## समाचार पत्रों से चियत अंश Newspapers Clippings

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology

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### **CONTENT**

S. No.	TITLE	Page No.
	COVID-19: DRDO's Contribution	1-6
1.	DRDO's AI brains launch SAMPARC App to track COVID-19 patients	1
2.	Ministry of Defence joins fight against Coronavirus, provides food packets, medical supplies and health care assistance	3
3.	অতিবেগুনি রশ্মিতেই কাবু করোনা, DRDO-র যন্ত্রে ভাইরাস মুক্ত হবে মোবাইল–ব্যাগ–টাকা Coronavirus tamed by Ultraviolet Rays: DRDO's equipment will make mobile-bag-money virus free	5
	COVID-19: DRDO/ATIRA/Railway Contribution	7-11
4.	DRDO partners with Ahmedabad-based textile association to make N-99 masks in India	7
5.	Ahmedabad textile body in collaboration with DRDO develops high quality cloth to make 'N-99' masks	8
6.	रेलवे ने एक दिन में बनाई इतनी PPE kit, कोरोना से लड़ाई हो जाएगी आसान	9
7.	Railways to make one lakh coveralls by May 31 for Covid-19 frontline staff	10
	DRDO Technology	12
8.	DRDO's OBOGS developed for LCA-Tejas will now save critically ill Patients	12
	COVID-19: Defence Forces Contribution	13 <b>-1</b> 9
9.	Coronavirus: This is how Indian Army is going to handle personnel rejoining from leave	13
10.	Indian Army soldiers to be placed under 'green, yellow, red' categories to prevent spread of Covid-19	14
11.	कोरोना: भारतीय सेना ने कर्मियों को 'हरे, पीले व लाल' श्रेणियों में <mark>बांटा, जानें</mark> इसके पीछे	15
12.	का कारण COVID 19 and Indian Army: How to cope with movement restrictions	16
13.	IAF transports 450 tonnes of medical equipment, support materials amid coronavirus lockdown	17
15.	What is Operation Sanjeevani by Indian Air Force?	18
	Defence Strategic: National/International	19-22
16.	Rajnath Singh reviews implementation of reform measures in armed forces	19
17	What is Shekatkar report, defence ministry's first order of business after lockdown	20
18	Dassault Reliance Aerospace resumes operations at Mihan SEZ	21
	COVID-19 Research	22-24
19.	कोविड 19 को लेकर पेरिस में नया खतरा, पानी में कोरोना वायरस मिला	22
20.	Air pollution linked to raised Covid-19 death risk	23

### **COVID-19: DRDO's Contribution**



Mon, 21 April 2020

# DRDO's AI brains launch SAMPARC App to track COVID-19 patients

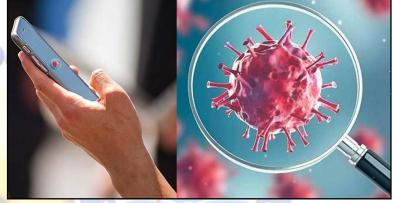
By Anantha Krishnan M

Bengaluru: The Defence Research and Development Organisation (DRDO) have come out with yet another solution to aid India's ght against COVID-19.

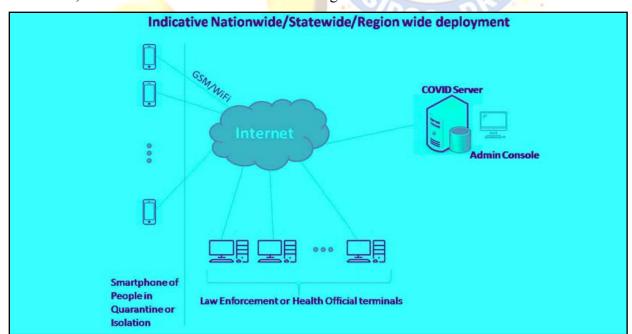
Sources confirm to Onmanorama that the Centre for Artificial Intelligence and Robotics (CAIR), one of the most sensitive and less-talked about laboratories of DRDO based out of

Bengaluru has already offered various state governments an information technology-driven approach to enable tracking of people under quarantine.

One of DRDO Young Scientists Labs (DYSL) dedicated to Artificial Intelligence (opened by Prime Minister Narendra Modi this January), too have partnered with CAIR in this societal mission.



A team of 20 scientists is said to have worked behind developing this solution called SAMPARC, which means: Smart Automated Management of Patients and Risks for COVID-19.



#### **Tracking Patients**

SAMPARC is a software that includes an App that would be installed on the smart phones of the patients. It is a server-side application that would be used by the state authorities to track the patients. Hosted exclusively for the use of state governments, it took scientists about three weeks to

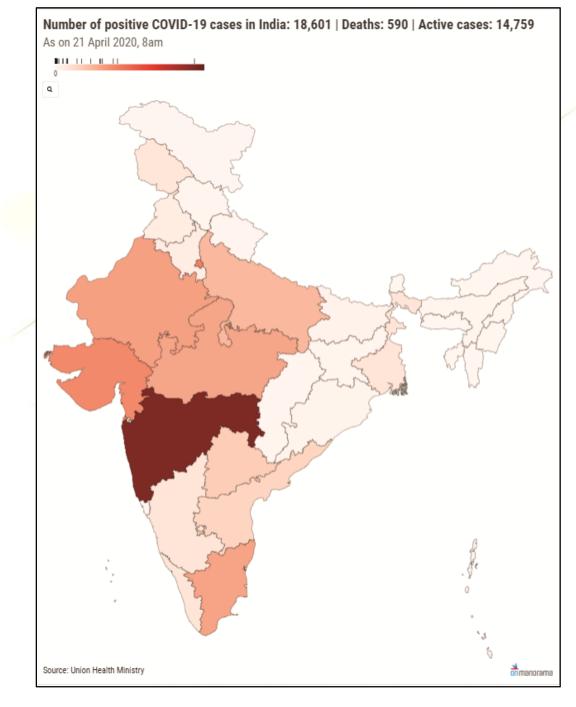
develop it. The launch version of the App was released during the first week of April to the Uttar Pradesh government.

The scientists are already working on the next version of the software based on the feedback from the users. Several state governments, including Maharashtra where the COVID-19 cases have shot up, are set to use this App.

"The initial stages of the deployments are with UP, Maharashtra and Nagaland. Based on their inputs from initial deployment and discussions, we have incorporated additions. Large scale usage is expected to happen in due course," an official said.

Unlike several other DRDO labs, CAIR has always remained under the radar owing to the sensitive missions being handled.

SAMPARC is meant only for tracking and not for contact tracing. "Therefore, it does not need any private information of the patient except his/her location of quarantine and the current location of the patient, as well as their photographs," says the official. It would function based on authentic information fed by the state officials and not based on crowd sourced data.



#### **Colour Codes**

The system would enable geo-fencing, AI-based automated face recognition (between sulfide taken during registration and subsequent selfies sent by the patient), and would have the capability to display the information to the state officials on a map which can be colour-coded to depict hotspots and containment zones.

"From the perspective of the patients, honest usage of SAMPARC could give them an option of home isolation instead of isolation in a government facility," the official added.

SAMPARC is expected to drastically reduce the overhead of tracking every patient under home isolation, thereby reducing the load on the state machinery. With SAMPARC, the officials can easily track the violators and can also perform random checks. The violators would be shown in red on a map if they break the geo-fence or their selfie(s) does not match; would be shown in blue if their smart phones stop sending periodic updates; and in green if everything is found satisfactory.

"Once the period of quarantine or isolation is over, the patients can uninstall the App from their smart phones," adds the ofcial.

(The writer is an independent aerospace and defence journalist, who blogs at Tarmak007 and tweets @writetake.)

https://english.manoramaonline.com/news/nation/2020/04/20/drdo-cair-ai-samparc-app-track-covid19-patients.html

## **THE FINANCIAL EXPRESS**

Tue, 21 April 2020

## Ministry of Defence joins fight against Coronavirus, provides food packets, medical supplies and health care assistance

Country's leading defence technology company has taken initiative by setting up a community kitchen to supply around 500 food packets every day until the crisis is over By Huma Siddiqui

Be it fighter aircraft, or helicopters, missiles or tanks, Defence PSUs, Ordnance Factory Board (OFB) and companies have all ramped up their resources and are working round the clock to help the government fight against the global pandemic COVID-19.

