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X-Press Pearl disaster may not be over yet

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In May last year, the *X-Press Pearl*, a cargo vessel carrying hazardous chemicals, oil and plastics, caught fire off the coast of Sri Lanka, causing the biggest maritime disaster in Sri Lankan history. Expert reports released early this year say billions of plastic pellets that washed ashore from the disaster carry traces of heavy metals and other toxic chemicals of great risk to individuals from coastal communities and to marine animals and birds.

The pellets, called nurdles, washed onto Sri Lankan beaches as the disaster unfolded, turning the golden sands murky grey. Although the nurdles were white onboard, the vessel had been on fire for days before it could be doused, resulting in some of the nurdles being burned before ending up on beaches, and turning grey. Other nurdles sunk to the sea bed through the glittering turquoise-blue waters, to be carried to distant shores by the ocean currents.

Then came the carcasses of turtles, fish and other marine species, even months after the disaster. Many showed scorch marks that experts believe to be from chemical burns, as some of the vessel's cargo included hazardous materials. Animal samples were sent abroad for laboratory testing more than a year ago, but results are yet to be released to the public.

Now close to 18 months after the disaster, the nurdles have become more evasive, buried under the sand and more difficult to spot, making their removal from the beaches a massive challenge. Groups of volunteers now sift through the sand with strainers, seeking nurdles hiding in the sand layers.

However, reports released by the Woods Hole Oceanographic Institution (WHOI) and International Pollutants Elimination Network (IPEN), in February, speak of the complex nature of the nurdles washed ashore – partly because these exist as burnt lumps – with traces of carcinogens, heavy metals and endocrine disrupting chemicals such as bisphenol A. IPEN believe the latter to be from the epoxy resin cargo in the ship, which they now suspect to be present on the beaches and in the ocean. IPEN analysis has also revealed the presence of heavy metals, and polyaromatic hydrocarbons (PAHs) in the burnt lumps, some at the same levels as established serious-risk concentrations.

These findings are worrying for the volunteers, who are frequently in contact with the nurdles, wearing only gloves and no other protection gear. Yet, the volunteers and the coastal communities have been largely unaware of the potential dangers they are in.

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The risks do not end here; nurdles, being the same size as food consumed by marine species, including birds, have a high chance of being ingested – with the potential of these chemical effects being transferred along the food web. In fact, there have been several reports of fish being discovered with nurdles in their stomachs.

Just recently, Colombo High Courts indicted five of the ship's crew, along with the captain. But the Sri Lankan authorities are yet to communicate to the public on the far-reaching damage caused by the disaster, and it seems that the tragedy is perhaps not over just yet.