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SRI LANKA: X-PRESS PEARL

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(Rob Holland, Technical Lead)

Oil Spill Response

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Incident overview

- ‘Super Eco 2700’ class container ship
  - Registered in February 2021
  - 10km NW of Colombo, Sri Lanka
  - Loss of cargo and risk of oil spill
    - 1486 containers on board
    - 81 classified as ‘Dangerous Goods’
    - 25 tonnes of nitric acid and other chemicals
    - 300m^3 HFO
    - Virgin plastic pellets (nurdles)

20th May 2021
Fire starts

25th May 2021
OSRL notified by ITOPF

26th May 2021
OSRL mobilised
Under BiMCO RESPONSECON 3rd party contract

2nd June 2021
Vessel sinks

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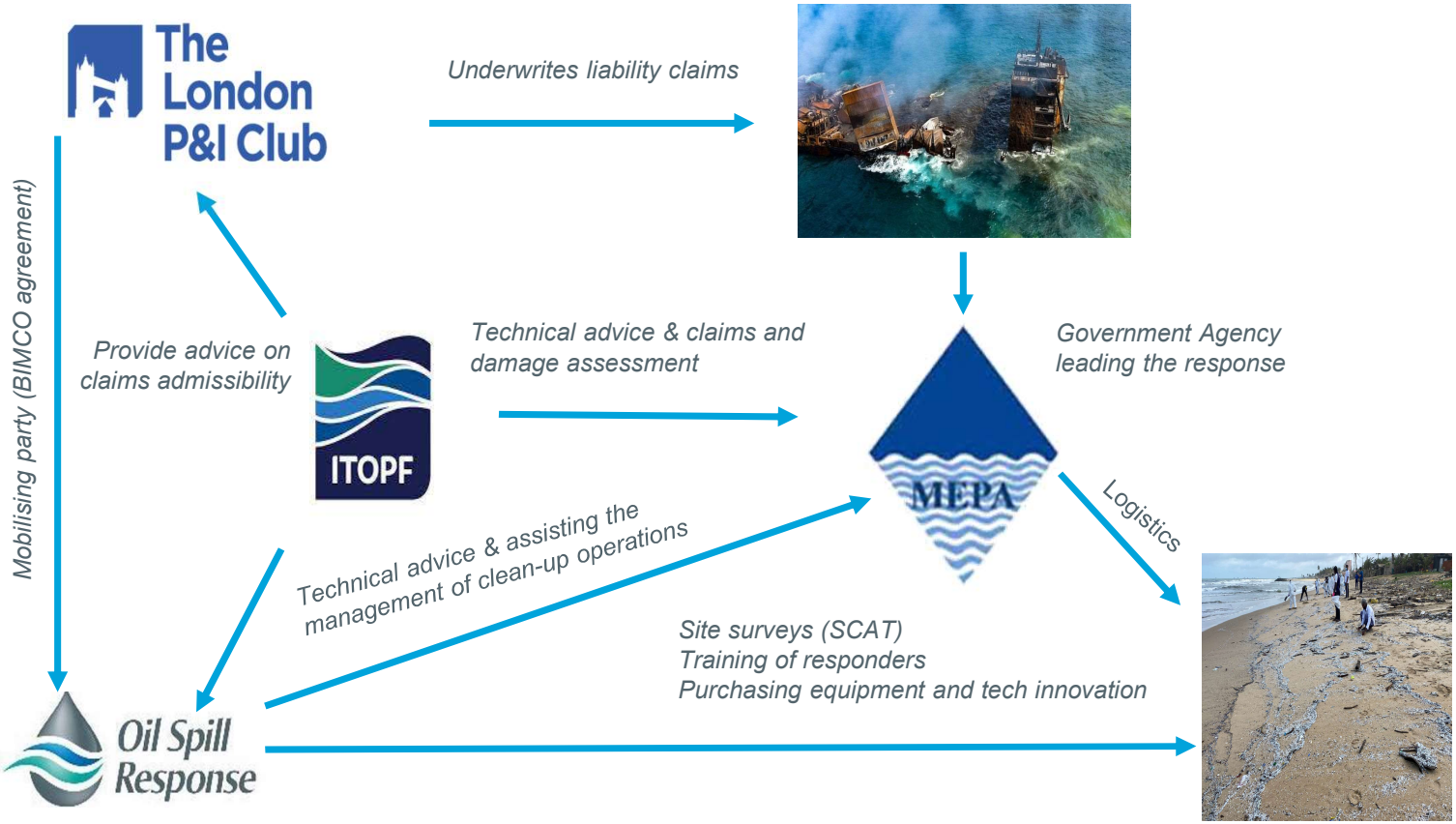
Roles & Responsibilities

