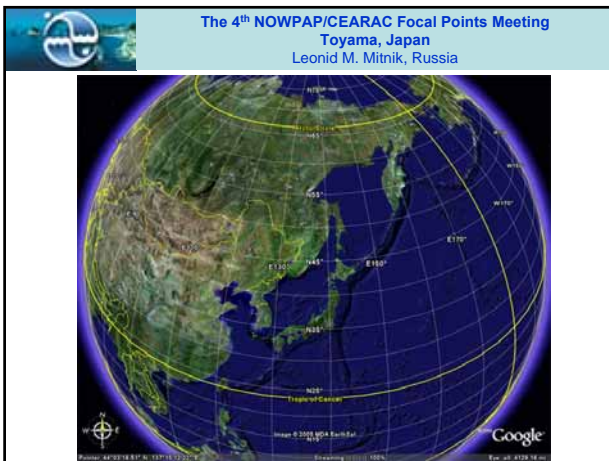


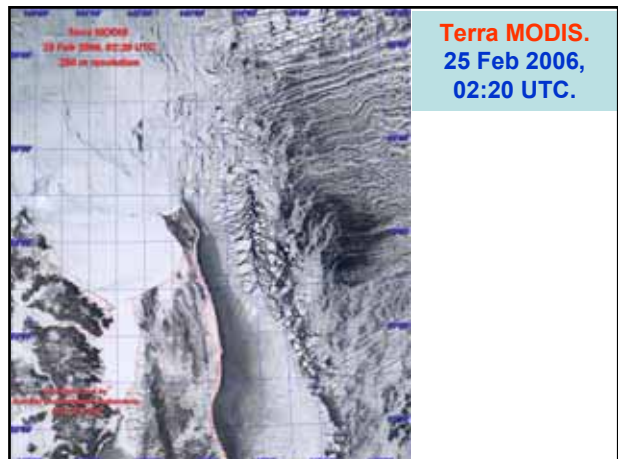
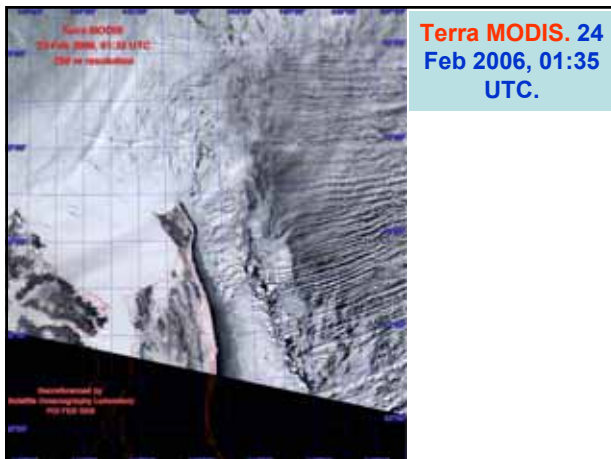
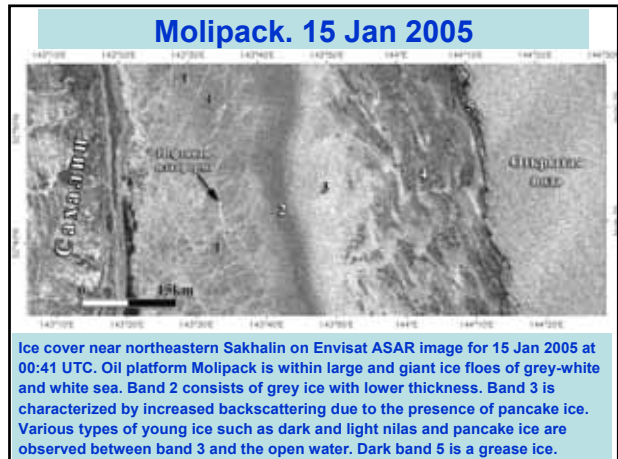
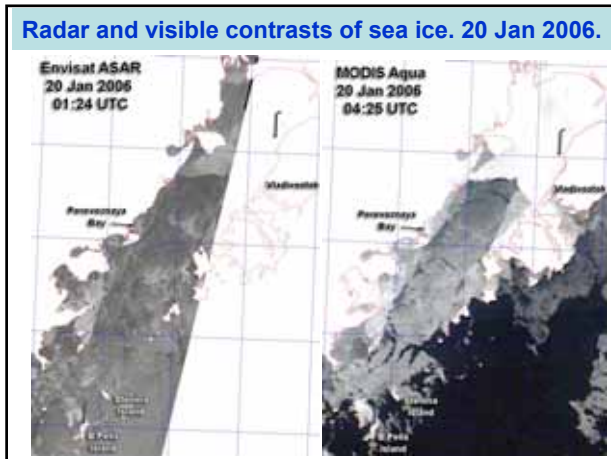
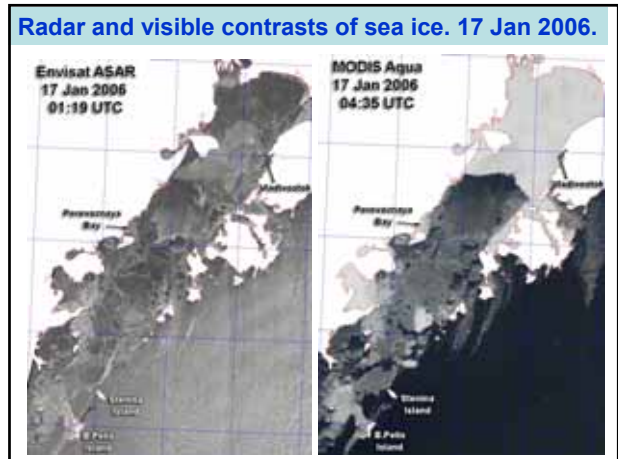
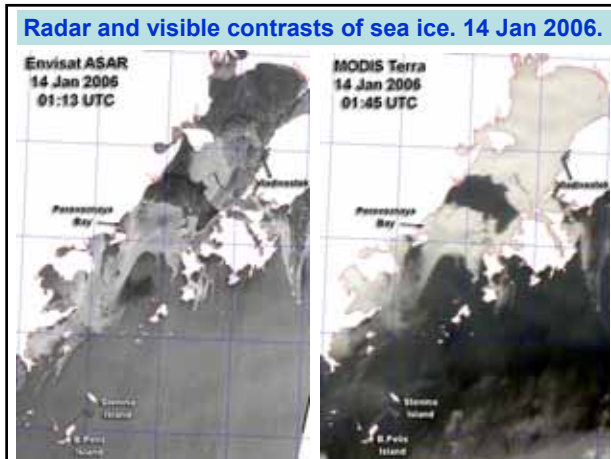
A collage of images illustrating NOWPAP efforts since 2005. The top left features the UNEP logo and the text 'NOWPAP effort made since 2005'. To the right is a banner with 'We the peoples' and a photo of a meeting. Below are four sections: 'Meetings and Workshops' with photos of conferences; 'Environment Education' with photos of classrooms and presentations; 'Cooperation' with a photo of a group of people; and 'Coastal Cleanup Campaign' with photos of people cleaning a beach.