#### **BrahMos Aerospace**

Country's leading defence technology company has taken initiative by setting up a community kitchen to supply around 500 food packets every day until the crisis is over.

"Till date more than 8000 food packets have been distributed and the kitchen staff, while maintaining the basic standards of hygiene and cleanliness is working dedicatedly to prepare the food," a senior executive of the company shared with Financial Express Online.

According to the Ministry of Defence (MoD) "DPSUs,

OFBs, and defence companies which are the critical institutions under the Department of Defence



"All technical details of these equipment are available to industries for production at free of cost from DRDO," Reddy stated. (Photo Credit: BrahMos Aerospace)

Production (DDP), are putting in their manpower and resources to fight COVID-19."

These are all working round the clock using the expertise they have and sharing it with the private sector to ensure that there is no shortage of medical supplies including the PPEs, hand sanitizers, masks, gloves, ventilators, and other medical devices. "Also, they have identified isolation beds and facilities in their own hospitals" stated the MoD.



Assuring the private industry of DRDO's Photo Credit: BrahMos Aerospace sharing complete know-how with those seeking it, Chairman Defence Research and Development Organisation (DRDO) Dr G Satheesh Reddy, said "The focus is on indigenization of the components that are required in various medical devices and supplies. DRDO is working on test kits, goggles, oxygen cylinders, Viral Transport Mediums (VTMs) and critical components for the ventilators."

Also, R&D is going on in the DRDO labs on reusability of the PPE fabrics.

While DRDO is in the process of developing more than 20 products, newly developed products like UV sanitisation box, handheld UV device, COVSACK (COVID Sample Collection Kiosk), foot-operated fumigation device, touch-free sanitisers and face shield have already been handed over.

"All technical details of these equipment are available to industries for production at free of cost from DRDO," Reddy stated.

### Contributions by Hindustan Aeronautics Limited (HAL)

As has been reported earlier this DPSU located in Bengaluru has set up an isolation ward facility where three beds have been identified in ICU, 30 beds in wards and a building has been readied with 30 rooms.

The aerospace company has also been involved in manufacturing and distributing PPEs to Doctors in various Hospitals in Bangalore, and has manufactured 160 aerosol boxes. These aerosol boxes have been distributed to various Government Hospitals in Bengaluru, Mysore, Mumbai, Pune, Uttar Pradesh, Telangana, Andhra Pradesh and Tamil Nadu.

#### **Bharat Electronics Limited (BEL)**

This DPSU has under the directions of Ministry of Health and Family Welfare (MoH&FW) has manufactured and delivered 30,000 ventilators — all done within two months.

It is due to the joint efforts of DRDO which initially designed and developed it and this was improved on by local Mysore located company M/s Skanray, and BEL manufacturing it. With this week according to the MoD, BEL is expected to manufacture 5000 ventilators. And the schedule that has been chalked out, BEL will manufacture 10,000 in May and another 20,000 in June. Both DRDO and BEL are working on making components in India.

#### **Bharat Dynamics Limited (BDL)**

This company is in the process of developing a prototype of a ventilator. This will be tested and certified early next month, which will be followed by manufacturing. This project will be completed with the help of a startup based in

#### **Bharat Earth Movers Limited (BEML)**

This company is playing the most important role in the manufacturing of ventilators by BEL & M/s Skanray. BEML has so far manufactured 25 sets of five components and is working on more for the mass production of ventilators.

https://www.financialexpress.com/defence/ministry-of-defence-joins-fight-against-coronavirus-provides-food-packets-medical-supplies-and-health-care-assistance/1933980/





## অতিবেগুনি রশ্মিতেই কাবু করোনা, DRDO-র যন্ত্রে ভাইরাস মুক্ত হবে মোবাইল-ব্যাগ-টাকা Coronavirus tamed by Ultraviolet Rays: DRDO's equipment will make mobile-bag-money virus free

By Sulaya Singha

**অর্ণব আইচ:** অতিবেগুনি রশ্মিতেই কাবু করোনা ভাইরাস। মোবাইল, মানিব্যাগ, ফাইল, টাকা যা-ই হোক না কেন, আলট্রাভায়োলেট রশ্মি বা ইউভিসি তার উপর ফেলা হলেই করোনা ধুয়ে-মুছে সাফ। এই রশ্মি নষ্ট করে ফেলবে কোভিড-১৯-এর আরএনএ। এমনই যন্ত্র নিয়ে এল প্রতিরক্ষা মন্ত্রকের ডিফেন্স রিসার্চ অ্যান্ড ডেভেলপমেন্ট অর্গানাইজেশন বা ডিআরডিও (DRDO)।



ডিআরডিও'র আওতায় খাকা দু'টি গবেষণাগার ডিফেন্স ইন্সটিটিউট অফ ফিজিওলজি অ্যান্ড অ্যালায়েড সায়েন্সেস (ডিপাস) ও ইন্সটিটিউট অফ নিউক্লিয়ার মেডিসিন অ্যান্ড অ্যালায়েড সায়েন্সেস (ইনমাস) যৌখভাবে তৈরি করেছে দু'টি যন্ত্র। আবার দক্ষিণ নাভাল কমান্ডও 'ইউভি রে' দিয়ে সাফ করার জন্য বানিয়েছে একই ধরনের যন্ত্র। ডিআরডিও সূত্রে জানা গিয়েছে, দু'টি যন্ত্রের মধ্যে একটি হচ্ছে 'ইউভি স্যানিটাইজেশন বক্স' ও অন্যটি হচ্ছে 'হ্যান্ড হেল্ড ইউভি ডিভাইস'। সেনাবাহিনী বা সরকারি অফিসগুলি নিজেদের জন্য এগুলি ব্যবহার করতে পারবেই। এছাডাও সাধারণ মানুষের হাতেও যাতে এই যন্ত্রগুলি পৌঁছে দেওয়ার চেষ্টা করছেন ডিআরডিও আধিকারিকরা।

ডিআরডিও'র বিশেষজ্ঞদের মতে, অতিবেগুনি রিশ্ম বা 'আলট্রাভায়োলেট সি লাইট' ক্ষমতা রাখে কোভিড-১৯ বা করোনা ভাইরাসের জেনেটিক বস্তু নষ্ট করে দেওয়ার। এই রিশ্মি কিছুক্ষণের জন্য কোনও বস্তুর উপর ফেলা হলে ভাইরাসের আরএনএকে ধ্বংস করে। এই বিষয়ে ভাইরাস বিশেষজ্ঞ ডা. সিদ্ধার্থ জোয়ারদার জানান, ইউভি রিশ্মি ভাইরাসের ডিএনএ ও আরএনএ দু'টিকেই নষ্ট করতে সক্ষম। এই রিশ্মি ভাইরাসের আরএনএ ভেঙে ফেলতে পারে। তার ফলে আর নতুন করে ভাইরাস তৈরি হতে পারবে না। ভাইরাস না বাড়তে পারলে সংক্রমণও ছড়াবে না।

ডিআরডিও'র বিশেষজ্ঞরা জানিয়েছেন, হাতে বা সঙ্গে থাকা জিনিসের থেকেও ছড়াতে পারে করোনা। তার মধ্যে যেমন রয়েছে মোবাইল ফোন বা ট্যাব, তেমনই রয়েছে মানিব্যাগ, টাকা বা ফাইলের কভার। এই বস্তুগুলিতে যদি করোনা ভাইরাস থাকেও, ইউভি রশ্মি তাকে নস্ট করবে। তার জন্যই তৈরি করা হয়েছে 'ইউভি বক্স'। এই বাক্সের ভিতরই রয়েছে 'ইউভিসি ল্যাম্প'। সেগুলি বাক্সের ভিতর সার বেঁধে রাখা। বাক্সের



