



White Phosphorus Munitions

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Why in News?

Recently, global human rights organizations, [Amnesty International](#) and [Human Rights Watch](#) have accused the Israel Defense Forces (IDF) of using [white phosphorus munitions](#) in Gaza and Lebanon, in violation of [International Humanitarian Law \(IHL\)](#).

What is the White Phosphorus?

- **About:**
 - [White phosphorus](#) is a pyrophoric that ignites when exposed to oxygen, producing thick, light smoke as well as **intense 815-degree Celsius heat**.
 - **Pyrophoric substances** are those which ignite spontaneously or very quickly (under five minutes) when in contact with air.
- **Global Status:**
 - Under the **Globally Harmonized System of Classification and Labeling of Chemicals**, the internationally agreed-upon system to standardize chemical hazard classification and communication, **white phosphorus falls under “Pyrophoric solids, category 1”**, which includes chemicals that catch fire “spontaneously” when exposed to air. It is among the most unstable of pyrophoric substances.
- **Military Uses:**
 - White phosphorus is dispersed in artillery shells, bombs, and rockets. It can also be delivered via felt (textile) wedges soaked in the chemical.
 - Its primary military use is as a **smokescreen** — used to hide troop movement on the ground. The smoke acts as a visual obscurant. **White phosphorus is also known to mess with infrared optics** and weapons tracking systems.
 - White phosphorus can also be used **as an incendiary weapon**. US forces used white phosphorus munitions during the **second battle of Fallujah in Iraq in 2004**, to force concealed combatants to abandon their positions.
- **Harmfulness:**
 - **Causes Severe Burns often down to the bone upon exposure, Respiratory Problems and can damage Infrastructures, crops and kill livestock, with raging fires**, especially in windy conditions.

Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

- The GHS, developed following a number of major industrial accidents in the 1970s and 1980s, plays a fundamental role in protecting workers from chemical hazards through its system of harmonized chemical labels (pictograms) and safety data sheets.
- Following-up on Chapter 19 of Agenda 21 from the Rio Earth Summit in 1992, the first official version of the GHS was endorsed by the United Nations in 2003.

What is the History and Legal Status of Phosphorus Munitions?

▪ History:

- Irish nationalists in the **late 19th century first used white phosphorus munitions**, in a formulation that became known as **“Fenian fire”** (Fenian was an umbrella term for the Irish nationalists).
- These munitions have since been used around the world, from the Normandy invasion in World War II and the long-drawn [Nagorno-Karabakh conflict](#).

▪ Legal Status:

- White phosphorus munitions are **not under a blanket ban**, though their use is regulated under the IHL.
- It is not considered a chemical weapon because its operational utility is primarily due to heat and smoke, rather than toxicity. Thus, its use is governed by the [Convention on Conventional Weapons \(CCW\)](#), specifically Protocol III, which deals with incendiary weapons.
 - **First**, it restricts some **but not all use of ground-launched incendiary weapons** where there are concentrations of civilians.
 - **Second**, the protocol’s definition of incendiary weapons covers weapons that are **“primarily designed” to set fire to and burn people, and thus arguably excludes multipurpose munitions** such as those containing white phosphorus, which are considered to primarily be “smoking” agents.

UPSC Civil Services Examination, Previous Year Questions (PYQ)

Q1. With reference to ‘Organization for the Prohibition of Chemical Weapons (OPCW)’, consider the following statements: (2016)

1. It is an organization of the European Union in working relation with NATO and WHO.
2. It monitors the chemical industry to prevent new weapons from emerging.
3. It provides assistance and protection to States (Parties) against chemical weapons threats.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (b)

Q 2. Recently, the USA decided to support India’s membership in multi-lateral export control regimes called the “Australia Group” and the “Wassenaar Arrangement”. What is the difference between them? (2011)

1. The Australia Group is an informal arrangement which aims to allow exporting countries to minimize the risk of assisting chemical and biological weapons proliferation, whereas the Wassenaar Arrangement is a formal group under the OECD holding identical objectives.
2. The Australia Group comprises predominantly Asian, African and North American countries whereas the member countries of Wassenaar Arrangement are predominantly from the European Union and American Continents.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (d)

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