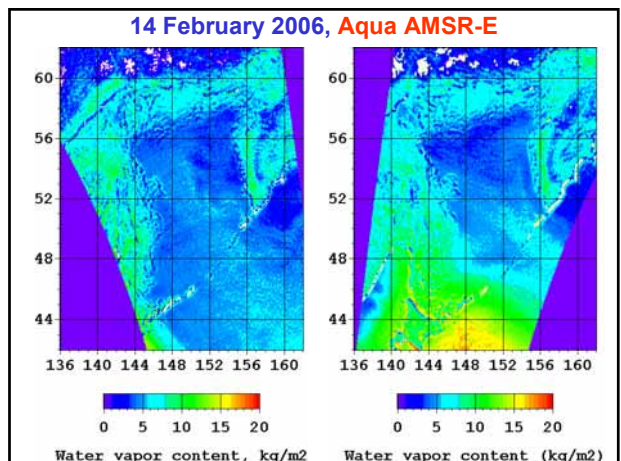
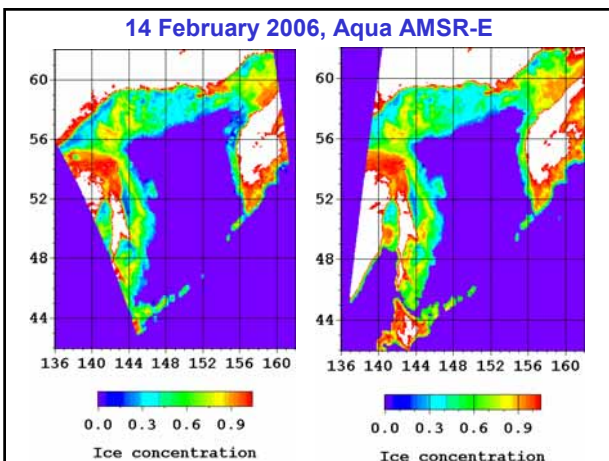
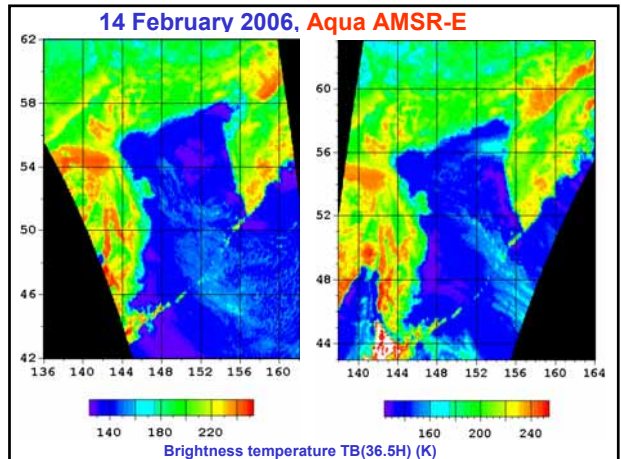
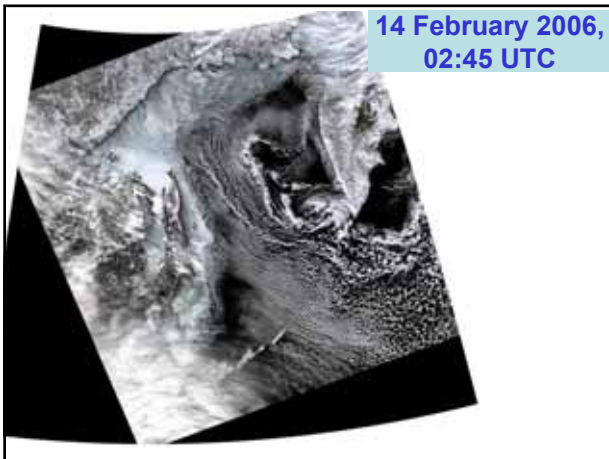
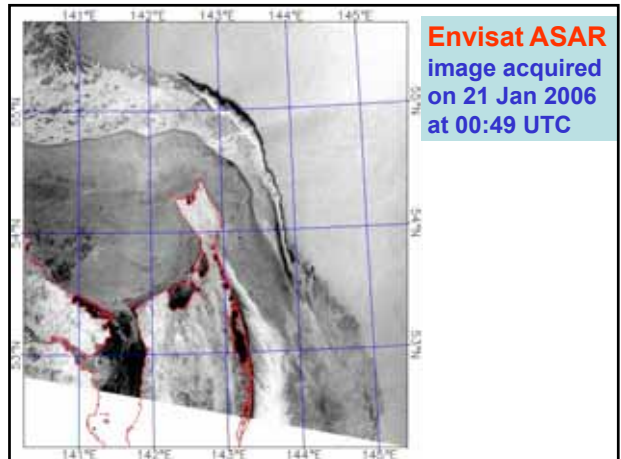
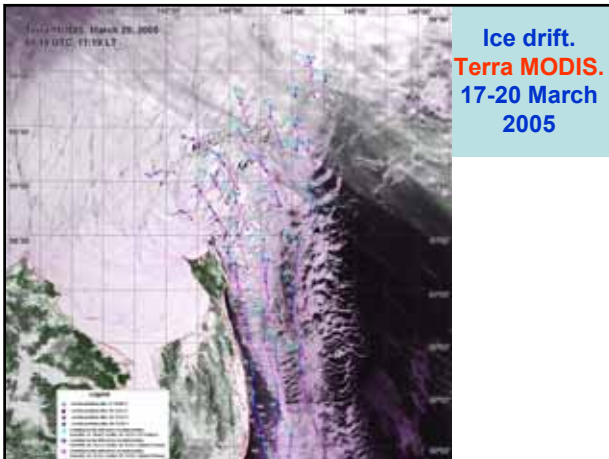


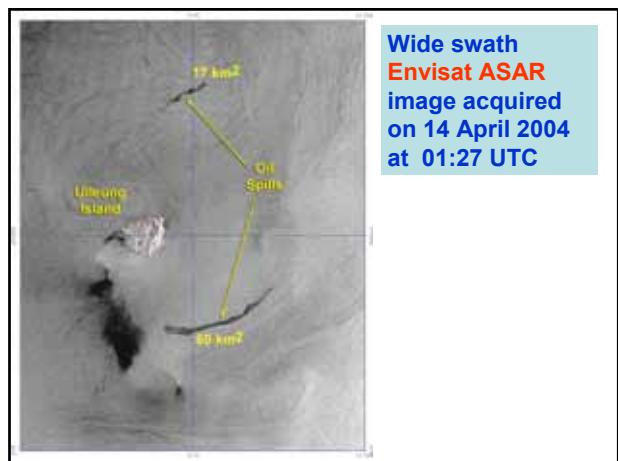
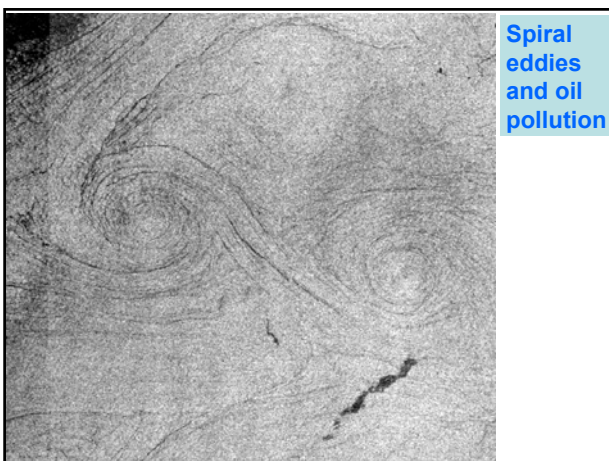
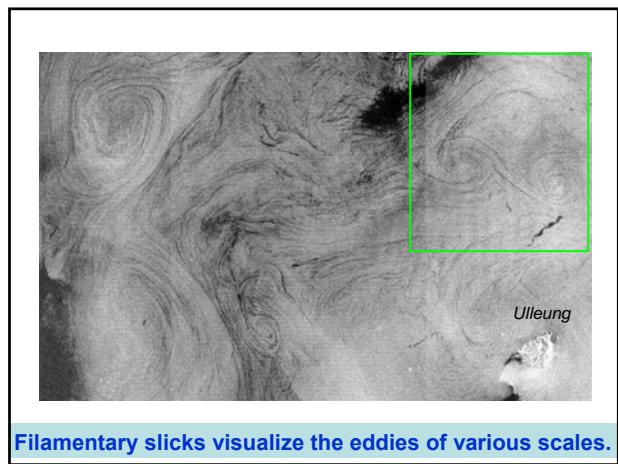
