

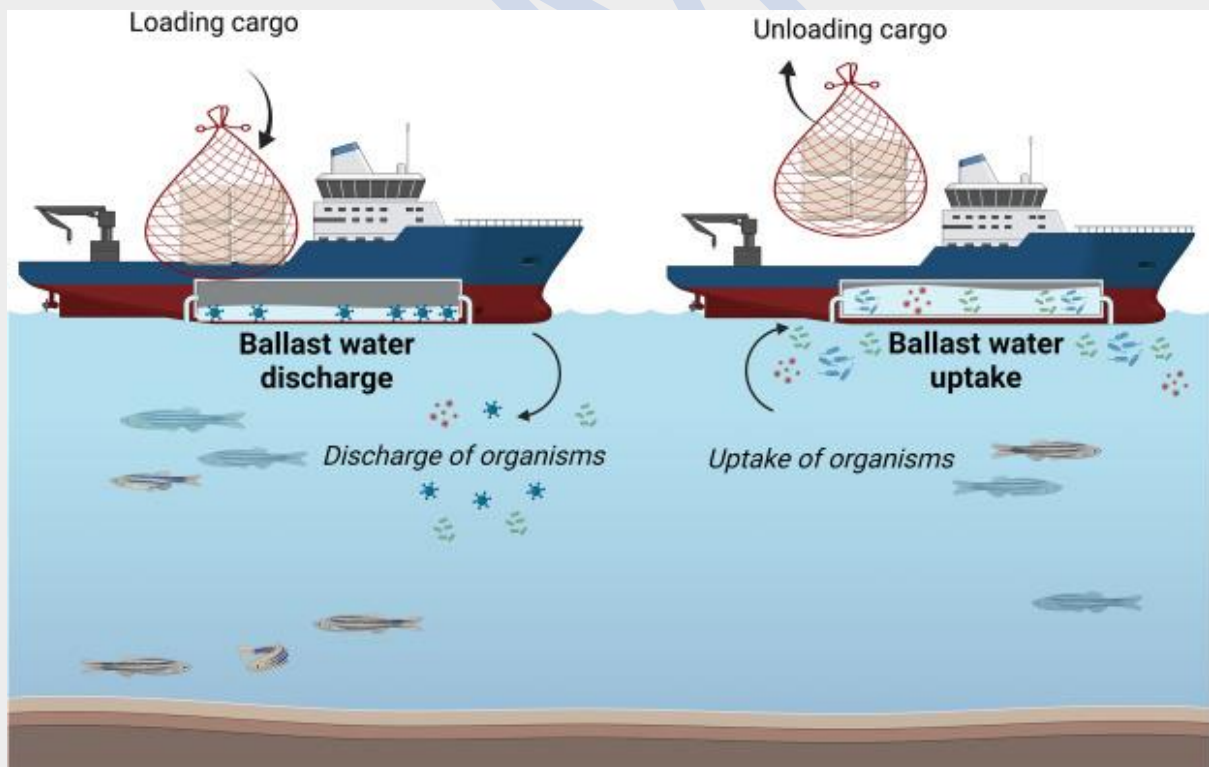
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1. How is ballast water facilitating the spread of invasive mussels on the coast near the Kamarajar Port?

Why in News?

The Tamil Nadu Water Resources Department (WRD) has informed the National Green Tribunal that it has sought ₹160 crore from the Kamarajar Port in Ennore, Tamil Nadu, to facilitate the removing of invasive mussels on the coast near the port in connection with an ongoing case on the proliferation of *Mytella strigata*, or charru mussel that harms marine ecosystems and hinders fisher boat movements, affecting their livelihood. The WRD has charged that Kamarajar Port is the main reason for the spread of the invasive species by not regulating the ballast water from ships.



What is ballast water?

