

2020

समाचार पत्रों से चयित अंश Newspapers Clippings

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

Volume: 45 Issue: 82 16 April 2020



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केंद्र
Defence Scientific Information & Documentation Centre
मेटकॉफ हाउस, दिल्ली - 110 054
Metcalf House, Delhi - 110 054

CONTENT

S. No.	TITLE	Page No.
	COVID-19: DRDO's Contribution	1-12
1.	COVSACK: Kiosk for Covid-19 sample collection developed by DRDO	1
2.	After Kerala, DRDO develops walk-in kiosks for coronavirus sample collection	2
3.	Coronavirus: सैंपल लेने के लिए डीआरडीओ ने तैयार किया 'कोवसैक' कियोस्क, बिना पीपीई हो सकेगी जांच	3
4.	DRDO ने बनाया कोरोना सैंपल कलेक्शन के लिए ऑटोमेटिक Kiosk	4
5.	DRDO develops COVID sample collection kiosk which protects health and sanitation workers from possible infection	5
6.	DRDO develops Covid-19 sample collection kiosk to help healthcare workers	6
7.	DRDO develops unique Covid-19 testing kiosk which does not require PPEs; Details here	6
8.	DRDO develops Covid-19 sample collection kiosk to help healthcare workers	7
9.	Tens of thousands of Chinese PPE kits fail India safety test	8
10.	After 50,000 PPE kits from China fail quality tests, India ramps up in-house production	9
11.	Covid-19: Railways plans to produce over 1.3 lakh coveralls for healthcare personnel by May-end	10
12.	Railways to make 30K PPE in April, 1 lakh in May to meet demand	11
13.	Railways to produce over 30,000 PPE coveralls in April; 1 lakh by May	12
	DRDO Technology	13-13
14.	Indian Navy wants feasibility study to see if P-8I can be armed with Long-Range Cruise Missiles	13
	COVID-19: Defence Forces Contributions	14-17
15.	Drones, thermometers and oxygen systems: Army and Navy innovate to fight Covid-19	14
16.	Army advises personnel to use govt's Aarogya Setu app, but with usual cyber precautions	15
17.	Indian Army medical teams on standby to help four neighbouring countries	16
	Defence Strategic: National/International	18-25
18.	Toward a holistic defence innovation policy	18
19.	India's Rakhine headache	19
20.	Army Chief to visit Kashmir to review situation amidst surge in ceasefire violations	21
21.	India issues warning after China antagonises New Delhi with 8 warships in Indian Ocean	21
22.	Harpoon Anti-Ship Missiles: The next Armour in the Indian Navy	22
23.	Mystery Submarine in service with Pakistan's Navy SEALs	24
	Science & Technology	25-27
24.	Why the coronavirus slowed China's plan to take on Elon Musk's internet satellites	25
	COVID-19 Research	28-33
25.	कोरोना वायरस: वैक्सीन पर करोड़ों खर्च कर रहा ऑस्ट्रेलिया, यह दवा बन सकती हैकोविड-19 का तोड़	28
26.	क्या चमगादड़ से इंसान में आ रहा है कोरोना वायरस? ICMR ने दिया यह जवाब	30
27.	रिसर्च पर विवाद / चमगादड़ से कुत्ते में और कुत्ते से इंसान में पहुंचा होगा कोरोना: कनाडाई वैज्ञानिक की रिपोर्ट पर भड़के दूसरे वैज्ञानिक	31
28.	COVID19 immunity can last for 2 years but social distancing must till 2022	32



Thu, 16 April 2020

COVSACK: Kiosk for Covid-19 sample collection developed by DRDO

COVID Sample Collection Kiosk (COVSACK) will have a shielding screen that will protect the health professional from droplet/aerosols transmission while taking a COVID-19 sample

By Shailaja Tripathi

COVID Sample Collection Kiosk (COVSACK) has been developed by the Defence Research and Development Laboratory (DRDL), Hyderabad. DRDL is a missile system laboratory that comes under the Defence Research and Development Organisation (DRDO).

DRDL has developed the kiosk in the consultation with the doctor's of Employees State Insurance Corporation (ESIC), Hyderabad.

The kiosk will be useful for healthcare workers while taking COVID-19 samples of infected patients. This unit will reduce the requirement to change Personal Protective Equipment (PPE) by the health workers.

COVID Sample Collection Kiosk (COVSACK):

The kiosk will be used by the health workers for collecting the samples of COVID-19 from the patients.

The patient will walk into the kiosk and oral or a nasal swab will be taken by the health worker from outside through the built-in gloves.

The shielding screen of the kiosk will protect the health professional from droplet/aerosols transmission while taking a sample.

Functions of COVSACK:

- The kiosk will be automatically disinfected without any human involvement; it will make the process of sample collection free from infection.
- Once the patient will leave, four nozzle sprayers in Kiosk cabin will spray disinfectant mist for 70 seconds to disinfect the empty chamber.
- It will be further flushed with UV light disinfection and water and the system will be ready for use in less than 2 minutes.
- Voice command can also be given through the two-way communication system of COVSACK.
- It is possible to use COVSACK either from the inside or from the outside as suitable for the medical professional.

The cost of COVID Sample Collection Kiosk is nearly Rs. 1 lakh. The industry-based at Belgaum, Karnataka can support 10 units per day.

DRDO had designed and developed two units and after the successful testing handed them over to ESIC Hospital, Hyderabad.

<https://www.jagranjosh.com/current-affairs/kiosk-for-covid-19-sample-collection-developed-by-drdo-1586948760-1>



After Kerala, DRDO develops walk-in kiosks for coronavirus sample collection

The suspected infected patients have to walk into the COVID Sample Collection Kiosk (COVSACK) and a nasal or oral swab is taken by healthcare professionals from outside through the built-in gloves

By PB Jayakumar

Key Highlights:

- **DRDO develops safe swab sample collection kiosks named COVSACK**
- **Kerala had innovated it as WISK a week ago, modelling South Korea**
- **Patients walk into COVSACK and health professionals safely sit inside WISK**
- **No need for PPEs for sample collection, besides ensuring safety of sample collector**

Protection of health worker is a big concern worldwide while dealing with COVID-19 patients. Within a week of South Korea developing walk-in kiosks to collect swab samples without human intervention, Kerala emulated them with WISK sample kiosks a week ago. Now the Defence Research and Development Laboratory (DRDL) in Hyderabad has come up with COVID Sample Collection Kiosk (COVSACK), in consultation with the doctors of Employees' State Insurance Corporation (ESIC), Hyderabad.

In this, the suspected infected patients have to walk into the kiosk and a nasal or oral swab is taken by healthcare professionals from outside through the built-in gloves. The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of kiosk cabin protects the health care worker from the aerosols and droplet transmission while taking the sample. This reduces the requirement for Rs 1000-plus worth personal protection equipment (PPE) that has to be changed by healthcare workers after each sample collection, says Defence Research and Development Organisation (DRDO).



After the patient leaves the kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection. The system is ready for next use in less than two minutes. Voice command can be given through two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals.

The COVSACK costs nearly Rs 1 lakh and a manufacturer based at Belgaum, Karnataka is gearing up to make 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

The Ernakulam government medical college hospital in Kerala last week had developed its WISK, with the help of district administration based on social media footage on COVID-19 sample collection methods used in South Korea. In the Kerala version, costing Rs 40,000, the kiosk has an ultraviolet light unit, gloves and exhaust fan and is almost like a Personal Protective Equipment small suit. In that, the health worker sits inside the kiosk and collect the throat swab using the gloves attached to the unit. The gloves would be sanitised after every sample collection. Another advantage is the unit can be mounted in an ambulance to go to hotspot areas and collect samples,

instead of suspected patients transported in ambulances to nearby designated testing centres. Kerala has also made two units and is in discussion with NGOs to set up more such units.

Meanwhile, the Ordnance Factory Board (OFB) under the Ministry of Defence has started supply of coveralls conforming to ISO Class 3 exposure standards. Manufacture of initial order of 1.10 lakh from HLL Lifecare Limited (HLL), the government's nodal agency to procure medical equipment fighting COVID-19, is in full swing and will be completed in 40 days.

The Factories Board has also developed special two-metre tents which can be used for medical emergency, screening, hospital triage and quarantine purposes. These are made up of waterproof fabric, mild steel and aluminium alloy. Supplies have already started, said a communication from the government.

<https://www.businesstoday.in/latest/trends/after-kerala-drdo-develops-walk-in-kiosks-for-coronavirus-sample-collection/story/401124.html>



Thu, 16 April 2020

Coronavirus: सैंपल लेने के लिए डीआरडीओ ने तैयार किया 'कोवसैक' कियोस्क, बिना पीपीई हो सकेगी जांच

नीरज राजपूत

- इस कियोस्क में मरीज को खड़ा कर दो इनबिल्ट ग्लब्स से लिया जा सकता है सैंपल।
- 2 मिनट की डिसइंफेक्शन प्रक्रिया के बाद दोबारा प्रयोग के लिए हो जाता है तैयार।

नई दिल्ली: कोरोना वायरस के टेस्ट और सैंपल लेने के लिए डीआरडीओ की हैदराबाद स्थित लैब ने एक खास कियोस्क तैयार किया है। करीब एक लाख की कीमत वाले इस कियोस्क से डॉक्टर बिना पीपीई सूट पहने भी टेस्ट कर सकता है। रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) की हैदराबाद स्थित डिफेंस रिसर्च एंड डेवलपमेंट लैब (डीआरडीएल) ने इसे 'कोवसैक' यानि कोरोना वायरस सैंपल कलेक्शन कियोस्क नाम दिया है।

डीआरडीएल ने इस यूनिट को हैदराबाद स्थित कर्मचारी राज्य बीमा निगम (ईएसआईसी) के डॉक्टरों के परामर्श से तैयार किया है। कोरोना



वायरस परीक्षण के लिए डॉक्टर या अन्य हेल्थ वर्कर कियोस्क में अंदर प्रवेश करने वाले व्यक्ति का बाहर से ही दो इनबिल्ट ग्लब्स में नाक या मुँह से सैंपल ले सकता है। कियोस्क मानव भागीदारी की आवश्यकता के बिना स्वतः संक्रमण रहित हो जाता है। जिससे प्रक्रिया संक्रमण के फैलने से मुक्त हो जाती है।

कियोस्क केबिन की परीक्षण स्क्रीन स्वास्थ्य कर्मियों को नमूना लेते समय एयरोसोल/ड्रॉपलेट ट्रांसमिशन से बचाती है। साथ ही मरीज के कियोस्क छोड़ने के बाद कियोस्क केबिन में लगे हुए चार नोजल स्प्रेयर 70 सेकंड की अवधि के लिए कीटाणुनाशक छिड़ककर खाली कक्ष को डिसइंफेक्ट कर देते हैं। यह सिस्टम दो मिनट से भी कम समय में अगले उपयोग के लिए तैयार हो जाता है।

कोवसैक में टू-वे कम्युनिकेशन सिस्टम के माध्यम से वॉयस कमांड भी दिया जा सकता है। चिकित्सा कर्मियों की आवश्यकतानुसार कोवसैक को अंदर या बाहर की तरफ से समान रूप से इस्तेमाल करना संभव है। इस कोवसैक की लागत लगभग एक लाख रुपये है और कर्नाटक के बेलगाम स्थित चिन्हित इंडस्ट्री रोजाना इसकी 10 इकाइयां मुहैया कर सकती है। सफल परीक्षण के बाद ऐसे दो कियोस्क को डीआरडीएल ने ईएसआईसी अस्पताल हैदराबाद को सौंप दिया है।

<https://www.abplive.com/news/india/drdo-prepares-kovsack-kiosk-to-sample-corona-virus-without-ppe-ann-1352185/amp>