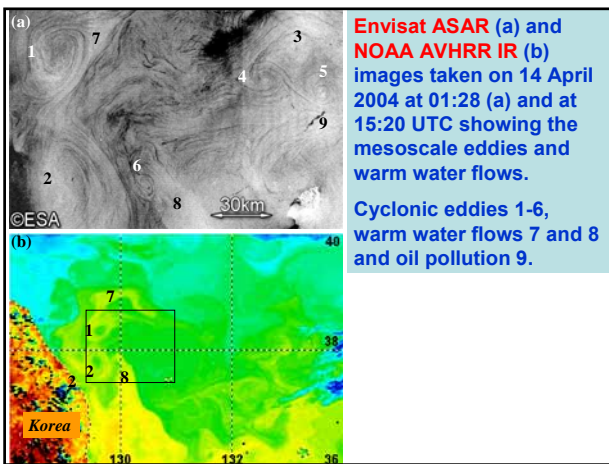
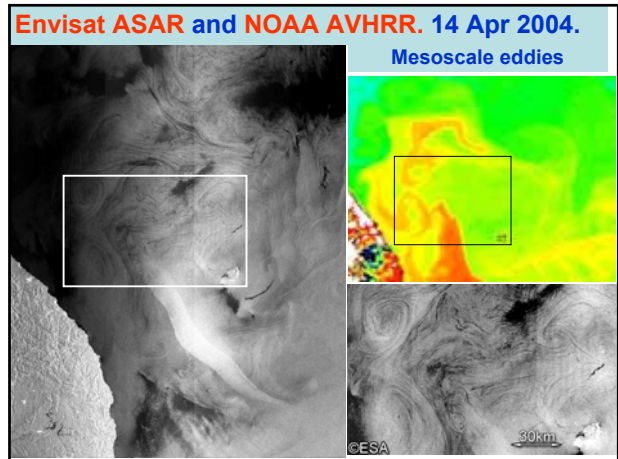
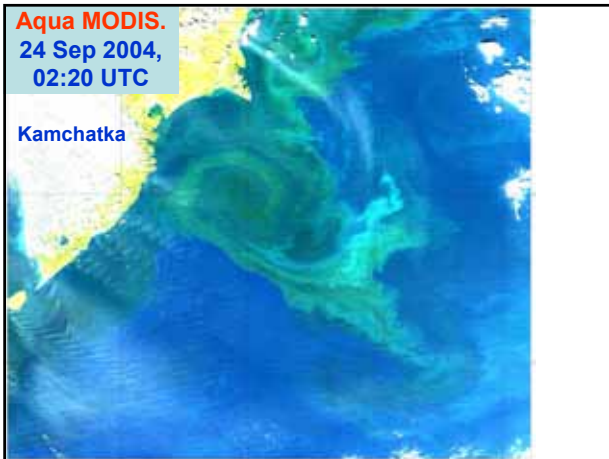
NOWPAP effort to reduce or prevent marine litter will benefit all those using the Northwest Pacific and its beaches

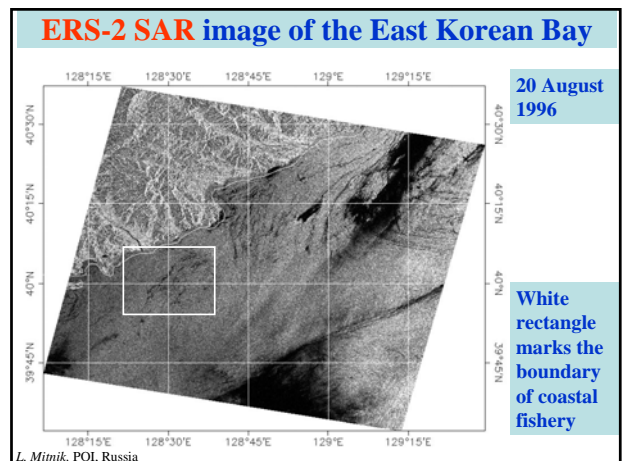
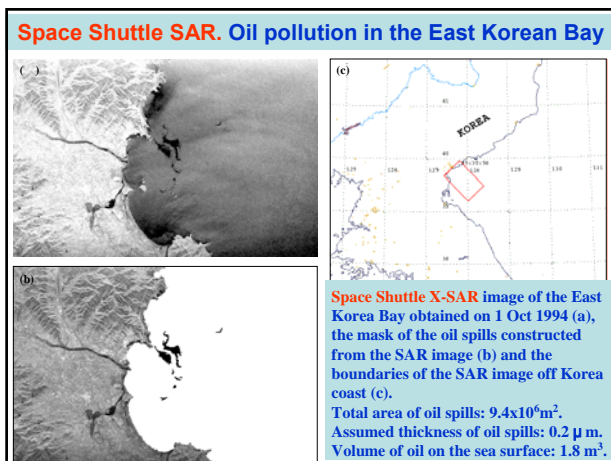
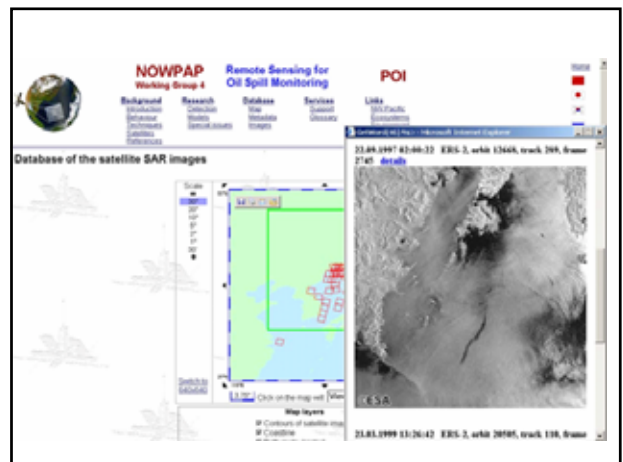
