Understanding the Basics of Forest Fire Mitigation

What is the issue?

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- A massive forest fire at Kurangani forest in Theni district of Tamil Nadu has caused huge causality. Click here to know more
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- This tragedy raises several issues of approaches in fighting fires and ways of mitigating damage.
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What are the available approaches in addressing forest fire?

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- **Controlled burning -**The British introduced a system of controlled burning of undergrowth in safe seasons (say, during winter), so that by summer there would be nothing left to burn.
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- This is an extremely destructive practice, since it wipes out insects, small reptiles, seeds, herbs and bushes.
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- **Fire Line-** This method contain the fire in compartments bordered by natural barriers such as streams, roads, ridges, and fire lines along hillsides or across plains.
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- A fire line is a line through a forest which has been cleared of all vegetation, the width depends on the type of forest being protected.
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- Once the blaze has burnt out all combustibles in the affected compartment, it fizzles out and the neighbouring compartments are saved.
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- **Counter fire approach -** This follows setting up of a counter fire, so that when a fire is unapproachable for humans, a line is cleared of combustibles and manned.
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- One waits until the wildfire is near enough to be sucking oxygen towards it, and then all the people manning the line set fire to the line simultaneously.
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- The counter fire rushes towards the wildfire, leaving a stretch of burnt ground, as soon as the two fires meet, the blaze is extinguished.
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- **Combination method -**This is practised in combination with fire lines and counter fire.
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- This is the most practical and most widely used, is to have enough people with leafy green boughs to beat the fire out.
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- **Technological approach -** In this Helicopters or ground-based personnel spray fire retardant chemicals, or pump water to fight the blaze.
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- These are expensive methods and make sense when one is protecting a human community, but are usually not practised in India.
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What is the forest fire monitoring mechanism in India?

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- A fire anywhere in the world is detected by NASA's MODIS (Moderate Resolution Imaging Spectroradiometer) and VIIRS (Visible Infrared Imaging Radiometer Suite) satellites.
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- Then Forest Survey of India (FSI) analyses such data by overlaying the digitised boundaries of forest areas to pinpoint the location to the exact forest compartment.
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- The FSI relays news of the fire to the concerned State, so that the Divisional Forest Officer (DFO) in charge of the forest where the fire is raging is informed.
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- Earlier the time lapse between spotting the fire and the news reaching the DFO was five to six hours, but this has been reduced to about two hours recently.
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- Meanwhile, news of the fire would have reached the DFO from his guards in watchtowers and on patrol and the DFO decides whom to deploy.
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- There will be a master fire control room which is informed and which sends

firefighters from local fire crew stations to fight the blaze.
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What are few shortfalls in mitigating forest fires?

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- In India Forest departments face a huge constraint of funds, major amounts of funds are used for frivolous purposes like ‘planting forests’, instead of investing in mitigating infrastrucres.
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- While communication and response time have been cut down, the actual numbers of Forest Department personnel that are sent to put out fires are woefully inadequate.
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- Contract fire fighters with inadequate training are recruited due to corrupt officials and political parties.
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How mitigation efforts can be enhanced?

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- Respective Governments need to vastly increase the number of firefighters as well as equip them properly with adequate gears and other essentials.
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- Seasonal labour with adequate training can be contracted during the fire season to the fill gaps of fire fighters, Local villagers would be the best resource.
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- More Forest Department field staff could be hired to put out fires during the fire season and to patrol the forests during other times.
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- Recruitment of field staffs and investments in equipments must be done by discontinuing the claimed ‘forest plantations’, this would help rejuvenation of fire-stressed forest ecosystems.
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- Giving access to the public to reserve forests would have a salutary effect on the quality of life and the quality of field researchers available within the country.
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Source: The Hindu

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