

X-PRESS PEARL

HNS CASE STUDY

HNS Convention Workshop

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ITOPF
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INCIDENT OVERVIEW

Vessel:	Containership X-PRESS PEARL
GT:	30,911
Oil onboard:	320 MT LSHFO
Containers on board:	1,486
DG Containers:	81





Timeline

20 th May 2021	Fire breaks out
25 th May 2021	Fire becomes out of hand and crew are evacuated
2 nd June 2021	Vessel sinks
2 nd June 2021	ITOPF arrives on site

NURDLES



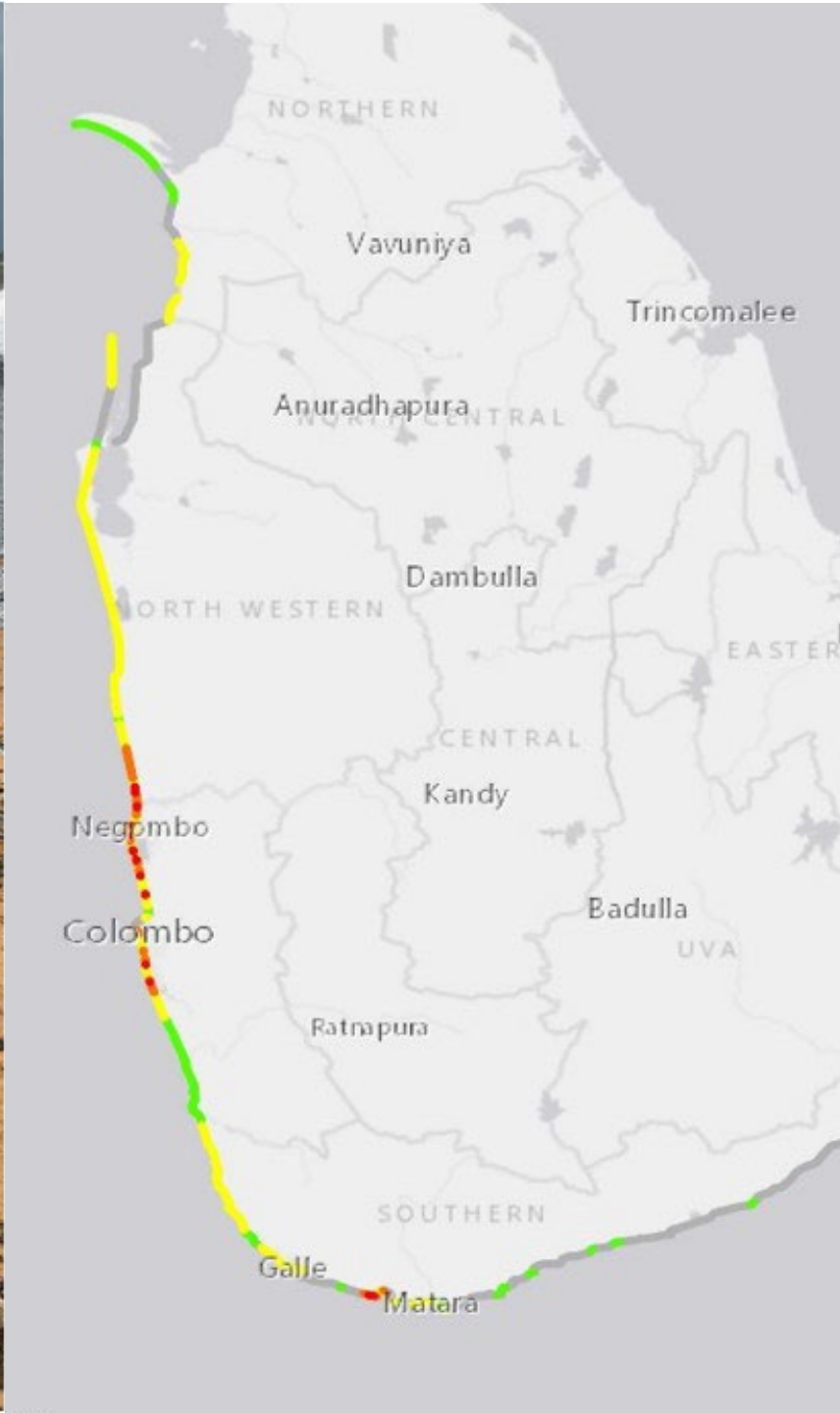
175



700



1,000



DANGEROUS GOODS ON-BOARD

LITHIUM ION
BATTERIES

ALUMINIUM
REMELTING BY-
PRODUCTS

METHANOL

VINYL
ACETATE,
STABILISED

CARBON
DIOXIDE

SODIUM
METHYLATE

NITRIC ACID

ENVIRONMENTALLY
HAZARDOUS
SUBSTANCE UN 3082

SODIUM
METHYLATE IN
ALCOHOL

SODIUM
HYDROXIDE
SOLUTION

PERFUMERY
PRODUCTS

FIRE
EXTINGUISHERS
(COMPRESSED OR
LIQUIFIED GAS)