LegendNews

Thu, 16 April 2020

DRDO ने बनाया कोरोना सैंपल कलेक्शन के लिए ऑटोमेटिक Kiosk

नई दिल्ली: कोरोना से लड़ने में DRDO को एक बड़ी कामयाब मिली है, DRDO ने डिवाइस 'सैंपल कलेक्शन करने वाला Kiosk (COVSACK)। दरअसल कोरोनावायरस महामारी के खिलाफ चल रहे प्रयासों, में रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) ने वैज्ञानिक प्रयासों का उपयोग उत्पादों को त्वरित रूप से विकसित करने के लिए लगातार कर रही है। ऐसे में डीआरडीओ (डिफेंस रिसर्च एंज डेवलपमेंट ऑर्गनाइजेशन) ने सैंपल कलेक्शन कियोस्क बनाया है। यह देश में पहली बार बना एक ऐसा कियोस्क है, जहां स्वास्थ्यकर्मी बिना पीपीई यानी किट के भी कोरोना संदिग्धों का सैंपल ले सकते हैं।

डीआरडीओ का इस पर कहना है कि "यह कियोस्क स्वास्थ्य कर्मियों को उन रोगियों से नमूने एकत्र करने में मदद करेगा जो संभवतः संक्रमित हो सकते हैं। नमूने व्यक्तिगत स्वास्थ्य उपकरण (पीपीई) किट पहने बिना भी स्वास्थ्य कर्मियों द्वारा एकत्र किए जा सकते हैं।" गौरतलब है कि COVSACK की लागत लगभग एक लाख रुपये है। डीआरडीओ ने दो इकाइयों को डिजाइन और विकसित किया है और सफल परीक्षण के बाद इन्हें ईएसआईसी अस्पताल, हैदराबाद को सौंप दिया है।



गौरतलब है कि डीआरडीओ प्रयोगशालाएं विशेष फेस मास्क और व्यक्तिगत सैनिटेशन चैंबर्स के वॉल्यूम उत्पादन के लिए उद्योग भागीदारों के साथ काम कर रही हैं। वहीं अब स्वास्थ्यकर्मियों को कोरोना से बचाने के लिए डीआरडीओ को यह एक बड़ी कामयाबी मिली है। दरअसल COVID-19 वायरस अधिकतर कोरोना संक्रमित मरीजों के संपर्क में आने की वजह से फैलता है। जब कभी संक्रमित व्यक्ति के संपर्क में कोई भी आदमी आता है तो वह भी कोरोना से पीड़ित हो जाता है। ऐसे में स्वास्थ्यकर्मी जो मरीज का इलाज या फिर देखभाल कर रहे होते हैं वे सबसे ज्यादा कोरोना से प्रभावित होते हैं।

सैंपल कलेक्शन करने वाला Kiosk (COVSACK) कैसे करता है काम ?

Kiosk (COVSACK) को इस तरह से डिजाइन किया गया है कि इसे मानव निर्मित हस्तक्षेप के बिना स्वचालित रूप से डिसइन्फेक्ट किया जा सकता है, यानी ये ऑटोमेटिक है। इसकी अंतर्निर्मित सुविधाओं की मदद से बिना किसी इंसानी मदद से ये चलता रहेगा। इसके अलावा नमूने लेते समय चिकित्साकर्मियों को पीपीई पहनने की कोई आवश्यकता नहीं होगी। ये चेंबर ऐसे बनाया गया है कि स्वास्थ्यकर्मी बाहर से संदिग्ध मरीज का सैंपल ले सकते हैं।

इसमें मरीज चेम्बर के अंदर जाता है और स्वास्थ्य कर्मी बाहर रहता है। साथ ही इसमें मरीज से बात करने के लिये कॉम्युनिकेशन सिस्टम बनाया गया है। इसकी शील्ड स्क्रीन मरीज के ऐरो सोलोस से स्वास्थ्यकर्मी को बचाती है जब वो सैम्पल ले रहे होते हैं। साथ ही आटोमेटिक तौर पर कियोस्क में ही बने सप्रयर्स और यूवी लाइट की मदद से सेनेटाइज हो जाता है। इनमें डिसइन्फेक्ट घोल और पानी का छिड़काव करने वाले इन-बिल्ट स्प्रेर्स की मदद से इसे स्वचालित रूप से डिसइन्फेक्ट किया जा सकता है। इसके बाद यूवी लाइट के माध्यम से कीटाणुशोधन किया जाता है। इसमें हर दो मिनट के बाद एक मरीज का सैम्पल लिया जा सकता है। इसका इस्तेमाल कोरोना के लिये बने अस्पताल में शुरू हो चुका है।

<http://legendnews.in/drdo-creates-automatic-kiosk-for-corona-sample-collection/>

THE ASIAN AGE

Thu, 16 April 2020

DRDO develops COVID sample collection kiosk which protects health and sanitation workers from possible infection

Healthcare workers can collect samples from outside a booth, protected by a screen from the potential carrier of the contagion inside

By Aksheev Thakur

The Defence Research Development Organisation (DRDO) has developed a COVID Sample Collection Kiosk (COVSACK) to enable health care workers to collect samples for testing from persons suspected to have been infected, without coming into direct contact with them.

Covsack does away with the need for health workers to wear Personal Protective Equipment (PPE) while collecting oral samples of people coming in for Covid testing.

The Kiosk is designed for automatic disinfection, once again eliminating the need for human personnel from coming in contact with a possibly contaminated environment. Sprayers with disinfectant solution, water and UV lights are used to sanitise the booth.

How it Works

A person who arrives for testing enters the kiosk from where their oral swabs are collected by healthcare workers outside the chamber. A screen protects the healthcare worker from droplets that might be emitted by the breath, cough or sneeze of a potential carrier of the contagion.

The auto-disinfection sprayers mounted in the kiosk spray 1% sodium hypochlorite solution for a period of 1 minute to sanitise the walls, gloves and insides of the chamber, after the person being tested exits. The automated system then flushes the cabin with water from the inbuilt sprayers after which it disperses UV light to complete the disinfection process.

After this, the next person is allowed in for sample collection.

<https://www.asianage.com/technology/in-other-news/150420/drdo-develops-covid-sample-collection-kiosk-which-protects-health-and-sanitation-workers-from-possible-infection.html>



DRDO develops Covid-19 sample collection kiosk to help healthcare workers

New Delhi: Stepping up its efforts to fight coronavirus, Defence Research & Development Laboratory (DRDL), Hyderabad has developed COVID Sample Collection Kiosk (COVSACK) for healthcare professionals. This initiative comes after DRDO recently announced that it is making bio suits with a special sealant used in submarine applications for healthcare workers and also tweaked fire fighting equipment into machines to spray disinfectants to sanitise roads and other surfaces.

As far as the kiosk is concerned, the unit has been developed by DRDL in consultation with the doctors of Employees' State Insurance Corporation (ESIC), Hyderabad. The COVSACK kiosk will be used by healthcare workers for taking COVID-19 samples from suspected infected patients. Patient under test walks into the Kiosk and a nasal or oral swab is taken by a health care professional from outside through the built in gloves.

The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of the kiosk cabin protects the health care worker from the aerosols/droplet transmission while taking the sample. This reduces the requirements of PPE change by health care workers.

After the patient leaves the Kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection.

“The system is ready for next use in less than two minutes. Voice command can be given through a two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals,” as per a press release.

These kiosks cost nearly Rs 1 lakh and the identified industry based at Belgaum, Karnataka can support 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

<https://timesofindia.indiatimes.com/gadgets-news/drdo-develops-covid-19-sample-collection-kiosk-to-help-healthcare-workers/articleshow/75154468.cms>

R. REPUBLICWORLD.COM

Thu, 16 April 2020

DRDO develops unique Covid-19 testing kiosk which does not require PPEs; Details here

DRDO has developed the first-of-its-kind machinery for COVID-19 sample collection which eliminates the use of PPEs and the risk of doctors getting infected

By Gloria Methri

Mumbai: The Defence Research and Development Organization (DRDO) in Hyderabad has developed the first-of-its-kind machinery for COVID-19 sample collection which eliminates the use of PPEs with no physical contact between patients and doctors and the risk of doctors getting infected. The device is known as 'Covsack'. Taking a cue from the machinery used for titanium welding of missiles, the DRDO developed the state-of-art device within three days of time.

How Does the Device Work?

Speaking exclusively to Republic TV, Dr Doshi explained the mechanism of this unique product.

“It has a state-of-the-art system in the product. The patient can enter the machinery the doctor can take the blood samples from outside using the gloves. There is a mic for communicating with the patient, and a light system for focusing. The device is air-tight and ensures no leakage of the virus,” the DRDO official said.

It takes only 10 to 15 minutes to test a patient and the machine sanitises automatically using chemical sprays and water pipelines after the patient exits. Within 60 to 70 seconds, the device is ready for the next test, he added.

The DRDO is set to conduct a demonstration, following which it will begin the manufacturing process in full swing. Currently, the Organisation based in Hyderabad holds the manufacturing capacity of 10 devices per day and they are trying to ramp up the capacity to deliver more products to hospitals.

As the country is facing a shortage of PPE kits for all health workers treating COVID-19 patients, this machinery will be a massive help in ensuring the safety and protecting of medical professionals.

<https://www.republicworld.com/india-news/general-news/drdo-develops-unique-covid-19-testing-kiosk-which-does-not-require-ppe.html>



Thu, 16 April 2020

DRDO develops Covid-19 sample collection kiosk to help healthcare workers

New Delhi: Stepping up its efforts to fight coronavirus, Defence Research & Development Laboratory (DRDL), Hyderabad has developed COVID Sample Collection Kiosk (COVSACK) for healthcare professionals. This initiative comes after DRDO recently announced that it is making bio suits with a special sealant used in submarine applications for healthcare workers and also tweaked fire fighting equipment into machines to spray disinfectants to sanitise roads and other surfaces.

As far as the kiosk is concerned, the unit has been developed by DRDL in consultation with the doctors of Employees' State Insurance Corporation (ESIC), Hyderabad. The COVSACK kiosk will be used by healthcare workers for taking COVID-19 samples from suspected infected patients. Patient under test walks into the Kiosk and a nasal or oral swab is taken by a health care professional from outside through the built in gloves.

The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread. The shielding screen of the kiosk cabin protects the health care worker from the aerosols/droplet transmission while taking the sample. This reduces the requirements of PPE change by health care workers.

After the patient leaves the Kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds. It is further flushed with water & UV light disinfection.

“The system is ready for next use in less than two minutes. Voice command can be given through a two-way communication system integrated with the COVSACK. It is possible to configure COVSACK to be used either from inside or outside as required by the medical professionals,” as per a press release.

These kiosks cost nearly Rs 1 lakh and the identified industry based at Belgaum, Karnataka can support 10 units per day. The DRDO has designed and developed two units and handed over these to ESIC Hospital, Hyderabad after successful testing.

<https://www.gadgetsnow.com/tech-news/drdo-develops-covid-19-sample-collection-kiosk-to-help-healthcare-workers/articleshow/75154592.cms>

THE ECONOMIC TIMES

Thu, 16 April 2020

Tens of thousands of Chinese PPE kits fail India safety test

India continues to see a shortfall in the availability of personal protection equipment (PPE) for healthcare even as the government significantly ramps up domestic production and some kits from China failed quality tests

By Teena Thacker, Anandita Singh Mankotia

New Delhi: India continues to see a shortfall in the availability of personal protection equipment (PPE) for healthcare even as the government significantly ramps up domestic production and some kits from China failed quality tests. Many kits made in China, the world’s main supplier, that were donated to the Indian government, were found unusable because they failed safety checks, a person aware of the matter told ET. Of 170,000 PPE kits that arrived in India on April 5, about 50,000 failed quality test.