Alignment through Objectives



OSRL Objectives:

- Ensure the health, safety, and security of all personnel.
- Implement industry good practice in all our response activities, and to offer advice and guidance as required.
- Propose and implement efficient/suitable nurdle recovery techniques including the development of new techniques and modification of equipment to improve the efficiency of nurdle collection.
- Work with local authority officials to maintain consistent shoreline operations / reporting.
- Advise, develop, and train clean-up crews inefficient and effective recovery techniques.
- Support on-going surveys to determine the extent and degree of nurdle impact.
- Development of Site Treatment Recommendations.

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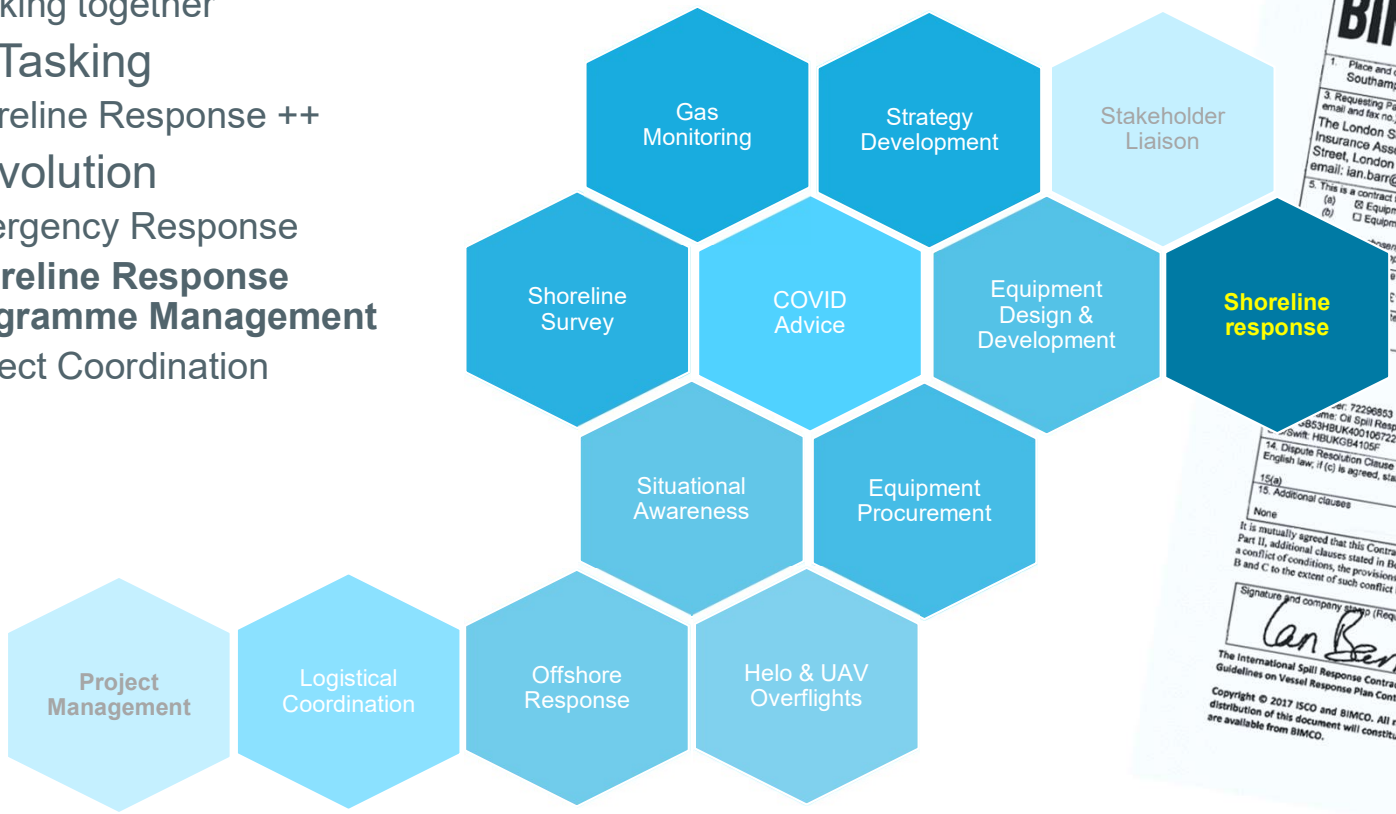
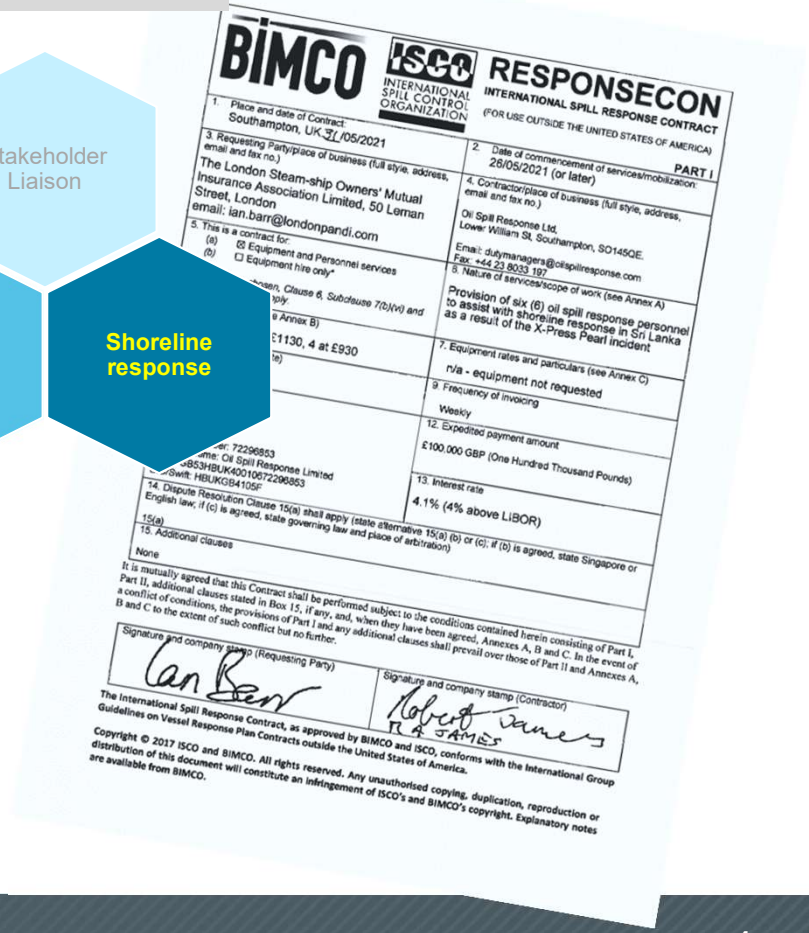
OSRL Involvement

'Provision of six (6) oil spill response personnel to assist with shoreline response in Sri Lanka as a result of the X-Press Pearl incident.'