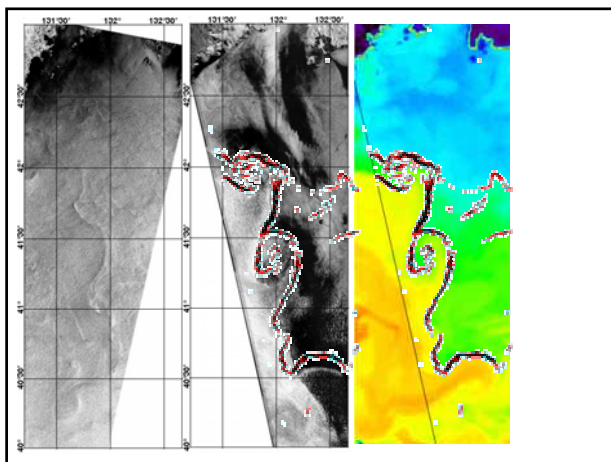
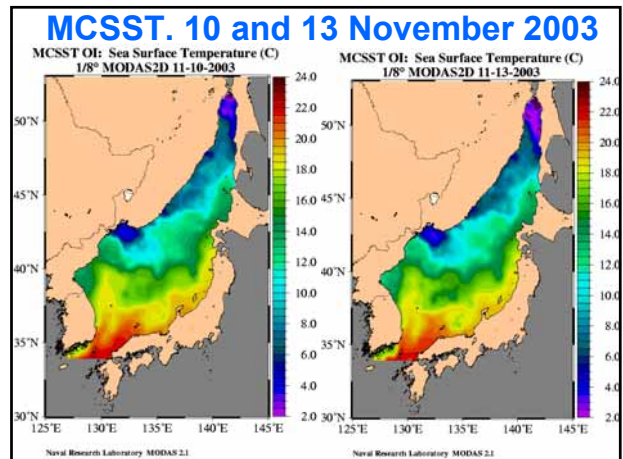
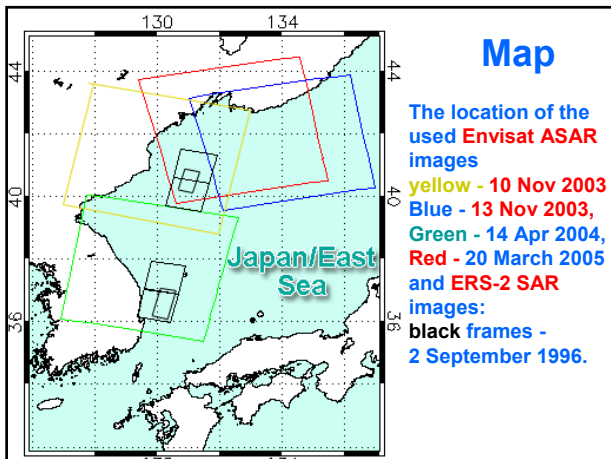


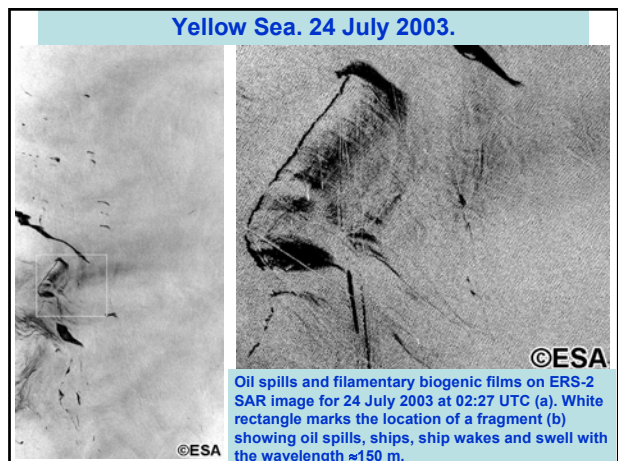
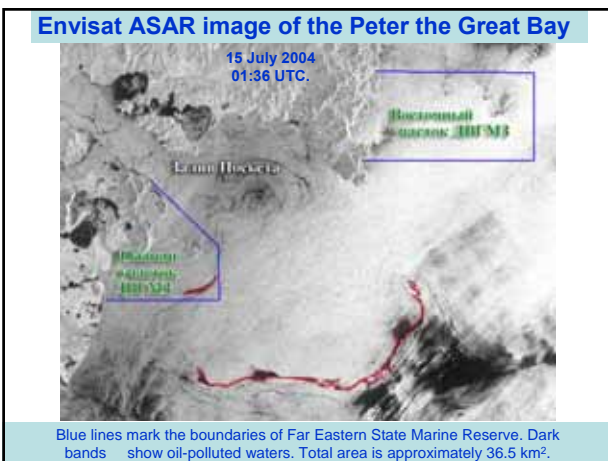
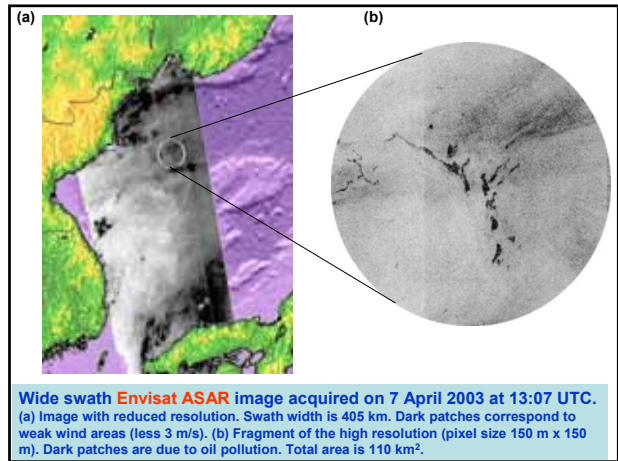
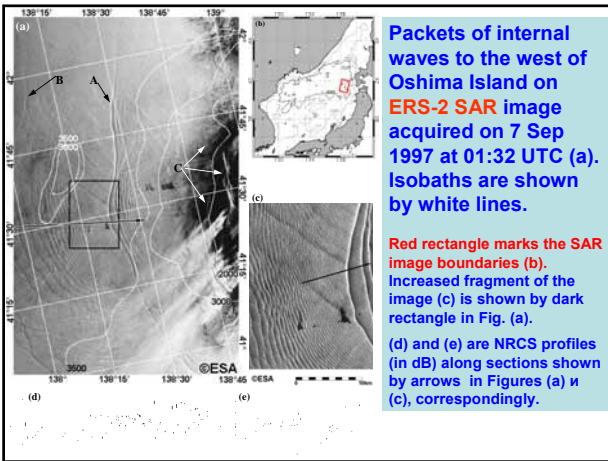
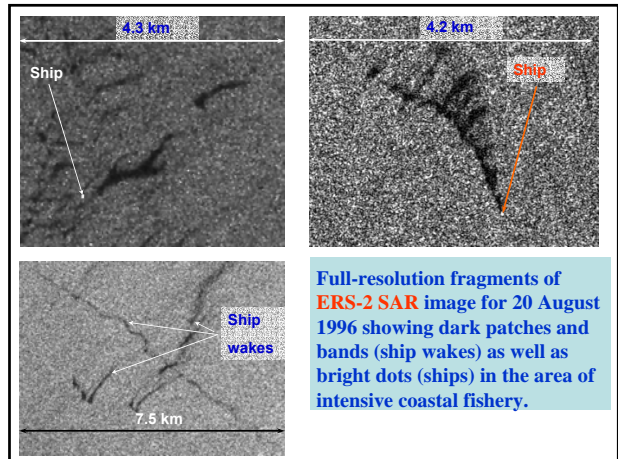
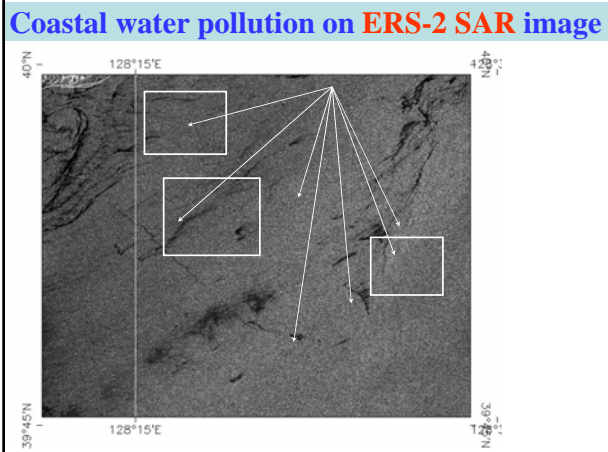