“Two small consignments with 30,000 and 10,000 PPE kits, too, failed tests,” the person said.

The kits were tested at the Defence Research & Development Organisation laboratory in Gwalior. While government officials said they are procuring CE/FDAcertified PPE kits only, some consignments received as donations failed the quality tests and cannot be used. “Kits that are not FDA/ CE-approved have to pass quality tests in India,” the person said.

Consignments that failed the quality tests are those received as donations from big private companies in India, the person said, without identifying the donors.

To meet the shortfall, an order for an additional 1 million suits has been placed through traders, including a Singaporean company, people with knowledge of the plan said. However, all suits will be sourced from China only.

“By the end of May first week, we should have these suits. More orders are being placed,” they said. The government estimates India will



be in a comfortable position if it had 2 million PPE suits. Government officials said there is no need to panic.

“The number of orders being placed is growing. China is the major supplier. We were totally dependent on imports earlier and never expected that there would be a surge in demand,” a senior government official said, adding that domestic manufacturing is ramping up, too.

“Domestic PPE production has increased to 30,000 kits a day, hitting the target a week earlier than scheduled, and is expected to touch 50,000 by the end of the month. Cumulatively, we have produced over 150,000 suits and should be able to manufacture an additional 100,000 by the weekend,” the people said.

India has been procuring additional machines needed to manufacture the suits. “Another 30 hot air seam sealing machines will soon be sourced,” an official said, Meanwhile, PTI reported on Wednesday that China has asked all the countries to import these items through reputed Chinese firms cleared by the government and vowed to punish those involved in counterfeit behaviour.

<https://economictimes.indiatimes.com/industry/healthcare/biotech/tens-of-thousands-of-chinese-ppe-kits-fail-india-safety-test/articleshow/75171817.cms?from=mdr>

DESID BUSINESS INSIDER INDIA

Thu, 16 April 2020

After 50,000 PPE kits from China fail quality tests, India ramps up in-house production

By Prerna Sindwani

- *India needs over a lakh PPE (Personal Protective Equipment) kits per day.*
- *The country placed orders for 15 million PPE kits, including rapid testing kits from China.*
- *However, of the 1.7 lakh kits imported on April 5, nearly 50,000 failed the quality tests as per Indian standards, according to an ET report.*
- *The in-house production of PPE kits has also gone up to 30,000 per day.*
- *A Reuters report said that India needs at least 38 million masks and 6.2 million PPEs to fight the global pandemic.*

India needs over a lakh PPE (Personal Protective Equipment) kits per day but has an acute shortage of these kits — including N-95 masks, head covers and glasses. Even the medical staff is low on masks and suits that could save them from Coronavirus infection.

A Reuters report said that India needs at least 38 million masks and 6.2 million PPEs to fight the global pandemic.

The government has ramped up the domestic production roping in the textile industry to prepare masks. It also ordered 15 million export orders of PPE kits — including the rapid testing kits from China.

50,000 PPE kits from China failed the quality tests

However, as many as 50,000 PPE kits from China failed the quality tests as per Indian standards, according to an ET report. These were from the April 5 lot of 170,000 PPE kits imported. The report said that the equipment and kits supplied to India were of no use since it failed the safety checks at the Defence Research & Development Organisation (DRDO) laboratory in Gwalior.

“Two small consignments with 30,000 and 10,000 PPE kits, too, failed tests,” ET reported citing sources.

China has already been facing criticism from the European countries over the quality of equipment exported. This may be attributed to surge in the global demand for equipment amid the Coronavirus concerns.

India to import PPE kits from South-Asian countries

India has now shifted the focus to other South-Asian countries for imports. "A Singapore-based online platform has been identified which can supply 10 lakh PPE kits and an order has been placed through the Ministry of External Affairs to procure them. Another supplier-based in Korea, who has tie-ups with production companies in Vietnam and Turkey has been identified with daily production capacity of over 1 lakh PPE kits. Orders are being placed on this company through MEA for supplying 20 lakh PPE kits," Ministry officials reportedly said.

"By the end of May first week, we should have these suits. More orders are being placed," the government officials said. In fact, the in-house production of PPE kits went up to 30,000 per day.

A shortage of these kits are being felt across the world as countries close borders and India relies heavily on imports.

"The shortage of PPE was there, because the raw material was always imported from other countries. But the government has addressed the issue by looping in the textile workers," said Gautam Bhansali, member of Maharashtra's state taskforce for Coronavirus.

<https://www.businessinsider.in/india/news/after-50000-ppe-kits-from-china-fail-quality-tests-india-ramps-up-in-house-production/articleshow/75173170.cms>

Outlook
THE FULLY LOADED MAGAZINE

Thu, 16 April 2020

Covid-19: Railways plans to produce over 1.3 lakh coveralls for healthcare personnel by May-end

New Delhi: The Railways will produce over 30,000 coveralls for COVID-19 healthcare personnel this month and it plans to manufacture 1 lakh more of the personal protective equipment (PPE) in May, the national transporter said on Wednesday.

The prototype of the coveralls -- one-piece protective garments -- has been cleared with the highest grades by the DRDO's authorised laboratory in Gwalior after prescribed tests, it said.

"Production units, workshops and field units have started manufacturing the personal protective equipment coveralls for medical and healthcare personnel who get directly exposed to the COVID-19 disease when working amongst infected patients," the Railways said in a statement.

"The Indian Railways will produce over 30,000 such coveralls in April 2020 and plans to manufacture 1,00,000 of the same in May 2020," it said.

The Jagadhari Workshop of the Northern Railways had taken the initiative to design and manufacture the prototype of the coverall, the statement said.

The prototype was tested by the Defence Research Development Establishment Laboratory of the DRDO at Gwalior. This lab is authorised for conducting such tests. It passed all the tests conducted by the DRDE with the highest grades, it said.

"Taking this initiative forward, the Railways has been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in the current month," the national transporter said.

"Production has started and the Railway's own doctors, the end users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up," it said.

According to Union Health Ministry, the death toll due to the coronavirus rose to 392 while the number of cases in the country climbed to 11,933 on Wednesday.

(Disclaimer: This story has not been edited by Outlook staff and is auto-generated from news agency feeds. Source: PTI)

<https://www.outlookindia.com/newscroll/covid19-railways-plans-to-produce-over-13-lakh-coveralls-for-healthcare-personnel-by-mayend/1803502>



Thu, 16 April 2020

Railways to make 30K PPE in April, 1 lakh in May to meet demand

New Delhi: With the growing demand for personal protective equipment (PPE) across the country amid the novel coronavirus crisis, the Indian Railways on Wednesday said that it plans to supply 30,000 PPE to medical professionals by April-end.

The national transporter also said that it plans to manufacture one lakh PPE in May.

A Railway Ministry spokesperson said that the production units, workshops and field units have started manufacturing PPE coveralls for healthcare personnel, who get directly exposed to coronavirus while treating infected patients.

"Indian Railways will produce over 30,000 such coveralls in April 2020 and plan to manufacture one lakh in May," the official said.

"In order to fill the gap in availability and requirement of PPE, the Jagadhari workshop of Northern Railway had taken the initiative to design and manufacture the prototype PPE coverall. The prototype was tested by Defence Research Development Establishment (DRDO) Laboratory at Gwalior, authorised for conducting such tests," he said, adding that it had cleared the test with the highest grades.

The official said that Railway doctors, medical professionals, other health workers and caregivers are working tirelessly to fight coronavirus.

He said that as a first line of defence against contracting coronavirus, the health professionals need to be provided with special impervious coverall that acts as a barrier to the virus as well as other disease-carrying fluids.

The official pointed out that taking the initiative forward, Indian Railways has been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in April.

"The production has started and Railway's own doctors, the end-users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up. To meet the growing requirement, Indian Railways have set the target of manufacturing another one lakh PPE coveralls in May and sourcing appropriate raw material has started," he said.

Planning for any future requirement, the Railways has already converted 5,000 coaches into isolation wards for over 80,000 Covid-19 patients.

The 21-day nationwide lockdown from March 24 to April 14 was extended till May 3 by Prime Minister Narendra Modi to combat the spread of the pandemic.

The Railways has also extended the suspension of passenger, mail and express train services till May 3 and also stopped passenger bookings until further orders.

<http://www.daijiworld.com/news/newsDisplay.aspx?newsID=696911>

Railways to produce over 30,000 PPE coveralls in April; 1 lakh by May

New Delhi: Indian Railways production units, workshops and field units have started manufacturing Personal Protective Equipment (PPE) Coveralls for medical and healthcare personnel who get directly exposed to the COVID-19 disease when working amongst infected patients.

"Indian Railways will produce over 30,000 such coveralls in April 2020 and plan to manufacture 1,00,000 of the same in May 2020. The prototype coveralls have already cleared the prescribed tests with the highest grades at the authorised DRDO laboratory at Gwalior," said the Ministry of Railways in a statement.

Jagadhari Workshop of Northern Railway had taken the initiative to design and manufacture a prototype PPE coverall. The prototype coverall was tested by Defence Research Development Establishment Laboratory of DRDO at Gwalior, authorised for conducting such tests.

The coverall samples passed all the tests conducted by DRDE with the highest grades, the Ministry informed.

Railways have been able to procure and distribute to its workshops and other units sufficient raw material for manufacturing more than 30,000 PPE coveralls in the current month (April 2020). Production has been started and Indian Railway's own doctors, the end users of these coveralls, have also been involved in trying out these coveralls as their production is ramped up.

The Civil Aviation Ministry on Tuesday said all international and domestic commercial passenger flights will remain suspended till midnight of May 3. Suspension of Railway passenger services is extended till May 3, freight movement to continue.

Railways have set the target of manufacturing another 1,00,000 PPE coveralls in May, and sourcing of appropriate raw material has started. "All this has been done despite there being a major global shortage of appropriate raw material as well as machinery for manufacturing PPE coveralls. Behind this endeavour is the timetested capability of Indian Railway's workshops and Production Units of manufacturing and maintaining some of the safest railway rolling stock in the world. The same capabilities, expertise, protocols and procedures usually followed for design, manufacturing and use of rolling stock, have been utilised for enabling field units and workshops to start manufacturing high quality PPE coveralls so rapidly," the Ministry informed in the statement.

A day after Prime Minister Narendra Modi announced the extension of lockdown, the central government on Wednesday issued a detailed set of guidelines to be followed till May 3.

Indian Railways' Doctors, Medical Professionals, other health workers and care-givers are working tirelessly fighting the COVID-19 disease. All these personnel are directly exposed to the COVID-19 disease when working amongst infected patients. As a first line of defence against contracting the novel Coronavirus, they need to be provided with a special kind of impervious coverall that acts as a barrier to the virus as well as other disease carrying fluids.

The Railways has also extended the suspension of passenger, mail and express train services till May 3 and also stopped passenger bookings until further orders. The 21-day nationwide lockdown from March 24 to April 14 was extended till May 3 by Prime Minister Narendra Modi to combat the spread of the pandemic.

<https://punemirror.indiatimes.com/news/india/man-in-bhopal-accidentally-drinks-acid-stored-in-a-beer-bottle-dies/articleshow/75161670.cms>



Wed, 15 April 2020

Indian Navy wants feasibility study to see if P-8I can be armed with Long-Range Cruise Missiles

Armed with just lightweight air-launched Mk 54 torpedoes and Harpoon Block II anti-ship missiles, India's P-8I long-range maritime reconnaissance aircraft fleet being built and integrated by Boeing in future will get major offensive firepower as it plans to get an air-launched variant of Long-Range Land Attack Cruise Missile (LRLACM) developed by India based on India's first home-grown subsonic cruise missile, Nirbhay, integrated into the platform if it gets clearance after conducting feasibility studies.