ভিতর রাখতে হবে বস্তুগুলি। ল্যাম্প থেকে রশ্মি বস্তুর উপর পড়লে নষ্ট হচ্ছে ভাইরাস। আবার এই ল্যাম্পগুলি ওজোন গ্যাস ভৈরি করে। বস্তুর যে অংশে রশ্মি লাগছে না, সেই অংশে থাকা ভাইরাস নষ্টে সাহায্য করে ওজোন গ্যাসও। কেউ যদি আংটি খুলে এই বাক্সে রাখেন, তাও ফলপ্রসৃ হতে পারে।

আবার বাড়ি বা অফিসের চেয়ার, ফাইল, পোস্টে বা কুরিয়রে আসা কোনও চিঠি বা জিনিস, এমনকী ডেলিভারি অ্যাপে আসা থাবার বা ওষুধের প্যাকেটের উপর থাকা করোনা ভাইরাস কাবু করতে গেলে ব্যবহার করা যেতে পারে 'হ্যান্ড হেল্ড ডিভাইস'। এই ডিভাইস থেকে বের হওয়া রিশ্মি মিনিটখানেকের মধ্যেই ধ্বংস করবে ভাইরাসের বাড়বাড়ন্ত। ডিআরডিও'র দাবি, স্যানিটাইজেশন করার জন্য অনেক সময় যে রাসায়নিকগুলি ব্যবহার করা হয়, সেগুলি ক্ষতিকর। কিন্তু অভিবেগুনি রিশ্মি পরিবেশ বান্ধব ও সেদিক থেকে ক্ষতিকর নয়। তবে ভাইরাস বিশেষজ্ঞদের মতে, অভিবেগুনি রিশ্মি বস্তুর উপর থাকা ভাইরাস ধ্বংস করলেও শরীরের সংস্পর্শে এলে তা মানুষের ক্ষতি করতেই পারে। বিশেষ করে চোথের পক্ষে এই রিশ্মি খুবই ক্ষতিকর। তাই বাড়িতে খুব সাবধানে ব্যবহার করতে হবে এই যন্ত্র। বিশেষ করে যে বাড়িতে শিশুরা রয়েছে, সেই বাড়িতে এই যন্ত্র ব্যবহার না করাই ভাল বলে জানিয়েছেন বিশেষজ্ঞরা।

https://www.sangbadpratidin.in/india/drdo-makes-new-device-to-kill-deadly-coronavirus/

ज्ञान प्रसार एवम् विस्तार के 50 वर्ष

### **COVID-19: DRDO/ATIRA/Railway Contribution**

### THE TIMES OF INDIA

Tue, 21 April 2020

## DRDO partners with Ahmedabad-based textile association to make N-99 masks in India

The Ahmedabad Textile Industry's Research Association (ATIRA) in collaboration with the Defence Research and Development Organisation has produced a high quality cloth to make masks of 99 per cent filter efficiency.

ATIRA is developing the cloth material for preparation of five lakh 'N-99 masks', which it says would be better in quality than the N-95 masks that have been in huge demand of late in the fight against coronavirus.

While the N-95 respirator is able to filter 95 per cent of the very small airborne particles, the efficiency of the N-99 mask to filter such particles will be 99 per cent.

The Ahmedabad-based textile research association claims it is the only facility in the country to produce filter cloth for N-99 masks.

"Ninty nine per cent filtration is the highest among all types of masks available in India. There were many challenges initially, but with the untiring efforts of our highly competent scientists and research technicians, we were able to successfully develop this cloth and produce it on large scale," ATIRA director Pragnesh Shah told PTI.

The N-99 mask has five layers out of which two are of nano mesh which are inside and three outer layers are of cloth, he said.

"Currently, the filter cloth is manufactured at a state-of-the-art facility of ATIRA as per the WHO guidelines. The Government of India and the Defence Research and Development Organisation (DRDO) have recognised the efficiency of these masks, Shah said.

The high quality cloth for over 3.5 lakh masks has already been handed over to DRDO, while production of more such material is going on, said ATIRA deputy director Deepali Palawat, who is heading the project.

"This project is the finest example of collaboration and coordination with the government. It was difficult to procure raw materials during the lockdown. The government has moved mountains to help us procure the raw materials and provided full support during the lockdown," she said.

Palawat said it was difficult to convert the research centre into a production unit but a 15-member ATIRA staff, including scientific officers and technicians, are working round-the-clock to fulfil DRDO's order of five lakh masks.

"The DRDO is getting these masks ready for health ministry officials, doctors of the All India Institute of Medical Sciences (AIIMS) and top defence cadre, she said.

"We are happy that we are able to help the Indian government and people during such unprecedented times. Our partnership with DRDO has yielded something noteworthy for the country," ATIRA council member Punit Lalbhai said.

ATIRA is a renowned body set up here in 1947 by textile mills as an autonomous non-profit R&D institution.

Its activities cover various aspects, from fibre to finished fabrics in traditional textiles as well as technical textiles in the arena of geo-textiles, nano web technology and composites, as per the association's website.

https://timesofindia.indiatimes.com/gadgets-news/drdo-partners-with-ahmedabad-based-textile-association-to-make-n-99-masks-in-india/articleshow/75248233.cms



# Ahmedabad textile body in collaboration with DRDO develops high quality cloth to make 'N-99' masks

ATIRA is developing the cloth material for preparation of five lakh 'N-99 masks', which it says would be better in quality than the N-95 masks that have been in huge demand of late in the fight against coronavirus

The Ahmedabad Textile Industry's Research Association (ATIRA) in collaboration with the Defence Research and Development Organisation has produced a high quality cloth to make masks of 99 per cent filter efficiency, the highest among all kind of masks available in the country.

ATIRA is developing the cloth material for preparation of five lakh 'N-99 masks', which it says would be better in quality than the N-95 masks that have been in huge demand of late in the fight against coronavirus.

While the N-95 respirator is able to filter 95 per cent of the very small airborne particles, the efficiency of the N-99 mask to filter such particles will be 99 per cent.

The Ahmedabad-based textile research association claims it is the only facility in the country to produce filter cloth for N-99 masks.

"Ninty nine per cent filtration is the highest among all types of masks available in India. There were many challenges initially, but with the untiring efforts of our highly competent scientists and research technicians, we were able to successfully develop this cloth and produce it on large scale, ATIRA director Pragnesh Shah said.

The N-99 mask has five layers out of which two are of nano mesh which are inside and three outer layers are of cloth, he said.

"Currently, the filter cloth is manufactured at a state-of-the-art facility of ATIRA as per the WHO guidelines. The Government of India and the Defence Research and Development Organisation (DRDO) have recognised the efficiency of these masks, Shah said.

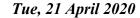
The high quality cloth for over 3.5 lakh masks has already been handed over to DRDO, while production of more such material is going on, said ATIRA deputy director Deepali Palawat, who is heading the project.

"This project is the finest example of collaboration and coordination with the government. It was difficult to procure raw materials during the lockdown. The government has moved mountains to help us procure the raw materials and provided full support during the lockdown," she said. Palawat said it was difficult to convert the research centre into a production unit but a 15-member ATIRA staff, including scientific officers and technicians, are working round-the-clock to fulfil DRDO's order of five lakh masks.

"The DRDO is getting these masks ready for health ministry officials, doctors of the All India Institute of Medical Sciences (AIIMS) and top defence cadre, she said. "We are happy that we are able to help the Indian government and people during such unprecedented times. Our partnership with DRDO has yielded something noteworthy for the country," ATIRA council member Punit Lalbhai said. ATIRA is a renowned body set up here in 1947 by textile mills as an autonomous non-profit R&D institution.