- ITOPF Notification
  - Working together
- OSRL Tasking
  - Shoreline Response ++
- Role Evolution
  - Emergency Response
  - **Shoreline Response Programme Management**
  - Project Coordination





BIMCO ISCO INTERNATIONAL SPILL CONTROL ORGANIZATION

RESPONSECON
INTERNATIONAL SPILL RESPONSE CONTRACT
(FOR USE OUTSIDE THE UNITED STATES OF AMERICA)
PART I

1. Place and date of Contract: Southampton, UK 31/05/2021
2. Date of commencement of services/mobilization: 26/05/2021 (or later)
3. Requesting Party/place of business (full style, address, email and fax no.) The London Steam-ship Owners' Mutual Insurance Association Limited, 50 Leman Street, London email: ian.barr@londonpandi.com
4. Contractor/place of business (full style, address, email and fax no.) Oil Spill Response Ltd, Lower William St, Southampton, SO145QE. Email: dutymanagers@oilspillresponse.com Fax: +44 23 8033 197
5. This is a contract for: (a) ☒ Equipment and Personnel services (b) ☐ Equipment hire only*
6. Nature of services/scope of work (see Annex A) Provision of six (6) oil spill response personnel to assist with shoreline response in Sri Lanka as a result of the X-Press Pearl incident
7. Equipment rates and particulars (see Annex C) n/a - equipment not requested
9. Frequency of invoicing Weekly
12. Expedited payment amount £100,000 GBP (One Hundred Thousand Pounds)
13. Interest rate 4.1% (4% above LIBOR)
14. Dispute Resolution Clause 15(a) shall apply (state alternative 15(a) (b) or (c); if (b) is agreed, state Singapore or English law; if (c) is agreed, state governing law and place of arbitration) 15(a)
15. Additional clauses None

It is mutually agreed that this Contract shall be performed subject to the conditions contained herein consisting of Part I, Part II, additional clauses stated in Box 15, if any, and, when they have been agreed, Annexes A, B and C. In the event of a conflict of conditions, the provisions of Part I and any additional clauses shall prevail over those of Part II and Annexes A, B and C to the extent of such conflict but no further.

Signature and company stamp (Requesting Party) | Signature and company stamp (Contractor)

The International Spill Response Contract, as approved by BIMCO and ISCO, conforms with the International Group Guidelines on Vessel Response Plan Contracts outside the United States of America.

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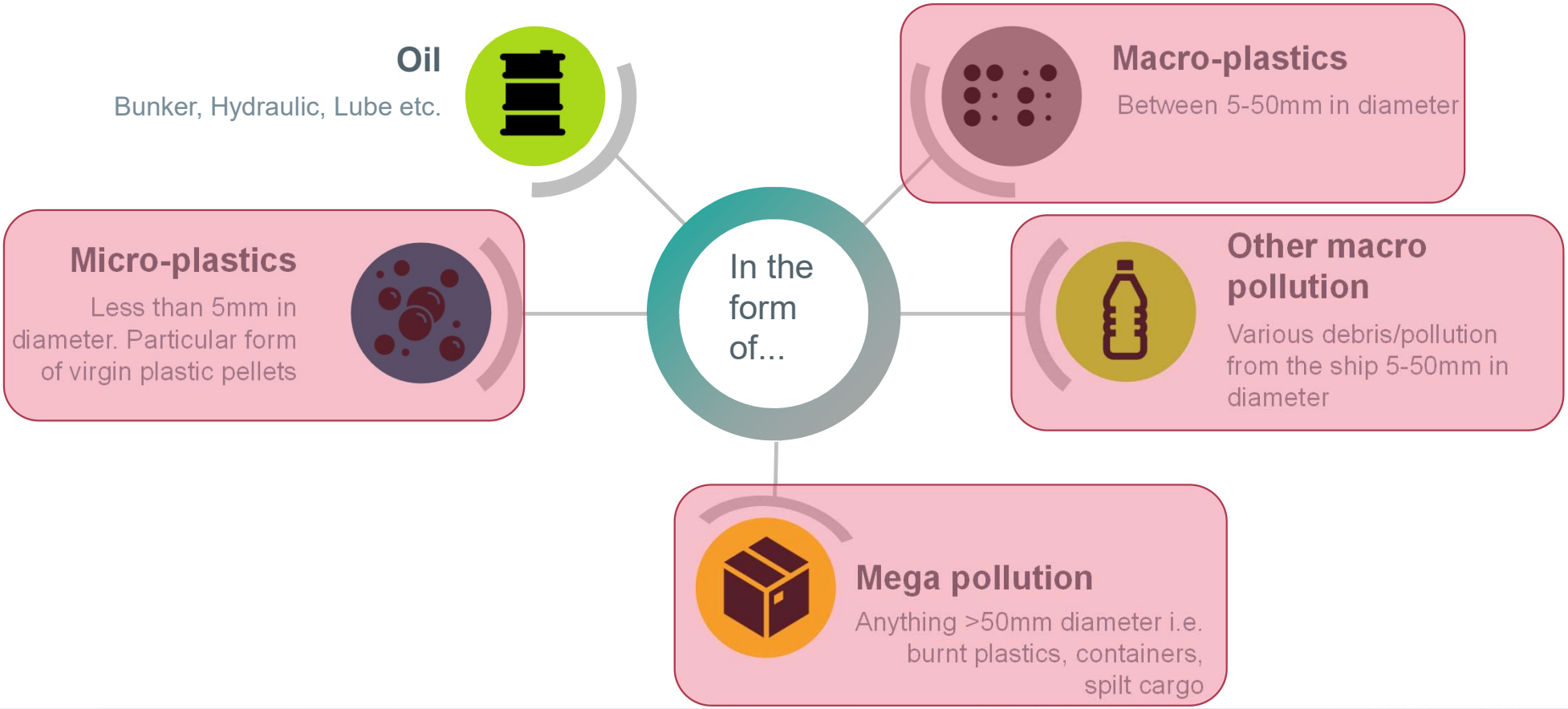
Understanding the pollution