Aeronautical Development Establishment (ADE) is developing an air-launched variant of LRLACM with sea-skimming capabilities both for the Air force and Navy. LRLACM with a range of over 1000 km has been planned for both Air force and Naval Aircrafts. Indian Navy will be getting four additional P-8I long-range maritime reconnaissance aircraft in May and has been cleared to procure six more at a later stage which will take the total fleet to 18.

P-8I is equipped with radar, optical and sonar sensors, and it is armed with anti-ship missiles and torpedoes. It's designed to patrol the oceans to detect and attack threats including hostile submarines capable of firing off nuclear missiles. P-8I can carry 126 sonobuoys internally, four Boeing AGM-84 Harpoon anti-ship missiles on hard points beneath its wing and Mk 54 lightweight hybrid torpedoes within an internal bomb bay.



AGM-84K SLAM-ER missile on a P-8A Poseidon at Naval Air Station Jacksonville in Florida

Internal weapons bay located at the rear of the P-8I are capable of accommodating Mk-54 torpedoes, Mark 82 depth charges for ASW operations, Mines, Sonar buoys and Survival Gear and are not designed to carry long-range cruise missiles like LRLACM. Since P-8I is constructed from a 737-800 commercial airliner's air frame, so it is also not possible to slung under the belly a cruise missile due to lower ground clearance space.

P-8I has four under wing hard-points for AGM-84D Harpoon and, likely, the existing wing hard points will likely be used to carry LRLACM in future which will require some feasibility studies which will come in handy from studies done by the Boeing which is has been made in charge of similar program for the P-8A Poseidon under commands of US Naval Air Systems Command (NAVAIR) to arm them with Long Range Anti-Ship Missiles or American origins.

(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/indian-navy-wants-feasibility-study-to-see-if-p-8i-can-be-armed-with-long-range-cruise-missiles/#more-225300>

Thu, 16 April 2020

Drones, thermometers and oxygen systems: Army and Navy innovate to fight Covid-19

The Army and Navy are experimenting with ways to fight COVID-19 at scale

By Pradip R Sagar

After setting up massive quarantine facilities at several places to counter COVID-19 pandemic, the Indian Army has now done multiple innovations to support the medical fraternity.

The Army Base Workshop has experimented with using drones, normally used by the military for surveillance operations, to combat the global virus.

Quadcopters equipped with disinfectant sprayers are active platforms to quickly sanitize large areas exposed to contamination or in case of stage 3 of the pandemic. Officers of Corps of EME, who have developed it, claims that it is capable of carrying 5 litres of disinfectant and can be used up to a surface elevation of 6,000 ft and effective spray height of 10 metre.

Officials also claim that such quadcopters can cover an area of the size of a football field in 3-5 minutes. And its compact design makes it convenient for use anywhere. It will cost around 7.5 lakh per equipment.

Army's 505 Army Base Workshop has offered to develop it in two weeks depending on battery charge capacity which is a serious limitation under the present lockdown conditions.

An Army official said that owing to the spread of coronavirus, it is imperative to avoid physical contact with each other. Current thermometers in service, both mercury-based and digital, require physical contact with the patient thereby increasing the risk of spread of this contagious disease.

"In order to avoid this, a non-contact infrared smart thermometer has been designed as a technology demonstrator. It has an infrared proximity sensor which detects the body without contacting it," the officer said while adding that the detected temperature by the sensor will be displayed on the LCD screen.

Its developers say that this device avoids physical contact with the virus-affected person and also restricts access control at sensitive areas. It is economical and user-friendly with cost around Rs 1,800. It has been validated by the Military Hospital in Agra.

Other innovations include an anti-aerosolisation chamber used in disinfecting medical personnel, a 3D-printed surgical mask, and an ultraviolet light sanitizer. These could all turn out to be important contributions by the Indian Army towards the nation's fight against the global pandemic.

The army is also providing battlefield nursing training for non-medical personnel and assisting medical staff in case of emergency situations.

Indian Navy, too, has done some innovations to fight COVID-19. Its Southern Command in Kochi has developed an air evacuation pod to airlift any COVID-19 patient from a warship or any other place while minimising the threat of the spread of infection.

Navy claims that the manufacturing cost of the pod is Rs 50,000 while an imported piece costs Rs 59 lakhs. So far, the Navy has manufactured 12 such pods and handed it over to other commands.

It has also developed a portable multi-feed oxygen distribution system, using a six-way radial header with fine adjustment reducer and adapter, to provide oxygen from a pair of oxygen cylinders to 12 patients through vent mask in case of emergency.

Officials believe that it caters to a large number of patients who may need oxygen support in case of mass casualties. Typical oxygen facility at hospitals only caters to a single patient.

"It's a low-cost arrangement for provisioning oxygen supply in makeshift field hospitals where standing arrangements may not be provided," an official said.

In addition to it, Indian Navy's Vizag-based eastern headquarters has designed and manufactured "Portable Multi-feed Oxygen Manifold" for the civil administration of Andhra Pradesh.

The Naval Dockyard in Mumbai has designed and developed an infrared-based temperature sensor for the screening of personnel at the entry gates of naval yards. "The instrument has been manufactured at Rs 1,000 (which is a fraction of the cost of temperature guns in the market) through in-house resources," a naval officer said.

<https://www.theweek.in/news/india/2020/04/15/drones-thermometers-and-oxygen-systems-army-and-navy-innovate-to-fight-covid-19.html>

DESI **ThePrint**

Thu, 16 April 2020

Army advises personnel to use govt's Aarogya Setu app, but with usual cyber precautions

The Army follows strict protocol and advises against use of smartphones and social media to prevent breach in security

By Amrita Nayak Dutta

New Delhi: The Army has advised its personnel, their families and veterans to download the government's healthcare mobile app Aarogya Setu to use during the Covid-19 pandemic, but cautioned that cyber security protocols be followed to ensure no breach in security.

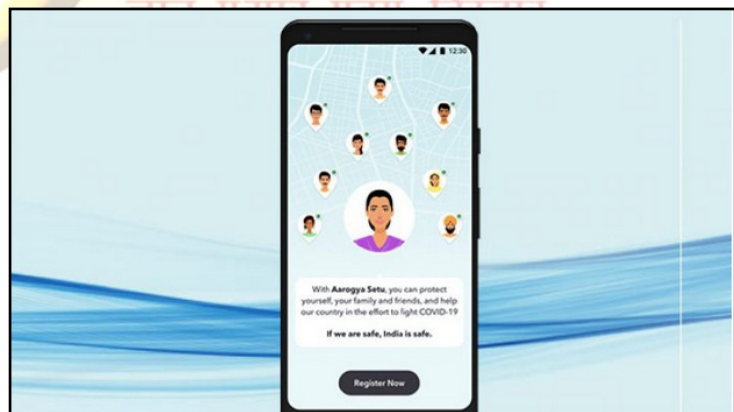
The Aarogya Setu is designed to collect one's location data and cross reference it with the Indian Council of Medical Research (ICMR)'s database of Covid-19 tests to warn a user if an infected person is in close proximity.

The ICMR has been the premier government body carrying out tests to identify individuals and areas with the Covid-19 disease.

The app has so far been downloaded at least five crore times.

The Army's advisory states that personnel can't use the app while on office premises, operational areas and in other sensitive locations.

The Army has also advised switching on location services and bluetooth only while visiting public places, at Isolation Centres, when called for Covid-19-related assistance by civil authorities and while moving out of cantonments or military stations.



Army sources said personnel have also been told not to disclose their service identity, including rank, appointment and contact list of users, while using such apps. Further, they have advised updating their mobile operating system and installing an antivirus software.

Prime Minister Narendra Modi had urged citizens to download the Aarogya Setu app while addressing the nation on 14 April, though some experts have raised concerns over data privacy.

The Army, in general, periodically recommends its officers holding critical posts to sparingly use smartphones and social media, particularly in operational areas and sensitive locations, to prevent any sort of intelligence gathering.

As reported by ThePrint, the Army had issued an advisory last October cautioning officers against the use of Facebook, and also advised against using WhatsApp for official communication.

However, the use of the Aarogya Setu is being seen as a preventive measure to check the spread of Covid-19, particularly in bases where thousands of personnel stay as a community with limited opportunity to practice social distancing, according to an Army source.

The Army has been actively involved in the government's efforts to combat the disease by providing logistical support such as running quarantine camps and deploying medical personnel to civilian camps.

<https://theprint.in/defence/army-allows-personnel-to-use-govts-aarogya-setu-app-but-with-usual-cyber-precautions/402527/>

DESIDOC

THE NEW
INDIAN EXPRESS

Celebrating
50 years

Thu, 16 April 2020

Indian Army medical teams on standby to help four neighbouring countries

A total 1,200 battlefield nursing assistants are trained to augment medical resources and seven COVID response teams with personnel from engineers and Army Medical Corps are on standby

New Delhi: The Indian Army has kept medical teams on standby for deployment in Sri Lanka, Bangladesh, Bhutan and Afghanistan to help these countries in their fight against coronavirus.

Prime Minister Narendra Modi has stated that India is ready to provide medical help to the neighbouring countries following which the Indian Army was alerted.

The force had on April 11 sent eight medical officers and seven paramedics to Kuwait for capability development of that country's government and setting up of RTPCR diagnostic panel machine.



The Army had also provided assistance to other friendly foreign countries. From March 13 to March 21, a medical team comprising five doctors, two nursing officers and seven paramedics were deployed in an advisory role to assist the Male government as part of its domestic COVID protection measures.

India had also provided medicines and medical equipment to Nepal and Afghanistan governments.

Within the country also, the force has taken up various initiatives. The force has deployed four medical officers and 18 support staff at the Narela quarantine centre being run by the Delhi government.

The Army was roped in from February when coronavirus was reported in China's Wuhan.

The force was the first to set up a quarantine base in Manesar. From February 2 to February 18, a total 248 Indian citizens, mostly students, evacuated from Wuhan were quarantined at Manesar base.

Again from February 27 to March 12, a total 124 people evacuated from Diamond Princess Cruise at Japan were quarantined at Manesar base.

While the people were being removed from Manesar base, another lot of 83 people from Italy were quarantined from March 11. Out of 83 people, six citizens of India origin from Italy and three from the US were also quarantined.

A total 82 were discharged after being confirmed negative while one positive case was referred to Safdarjung hospital.

From March 15 to as on date, a total of 236 Indian citizens have been evacuated from Iran and quarantined at Jaisalmer. Out of these, 19 were COVID positive and were admitted at AIIMS Jodhpur. Nine of them have since recovered.

Nearly two battalion strength of troops vacated their living accommodation to assist in establishing these national-level facilities.

From March 16, to as on date, a total 53 citizens evacuated from Iran are quarantined at Jaisalmer. Out of these, three were COVID positive and admitted at AIIMS Jodhpur.

Another lot of 195 Indian citizens evacuated from Iran on March 18 are quarantined at Jaisalmer. Out of these, 22 were COVID positive and admitted at AIIMS Jodhpur.

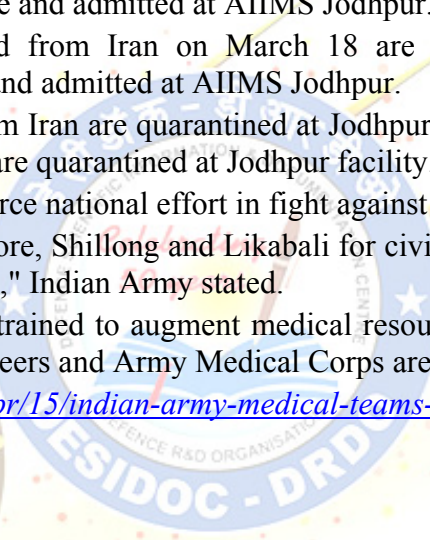
A total 277 citizens evacuated on March 25 from Iran are quarantined at Jodhpur. Again on 275 Indian citizens evacuated from Iran on March 29, are quarantined at Jodhpur facility.