Ships need to have a certain level of immersion into the sea to be stable. When a ship discharges cargo, it rises up in the water and therefore, to keep a minimum level of immersion, ship staff take in sea water called ballast water inside tanks in the ship. And when the ship loads cargo, leading to more immersion, the ballast water is pumped out of the ship. Until

recently, there was no bar on taking in and pumping out of ballast water at ports, in the ocean, along the coast and so on. Since ballast water carries invasive species into other countries that destroy ecosystems, global shipping has sought to regulate ballast water discharge.

How serious is the problem?

In India, scientists have recorded nearly 30 invasive species coming from ship ballast water. Among the most harmful in recent times is the charru mussel, *Mytella Rigata*, says Biju Kumar, professor and head of the department of aquatic biology and fisheries at the University of Kerala. In the Pulicat lake in Tamil Nadu, as in Ashtamudi lake in Kerala, this mussel has replaced almost all other species, he says. Its survival rate and egg production is very high. Though of marine origin, it can survive even in fresh water, he adds.

What are global regulations?

The Ballast Water Management (BWM) Convention of the International Maritime Organization (IMO) came into force in 2017 to help prevent the spread of potentially harmful aquatic organisms and pathogens in ships' ballast water. From September 8, 2017, ships must manage their ballast water so that aquatic organisms and pathogens are removed or rendered harmless before the ballast water is released in a new location.

Recently constructed ships with functioning ballast water management systems continuously take a small portion of the ballast water they had taken in after discharge of cargo and dose it with chemicals so that all the water is rendered free of any biological organism before the water is pumped out during the loading of cargo. Ships built before the BWM convention that don't have these systems are required to exchange the ballast water they took in a port with "neutral" water from the middle of the oceans enroute to the loading port.

Among the countries most serious about preventing ship ballast water damaging their marine ecosystems are Australia and New Zealand. Australia, as a major supplier of coal and iron and other raw materials, sees much ballast water pumping out in ports. Australia is home to ecologically sensitive areas such as the Great Barrier Reef where such water can cause immense harm. Ships calling on Australian ports are often subject to rigorous checks including of ballast water management systems.

What is India's position?

Documents of the IMO show that as of July 2, 97 countries have signed on to the BWM as contracting states. India is not on the list of countries. This means that there is no obligation on the part of ships calling on Indian ports to enforce the BWM convention. While other rules such as relating to discharge of oil apply in Indian ports, the discharge of ballast water brought in from other countries is not subject to checks or regulation.

"No restriction is seen regarding discharge of ballast water in Indian ports," says V. J. Mathew, senior advocate who specialises in maritime law. In any case, ports are only a facilitator of ship traffic and cannot be held liable in such cases. If there is any evidence that a vessel has pumped out the ballast water that led to the invasive species, then the vessel owner can be held liable if a law is in force, says Mr. Mathew, adding that it is time India signed on to the convention.

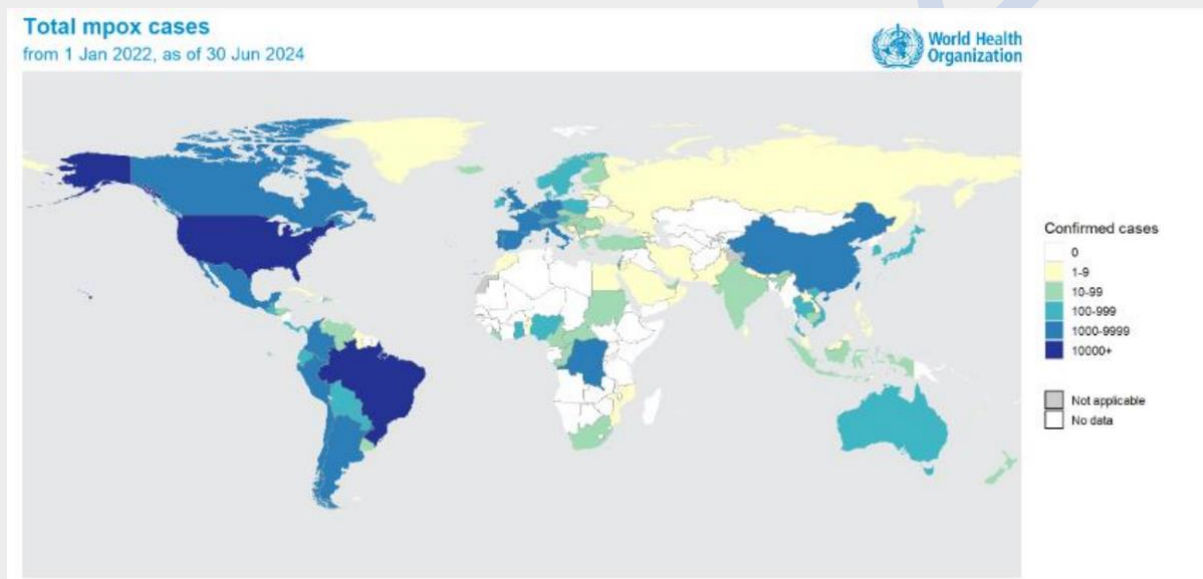
Relevance: GS Prelims & Mains Paper III; Environment