Its activities cover various aspects, from fibre to finished fabrics in traditional textiles as well as technical textiles in the arena of geo-textiles, nano web technology and composites, as per the association's website.

https://www.news18.com/news/india/ahmedabad-textile-body-in-collaboration-with-drdo-develops-high-quality-cloth-to-make-n-99-masks-2584715.html

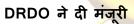




## रेलवे ने एक दिन में बनाई इतनी PPE kit, कोरोना से लड़ाई हो जाएगी आसान

देश इस समय कोरोना वायरस (Coronavirus) महामारी covid 19 से लड़ रहा है। इस लड़ाई में भारतीय रेलवे भी महत्वपूर्ण योगदान दे रहा है। भारतीय रेलवे के Northern Railways जोन के एक

कारखाने ने रविवार 1914।2929 को एक दिन में 1003 कवरऑल (PPE kit) बना कर नया रिकॉर्ड बनाया है। देश में डॉक्टरों और अस्पतालों में काम कर रहे कर्मचारियों की जरूरत को ध्यान में रखते हुए उत्तर रेलवे ने रोज लगभग 1000 कवरऑल बनाने का लक्ष्य रखा है। देश में इस समय बड़े पैमाने पर PPE kit की जरूरत है रेलवे का ये प्रयास कोरोना से लड़ाई में काफी मददगार साबित होगा। उत्तर रेलवे के चीफ मैकेनिकल इंजीनियन (CME) अरुण अरोड़ा के मुताबिक इस समय पूरी द्निया में PPE kit की कमी है। ऐसे में उत्तर रेलवे की जगाधरी वर्कशॉप में बनाए जा रहे PPE kit कोरोना से लड़ाई में काफी मददगार साबित होगी। फिलहार वर्कशॉप में रोज एक हजार किट बनाई जा रही है। मई तक इसे 2000 प्रतिदिन तक ले जाने का लक्ष्य है। रेलवे की ओर से तैयार की जा रही किट की कीमत बाजार में उपलबध किट की तुलना में लगभग आधी है।



कोरोना वायरस (coronavirus outbreak in India) covid 19 के संक्रमण को रोकने के लिए देश के डॉक्टर हर संभव प्रयास कर रहे हैं। डॉक्टरों की मदद के लिए भारतीय रेलवे (Indian Railways) ने अपनी वर्कशॉप में बड़े पैमाने पर व्यक्तिगत सुरक्षा उपकरण (PPE) बनाने

का फैसला लिया है। उत्तर रेलवे को रक्षा अनुसंधान एवं विकास संगठन (DRDO) से पीपीई को बनाने की मंजूरी मिल चुकी है।









#### डॉक्टर और मेडिकल स्टॉफ को मिलेगी मदद

PPE रेलवे सिहत अन्य अस्पतालों में कोरोना वायरस के इलाज में लगे रेलवे चिकित्सकों और अस्पताल के कर्मचारियों को आवश्यक सुरक्षा उपलब्ध करायेगा। रेलवे ने एक बयान में कहा, रेलवे के चिकित्सकों और पैरामेडिक्स के लिए हर रोज इस तरह के एक हजार सुरक्षा उपकरण बनाने के लिए रेलवे में आवश्यक प्रबंध किये जा रहे है।

### कोरोना मे इलाज में लगे डॉक्टरों को रेलवे देगा PPE

रेलवे कोरोना के इलाज में लगे देश के अन्य डॉक्टरों को भी 50 प्रतिशत PPE कपड़ों की आपूर्ति करने पर विचार कर रहा है। इन सभी के लिए जगाधरी से सामग्री खरीदी जा रही है जो पंजाब में कई बड़े कपड़ा उद्योगों के करीब स्थित है। यमुनानगर स्थित विक्रेता से कच्चे माल का स्रोत तय करने का निर्णय लिया गया है और इसे कपड़ा मंत्रालय ने मंजूरी दे दी है। बयान में कहा गया है, "आने वाले दिनों में, उत्पादन सुविधाओं में और तेजी आ सकती है। कोरोना वायरस से निपटने में लगी अन्य सरकारी एजेंसियों द्वारा भारतीय रेलवे के इस कदम का स्वागत किया जा रहा है।

### रेलवे ने 2500 कोचों को आइसोलेशन वार्ड में बदला

भारतीय रेलवे भी कोरोना वायरस के खिलाफ जंग में पूरी शिद्दत के साथ जुटी हुई है। रेलवे ने अब तक 2500 कोचों को कोरोना वायरस संदिग्ध के लिए आइसोलेशन वार्ड में तब्दील कर दिया है। यानी इन 2500 कोचों में 40 हजार आइसोलेशन वार्ड बनाए गए हैं। वहीं रेलवे अभी 5000 कोचों को आइसोलेशन वार्ड में तब्दील करने में जुटा है, जिसमें अब तक 2500 कोचों को कोरोना संदिग्धों के लिए आइसोलेशन वार्ड में तब्दील कर दिया गया है। इस तरह भारतीय रेलवे एक दिन में औसतन 375 कोच को आइसोलेशन वार्ड में बदल रहा है।

### मास्क और सेनेटाइजन का भी हो रहा है प्रोडक्शन

उत्तर रेलवे ने 19.04.2020 तक 32682 मास्क और 4715 लीटर सेनेटाइजर बनाया है। वहीं रेल कारखानों में प्रोडक्शन के दौरान सोशल डिस्टेंसिंग भी मेंटेन की रही है। रेलवे का NER जोन रक्षक नाम से आइसोलेशन कोच तैयार कर रहा है।

https://www.zeebiz.com/hindi/railways/photo-gallery-indian-railways-ppe-kit-northern-railways-workshops-fabricates-1003-coveralls-in-a-single-day-gets-drdo-thumbs-up-25171

## The Indian **EXPRESS**

Tue, 21 April 2020

# Railways to make one lakh coveralls by May 31 for Covid-19 frontline staff

Railways' coverall samples were passed by the DRDO laboratory in Gwalior, following which it picked up material from the four government-authorised suppliers of raw material for PPEs to stitch the coveralls

By Avishek G Dastidar

New Delhi: Indian Railways is targeting to make 1 lakh coveralls by May 31 for the country's frontline staff battling the COVID-19 outbreak. As of now, it has procured raw material for 60,000 of this critical Personal Protective Equipment (PPE) and distributed it among its various zones.

Railways' coverall samples were passed by DRDO laboratory in Gwalior following which it picked up material from the four government-authorised suppliers of raw material for PPEs to stitch the coveralls.

While raw material for 60,000 coveralls is already distributed among all zonal railways, the same for another 40,000 has been requisitioned and will reach by April-end so that the figure touches a lakh by end of May. The coveralls that Railways is making are for half the cost of those available in the market, officials said.

Including GST, the railway coverall costs Rs 447 per piece, whereas the ones available in the market are for Rs 808.50.

"We have tied up with the government-approved raw material suppliers. What we are making are not just cheaper but also superior in quality compared to what is available in the market," said Arun Arora, Principal Chief Mechanical Engineer of Northern Railway, which got its coverall

samples passed by the DRDO lab and then sent the design and tutorial videos to other zones to follow. Northern Railway is also the nodal procurement body for coverallrelated material in all of Indian Railways.

On Monday, for two consecutive days, the workshops and other units of Northern Railway together stitched over 1,000 coveralls a day. So far the zone has made 3467 coveralls and has supplied to railway hospitals and elsewhere as well. It is Including GST, the railway coverall costs Rs 447 per piece, whereas targeting to make over 10,000 coveralls by the ones available in the market are for Rs 808.50. (Express Photo)



month-end. In the overall pool of a lakh coveralls by Indian Railways, this zone is gearing up to make around 40,000-50,000.

However, in what could prove to be a setback, the UP government Monday shut down the two main workshops in Lucknow where these PPE items were being made—one in Alambagh and the other in Charbagh as part of containment measures. A stitching facility identified in Noida has also been shut down for the same reason. However, officials maintained that despite these hurdles, they would be able to achieve the target. "We expect to make around 40,000-50,000 coveralls in Northern Railway alone by May 31," Arora said.

Recently, at least 30,000 PPEs that arrived from China as donations did not pass Indian tests. There has also been complaints of spurious coveralls in the market. India requires around 15 million coveralls by June. The government has pressed into service several manufacturers to meet the demand and is also exploring various options to import.

Uttar Pradesh's Madhyanchal Vidyut Vitaran Nigam Limited has sought 100 litres of hand sanitiser from Northern Railway, which has so far made 4798 litres of it.

On Monday, the district administration in Dhanbad shut down the Divisional Railway Manager's office as containment and quarantine measures.

https://indianexpress.com/article/india/indian-railways-coveralls-masks-coronavirus-covid-19-6371515/

### **DRDO Technology**



Tue, 21 April 2020

# DRDO's OBOGS developed for LCA-Tejas will now save critically ill Patients

Indigenous On-Board Oxygen Generating System (OBOGS) Developed by the Defence Research and Development Organisation (DRDO) for the Tejas Mk2 program now will be used to fight the Chinese Virus affected Patients as DRDO has now proposed to use them as oxygen generation plant for Critically ill Patients.