The force has also enhanced capability to reinforce national effort in fight against COVID.

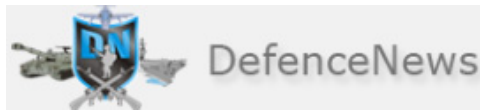
"Three dedicated COVID hospitals at Barrackpore, Shillong and Likabali for civilians with total capacity of 490, extendable to 590, has been set up," Indian Army stated.

A total 1,200 battlefield nursing assistants are trained to augment medical resources and seven COVID response teams with personnel from engineers and Army Medical Corps are on standby.

<https://www.newindianexpress.com/nation/2020/apr/15/indian-army-medical-teams-on-standby-to-help-four-neighbouring-countries-2130505.html>



DRDO
DEFENCE RESEARCH ORGANISATION
RESIDOC - DRDO
ज्ञान प्रसार एवम् विस्तार
के 50 वर्ष



Thu, 16 April 2020

Toward a holistic defence innovation policy

The Ministry of Defence (MoD) released the draft version of the Defence Procurement Procedure (DPP 2020), which aims to enhance the acquisition efficiency, while also steadfastly pursuing self-reliance in defence production. On the face of it, the twin goals are not necessarily compatible, and often involve tricky trade-offs as the indigenous production of defence equipment is prone to time and cost-overruns, especially in the context of catching-up countries like India.

The new DPP, nevertheless, firmly commits itself to pursue 'indigenisation' and 'Make in India' goals, alongside addressing procurement efficiency through several other measures. Drafted by a high-level committee, the DPP 2020 has introduced a variety of forward-looking measures in the areas of indigenous innovation, local value addition, and to enhance acquisition efficiency.

On indigenous innovation, the DPP 2020 significantly expands the scope of 'make' procedure by including new features like 'innovation contests', and acceptance of 'unsolicited bids' from the industry, which adds to existing features like R&D procurement and technology development fund. It emphasises the role of India's growing fleet of tech start-ups and MSMEs to deliver new-generation defence capabilities. The 'make'-related procurement in conjunction with the 'strategic partnership' model (SPM) of DPP 2016 provides for the accumulation of technological capabilities through both internal and external technology acquisition routes. The distinction presented in chapter three of the DPP between 'make' and 'innovation' categories, however, is somewhat confusing as the two involve much conceptual overlap.

Under make category, the DPP 2020 calls for leveraging the Indian expertise in the software sector, which holds strong potential for creating a new defence-centric software market, and also to deliver niche capabilities and military advantages to Indian defence. Further, the DPP also aligns itself with Industry 4.0 goals by identifying the need for greater interface with artificial intelligence in defence platforms. Overall, the wide-range of demand-side instruments incorporated in the DPP offer immense potential for infusing innovation dynamism in the Indian industry and proper implementation is vital to exploiting their full benefits.

On domestic value addition, the DPP 2020 introduces new acquisition categories such as 'Buy' (Global — manufacture in India) and increases the level of domestic content requirements (DCR) in various 'buy and make' categories by about 10% from DPP 2016. The stipulation of higher DCR, i.e. upto 50% in Buy (Global — manufacture in India) is aimed at incentivising local value addition by sourcing raw materials, intermediates, special alloys, components, etc., from the local industry. The DCR is regarded as useful to forge backward linkages between MNCs and local suppliers and to induce a technological change. However, the DCR is also prone to causing inefficiencies, especially when there is little R&D or creative technological effort on the part of domestic firms. A periodic review or a sunset clause would be appropriate to ensure that DCR helps to serve 'Make in India' objectives.

The offset policy is another important instrument under the DPP to foster the participation of Indian firms in global value chains. DPP 2020 strengthens the offset policy framework by proposing higher incentives, especially to support MSMEs in the industrial corridors in Tamil Nadu and Uttar Pradesh. Among others, the new offset tools incorporated in DPP 2020 include multipliers upto four for critical technologies, offset obligations through the building and exporting of products rather than components, third-party assessment for offset discharge through transfer of technology (ToT), etc., which are promising for the Indian industry.

Finally, in the area of acquisition efficiency, the new DPP proposes several useful reforms to cut down procedural delays and minimise procurement timelines. One of the key provisions, in this respect, includes ‘leasing’ of platforms and equipment, when direct procurement is considered to be unviable or when leasing works out to be cheaper than direct procurement. The leasing option would help the resource-constrained MoD to ease financial pressures in capital acquisitions while also enabling the induction of mega-platforms like transport fleets, trainers, simulators, etc., with minimal lead time.

Also, among various new provisions in the DPP, which were not adequately dealt with in the previous manuals, include ‘optimised’ life-cycle cost approach for new acquisitions, ‘price variation clause’ to deal with cost-escalations during the stages of bid submission and contract negotiations, ‘field evaluation trials’ to be conducted by specialised trial wings, etc.

The optimisation approach, however, is likely to pose challenges for developmental programmes as opposed to systems/platforms with wider user-base. A new chapter on procurement of software and systems has been added with the intent of ensuring flexibility in the procurement process and to keep up with the changing pace of technology.

In sum, DPP 2020 gets the overarching demand logic right as it incorporates diverse instruments to spur innovation and technological capabilities. It might, however, benefit from the experience of other catching-up countries in preparing the technological upgradation of domestic suppliers by combining demand with appropriate supply-side measures. Pushing domestic firms into DCR, offsets and complex innovation projects do not always work if they lack requisite R&D and innovation capabilities. Therefore, an appropriate combination of demand and supply-side incentives are necessary. The DPP by being an acquisition manual, however, leaves R&D and innovation issues out of its scope. It is necessary that the MoD works toward a holistic defence innovation policy that takes into account the entire eco-system, and combines various tools to support ‘Make in India’ goals.

<https://www.defencenews.in/article/Toward-a-holistic-defence-innovation-policy-830184>

The Telegraph
online edition

Thu, 16 April 2020

India's Rakhine headache

The Army cannot get involved in the 109 km road project connecting Paletwa river terminal to Zorinpui on Mizoram border

By Subir Bhaumik

In a bid to ensure the early operationalization of the ambitious Kaladan multimodal transport project, India may be getting sucked into Myanmar’s Rakhine conflict. This raises the spectre of the Sri Lankan conflict that had sucked India in during the late 1980s.

The Tatmadaw seems to be all at sea while trying to tackle the insurgency in the Rakhine province. Myanmar’s soldiers are being kidnapped or killed by the Arakan Army insurgents, whose new mobile form of warfare has caught the Tatmadaw off guard. Rakhine is strategically important because China and India have initiated major connectivity projects there.

The Chinese have finished the Kyaukphyu deep sea port and are going ahead with a special economic zone around it with rail-road and oil-gas pipelines linking it to Yunnan. India has renovated the Sittwe port and is seeking to use it to connect to Mizoram through the Kaladan river.



That the Arakan Army is no throwaway weighs heavy on Indian military planners: they want to back the Tatmadaw so that it can regain control over the rebels in Rakhine. The Kaladan project can then be completed. But India wouldn't want to get too deeply involved. It can then avoid retaliation by the rebels. Military officials and strategic analysts have advised caution, saying India should avoid getting involved in the Rakhine imbroglio.

After years of delay, India finally began the construction of the 109-kilometre road project connecting the Paletwa river terminal to Zorinpui on the Mizoram border. But work on this phase of the project has been tortuously slow, one reason being the Arakan Army's constant disruptions. Workers involved in the road and bridge construction have been kidnapped. The Indian army conducted 'Operation Sunrise' to demolish the Arakan Army's bases in southern Mizoram.

On completion, the project will help connect Mizoram to the Sittwe port in Rakhine. The project was undertaken as a sea-land access to the Northeast at a time when Bangladesh, under the then prime minister, Khaleda Zia, was not playing ball. But with the Sheikh Hasina Wajed government agreeing to multimodal transit to the Northeast through Bangladesh's territory, the Kaladan project may have lost its significance except for landlocked Mizoram. India has already completed the rest of the Kaladan project work in Myanmar. This includes the construction of the Sittwe port, building a river terminal upstream at Paletwa, and the dredging of the Kaladan river. A Rs 6,000-crore project is under way for four-laning the 300-km highway from the Myanmar border to Aizawl to ensure the faster movement of goods. The completion of the Paletwa-Zorinpui road, therefore, holds the key to operationalizing the Kaladan project.

After Operation Sunrise, the Arakan Army has attacked Indian interests more regularly. In November last year, five Indian workers were kidnapped along with an MP of the National League for Democracy. The Mizoram chief minister, Zoramthanga, a former rebel leader with extensive contacts among rebel groups on the India-Myanmar border, played a key role in getting the workers and the MP released but one of the workers died in captivity. A similar incident of abduction had taken place in March 2019. The Arakan Army rebels also set ablaze a civilian vessel carrying 300 steel frames for the Paletwa bridge and the crew were abducted. That perhaps influenced India to undertake Operation Sunrise in close coordination with the Tatmadaw.

A spokesman for the Arakan Army recently told the media in Myanmar that "China recognises us but India doesn't". Analysts have interpreted this as a way of expressing the Arakan Army's frustration for India's refusal to pay up. China may have already done so to ensure there is no disruption of work in the Kyaukphyu deep sea port and the SEZ. Beijing maintains cordial relations with the federal government, the Tatmadaw and with rebel groups, especially those in the Northern Alliance. There is no evidence of Chinese assistance to the Arakan Army. But the fact that the Chinese project at Kyaukphyu has not been disturbed, unlike the Indian project in Kaladan, has raised suspicions.

The Arakan Army says it is not against transnational projects in Rakhine, provided the stakeholders 'recognize' the rebels and stop cooperating with the Tatmadaw. Zoramthanga, the Mizoram chief minister who is helping the prime minister to bring northeastern rebel groups to the table, is against any Indian military adventurism in Rakhine. He would rather use his influence with the Arakan Army to complete the Kaladan project — critical for Mizoram — without a fuss.

Stretched on account of counter-insurgency duties in Kashmir and the Northeast and having to stand guard over the long borders with China and Pakistan, the Indian army cannot afford to get involved in the Rakhine muddle. The question before India now is whether it can develop its Myanmar policy based entirely on its good relations with the ruling regime and the military, or will it consider reverting to the policy of 'selective relationships' with rebel groups like the Kachin Independence Army and the National Unity Party of Arakans to protect its interests. With someone like Zoramthanga around, India could actually consider a role in bringing the Arakan Army and the Burmese military to the table.

<https://www.telegraphindia.com/opinion/india-s-rakhine-headache/cid/1765161>

Army Chief to visit Kashmir to review situation amidst surge in ceasefire violations

By Rajat Pandit

New Delhi: Army Chief General M M Naravane will head to Kashmir on Thursday to review the operational situation and preparedness in the backdrop of the surge in ceasefire violations and infiltration attempts along the Line of Control, which comes at a time when both India and Pakistan are grappling with the coronavirus pandemic.

Gen Naravane in particular will be visiting the 15 Corps headquarters in Srinagar and the 28 Infantry Mountain Division in Kupwara during his two-day tour to discuss the ongoing counter-infiltration and counter-terrorist operations with the commanders on the ground, said sources on Wednesday.



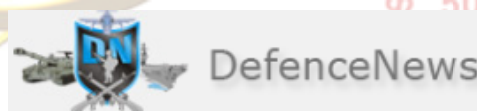
The visit comes soon after the recent spike in ceasefire violations (CFVs) along the 778-km LoC, with both the Indian and Pakistani armies deploying artillery guns and anti-tank guided missiles to target each other's posts and locations, as was reported earlier by TOI.

