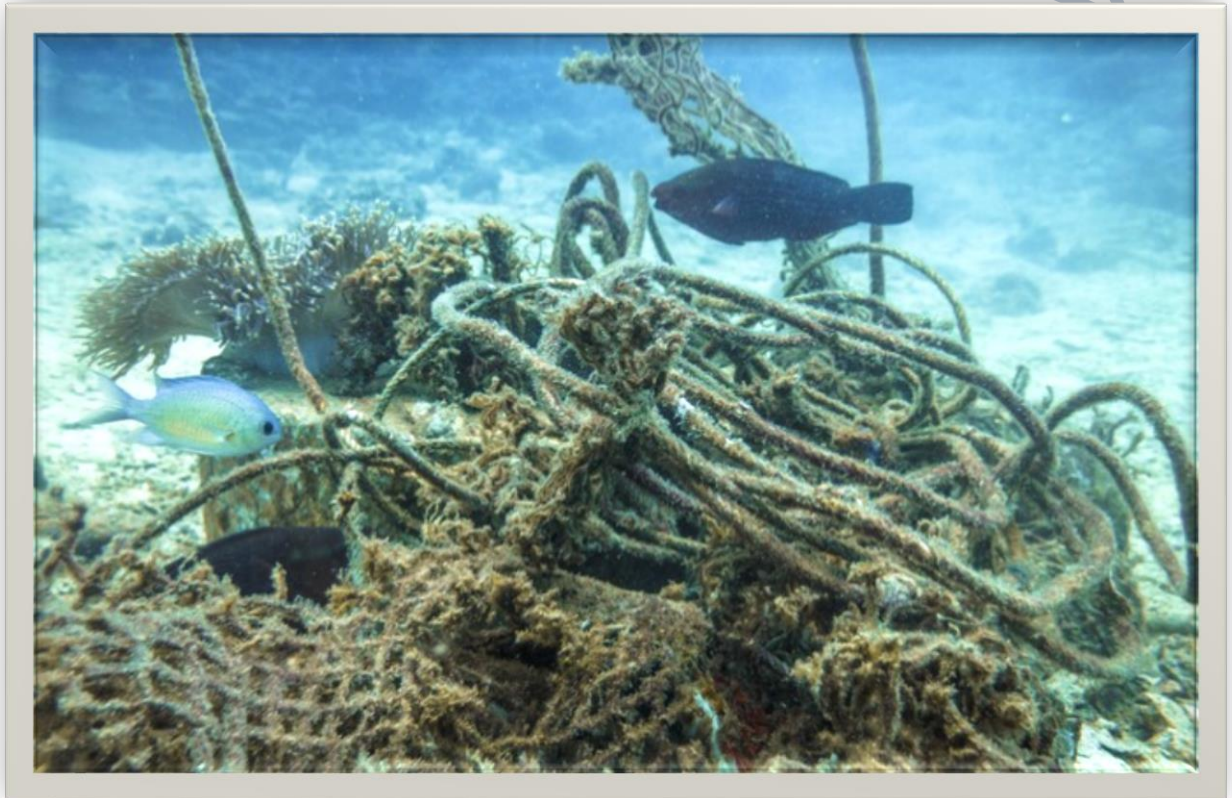


## Environment and Ecology: Ghost gear and marine debris.

### GS Paper 3: Biodiversity; Conservation, environmental pollution and degradation.



#### Ghost gear

Before the dawn of plastic, fishing nets were made from natural materials such as cotton or coconut. These days plastic nets have replaced most types of natural materials because they are lighter, stronger and cheaper to produce. Plastic is impervious to biodegradation and remains unchanged for decades. As a result, abandoned, lost or discarded fishing gear, commonly referred to as ghost gear and are clogging the marine environment at an alarming rate. It is estimated that around 640,000 tons of ghost gear is produced every single year, but this amount is likely a gross underestimation of the true quantity entering our waterways today.

## The reason for ghost gear accumulation

The reasons for ghost gear production is varied and includes, for example, accidental loss, operational damage or gear conflicts. However, illegal, unreported or unregulated (IUU) fishing may increase the chance of intentional gear loss due to gear abandonment and a lack of port side disposal by IUU vessels.

## The seriousness of the issue

Ghost fishing is insidious, cryptic and occurs across national boundaries which creates the perfect recipe for a difficult issue to address. The exact number of animals that become victims of ghost gear through entanglement or ingestion is unknown, but a recent expert survey highlighted that marine debris in the form of ghost gear is widely recognised as a major source of mortality for marine organisms.

Ghost gear not only causes mortality through entanglement or ingestion but can smother sensitive habitats such as coral reefs. Furthermore, the transient nature of floating ghost gear makes it the perfect object for hitchhikers. For example, micro plastics have been shown to harbour a wide variety of bacterial and microbial communities. Therefore, it is not a stretch of the imagination to assume invasive communities could colonise ghost gear and introduce disease to local fauna.



***Ghost fishing gear is a significant threat to marine life. They can injure and kill marine organisms.***



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## Ghost gear problem in India

There are still no data pertaining to the extent of prevalence of ghost gear off India's coast. And data is crucial here, for the detrimental effects of these nets also spill over into other countries and oceans. Ghost nets are often 'ghost fishers'. Ocean currents carry them for thousands of km across the ocean floor, ensnaring, injuring and drowning marine life and damaging live corals along the way. Discarded Indian and Thai fishing nets, for instance, have been fished out of Maldivian coasts, reports a study that examined 74 separate ghost net collections between 2013 and 2014. The Hindu recently reported that scientists at Kochi's Indian Council of Agricultural Research-Central Institute of Fisheries Technology studied ghost nets in Gujarat, Andhra Pradesh, Kerala and Tamil Nadu.

## The Global Ghost Gear Initiative (GGGI)

The Global Ghost Gear Initiative (GGGI) is a cross stakeholder alliance of fishing industry, private sector, corporates, NGOs, academia and governments focused on solving the problem of lost and abandoned fishing gear worldwide.

## Way ahead

There are numerous innovative solutions to tackle it, if we can learn from projects across the world. In countries like Canada and Thailand, fishermen retain their used nets; these are recycled into yarn to craft socks and even carpet tiles. For the first time in a developing country, a gear-marking programme is being tested in Indonesia so that the trajectory of gear, if it drifts away, can be studied better.

Outreach and education among fishing communities would be crucial along with policy-level changes. In one instance in India, ghost nets hauled from Kerala's Kollam have been used to pave roads. This shows that transformation is possible, though more efforts to make the process more organised across the over 7,500 km of India's coasts, as well as inland water bodies, are the need of the hour.

## Questions

1. The problem of ghost gear has grown from a fishing fallout that people had not heard of to one that is now difficult to ignore. Comment.