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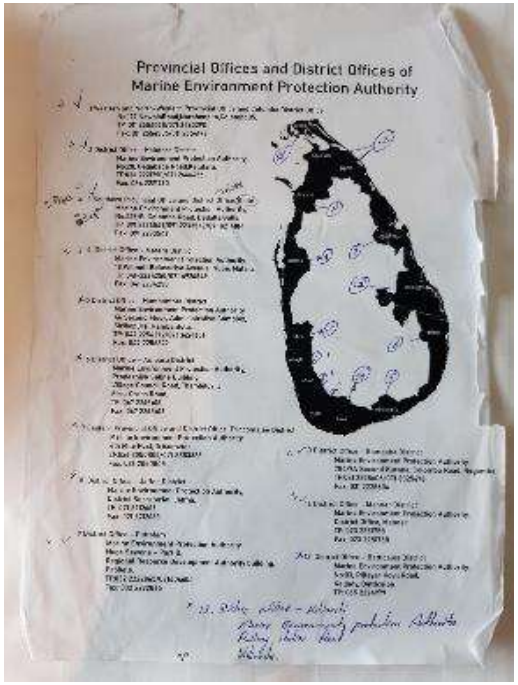
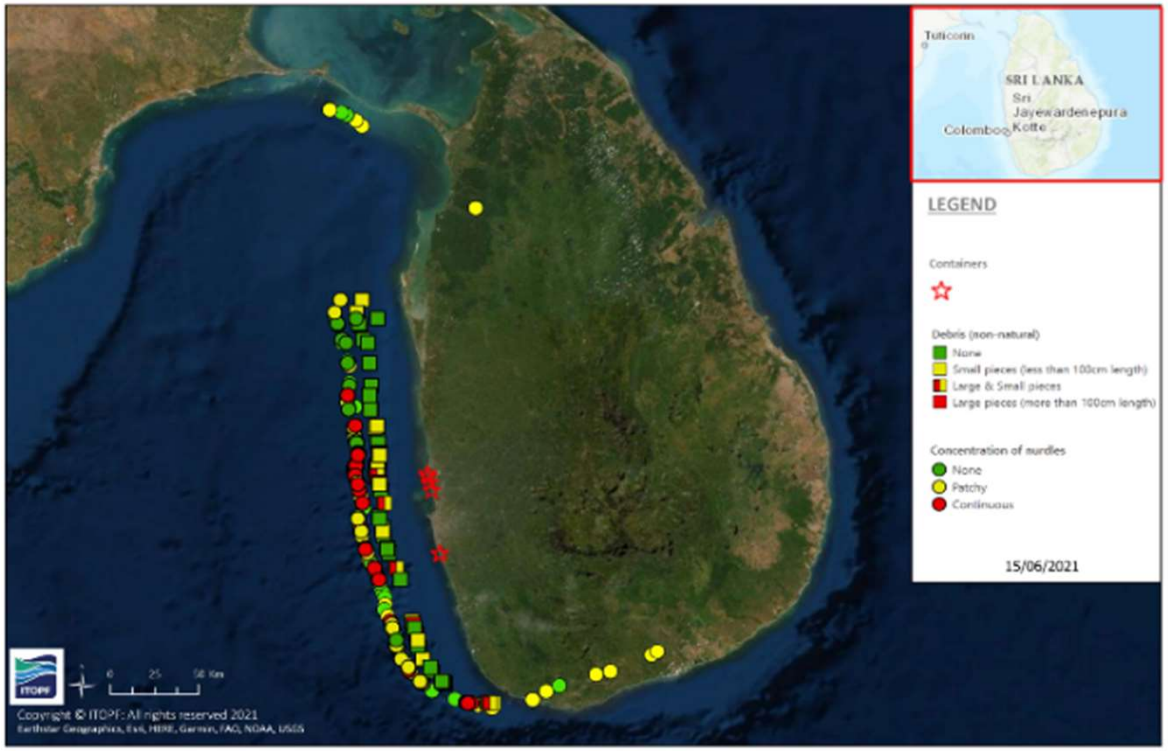
Situational Awareness