The Indian Army on April 10 had used 105mm field guns as well as 155mm Bofors howitzers to target terror launch pads, ammunition dumps and gun positions in the Dudhniyal area opposite the Keran sector of Kupwara.

The Keran sector was also the site of the fierce close-quarter gun-battle in which five terrorists were killed on April 5. Five Indian Para-SF commandos, unfortunately, had also laid down their lives in the encounter after being air-dropped by helicopters in the snow-bound heights.

India has already recorded well over 1,200 CFVs this year, with 367 in January, 382 in February and 411 in March. Last year, there were as many as 3,479 CFVs and firings across the LoC and the 198-km international border in J&K, the highest number recorded since 2003.

<https://timesofindia.indiatimes.com/india/army-chief-to-visit-kashmir-to-review-situation-amidst-surge-in-ceasefire-violations/articleshow/75161859.cms>



Thu, 16 April 2020

India issues warning after China antagonises New Delhi with 8 warships in Indian Ocean

Conflict between China and India has the potential to become reality after Beijing deployed "seven to eight People's Liberation Army Navy warships in the Indian Ocean Region" according to a senior Indian Navy commander.

Indian Navy Chief Admiral Karambir Singh confirmed the constant presence of Chinese vessels in the Indian Ocean, part of Beijing's ambitions to build and protect global trade routes. Speaking at the Raisina Dialogue, the admiral warned: "If anyone operates in our region, they have to notify us first." The Indian Navy released a statement that said: "The Dornier squadron of the ENC, INAS 311, operating from the air station, has been undertaking regular maritime surveillance missions.

"Additionally, all other air assets have been kept mission-ready and prepared for immediate deployment should the need arise."

The statement from the military commander comes against the backdrop of movements of a Chinese aircraft carrier and warships through the Miyako Strait in the fraught South China Sea.

According to a Japanese military report, released late last year, China has the third-largest ground force in the world following India and North Korea, with approximately 9,80,000 personnel.

The report read: "Since 1985, China has continuously sought to modernise its military by curtailing the number of personnel and streamlining organisations and systems through reforms, including those currently being implemented, in order to improve operational capabilities.

"China has rapidly modernised its missile forces in recent years."

China's Peoples' Liberation Army, PLA, was always regarded as the largest army in the world with an approximate strength of two million soldiers.

But recently India has overtaken the Chinese in the size of its land forces.

India is now in the early stages of building a leaner and modern technology-enabled force as envisioned by Prime Minister Narendra Modi in 2015.

Chinese president Xi Jinping had in 2015 announced the downsizing of the PLA to make the force leaner and reliant on modern warfare.

The unprecedented reform began in November that year during which the focus shifted to technology for cyber and space and futuristic weapons besides giving a greater emphasis on building up the PLA's Navy and the Air Force.

China is deploying naval vessels along their projected maritime trade routes.

This is part of Xi Jinping's Belt and Road Initiative, which is the largest investment in global infrastructure of all time.

It is easily outpacing the United States' Marshall Plan following World War II.

The Belt and Road initiative and accompanying Chinese military buildup have been heralded as a fundamental change in the global order.

The balance of regional economic and military power is undergoing a dramatic change as China vies for global trade domination.

<https://www.defencenews.in/article/India-issues-warning-after-China-antagonises-New-Delhi-with-8-warships-in-Indian-Ocean-830180>



Thu, 16 April 2020

Harpoon Anti-Ship Missiles: The next Armour in the Indian Navy

India has purchased ten AGM-84L Harpoon Block II air-launched missiles and related equipment for an estimated cost of USD 92 million from the USA. The Harpoon Block II air-launched missiles are all-weather anti-ship missiles

By Hemant Singh

Recently, the USA Government has approved the India US defence deal of worth USD 155 million. This deal includes ten Harpoon Block II air-launched missiles and related equipment, three MK 54 Exercise Torpedoes and related equipment and sixteen MK 54 All Up Round Lightweight Torpedoes.

Key Facts about the Harpoon Block II Missiles:

Country of origin: United States

Type: Anti-ship missile

In service: 1977–present

Latest version: Harpoon Block II

Used by: 30 Countries

Manufacturers: Boeing Defense, McDonnell Douglas, Space & Security

Unit cost: US\$1,200,000 for Harpoon Block II (2011)

No. built: 7,500

Specifications

Length: 182.2 in. ship launch, 151.5 in. air launch

Diameter: 13.5 in.

Weight: 1,160 lb (Air configuration)

1,459 lb (ASROC configuration)

1,520 lb (TARTAR configuration)

1,523 lb (Capsule/canister configuration)

Note: Its weight varies between 526kg and 690 kg based on the launch configuration.

Maximum speed: 537 mph (864 km/h; 240 m/s; Mach 0.71)

Range: In excess of 67 nautical miles

Propulsion: Air-breathing turbojet engine (cruise), solid-propellant booster

Launch Platforms: Air, land, surface and sub-surface applications

Ships: Fast patrol boats, destroyers and frigates

Aircrafts: F/A-18, F-15, F-16, F-27, F-50, P-3, S-3

Submarines: Wide range of classes with 9 foreign navies

Harpoon Block II is the world's premier anti-ship missile. It has the capacity to execute the target of both land-strike and anti-ship missions. Among the best features, it has the all-weather, over-the-horizon capability.

This 500-pound heavy warhead has the capacity to deliver lethal firepower against a wide variety of land-based targets, including surface-to-air missile sites, exposed aircraft port or industrial facilities and ships in port.

The capability of the Harpoon Block II can be easily imagined by these facts that over 180 submarines, 600 warships, 12 types of aircraft and mobile land-based launch platforms are armed with Harpoon missiles.

The First flight of the Harpoon missile was conducted on Dec. 20, 1972, and currently used by 30 countries in the world.

How will Harpoon Missile be helpful for India?

Since last some years, China has been very aggressive and possessive in the South China Sea and the East China Sea.

China claims sovereignty over all of the South China Sea while other countries i.e. Malaysia, Vietnam, Philippines, Brunei, and Taiwan also have counterclaims.

It is said that the South China Sea is filled with many minerals, oil, and other natural resources.

China has also claimed that the Indian Navy is not much capable as compared to Land and Air defence. The induction of Harpoon Missile in the Indian navy will strengthen the Indian feats in the sea.

After finalising this deal, the Pentagon said; "India will use the enhanced capability as a deterrent to regional threats and to strengthen its homeland defence."

So the purchase of the Harpoon Missile by India will not only strengthen the Indian Navy but also balance the power in the south Asian region.

<https://www.jagranjosh.com/general-knowledge/harpoon-antiship-missiles-the-next- armour-in-the-indian-navy-1586944221-1>



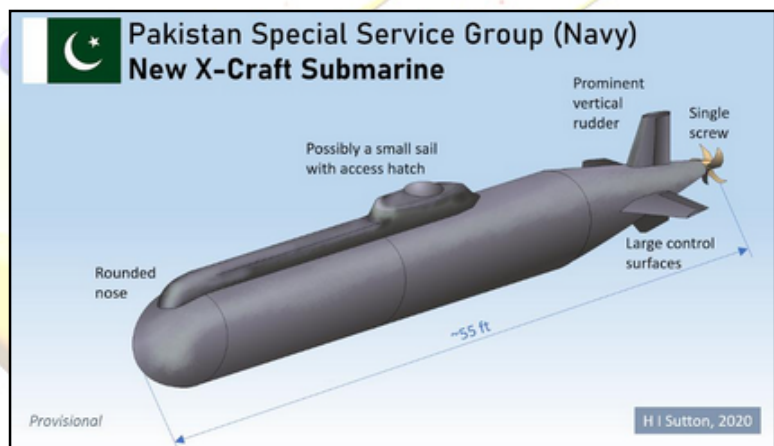
Thu, 16 April 2020

Mystery Submarine in service with Pakistan's Navy SEALs

By H I Sutton

Some of the best-kept secrets are hidden in plain sight. Sitting on the quayside at PNS Iqbal, a special naval base in Karachi, Pakistan, is a submarine that you won't find in any reference books, including my own World Submarines Covert Shores Recognition Guide. To my knowledge this will be the first article detailing this submarine, which appears to be in service with Pakistani Navy SEALs.

The submarine is a small special forces type, measuring around 55 feet long by 7 to 8 feet across. That is a fraction of the size of a regular submarine. Its location and size both point to use by the Pakistani Navy's Special Service Group, known as SSG (N). They are equivalent to the U.S. Navy SEALs and use the 'SEAL' terminology. They have a long tradition of training with the American unit.



Artist's impression of the new Pakistan Navy submarine. The image is based on analysis of satellite imagery. No photos are known to exist in the public domain. H I SUTTON

This category of submarine is called an X-Craft in Pakistani Navy parlance.

The term was inherited from the Italian manufacturer Cos.Mo.S (commonly written Cosmos) who sold Pakistan two sets of midget submarines in the past. The Italian firm itself borrowed the term from the Royal Navy midget submarines of World War II. The American equivalent to the X-Craft is the Dry Combat Submersible (DCS) now entering service with the U.S. Navy SEALs.

It may be intended to replace the Pakistani Navy's existing X-Craft. Pakistan operates three MG-110 X-Craft which were built locally between 1993 and 1996. They are getting long in the tooth and are due for replacement. But the Italian firm which designed them, Cos.Mo.S was closed down twenty years ago. Today its designs are continued by respected Italian manufacturer Drass. They offer a series of modern X-Craft that may be ideal for Pakistan.

But this mystery submarine does not appear to be a Drass design. The smallest publicly revealed Drass design is the DG-85, which is slightly larger than the boat seen in Pakistan.

One clue is that the boat first appeared in 2016. This may tie to a statement in the Pakistani Defence Production Division (MoDP) 2015-16 year book. It listed the "Indigenous design and construction of 01 Midget Submarine" as a target for 2016-2017.

Since then there have been reports that Turkish firm STM (Savunma Teknolojileri Mühendislik ve Ticaret A.Ş.) was jointly developing a mini-submarine with Pakistan. This could indicate that the mystery craft was not successful and so a new design is being developed. Another possibility is

that the Turkish partnership will focus on smaller 'chariots.' These are similar to the U.S. Navy's SDVs (SEAL delivery vehicles). In the Pakistani Navy the Chariots can be carried by the larger X-Craft.

Analysis of commercial satellite imagery shows that the boat rarely (if ever) goes in the water. The only clear image showing it in the water is from 2016. The operational status is therefore unclear. The tent that covers it is often moved, however, suggesting ongoing maintenance. So the sub cannot be written off, but what it's called and what exactly it does remains a mystery.

<https://www.forbes.com/sites/hisutton/2020/04/15/mystery-submarine-in-service-with-pakistani-navy-seals/#2170d3de3ba2>

Science & Technology

 South China Morning Post

Thu, 16 April 2020

Why the coronavirus slowed China's plan to take on Elon Musk's internet satellites

Two state-owned companies are racing to catch up with SpaceX's Starlink to provide internet from space

The coronavirus pandemic has shown just how essential the internet has become to modern life. Many people confined at home have relied on it to work, socialise and order the things they need for daily life. But it's also something that only half of the world's population has access to.

Companies in the US and China have been racing to change that by using low Earth orbit (LEO) satellites to drench the world in internet coverage. The hope is to reach areas that land-based cables can't cover.

In trying to catch up with the US, China has ramped up its efforts to become a major satellite internet provider. To accomplish this, state-owned and private companies in China plan to launch thousands of satellites into LEO.