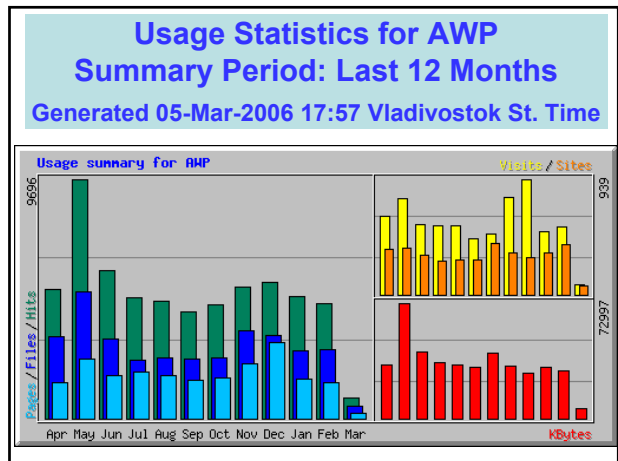
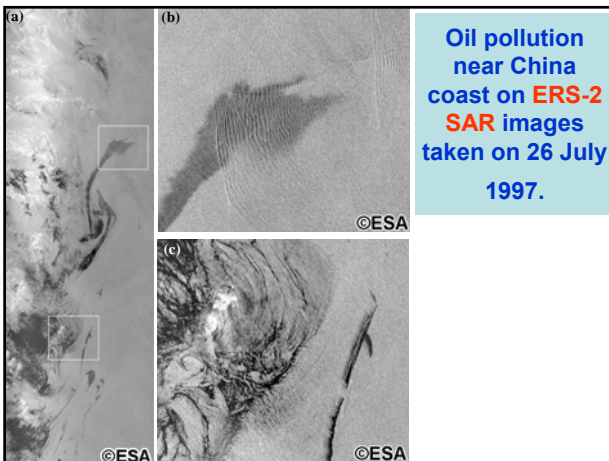












Summary by Month: Last 12 Months

Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Mar 2006	168	102	42	16	68	6204	81	214	513	842
Feb 2006	167	99	51	19	408	30018	555	1435	2772	4679
Jan 2006	158	87	51	16	336	32360	517	1586	2727	4924
Dec 2005	177	108	98	30	299	28560	939	3063	3368	5498
Nov 2005	177	118	74	26	339	33089	788	2224	3548	5334
Oct 2005	148	78	52	16	415	41157	498	1628	2437	4616
Sep 2005	143	79	52	15	281	32480	451	1561	2389	4304
Aug 2005	153	79	55	18	287	33547	558	1722	2464	4743
Jul 2005	158	76	60	17	275	35591	557	1869	2363	4912
Jun 2005	200	106	57	19	323	42096	574	1726	3201	6007
May 2005	312	165	78	25	379	72997	777	2426	5126	9696
Apr 2005	174	109	48	21	368	33847	633	1458	3296	5237
Totals						421946	6928	20912	34204	60792

Conclusion

- Satellite SAR: Envisat ASAR, ERS-2 SAR, ALOS – cooperation RAC members
- CEARAC – POI Web site
 - Remote Sensing for Oil spill Monitoring
 - Add new annotated images, include feedback with users
 - Cooperation with MERRAC
 - Education