Surveyed impact on the Western and Southern coastline, surveyed by MEPA, GAC, ITOPF & OSRL via ITOPF app.

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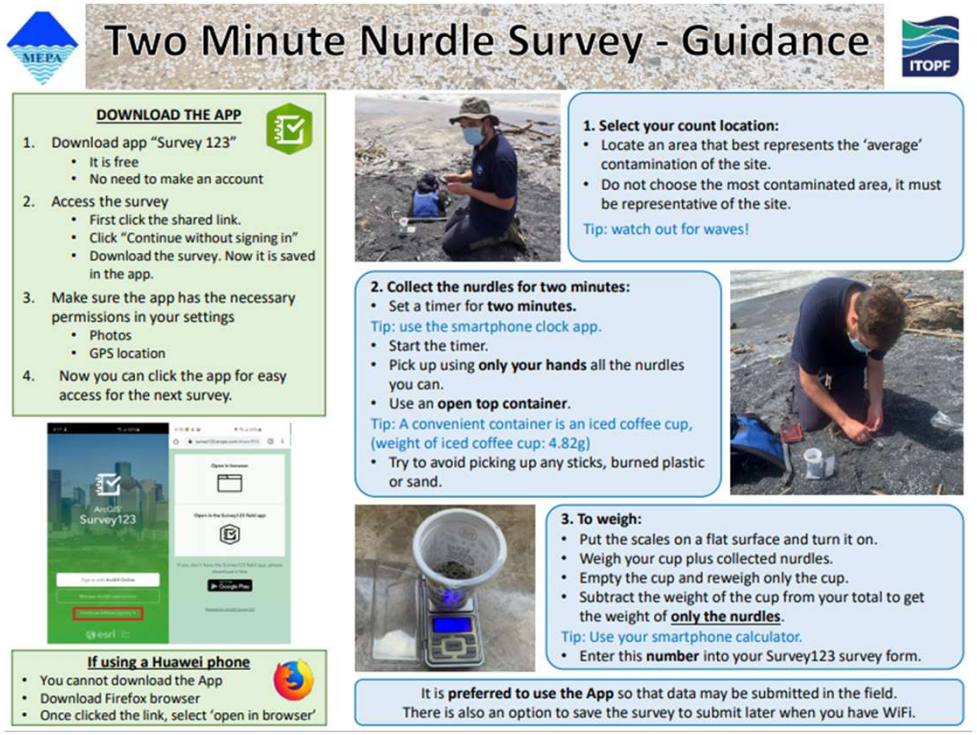
Shoreline Surveys

Mapping Nurdle Concentrations

> ‘SCAT’ Standardisation



Two Minute Nurdle Survey - Guidance

DOWNLOAD THE APP

1. Download app “Survey 123”
   - It is free
   - No need to make an account
2. Access the survey
   - First click the shared link.
   - Click “Continue without signing in”
   - Download the survey. Now it is saved in the app.
3. Make sure the app has the necessary permissions in your settings
   - Photos
   - GPS location
4. Now you can click the app for easy access for the next survey.