DRDO believes that the modified OBOGS system developed to produces oxygen inside the aircraft can be used to refill an Oxygen Gas Cylinder in Hospitals for patients who are in critical care units.

idrw.org has been informed that DRDO will start product demonstration of the lightweight OBOGS system which just



weighs 14.5kgs to refill an Oxygen Gas Cylinders in Hospitals so that oxygen generation capability in far fetched areas can be maintained in light of the possible shortage of Oxygen Gas Cylinders.

Note: Article cannot be reproduced without written permission of idrw.org in any form even for YouTube Videos to avoid Copy right strikes

https://idrw.org/drdos-obogs-developed-for-lca-tejas-will-now-save-critically-ill-patients/#more-225618

ज्ञान प्रसार एवम् विस्तार के 50 वर्ष

### **COVID-19: Defence Forces Contribution**



Tue, 21 April 2020

# Coronavirus: This is how Indian Army is going to handle personnel rejoining from leave

Personnel will rejoin only on receipt of specific instructions from units or formations that has granted leave or temporary duty

New Delhi: Days after starting special trains to meet the operational requirement on northern and eastern borders during COVID-19 lockdown, the Indian Army has issued instructions for personnel rejoining from leave, temporary duty and courses.

"Broad modalities/guidelines for rejoining have been planned in a phased manner considering the numbers of individuals rejoining from leave/temporary duty/courses and the requirement for smooth reporting, quarantine and onward dispersal to units," the Indian Army said.

Personnel will rejoin only on receipt of specific instructions from units or formations that has granted leave or temporary duty.



Image used for representational purpose only. (File Photo PTI)

According to the Indian Army, any individual whose leave station is within 500 km of unit/duty station is allowed to directly report to the unit using private transport only.

"Individuals who do not fall within the 500 km criteria will report to nearest unit/station headquarter in private vehicle only," it said.

All personnel in the Army will be classified as Green (who have completed 14 days quarantine period), Yellow (who need to undergo 14 days quarantine period) and Red (symptomatic requiring isolation and further treatment in COVID hospital), the force said.

As per the classification, all personnel reporting back from leave, temporary duty and courses will be classified as Yellow and will undergo 14 days quarantine period at the reporting station or unit.

"These personnel will subsequently be moved from reporting station to duty station, unit in Army vehicles and special trains. In case, personnel do not move under supervision of military authorities, they will be considered Yellow and undergo 14 days quarantine again," he said.

All personnel from Nepal who are presently on leave should remain at their home stations till the situation in Nepal stabilises and the government opens the border for move of personnel. "Requisite move instructions will accordingly be passed to such personnel from their parent units/headquarters/establishments," said Indian Army.

However, these orders for reporting will not apply to in 'hotspots or containment zones'.

"Individuals in hotspots/containment zones will follow strict 'no movement' till the areas are denotified as containment zones. The leave granting authorities will decide on the use of the exception of areas officially declared as 'hotspots, containment zones' by the central/state government."

https://www.newindianexpress.com/nation/2020/apr/20/coronavirus-this-is-how-indian-army-is-going-to-handle-personnel-rejoining-after-leave-2132840.html

## hindustantimes

Tue, 21 April 2020

# Indian Army soldiers to be placed under 'green, yellow, red' categories to prevent spread of Covid-19

Coronavirus in India: The new orders said soldiers would rejoin duties only on the receipt of specific instructions from their units, formations and establishments By Rahul Singh

New Delhi: The Indian Army on Monday came out with a fresh of instructions for soldiers who have completed their leaves, temporary duties and courses, and are required to rejoin their units on priority. According to the instructions, the top priority bracket includes soldiers whose units or duty stations are within 500km by private transport from their place of leave, all ranks of the operationally-critical Northern Command and personnel belonging to Army Medical Corps, Army Dental Corps and Military Nursing Service who are at the forefront of the fight against the coronavirus disease (Covid-19).

The second highest priority for rejoining duty has been accorded to "all ranks of Eastern Command plus officers and key appointments of other Commands as decided by the respective Commands."

"The guidelines for rejoining have been planned in a phased manner considering the numbers of individuals rejoining from leave/temporary duty/courses and the requirement for smooth reporting, quarantine and onward dispersal to units," two senior army officers said.

The new orders said soldiers would rejoin duties only on the receipt of specific instructions from their units, formations and establishments. "Any individual whose leave station is within 500km of unit/duty station is allowed to directly report to unit using private transport only. Those who are not within the 500km limit will report to nearest unit/station headquarters in private vehicle only," the instructions said.

With Covid-19 cases spreading at a fast rate across the country, the army said all its personnel be classified as 'green' (who have completed 14 days of quarantine), 'yellow' (those who need to undergo 14 days quarantine) and lastly, 'red' (who are symptomatic and require isolation and further treatment in Covid hospitals).

"All personnel reporting back from leave, temporary duty and courses will be classified as 'yellow' and will undergo 14 days quarantine at the reporting station/unit. They will subsequently be moved from reporting station to duty stations and units in army vehicles, special trains, etc.," the instructions said.

The army clarified in case such personnel do not move under the supervision of military authorities, they will continue to be considered 'yellow' and would have to undergo 14-day quarantine again.

According to the instructions, Indian Army soldiers from Nepal who are on leave will remain at their home stations till the situation in the neighbouring country stabilises or the government opens the border for the movement of personnel.

"Requisite move instructions will accordingly be passed to such personnel from their parent units, headquarters and establishments," the instructions said.

The army clarified that the latest instructions will not apply to soldiers in hotspots or containment zones.

"Individuals in hotspots/containment zones will follow strict 'no movement' till the areas are de-notified. The leave-granting authorities will decide on the use of the exception of areas

officially declared as hotspots/containment zones by the central/state government," the instructions said.

https://www.hindustantimes.com/india-news/indian-army-soldiers-to-be-placed-under-green-yellow-red-categories-to-prevent-spread-of-covid-19/story-07zKVNFbu1K7hYpJCmaAcJ.html

## अमरउजाला

Tue, 21 April 2020

## कोरोनाः भारतीय सेना ने कर्मियों को 'हरे, पीले व लाल' श्रेणियों में बांटा, जानें इसके पीछे का कारण

नई दिल्ली: भारतीय सेना ने कोविड-19 के खतरे को कम करने के लिए सैन्यकर्मियों को तीन श्रेणियों में बांटने का फैसला किया है। यह निर्णय इसलिए लिया गया है ताकि बेहतर ढंग से मॉनिटरिंग सिस्टम कायम हो सके।

सेना ने छुट्टी, अस्थायी ड्यूटी और प्रशिक्षण पाठ्यक्रम से लौटने वाले अपने कर्मियों को 'हरे, पीले और लाल' की तीन श्रेणियों में रखने का फैसला किया है। सरकारी सूत्रों ने सोमवार को बताया कि कोरोना वायरस के संक्रमण को फैलने से रोकने के लिए उपाय किए गए हैं।

नए निर्देशों के तहत, सेना मुख्यालय ने अभियान चलाने के लिए अहम उत्तरी कमान के सभी रैंक के अधिकारियों और सेना चिकित्सा कोर, सेना दंत कोर तथा सेना नर्सिंग सेवा के किम्यों को 'शीर्ष प्राथमिकता' के वर्ग में रखा है। सेना चिकित्सा कोर, सेना दंत कोर तथा सेना नर्सिंग सेवा के कई कर्मी संक्रमण का इलाज करने वाली विभिन्न टीमों का हिस्सा हैं।

जिन कर्मियों को शीर्ष प्राथमिकता में रखा गया है, उनमें वे सैनिक भी शामिल हैं जिनकी इकाई या स्टेशन उनके अवकाश स्थान से 500 किलोमीटर के दायरे में हैं और वह सड़क से वहां पहुंच सकते हैं।

सभी को ड्यूटी शुरू <mark>करने के बा</mark>द 14 दिनों के क्<mark>वारंटीन में</mark> जाना होगा