This year was supposed to be when China accelerated internet satellite launches. Now it looks like the coronavirus might be shifting the timeline.

Why do we need Internet from Space?

By the end of 2018, 51 per cent of the world's population was online, according to data from the International Telecommunications Union. That leaves 49 per cent of the world's population, or roughly 3.8 billion people, without access to a resource that many people have grown dependent on and take for granted.

Reaching everyone on Earth remains difficult for landline networks, which rely on undersea and underground cables. Satellite signals, on the other hand, can more easily reach remote areas. It also



In February, GalaxySpace's first 5G satellite completed its first communications test. (Picture: GalaxySpace/WeChat)

lets people get online in places where it used to be difficult or impossible, such as planes or ships in the middle of the ocean.

LEO satellites could be a boon for people who have to work in these hard-to-reach places or live in rural or remote areas. Even a large developed country like the US isn't able to reach 100 per cent of its population with landlines.

More than 2 million people in the country are reportedly only served by satellite internet. But such service today relies on slow geostationary satellites offering up expensive, laggy internet. Hundreds of new satellites in LEO are expected to change that.

Who are China's biggest players?

While Starlink from Elon Musk's SpaceX leads the US in LEO internet satellites, similar efforts in China come from both state-owned and private companies. But the two biggest players in China right now are state-owned.

China Aerospace Science and Technology Corporation (CASC) and China Aerospace Science and Industry Corporation (CASIC), China's two major state-run aerospace companies, both have their own satellite internet programs.

CASIC has a bigger focus on serving the military and national defence. The company will launch two constellations named Hongyun (meaning "rainbow cloud") and Xingyun (or "running cloud"), which will have 156 and 80 satellites respectively.

CASC's planned constellation, called Hongyan (or swan goose), will eventually consist of 300 satellites. It's scheduled to be completed in 2025.

One of the most well-known and well-funded private internet satellite companies in China right now is Beijing-based GalaxySpace. The company started two years ago and launched China's first commercial 5G satellite in January. It also plans to launch 650 satellites total, more than any other company in the country. GalaxySpace counts Xiaomi CEO Lei Jun as an investor.

But it's not just aerospace companies that want a piece of the market. Geely, the Chinese carmaker that acquired Volvo in 2010, said last month that it would build a LEO satellite constellation to provide high-speed internet for its self-driving cars. And it appears that the ambitious carmaker also wants to build its own rockets. Postings on a Chinese jobs site this week show the company is looking to hire rocket engineers.

For now, China is about a year behind the US in the development of internet satellites, according to a report by TF Securities. The report says China will have one or two "Starlink-level" companies in the future.

Did the Coronavirus slow China's Progress?

China's first manufacturing base for commercial space activities is being built in Wuhan, where the coronavirus outbreak first started to spread. As a result, the Wuhan National Space Industry Base had to halt construction for more than two months, according to a report by state broadcaster CCTV.

The base has resumed construction now, CCTV reported last weekend. It aims to have the ability to produce about 120 satellites annually after 2020.

The Wuhan base is responsible for producing satellites for both the Hongyun and Xingyun projects. Some say that while the pandemic slowed things down, the industry is still moving along.

"I would expect 2020's launch schedule to be 'pushed to the right' a little bit," said Blaine Curio, founder of Orbital Gateway Consulting, a Hong Kong-based consultancy focusing on space and satellite telecommunications. "However, in general, I think Chinese LEO broadband constellations will develop quickly this year."

Xingyun, for instance, will launch two satellites later this month, including one named Wuhan. They will be carried by the Kuaizhou-1A rocket, made by CASIC subsidiary ExPace. ExPace is also based in Wuhan and halted work during the pandemic.

But the Covid-19 pandemic definitely had an impact on some internet satellite companies outside China. OneWeb, one of the most high-profile internet satellite makers in the world, filed

for bankruptcy, citing financial turbulence caused by the pandemic. The lesser known American company Bigelow Aerospace and Australian company Sky and Space Global also ran into trouble.

The bankruptcies have made some in China's internet satellite industry wonder if similar business models will also fail in their country, Curio said. But others also think it presents an opportunity for China to catch up and become a leader.

"There are companies experiencing difficulties in any industry, and we can't judge an industry's trend based on one single company's development," a GalaxySpace spokesperson told Abacus, in reference to OneWeb's bankruptcy. The startup also said that it will keep focusing on innovating its technology and mass-producing low-cost satellites to achieve commercial value.

Will China Police its Satellite Internet?

China plans to eventually offer up its satellite internet to other parts of the world. But the country is notorious for being one of the most restrictive when it comes to internet freedom. China's Great Firewall blocks many of the world's most-visited websites like Google, YouTube and Facebook.

For its own satellite internet network, China controls the ground stations (or satellite gateways). These are the stations that transmit data to and from the satellites, so the government could control the entire system.

Foreign satellite network operators hoping to serve Chinese internet users might have to build gateway stations in China or find another way to ensure the government has access to that data.

If companies don't want a ground station in a country they want to serve, they will need to use intersatellite links, Curio said. These allow satellites to send data to each other, offering lower latency and higher speeds since it reduces how often satellites must communicate with the ground. But this solution is probably less appealing to countries that like to control and monitor internet access.

"Historically this has meant that some companies, most notably OneWeb, purposely did not [use] ISLs in their system architecture," Curio said, "because they knew that it would be harder to get access to tough markets like China or Russia if they had ISLs."

So when can we Actually Use it?

SpaceX promises that Starlink will be available to American users in 2020, and it's aiming for global coverage in 2021.

In China, CASC aims for Hongyan to start providing service in 2023. The company plans to have the full constellation completed and providing service globally by 2025. CASIC's Hongyun is also scheduled to be completely deployed by 2025.

But just having the satellites in orbit doesn't necessarily mean smooth sailing for Chinese internet users going forward. One important obstacle might be potential conflicts of interest between satellite internet providers and telecom giants, according to Curio.

Like CASC and CASIC, China's telecom giants are state-owned. And China Mobile, China Telecom and China Unicom don't have much incentive to cooperate with new technology that could eat up their market share.

It's different in the US, Curio said. While American telecom companies Verizon, AT&T and T-Mobile have a lot of market power, they don't have so much political power, he said.

Using CASIC and China Telecom as an example, Curio explained, "I guess in this kind of situation, where you have two big, roughly equally powerful state-owned incumbents in different industries, you will get, at best, a really inefficient and badly-designed compromise."

<https://www.scmp.com/tech/big-tech/article/3080118/why-coronavirus-slowed-chinas-plan-take-elon-musks-internet>

अमर उजाला

Thu, 16 April 2020

कोरोना वायरस: वैक्सीन पर करोड़ों खर्च कर रहा ऑस्ट्रेलिया, यह दवा बन सकती है कोविड-19 का तोड़

रेखा राजवंशी

कोरोनावायरस ने विश्व भर को हिला कर रख दिया है और अनेक देशों में भयावह रूप से फैल गया है। वर्तमान स्थिति के अनुसार अमेरिका और यूरोप में मृत्यु दर सबसे ज्यादा है, पर ऑस्ट्रेलिया की बात करें तो यहां स्थिति अभी भी नियंत्रण में है।

आज तक के आंकड़ों पर नजर डालें तो 15 अप्रैल तक 6400 से ज्यादा लोगों को कोविड पॉजिटिव पाया गया है, जिनमें से 60 ज्यादा लोगों की मृत्यु हुई है। इन आंकड़ों से यह तो स्पष्ट है कि यहां स्थिति अन्य देशों की तुलना में काफी ठीक है। केंद्रीय स्वास्थ्य मंत्री ग्रेग हंट ने कहा कि ऑस्ट्रेलिया में कोरोना वायरस का प्रसार में कमी होने का मुख्य कारण है कि यहां लोगों ने 'सेल्फ आइसोलेशन' के नियमों का पालन किया है।

प्रधानमंत्री स्कॉट मॉरिसन ने कहा कि कम से कम छह महीने के लिए सामाजिक-दूरी (सोशल डिस्टेंसिंग) के नियम लागू रहेंगे और संभावित रूप से लंबे समय तक, अगर शोधकर्ता इसके बचाव का टीका विकसित करने में असमर्थ हैं या अधिक समय लगता है।

COVID-19 महामारी के चलते दुनिया के अधिकांश देश प्रभावित हुए हैं, काम काज लगभग ठप्प हो गया है, अर्थव्यवस्था चरमरा गई है और वैज्ञानिक इस बात को समझने में व्यस्त हैं कि इस वायरस को कैसे नियंत्रित किया जा सकता है। कैसे जल्द से जल्द कोई वैक्सीन ढूंढा जा सकता है और कैसे मरीजों का कारगर उपचार किया जा सकता है।

शोध के लिए \$2.6 मिलियन से अधिक का निवेश

11 मार्च 2020 को, ऑस्ट्रेलियन स्वास्थ्य मंत्री ग्रेग हंट ने कोरोनावायरस आपातकालीन स्थिति से निपटने के लिए पीटर डोहर्टी इंस्टीट्यूट फॉर इन्फेक्शन एंड इम्यूनोनिटी में डायग्नोस्टिक्स शोध के लिए \$2.6 मिलियन से अधिक का निवेश करने की घोषणा की। यह धनराशि इस उद्देश्य से दी गई कि इससे कोरोनावायरस के कारण और निवारण के बारे में शोध किया जा सके। मेडिकल रिसर्च फ्रंटियर फंड (MRFF) से प्राप्त धनराशि का उपयोग ऑस्ट्रेलिया के रोगियों के कोरोना वायरस परीक्षण बढ़ाने के लिए किया जाएगा।

आपके शरीर का इम्यून सिस्टम (प्रतिरक्षा प्रणाली) COVID-19 से कैसे लड़ती है?

ऑस्ट्रेलियाई शोधकर्ताओं ने पाया है कि हमारी प्रतिरक्षा प्रणाली इस कोरोना वायरस से उसी तरह से प्रतिक्रिया देती है जैसे कि इन्फ्लूएंजा के लिए देती है। रोगियों में COVID-19 से ठीक होने से पहले जो



कोरोना वायरस के उपचार के लिए ऑस्ट्रेलिया में हो रहे प्रयोग -
फोटो : Amar Ujala

प्रतिरक्षा कोशिकाएं खून में निकलती हैं, वही कोशिकाएं हैं जो हम फ्लू से ठीक होने से पहले लोगों में दिखाई देती हैं।

कोविड -19 वैक्सीन का परीक्षण

मार्च में क्वींसलैंड के शोधकर्ताओं ने जानवरों पर एक और संभावित कोविड -19 वैक्सीन का परीक्षण शुरू किया, और वर्ष के मध्य तक इसका मानव परीक्षण शुरू करने की उम्मीद है। प्रोफेसर हेंडरसन ने कहा, "पहली चुनौती है कि इस वैक्सीन को नैदानिक परीक्षणों में सुरक्षित और प्रभावी साबित करना, लेकिन अगली चुनौती होगा इस वैक्सीन का उत्पादन करने के लिए वैश्विक स्तर पर पर्याप्त उत्पादन क्षमता की खोज करना, ताकि लाखों या अरबों लोगों को टीका लगाया जा सके।"

इसी कारण से अनुमान है कि COVID-19 वैक्सीन के व्यापक रूप से उपलब्ध होने में कम से कम 12 से 18 महीने लगेंगे। एक नई दवा को लेकर आशा - 4 अप्रैल की खबर के अनुसार कोरोनावायरस की चिकित्सा के सन्दर्भ में स्वास्थ्य अधिकारी एक नई दवा को लेकर आशान्वित दिखाई दिए।