If using a Huawei phone

- You cannot download the App
- Download Firefox browser
- Once clicked the link, select ‘open in browser’

1. Select your count location:

- Locate an area that best represents the ‘average’ contamination of the site.
- Do not choose the most contaminated area, it must be representative of the site.

Tip: watch out for waves!

2. Collect the nurdles for two minutes:

- Set a timer for **two minutes.**

Tip: use the smartphone clock app.

- Start the timer.
- Pick up using **only your hands** all the nurdles you can.
- Use an **open top container**.

Tip: A convenient container is an iced coffee cup, (weight of iced coffee cup: 4.82g)

- Try to avoid picking up any sticks, burned plastic or sand.

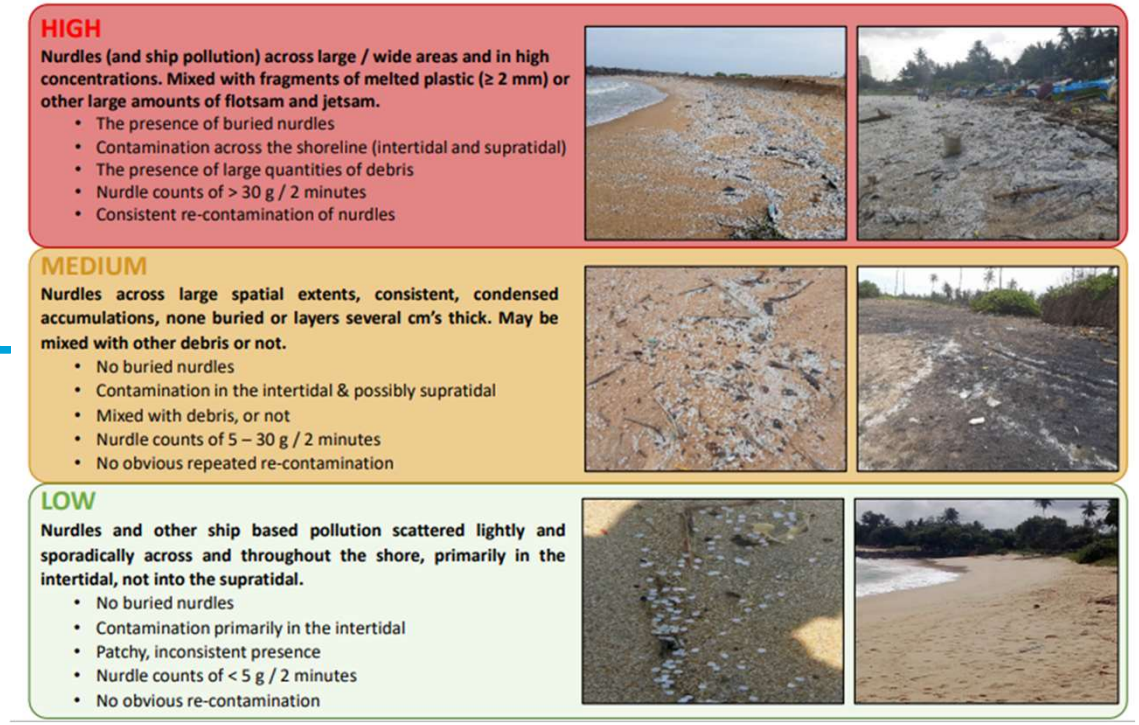
3. To weigh:

- Put the scales on a flat surface and turn it on.
- Weigh your cup plus collected nurdles.
- Empty the cup and reweigh only the cup.
- Subtract the weight of the cup from your total to get the weight of **only the nurdles**.

Tip: Use your smartphone calculator.