अपने सभी बे<mark>स, प्रतिष्ठानों औ</mark>र फॉर्मेशन को भे<mark>जे निर्दे</mark>श में सेना ने कहा है कि सभी कर्मियों को ड्यूटी शुरू करने के बाद 14 दिन के क्<mark>वारंटीन में</mark> जाना जरूरी है और उ<mark>न्हें 'पीली' श्रेणी में रखा जाएगा।</mark>

सूत्रों ने बताया कि 14 दिन का क्वारंटीन पूरा करने के बाद कर्मियों को 'हरी' श्रेणी में रखा जाएगा और जिनमें लक्षण दिखेंगे और उन्हें पृथक करने की जरुरत होगी। ऐसे कर्मियों को 'लाल' श्रेणी में रखा जाएगा।

पिछले कुछ हफ्तों में सेना मुख्यालय ने 13 लाख कर्मियों वाली मजबूत फौज को कोरोना वायरस से बचाने के लिए कई निर्देश जारी किए हैं। देश में कोविड-19 से 540 से ज्यादा लोगों की मौत हो गई है और 17000 से अधिक मामले हैं। सेना के भी आठ कर्मी संक्रमित पाए गए हैं।

नए दिशानिर्देशों के मुताबिक, वे सभी कर्मी जो छुट्टी, अस्थायी ड्यूटी और पाठ्यक्रम से लौट रहे हैं, उन्हें पीली श्रेणी में रखा जाएगा और उन्हें रिपोर्टिंग स्टेशन या इकाई में 14 दिन का क्वारंटीन पूरा करना होगा। इसके बाद इन कर्मियों को सेना की गाड़ी या विशेष ट्रेनों से रिपोर्टिंग स्टेशन से ड्यूटी स्टेशन या इकाई में भेजा जाएगा।

अगर कोई कर्मी सैन्य अधिकारियों की निगरानी में नहीं जाता है तो उसे फिर से 'पीली' श्रेणी में समझा जाएगा और उसे फिर से 14 दिन के क्वारंटीन में जाना होगा। निर्देशों के मुताबिक, पूर्वी कमान के सभी रैंक के अधिकारियों और अन्य कमान की अहम निय्क्तियों को दूसरे उच्चतर प्राथमिकता वर्ग में रखा गया है।

https://www.amarujala.com/india-news/coronavirus-indian-army-decides-to-put-personnel-classified-in-green-yellow-and-red-categories



Tue, 21 April 2020

# **COVID 19 and Indian Army: How to cope with movement restrictions**

In an environment of United we Stand Divided we fall; the new norm of social distancing is a major challenge for leadership at all levels

By Lt Col Manoj K Channan (Retd)

Troops are happy when they are kept busy. Under the current nationwide lockdown, the Indian Defence Services too have suspended all activities related to peacetime soldiering. These are mainly training, up-gradation cadres and professional qualifications, physical fitness, maintenance of equipment which includes warlike stores and unit assets. The Indian Army is a volunteer army has sixty per cent of the troops who are staying in the unit lines as their families are in their respective villages/cities.

In an environment of United we Stand Divided we fall; the new norm of social distancing is a major challenge for leadership at all levels. Fortunately, the summers have set in and the heat itself ensures that individual soldiers keep the requisite distance between themselves. While this may be easy in peacetime stations; the challenges are more acute at the Line of Control as the virus adds another challenge to the ones already existing. The enemy is not going to let any laxity go by and would exploit any window of opportunity to push across terrorists (who may be affected by Corona Virus) thus killing two birds with one stone. So how does one keep the boys busy?

Fortunately, the units are based on a modular system and it is assumed, that under that rationale troops are divided and kept engaged in routine duties of area maintenance, maintenance of vehicles, weapon cleaning, stock taking, segregation of beyond economic repair items and seeking their disposal. Making demands for deficient equipment and stores, personal documentation of All Ranks.

In fact the Pandemic is a great time to break the biorhythm of the troops as the 24-hour cycle can be broken down into four quarters and the troops at the sub-unit level be tasked accordingly. This would ensure that the social distance norms of the Ministry of Health and Family welfare are met in letter and spirit. To sum up, the South Western Army Commander has penned his thoughts which are very valid for the Indian Army, are appended below.

"Commanding the COVID, "He who has a Why to live for can bear almost anyhow."

The stakes are high; we are dealing today with an unforeseen, unfathomable and I daresay unbeatable enemy which is omnipresent. The COAS has rightly directed that force preservation is the order of the day and I am sure that everyone is paying heed to that diktat. Yes, we all need to be counted; yes we all need to do everything in our capacity to ensure that we and our command are prepared to undertake any task that comes our way. Deep down we all know that Fauj will always deliver, no matter what, we always do!

However, let me attempt to put a finger to keyboard and list out some unsolicited advice.

Firstly, for the Commanding Officer, the man in the eye of the storm. As has been emphasized time and again, it's vital for you to be visible; make sure your visits to the langar, the lines, the family quarters, the BFNA up-gradation cadres etc are more than usual – remember you are in Ops and it's vital that your men see you leading from the front.

Another important thing in our context is that you must at least seem to have an answer to all their questions – remember, for them their CO Saab is supreme and is expected to be the saviour, always; make sure you live up to that expectation. There is bound to be a lot of ambiguity, maybe even dichotomy (not by design though) with the orders that will come your way, especially now as you prepare for what lies ahead (which incidentally nobody can predict), however don't hesitate to put across your point of view, especially when it concerns the well-being of your command.

There may be numerous restrictions in place, but please be empathetic towards the genuine needs of the men you command, especially those away from their families, and don't hesitate to raise the level when reqd. Your better half has a huge role to play in order to assuage the anxieties of every soul in the extended family that you call your battalion/regiment/unit; make sure you find ways to make this exercise inclusive and craft a narrative to suit every stakeholder.

Nobody could have predicted the kind of situation that you are commanding in, so innovate as you go along (and by that I certainly don't mean the many avishkars doing the rounds) and deal with the situations as they present themselves.

Most importantly, keep yourself fit, physically & mentally, and find ways for your command to follow suit – it's vital we all do.

Secondly, for the Staff Officer at higher headquarters. Please recall your own time from when you were in a unit and felt slighted by a Staff Officer who only cared to please his Boss or his higher headquarters, rather than logically apply himself. Please remember, your loyalty ought to lie with the organisation first and NOT repeat NOT with the person you are the Staff Officer to. Your job is to always take an all-round a considered view of the situation on ground and advice/debate decisions which will have far-reaching consequences.

In your exuberance to always seem like you have all the answers, don't be a creator of work; rather be creative enough to lessen the burden below you.

Lastly, to the Higher Cdrs in the chain of command – please have trust, both laterally & vertically, and especially on your subordinates. Right now, nobody has the answers to what lies ahead, nor is anyone likely to anytime soon. But, you are expected to draw on your years of experience & wisdom, as also that of your staff, colleagues and subordinates and pass clear-cut directions; however please do so after you have war-gamed them thoroughly with the people who are going to be affected by those directions, because for them, coming from you, those are orders.

Let's hope, pray and prepare, so that we may emerge from this challenge stronger, wiser and unscathed. God speed. Lt Gen Alok Kler"

(The author is Indian Army Veteran. Views expressed are personal.)

https://www.financialexpress.com/defence/covid-19-and-indian-army-how-to-cope-with-movement-restrictions/1934112/

## THE TIMES OF INDIA

Tue, 21 April 2020

# IAF transports 450 tonnes of medical equipment, support materials amid coronavirus lockdown

New Delhi: The Indian Air Force (IAF) has transported 450 tonnes of medical equipment and other essential supplies till date amid the coronavirus lockdown in the country, the defence ministry said on Monday.

The IAF has mobilised its planes and helicopters along with the necessary support infrastructure to create and maintain "air-bridges" between nodal supply bases and recipient locations across the country, the ministry noted in its press release.

"The IAF has undertaken transportation of medical supplies including PPE (personal protective equipment), testing kits, sanitization material and associated equipment along with the movement by air of medical personnel," the ministry stated.

India has been under lockdown since March 25 to curb the spread of the novel coronavirus, which has infected more than 17,600 people and killed 550 people in the country till now.