POLYMERIC BEADS,
EXPANDABLE EVOLVING
FLAMMABLE VAPOUR

RESIN
SOLUTION,
FLAMMABLE

SODIUM
HYDROXIDE,
SOLID

RISK CATEGORIES

CLASS 4.2 – FLAMMABLE SOLIDS: SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION

**SODIUM
METHYLATE**

CLASS 2.2 – COMPRESSED GAS: NON-FLAMMABLE GASES

**CARBON
DIOXIDE**

CLASS 8 - CORROSIVES

NITRIC ACID

**SODIUM
HYDROXIDE
SOLUTION**

**SODIUM
HYDROXIDE,
SOLID**

CLASS 9 – MISCELLANEOUS DANGEROUS SUBSTANCES AND ARTICLES

**LITHIUM ION
BATTERIES**

**FIRE EXTINGUISHERS
(COMPRESSED OR
LIQUIFIED GAS)**

**ENVIRONMENTALLY
HAZARDOUS
SUBSTANCE UN 3082**

**POLYMERIC BEADS,
EXPANDABLE EVOLVING
FLAMMABLE VAPOUR**

CLASS 3 – FLAMMABLE LIQUIDS

METHANOL

**RESIN SOLUTION,
FLAMMABLE**

**VINYL ACETATE,
STABILISED**

CLASS 4.3 – FLAMMABLE SOLIDS: SUBSTANCE WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES

**ALUMINIUM
REMELTING BY-
PRODUCTS**

**SODIUM METHYLATE
IN ALCOHOL**

**PERFUMERY
PRODUCTS**

OTHER CARGO

- Sulfur
- Other metal ingots
- Fluorides of aluminium
- Sodium sulphate
- Decomposing foodstuffs
- General plastic waste
- Textiles and fibres
- Urea
- Assorted oils:
 - paraffin,
 - grease,
 - lubricating,
 - brake fluid
- Asphalt
- Quicklime
- Molybdcic Oxide

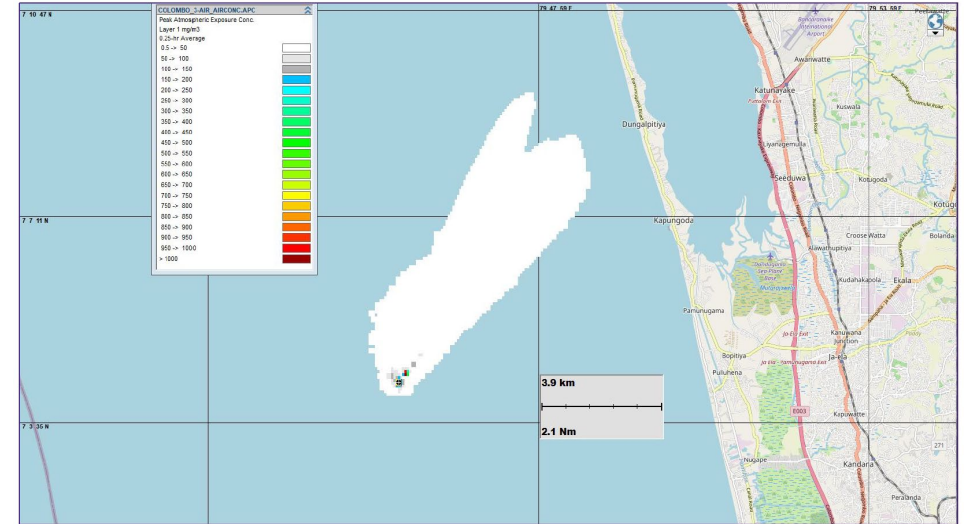


**Urea
Prill**

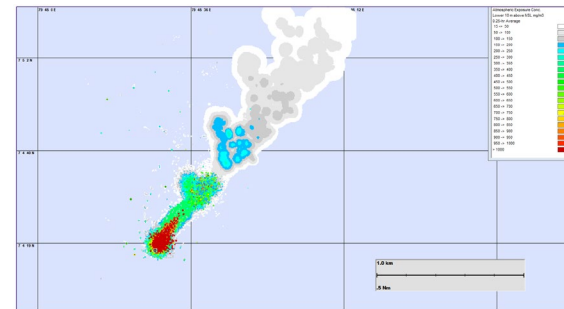


PLUMES

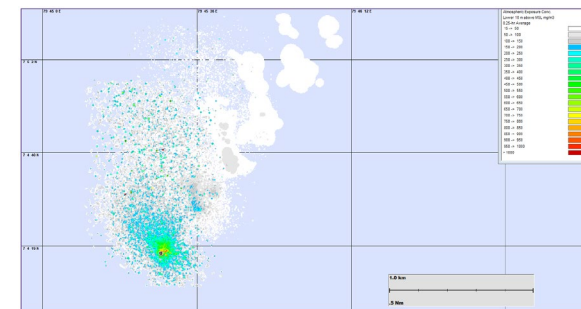
- No evacuation
- Smoke and chemical plumes predicted to dissipate before reaching shore
- Gas testing found no detectable concentrations