- Enter this **number** into your Survey123 survey form.

It is **preferred to use the App** so that data may be submitted in the field.
There is also an option to save the survey to submit later when you have WiFi.



HIGH

Nurdles (and ship pollution) across large / wide areas and in high concentrations. Mixed with fragments of melted plastic (≥ 2 mm) or other large amounts of flotsam and jetsam.

- The presence of buried nurdles
- Contamination across the shoreline (intertidal and supratidal)
- The presence of large quantities of debris
- Nurdle counts of > 30 g / 2 minutes
- Consistent re-contamination of nurdles

MEDIUM

Nurdles across large spatial extents, consistent, condensed accumulations, none buried or layers several cm’s thick. May be mixed with other debris or not.

- No buried nurdles
- Contamination in the intertidal & possibly supratidal
- Mixed with debris, or not
- Nurdle counts of 5 – 30 g / 2 minutes
- No obvious repeated re-contamination

LOW

Nurdles and other ship based pollution scattered lightly and sporadically across and throughout the shore, primarily in the intertidal, not into the supratidal.

- No buried nurdles
- Contamination primarily in the intertidal
- Patchy, inconsistent presence
- Nurdle counts of < 5 g / 2 minutes
- No obvious re-contamination

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Response techniques

- Local resources
- Initial resources available
- Little training required
- **High labour needs**
- **Resource heavy**
- **Issues with structure**
- **Separation of background debris**

- Local resources
- Little training required
- Better background debris separation
- **Moderate debris & sand separation**
- **High labour needs**
- **Resource heavy**

- Local resources
- Little training required
- Clean nurdle separation
- **High labour needs**

- Local resources
- Moderate training required
- **Moderate debris & sand separation**
- **Moderate labour needs**
- **Logistics & security of equipment**

- Low labour needs
- Large area coverage
- **Moderate debris & sand separation**
- **International resources**
- **Logistics & security of equipment**
- **High level of training required**

Manual

Enhanced manual

Flotation

Mechanical

Enhanced Mechanical

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Main challenges

- Limited personnel and local equipment resources
- Logistics of the equipment restricted movement of resources
- Language barriers for training personnel
- Sustained response without the 'biodegradation' seen with an oil spill
- Large % of background debris along with the nurdles
- No preparedness framework currently for plastic response
- Lessons learned not widely shared from previous experience
- Waste challenges
- Local communities: reduced accessibility

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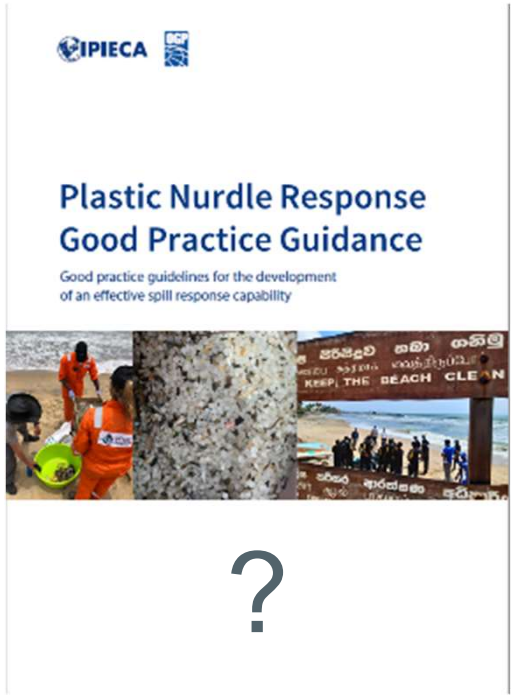
Key Take-Aways

> What have we learned as OSRL?

- Another form of hydrocarbon
  - Same but (very) different!
- Responder skills are transferable
  - Adaptability was a core strength
- The plastic risk transcends the energy transition
  - Plastic movement as feedstock will continue
- As with oil, prevention and preparedness are essential
  - So far, this is embryonic, at best
- Always more to learn
  - X-Press, 2021 = Torrey Canyon, 1967…?
  - Good practice guide...?



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Any questions?