The IAF has airlifted material to locations in 16 states and union territories (UTs) of Jammu and Kashmir, Ladakh and Puducherry since March 25.

"The critical requirement of transporting swab samples for testing from the UT of Ladakh continues to be undertaken by the IAF," the defence ministry said.

"In addition, IAF has also airlifted Covid-19 support material for various agencies including DRDO (Defence Research and Development Organisation) and ICMR (Indian Council of Medical Research)," the ministry stated.

Till date, the IAF has transported approximately 450 tonnes of medical equipment and support materials, it noted.

https://timesofindia.indiatimes.com/india/iaf-transports-450-tonnes-of-medical-equipment-support-materials-amid-coronavirus-lockdown/articleshow/75255244.cms



Tue, 21 April 2020

# What is Operation Sanjeevani by Indian Air Force?

Operation Sanjeevani: Indian Air Force (IAF) launched an 18-hour operation and airlifted 6.2 tonnes of essential medicines and hospital consumables with its C-130 transport aircraft and delivered it to the Maldives under Operation Sanjeevani

By Arfa Javaid

At the time of the global pandemic, Indian Air Force (IAF) launched an 18-hour operation and airlifted 6.2 tonnes of essential medicines and hospital consumables with its C-130 transport

aircraft and delivered it to the Maldives under Operation Sanjeevani. Due to the countrywide lockdown in India, as announced by Prime Minister Modi, the medicines and consumables couldn't have been transported through any other means.

After the Government of Maldives requested the Government of India, Indian Air Force activated 'Operation Sanjeevani' to lift and deliver the essential medicines and hospital consumables to the Maldives. The medicines were lifted from airports in New Delhi, Mumbai, Chennai and Madurai with the help of the Indian Army before it was transported to the Maldives.



**Operation Sanjeevani** 

#### **Operation Sanjeevani: What have been delivered to the Maldives?**

Influenza vaccines and anti-viral drugs which are used in other countries to treat COVID-19 such as Lopinavir and Ritonavir have been delivered. Hospital consumables include catheters, nebulisers, urine bags, infant feeding tubes, medications for cardiac conditions, kidney ailments, hypertension, high blood pressure, diabetes, arthritis, allergies and cancer treatment, anticonvulsants have also been delivered.

#### India extended help to the Maldives amidst COVID-19

In addition to these essential supplies, India has also dispatched 5.5 tonnes of essential medicines to the Maldives last month. A 14-member COVID-19 Rapid Response Team of doctors

and specialists have also been sent to the Maldives by the Indian Government. Indian Government has also evacuated nine Maldives nationals from Wuhan, China, where the COVID-19 was first identified.

#### Role of Indian Air Force at the time of crisis in the Maldives

The Government of India has helped the Maldives many times before the global pandemic. In 1998, the Indian Armed Forces helped the Maldives in the neutralization of the coup attempt. In 2004, several supplies were sent after the tsunami hit the Maldives. In 2014, Operation Neer was launched by the Indian Government to supply clean drinking water to the Maldives.

In the wake of the coronavirus pandemic, Government of India is helping its neighbouring country the Maldives. It is a growing example of India's neighbourhood first policy and reciprocation of Maldives' India first policy. It must be noted that the Maldives was the first neighbouring country of India which received essential medicines from India in its fight against COVID-19.

https://www.jagranjosh.com/general-knowledge/operation-sanjeevani-1587382468-1

### **Defence Strategic: National/International**

## THE HINDU

Tue, 21 April 2020

# Rajnath Singh reviews implementation of reform measures in armed forces

The review was carried out by Mr. Singh at a high-level meeting

New Delhi: Defence Minister Rajnath Singh on Monday took stock of progress in implementation of a long-delayed reform process in the armed forces under which a series of measures are being taken to enhance their combat capability, officials said.

The review was carried out by Mr. Singh at a high-level meeting which was attended by Chief of Defence Staff Gen Bipin Rawat, Chief of Naval Staff Admiral Karambir Singh, Chief of Air Staff Air Chief Marshal R.K.S Bhadauria and Chief of the Army Staff Gen M.M. Naravane.

Defence Secretary Ajay Kumar, Secretary and Chairman of Defence Research and Development Organisation G. Satheesh Reddy were also present at the meeting.

The government in August 2017 had unveiled the ambitious reform initiative for the Indian Army based on recommendations of a committee headed by Lieutenant Gen (retd) D.B. Shekatkar.

The committee had made a number of recommendations for triservices coordination including measures to ensure convergence in specific areas among the Army, the Navy and the Indian Air Force.



Defence Minister Rajnath Singh holds a meeting to review recommendations of Shekatkar Committee report on enhancing combat capabilities, in New Delhi, Monday, April 20, 2020. Photo Credit

The committee was tasked with suggesting steps to enhance combat capability of the armed forces.

"The meeting reviewed implementation of the recommendation of the Shekatkar committee," said an official.

The Army has implemented a number of recommendations out of 65 to enhance its combat capability.

The reforms recommended for the Army included redeployment and restructuring of approximately 57,000 posts of officers, junior commissioned officers and other ranks.

<u>https://www.thehindu.com/news/national/rajnath-singh-reviews-implementation-of-reform-measures-in-armed-forces/article31390429.ece</u>

## **ThePrint**

Tue, 21 April 2020

# What is Shekatkar report, defence ministry's first order of business after lockdown

Defence Minister Rajnath Singh chaired a meeting Monday to review the status of the Shekatkar report's implementation. The report has never been made public By Snehesh Alex Philip

New Delhi: After nearly a month in lockdown, the Ministry of Defence sprang into action Monday with Defence Minister Rajnath Singh undertaking a high-level review of the recommendations of the Shekatkar Committee on reforming the armed forces.

The meeting was attended by Chief of Defence Staff Gen. Bipin Rawat, Navy chief Admiral Karambir Singh, Air Force head Air Chief Marshal Rakesh Bhadauria, Army chief Gen. M.M. Naravane and Defence Secretary Ajay Kumar.

The Shekatkar Committee was set up by former defence minister Manohar Parrikar, and submitted its report in December 2016. The report, which is now the guiding principle for ongoing defence



The Ministry of Defence meeting to review the progress on implementing the Shekatkar report  $\mid$  Photo: ANI

reforms, has never been made public, because it covers operational aspects of the armed forces, and its disclosure is not in the interests of national security.

The Print takes a look at the key recommendations made by the report.

#### **Slew of Reforms**

The defence ministry is in the process of implementing a slew of reforms suggested by the committee, headed by Lt Gen. D.B. Shekatkar (retd), which studied how to make the armed forces much leaner, cohesive and modern.

Initially, the ministry had considered the report and sent 99 recommendations to the armed forces for making an implementation plan.

In August 2017, then-defence minister Arun Jaitley had approved 65 recommendations pertaining to the Indian Army for implementation.

According to a 2017 report, the Shekatkar Committee had recommended that India's defence budget should be in the range of 2.5 to 3 per cent of the GDP, keeping in mind possible future threats.

It had also suggested the establishment of a Joint Services War College for training for middle-level officers, even through the three separate war colleges — Mhow, Secunderabad and Goa — could continue to train younger officers for their respective services.

It had also recommended that the Military Intelligence School at Pune be converted to a triservice intelligence training establishment.

The first phase of the reforms approved by Jaitley involves redeployment and restructuring of approximately 57,000 posts of officers/JCOs/ORs and civilians.

The report also focuses on optimisation of Signals establishments to include radio monitoring companies, corps air support signal regiments, air formation signal regiments, composite signal regiments, and merger of corps operating and engineering signal regiments.

It included restructuring of repair echelons in the Army to include base workshops, advance base workshops and static/station workshops in the field Army.

It also called for the closure of military farms and army postal establishments in peace locations, which is among the recommendations already implemented.

https://theprint.in/defence/what-is-shekatkar-report-defence-ministrys-first-order-of-business-after-lockdown/405435/

## live mint years

Tue, 21 April 2020

# Dassault Reliance Aerospace resumes operations at Mihan SEZ

By Ishita Guha

- The company will operate with 25-30% of its total strength in the first phase
- Anil Ambani-led Reliance Infrastructure Ltd holds 51% stake in DRAL, a JV with Rafale fighter jet manufacturer Dassault Aviation which owns the rest

New Delhi: Dassault Reliance Aerospace Ltd (DRAL) on Monday re-started operations at its Mihan special economic zone (SEZ) in Nagpur, in line with the government's plan to lift the nationwide lockdown in a phased manner, according to a company statement.