Source: The Hindu

2. Why is mpox a global health emergency?

Why in News?

On August 14, the World Health Organization (WHO) declared the mpox outbreak in the Democratic Republic of the Congo and other African countries as a “global health emergency”. WHO Director-General Tedros Adhanom Ghebreyesus made the declaration on the advice of an International Health Regulations (IHR) emergency committee. The WHO had regraded the mpox outbreak to an “acute” grade 3 emergency, according to a report published on August 12. The outbreak, which first started in 2022, has continued unabated with a recent surge in cases reported from around the world.



What is mpox?

Mpox, or monkeypox, is a rare zoonotic disease (disease that spreads from animals to humans) caused by the monkeypox virus which belongs to the Orthopoxvirus genus in the Poxviridae family. Other diseases caused by viruses from this family include smallpox, cowpox, and more. The mpox virus is transmitted to humans through physical contact with someone infectious — it can happen through direct contact with infected blood, fluids, or skin or mucus lesions (damaged or broken areas). Mpox can also spread through contact with contaminated materials, or infected animals’ bites or scratches, or through activities like hunting, skinning, cooking, dealing with carcasses, or eating infected animals.

Currently, two clades or genetic groups of mpox exist: clade I which is mostly found in central and east Africa, and clade II which is linked to more cases in west Africa. The exact source of mpox remains unknown, but small mammals like squirrels and monkeys are believed to be carriers.

What are the symptoms?

The mpox virus in humans mostly presents as rashes, which can develop into blisters filled with liquid which may be itchy or painful. Other symptoms include fever, sore throat, headache,

muscle aches, back pain, low energy, and swollen lymph nodes. Infectious people can pass the disease on to others until all sores have healed and a new layer of skin has formed.

Symptoms of mpox usually begin within a week of infection, but can start 1-21 days after exposure as well. Symptoms typically last 2-4 weeks. Most people have less severe symptoms, but some may develop more serious illness and need care in a medical facility. Children, pregnant women, and immunocompromised people are at a greater risk of getting the virus.

What is the line of treatment?

Currently, there is no specific treatment for mpox. WHO recommends supportive care, such as medication for pain or fever for people who need it, but symptoms usually go away on their own. People suffering from mpox are advised to stay hydrated, eat well, get enough sleep, avoid scratching their skin, take care of their rash by cleaning their hands before and after touching lesions, and keep their skin dry and uncovered.

An antiviral developed to treat smallpox (tecovirimat) was approved in January 2022 by the European Medicines Agency for the treatment of mpox under exceptional circumstances, but experience with such therapeutics is limited.

Three vaccines — MVA-BN, LC16 and OrthopoxVac — developed against smallpox are also approved for prevention of mpox. However, only people who are at risk are considered for vaccination. WHO does not recommend mass vaccination against mpox.

What about the current outbreak?

