

## Robots in Warfare [UPSC GS 3 Notes]

For the uninitiated, military robots are either autonomous or remote-controlled robots designed for use in military applications such as search and rescue and attack.

Military Robots is a concept mainly seen and heard in science fiction films, but it is a concept nonetheless closer to reality than previously thought.

It just so happens that Israel, on 13 September 2021, unveiled REX MKII. It is an unmanned land vehicle that will be used for intelligence gathering, logistics support and will have the ability to carry out remote attacks.

REX MKII is just the latest in the series of military robots being developed by many nations. So it isn't a stretch to say that robots in warfare will not be a staple of science-fiction films, but a reality.

This article will further elaborate the concept of the Robots in Warfare within the context of the IAS Exam.

### History of Military Robots

Broadly speaking, the first known usage of robots in warfare was during World War II in the form of radio-controlled Goliath tanks by Nazi Germany and the Teletanks of the Soviet Union.

The concept of Robots in warfare began taking off, in a manner of speaking, during the Cold War when the Central Intelligence Agency (CIA) began to see the wisdom of using unmanned aerial vehicles (UAV) to gather information in an environment that would otherwise be dangerous for a human asset.

Post the Cold War, there have been many developments, such as the creation of UAVs that can fire air-to-ground missiles (AGMs) at designated targets and an experimental artillery system which can accurately respond to fire support requests. Military robots are prevented completely from becoming autonomous, as human input is required. This is due to the fact that machines will operate on logic in situations which will disregard civilian casualties if the objective is completed.

In 2020 a Kargu 2 drone hunted down and attacked a human target in Libya, according to a report from the UN Security Council's Panel of Experts on Libya, published in March 2021. This may have been the first time an autonomous killer robot armed with lethal weaponry attacked human beings.

### Advantages and Disadvantages of using Robots in Warfare

As advanced as the concept sounds, the usage of robots in warfare comes with both positives and negatives. They are as follows:

### Advantages:

- Robots can make quick decisions in fast-paced combat situations.
- Human lives can be saved if robots are sent into frontline combat.
- They can be mass-produced and upgraded instead of being trained.
- Military robots can traverse hazardous environments that are otherwise fatal to humans.
- Military robots are often lifesaving; they can perform duties similar to human duties without the actual danger to human lives.
- They can be easily replaceable.

### Disadvantages:

- Military robots can be hacked and turned against their original users.
- Governments can find ways to make military robots a tool of oppression.
- Military robots, without the right kind of restrictions in place, can make unethical decisions during military operations that might result in a high count of civilian casualties.

### India and Military Robots

India's Defence Research and Development Organization (DRDO) developed Daksh, an electrically powered and remotely controlled robot used for locating, handling and destroying hazardous objects safely. It can navigate staircases, negotiate steep slopes, navigate narrow corridors and tow vehicles to reach hazardous materials. Using its robotized arm, it can lift a suspect object and scan it using its portable X-Ray device. If the object is a bomb, Daksh can defuse it with its water jet disrupter.

### Frequently Asked Questions about Robots in Warfare

#### What is the future of military robots?

Emerging Army robots will massively extend the battlefield, enable more dispersed operations, deliver ammunition, network with air and ground drones, survey forward high-risk areas and even fire weapons to attack when directed by a human.

### **How will robotics change warfare?**

Emerging technologies are changing the character of warfare. Rapid advances in unmanned systems, robotics, data processing, autonomy, networking, and other enabling technologies have the potential to spur an entirely new war fighting regime.