Nitric Acid Vapours



Vinyl Acetate



Methanol

(All models for 15 min exposure limits at < 10m above MSL)



SHORE STRANDING

- General public issues
- Three containers on shore
- Stranding:
 - Fruit and packaging
 - Rolls of paper
 - Burnt debris
 - Plastic pellets



STORAGE CONTAINERS

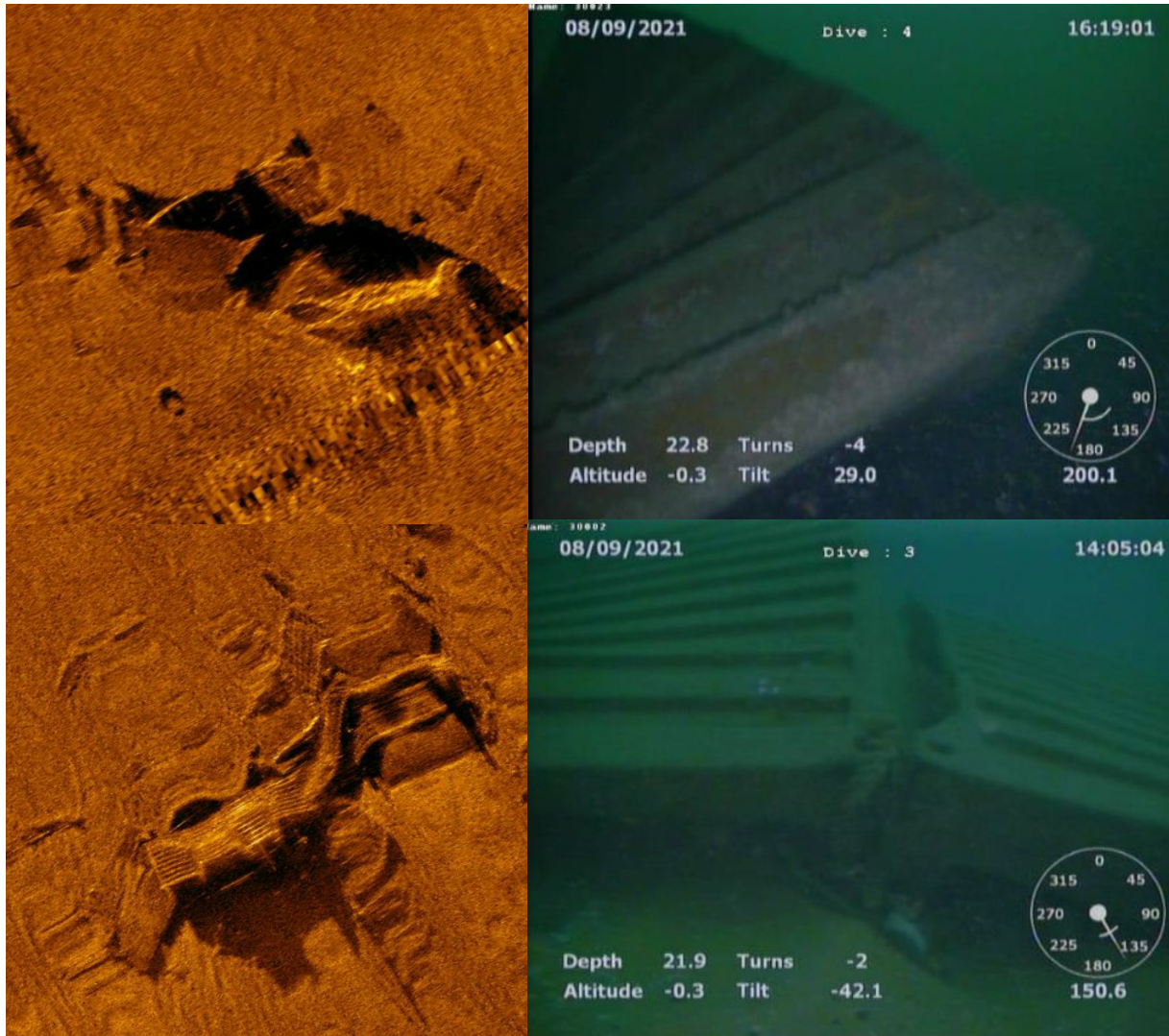


- Nurdle and debris storage.
- Three months in heat.
- HAZMAT suits.
- Samples collected



SUNKEN DEBRIS

- Concerns for substances in sunken containers.
- Rapid surveys of debris and containers on seafloor necessary.
- Prioritise recovery.



ENVIRONMENTAL MONITORING



- Monitoring typically a large part of an HNS incident.
- Environmental monitoring ongoing.

THANK
YOU