Mpox infections have been found closer home — Pakistan detected three patients with the virus, the health department of the northern Khyber Pakhtunkhwa province said on August 16. On Thursday, Sweden announced the first mpox case outside Africa of the clade I variant of mpox. According to the WHO, more than 15,600 cases and 537 deaths have been reported this year. The outbreak has affected 116 countries, and is the worst in the Democratic Republic of the Congo and neighbouring countries. Out of the cases reported in June 2024, Americas accounted for 19% of those, while 11% were reported in Europe.

The WHO has regraded the global mpox outbreak to an acute grade 3 emergency in accordance with the WHO Emergency Response Framework, which is the highest on the list. A grade 3 emergency requires a major to maximal response from the WHO. A public health emergency of international concern (PHEIC) is an extraordinary event that relates to the international spread of a disease and which would potentially require a global, coordinated response. The purpose of the PHEIC, the highest level of alarm by the WHO, is to coordinate immediate international action before the event becomes bigger and turns into a pandemic.

Relevance: GS Prelims

Source: The Hindu

3. Do doctors need a Central protection Act?

Why in News?

Resident doctors across India are on strike demanding laws that ensure their safety while on duty. This follows the rape and murder of a young doctor at R.G. Kar Medical College and Hospital in Kolkata on August 9. The protests started after the discovery of the doctor's body in the seminar room of the emergency building where she had been working. Doctors point out that while the hospital administration and State government attempted to underreport the incident, there is no Central law that protects healthcare workers.



What is the ground reality?

As per constitutional provisions, health and law and order are State subjects, and, therefore, it is the primary responsibility of the State government or Union Territory administration to take note of events and eventualities, and do what is necessary to prevent violence. The Union government has admitted that details of the number of fatalities of medical professionals due to attacks by families of patients are not maintained centrally.

Violence against healthcare workers at the workplace is not new in India. In 1973, Aruna Ramchandra Shanbaug working as a junior nurse at King Edward Memorial Hospital, Mumbai, was sexually assaulted by a hospital sweeper. She died in 2015 after spending over 41 years in a vegetative state following the attack. Years later, doctors and other healthcare workers continue to demand specific and basic safety measures at hospitals including improved lighting, increased security, and installation of properly monitored security cameras.

Those protesting in Delhi point out that medical colleges often have ill-lit corridors, poorly secured wards, and long distances between departments.

Demanding immediate systemic reforms to prevent such tragedies from happening again, Doctors added that a Central protection Act for doctors is crucial. There is a need to improve

the working conditions of junior doctors nationwide. Violence against healthcare workers is a global issue, but several countries have implemented effective measures to protect their medical professionals, setting examples that India could follow.

The U.K.'s NHS enforces a zero-tolerance policy on violence, supported by a dedicated security team and a comprehensive reporting system. In the U.S., some States classify assaults on healthcare workers as felonies, acting as a strong deterrent. Australian hospitals have introduced safety measures like security personnel, panic buttons, and mandatory de-escalation training.

What are the doctors demanding?

The Indian Medical Association (IMA), a national level association of allopathic doctors, maintained that at a policy level, the reluctance to acknowledge the violence on doctors at healthcare centres has to change. In a list of demands submitted to the Union government, it has sought hospital security protocols that are no less than those at an airport and that healthcare centres should be declared safe zones with mandatory security entitlements including CCTVs and deployment of security personnel.

What are provisions brought in by Centre?

On August 16, the Ministry of Health and Family Welfare issued an order that "in the event of any violence against any health care worker while on duty, the head of the institution shall be responsible for filing an institutional FIR within a maximum of six hours of the incident."

The order was issued in view of the fact that violence has become common against doctors and other healthcare staff in government hospitals. "A number of health workers suffer physical violence during the course of their duty... most of this violence is done by either [the] patient or patient's attendants," it said. Meanwhile, earlier this week, the National Medical Commission (NMC) directed all medical colleges to develop a policy for a safe work environment within the college and hospital campus for all staff members. It also said any incident of violence against medical students should be promptly investigated by the college management and an FIR should be lodged. "A detailed action taken report on any incident of violence should invariably be sent to the NMC within 48 hours of the incident," said the order.

Relevance: GS Prelims & Mains Paper II; Governance

Source: The Hindu