The company will operate with 25-30% of its total strength in the first phase, and plans to scale up operations as per the directives of the district administration and local authorities.

Dassault Reliance Aerospace supplies aero structure assemblies for Falcon 2000 business jets and components for Rafale aircraft, as part of the global supply chain for Dassault Aviation.

Anil Ambani-led Reliance Infrastructure Ltd holds 51% stake in DRAL, a joint venture with Rafale fighter jet manufacturer Dassault Aviation which owns the remaining.

The company said it will take all covid-19 related precautions to ensure the safety of its employees. "All precautionary measures have been taken to ensure safe working environment under the prevailing circumstances," it said.

The government has allowed lifting of the nationwide lockdown in a phased manner from today. It released guidelines for some sectors that can resume activities, while taking all necessary steps to curb the spread of coronavirus.

The government had initially imposed a 21-day national lockdown, effective 25 March and till 14 April. With the rise in the number of covid-19 cases in the country, it decided to extend the lockdown until 3 May but allowed some sectors to resume operations.

While announcing the extension of the lockdown on 14 April, Prime Minister Narendra Modi had said areas that show an improvement in reducing the number of cases will also see relaxations in the lockdown.

https://www.livemint.com/companies/news/dassault-reliance-aerospace-resumes-operations-at-mihan-sez-11587382521294.html

### **COVID-19 Research**



Mon, 20 April 2020

## कोविड 19 को लेकर पेरिस में नया खतरा, पानी में कोरोना वायरस मिला

पेरिस: संक्रामक महामारी कोरोना वायरस का एक और बड़ा खतरा सामने आया है। फ्रांस की राजधानी पेरिस शहर में पानी में भी कोविड-19 के विषाण पाए गए हैं। शहर के एक अधिकारी ने इसकी पुष्टि की है।

अधिकारी सेलिया ब्लाउल ने बताया कि पेरिस के गैर पीने योग्य पानी में नए कोरोना वायरस के 'माइनसक्यूल' सूक्ष्म निशान पाए गए हैं। यह पानी सड़कों की सफाई आदि में इस्तेमाल किया जाता है। अधिकारी ने कहा कि फिलहाल पीने के पानी के दूषित होने का कोई खतरा नहीं है।

ब्लाउल ने ब<mark>ताया कि पेरिस</mark> जल प्राधिकरण <mark>की प्रयोग</mark>शाला ने राजधानी के चारों ओर से एकत्रित 27 नमूनों में से चार में वायरस की सूक्ष्म मात्रा का पता लगाया है। एहितयात के तौर पर इन केंद्रों को तत्काल बंद कर दिया गया। इसकी उच्च स्तरीय जांच की जा रही है।

### चीन ने वुहान को कम जोखिम वाला क्षेत्र घोषित किया

वहीं कोरोना वायरस महामारी का केंद्र रहे वुहान को चीन ने कम जोखिम वाला इलाका घोषित किया है। हालांकि, कुछ दिन पहले शहर में संक्रमितों और मृतकों की संख्या संबंधी आंकड़ों में वृद्धि दर्ज की गई थी। स्वास्थ्य अधिकारियों ने रविवार को बताया कि देश में कोरोना संक्रमण के 16 नए मामले सामने आए हैं।

चीन की राज्य परिषद के दिशा-निर्देशों के अनुसार, जोखिम का आकलन नए मामलों के आधार पर किया जाता है। जिन शहरों, काउंटी और जिलों में बीते 14 दिन में किसी नए मामले की पुष्टि नहीं हुई हो, उसे कम जोखिम वाले इलाके की श्रेणी में रखा जाता है। जहां 50 से कम मामले हों या अधिक मामले होने के बावजूद बीमारी फैल नहीं रही हो, उन्हें मध्यम जोखिम की श्रेणी में रखा जाता है। जहां 50 से अधिक मामले और बीमारी फैल रही हो उन्हें उच्च जोखिम वाला क्षेत्र माना जाता है।

 $\underline{https://www.livehindustan.com/international/story-new-threat-in-paris-due-to-covid-19-corona-virus-found-in-water-3162570.html}$ 





## Air pollution linked to raised Covid-19 death risk

High levels of air pollution could raise the risk of dying from Covid-19, two studies suggest.

By Navin Singh Khadka

Dr Maria Neira, of the World Health Organization (WHO), told BBC News countries with high pollution levels, many in Latin America, Africa and Asia, should ramp up their preparations.

Those with underlying pollution-related conditions have developed severe Covid-19 in countries with high levels.

But medical professionals say it is too early to prove a direct relationship.

"We will be doing a map of most polluted cities based on our database to support national authorities in these regions so that they can prepare their epidemic response plan accordingly," Dr Neira said.

A US study suggests Covid-19 death rates rise by about 15% in areas with even a small increase in fine-particle pollution levels in the years before the pandemic.



The Harvard research suggests Covid-19 death rates in the US rose where there was a high concentration of fine particulate matter (PM2.5)

"Patterns in Covid-19 death rates generally mimic patterns in both high population density and high [particulate matter] PM2.5 exposure areas," the Harvard University report says.

These particles, one-30th the diameter of a human hair, have previously been linked to health issues including respiratory infections and lung cancer.

The Harvard study has not yet been peer reviewed but Ludwig Maximilian University of Munich chair of epidemiology Air pollution linked to raised Covid-19 death riskProf Annette Peters told BBC News its findings "are in line with earlier reports on hospitalisation and mortality due to pneumonia".

"It is one of the first studies substantiating our suspicion and the hypothesis that severity of the Covid-19 infection may be augmented by particulate matter air pollution," she said.

Report author Prof Francesca Dominici said: "We hope it will help stop the air quality from getting worse, particularly when we are hearing about authorities trying to relax pollution rules amid this pandemic."

Another study, at the University of Siena, in Italy, and Arhus University, in Denmark, suggests a possible link between high levels of air pollution and Covid-19 deaths in northern Italy.

The Lombardy and Emilia Romagna regions had death rates of about 12%, compared with 4.5% in the rest of Italy.

The study, published in Science Direct, says: "The high level of pollution in northern Italy should be considered an additional co-factor of the high level of lethality recorded in that area."

Population, age, differing health systems, and a variation in prevention policies across regions should also be taken into account.

Meanwhile, in the Philippines, Cesar Bugaoisan, of the Association for Respiratory Care Practitioners, said: "In our preliminary data, almost all of the dead individuals in the country due to coronavirus had pre-existing conditions, most of them linked to air pollution."

Air pollution already kills about seven million people every year, the WHO says.

And more than 90% of the world's population live in places where air pollution exceeds its guideline limits, mostly in poor countries.

Many of the affected countries are in South Asia, the Middle East, sub-Saharan and North Africa, according to a World Bank report last year.

Cities in Chile, Brazil, Mexico and Peru also have dangerous levels of air pollution, according to several WHO and United Nations reports.

But the World Air Quality Report 2019 suggests India has the most cities with high air pollution levels.

India has recorded 521 Covid-19 deaths so far.

Dr S K Chhabra, pulmonary department head at Primus Super Speciality Hospital, in Delhi, said: "If we see a significant rise in the spread of the virus, people with underlying conditions because of air pollution will definitely be the worst affected."

And Public Health Foundation India president Prof Srinath Reddy said: "If air pollution has already damaged the airways and lung tissue, there is reduced reserve to cope with the onslaught of coronavirus."

But Dr Rajni Kant Srivastava, of the Indian Council for Medical Research, said: "There is not enough evidence and we have also not carried out any such study."

The 2002 severe acute respiratory syndrome (Sars) outbreak, caused by a different strain of coronavirus, infected more than 8,000 people, in 26 countries, and killed almost 800.

And a 2003 University of California, Los Angeles study suggested people from areas of high air pollution were more than twice as likely to die from the disease.