ऑस्ट्रेलियाई वैज्ञानिकों ने शोध के आधार पर कहा है कि दुनिया भर में पहले से ही मौजूद एक परजीवी दवा 48 घंटे के भीतर वायरस को मार सकती है। यह दवा, जिसका उपयोग पारंपरिक रूप से सिर की जूं और खुजली के इलाज करने के लिए किया जाता है, कोरोनावायरस उपचार के लिए भी कारगर सिद्ध हो सकती है। प्रयोगशाला में यह दवा का वायरस के समापन में कारगर सिद्ध हुई और इसके अच्छे परिणाम रहे।

Ivermectin को सिर की जूं और खुजली सहित कई स्थितियों के उपचार के लिए दुनिया भर में वर्षों से उपयोग किया जाता है, और यह एक गोली, लोशन और शैम्पू के रूप में उपलब्ध है। अध्ययन में शामिल शोधकर्ताओं के काम की प्रशंसा करते हुए, विक्टोरियन स्वास्थ्य मंत्री ने लोगों से इस पदार्थ का दुरुपयोग न करने का आग्रह किया। क्योंकि इसके स्वयं इस्तेमाल से व्यक्ति की जान भी जा सकती है। स्वास्थ्य अधिकारियों ने लोगों से अनुरोध किया कि इसे खरीद कर अपनी चिकित्सा स्वयं न करें क्योंकि अभी भी इस पर शोध जारी है।

मोनाश बायोमेडिसिन डिस्कवरी इंस्टीट्यूट और डोहर्टी इंस्टीट्यूट के नेतृत्व में एक सहयोगी अध्ययन में पाया गया कि दवा कोशिकाओं में पनपने वाले कोरोनावायरस को रोकती है। अगला कदम यह निर्धारित करना है कि क्या यह मनुष्यों में कोरोना वायरस का प्रभावी ढंग से इलाज कर सकता है, और यह भी पता लगाया जाएगा कि एक सुरक्षित खुराक क्या होगी।

वैज्ञानिकों का कहना है

आइवरमेक्टिन लैब परीक्षणों में बढ़ने वाले वायरस को रोकता है लेकिन शोधकर्ताओं को यह पता लगाने की आवश्यकता है कि क्या यह मनुष्यों में प्रभावी है और यह किस दर पर सुरक्षित है। यह स्पष्ट नहीं है कि कोरोनावायरस को रोकने के लिए दवा कैसे काम करती है। मानव नैदानिक परीक्षण शुरू होने से पहले इस बात की पुष्टि में महीनें लग सकते हैं।

ज़ाहिर है कि ऑस्ट्रेलिया के वैज्ञानिक और सरकार कोरोनावायरस की रोकथाम और उपचार के लिए प्रयोग किए जाने वाले वैक्सीन और दवा पर रिसर्च करने में काफी पैसा लगा रही है। आशा यही है कि शीघ्र ही इसका कुछ न कुछ समाधान निकलेगा, लोग पुनः स्वयं को सुरक्षित करेंगे और जान जीवन पुनः सामान्य हो सकेगा।

(डिस्क्लेमर (अस्वीकरण): यह लेखक के निजी विचार हैं। आलेख में शामिल सूचना और तथ्यों की सटीकता, संपूर्णता के लिए अमर उजाला उत्तरदायी नहीं है।)

<https://www.amarujala.com/columns/blog/coronavirus-in-australia-australian-scientists-begin-research?pageId=1>

क्या चमगादड़ से इंसान में आ रहा है कोरोना वायरस?

ICMR ने दिया यह जवाब

भारतीय चिकित्सा अनुसंधान परिषद- आईसीएमआर के रमन गंगाखेडकर ने बताया कि- चीन में हुए शोध से ये मालूम हुआ है कि ये वायरस चमगादड़ों से आया है। चमगादड़ ने इसे पैंगोलिंस में ट्रांसफर किया होगा, पैंगोलिन से ये मनुष्यों में आ गया। उन्होंने कहा कि हमने निगरानी भी की, जिसमें हमने पाया कि चमगादड़ दो प्रकार के होते हैं जिनमें कोरोना वायरस होता है जो शायद 1000 साल में एक बार मनुष्यों में पहुंचे।

बता दें कि कोरोना वायरस का संक्रमण भारत में लगातार बढ़ रहा है। देश में पिछले 24 घंटे में 1076 पॉजिटिव मामले सामने आने के बाद कोरोना से संक्रमित लोगों की संख्या बढ़कर 11439 हो गई है। वहीं, पिछले 24 घंटे में कोरोना से 38 लोगों की मौत हुई है, जिससे कोविड-19 महामारी से मरने वालों का आंकड़ा 377 पहुंच गया है।

आपको बता दें कि भारत के वैज्ञानिकों ने देश के 4 राज्यों में चमगादड़ों के नमूनों में बैट कोरोना वायरस (बीटी सीओवी) होने की पुष्टि की थी। वैज्ञानिकों का कहना था कि यह कोरोना वायरस कोविड-19 बीमारी के कोरोना वायरस सार्स सीओवी2 से मिलता जुलता हो सकता है। डॉक्टर प्रजा यादव के नेतृत्व में हुए इस शोध का मकसद यह जानना था कि कोरोना वायरस की प्रजाति के कौन से और वायरस चमगादड़ या अन्य जीवों में मौजूद हो सकते हैं। यह शोध इंडियन जर्नल ऑफ मेडिकल रिसर्च में प्रकाशित हुआ है।

10 राज्यों में अध्ययन

इस शोध में वैज्ञानिकों ने भारत के 10 राज्यों में मौजूद दो प्रजाति की चमगादड़ के सैम्पल लिए थे। इनमें पिटरोपस एवं रोसेट्स प्रजाति के चमगादड़ों के नमूने लिए गए। वैज्ञानिकों ने पाया कि भारत में 10 राज्यों में से 4 राज्यों के चमगादड़ों में बैट कोरोना वायरस की पुष्टि हुई है।

इन राज्यों में मिला वायरस

केरल, हिमाचल और तमिलनाडु और पॉन्डिचेरी में चमगादड़ से लिए गए नमूनों में बैट कोरोना वायरस मिलने की पुष्टि हुई है।

छह राज्यों में नहीं मिला

10 राज्यों में चमगादड़ की दो प्रजातियों के सैम्पल लेकर कोरोना की पीसीआर जांच की गई थी। इनमें छह राज्यों में सैम्पल निगेटिव आये हैं। इनमें कर्नाटक, चंडीगढ़, उड़ीसा, पंजाब, गुजरात, तेलंगाना में चमगादड़ में बैट कोरोना वायरस नहीं मिला।

स्वास्थ्य मंत्रालय द्वारा जारी ताजा आंकड़ों के मुताबिक, कोरोना वायरस के कुल 11439 मामलों में से 9756 एक्टिव केस हैं। इसके अलावा, 1305 लोग पूरी तरह से ठीक हो गए हैं या उन्हें अस्पताल से छुट्टी दे



दी गई है। स्वास्थ्य मंत्रालय के मंगलवार सुबह 8 बजे तक के आंकड़ों के मुताबिक, कोरोना वायरस से सर्वाधिक 178 लोगों की मौत महाराष्ट्र में हुई। यहां अब इस महामारी से पीड़ितों की संख्या 3124 हो गई है।

<https://www.livehindustan.com/national/story-research-reveals-corona-virus-came-from-bats-says-icmr-3152257.html>

रिसर्च पर विवाद / चमगादड़ से कुत्ते में और कुत्ते से इंसान में पहुंचा होगा कोरोना: कनाडाई वैज्ञानिक की रिपोर्ट पर भड़के दूसरे वैज्ञानिक

- शोधकर्ता का दावा, कुत्ते में कमजोर प्रोटीन जैप के कारण वायरस उसकी आंतों में जगह बना लेता है फिर इससे इंसानों तक संक्रमण फैलता है
- रिसर्च की आलोचना करने वाले वैज्ञानिकों का तर्क, जर्नल में दी गई जानकारी का आपस में मेल नहीं, यह अतिशयोक्ति है

नई दिल्ली: अब तक कोरोनावायरस पर हुई ज्यादातर रिसर्च में इंसानों तक पहला संक्रमण पहुंचने की वजह पेंगोलिन या चमगादड़ बताया गया है। लेकिन हालिया रिसर्च में शोधकर्ताओं का कहना है कि चमगादड़ से कुत्ते में और कुत्ते से इंसान में कोरोनावायरस पहुंचा होगा। यह दावा कनाडा के वैज्ञानिक ने किया है। उनका कहना है कि आवारा कुत्तों का चमगादड़ खाना कोरोना महामारी की वजह हो सकती है। हालांकि इस रिसर्च को ज्यादा वैज्ञानिकों ने खारिज किया और कहा, कुत्तों की देखभाल करने वाले लोगों को इससे परेशान होने की जरूरत नहीं है।



दावा: कुत्ते की आंतों में पहुंचा वायरस

कनाडा की ओटावा यूनिवर्सिटी के प्रोफेसर जुहुआ जिया ने यह रिसर्च की। अब तक 1250 से ज्यादा कोरोनावायरस के जीनोम का अध्ययन कर चुके जुहुआ का कहना है कि सांप और पेंगोलिन में मिले वायरस के स्ट्रेन के कारण असल कड़ी टूट गई है जिसमें यह पता करना था कि चमगादड़ से इंसानों में वायरस कैसे पहुंचा। नए कोरोनावायरस के फैलने की कड़ी में नई जानकारी सामने आई है। चमगादड़ के जरिए यह वायरस कुत्तों की आंत तक पहुंचा और इससे इंसानों में संक्रमण फैला।



चीन में एहतियात के तौर कुत्तों को फेसमास्क लगाया गया है। तस्वीर साभार: टाइम

विरोध में आए वैज्ञानिक

- कैम्ब्रिज यूनिवर्सिटी के वैज्ञानिक प्रोफेसर जेम्स वुड ने इस रिसर्च की आलोचना की है। उनका कहना है कि मुझे यह समझ नहीं आया कि कैसे शोधकर्ता इस नतीजे पर पहुंच गया। यह अतिशयोक्ति है। यह हकीकत से काफी दूर है। रिसर्च में मौजूद जानकारी कुत्तों से इंसान में कोरोनावायरस पहुंचने का समर्थन नहीं करती। यह रिसर्च जर्नल में प्रकाशित भी हो गई, यह भी सोचने वाली बात है।
- पिछले महीने विश्व स्वास्थ्य संगठन (डब्ल्यूएचओ) इस पर एक बयान भी जारी किया है। डब्ल्यूएचओ का कहना है कि अब तक पालतू जानवरों से कोरोनावायरस के संक्रमण के प्रमाण नहीं मिले हैं।
- सैन फ्रांसिस्को स्टेट यूनिवर्सिटी के प्रोफेसर लिउनी पेनिंग्स कहते हैं, यह थ्योरी और डेटा एक-दूसरे को सपोर्ट नहीं करते और मैं इस रिसर्च को नहीं मानता।

तर्क दिया: कोरोना शरीर में कमजोर कोशिका ढूँढता है

मॉलीक्युलर बायोलॉजी एंड इवोल्यूशन जर्नल में प्रकाशित शोध के मुताबिक, इंसानों के शरीर में एक प्रोटीन होता है जिसे ज़िंक फिंगर एंटीवायरल प्रोटीन (जैप) कहते हैं। यह प्रोटीन जैसे ही कोरोनावायरस के जेनेटिक कोड साइट CpG को देखता है उसपर हमला करता है। अब वायरस अपना काम शुरू करता है और इंसान के शरीर में मौजूद कमजोर कोशिकाओं को खोजता है। कुत्तों में जैप कमजोर होता है इसलिए कोरोनावायरस आसानी से उसकी आंतों में अपना घर बना लेता है।

<https://www.bhaskar.com/happylife/news/hot-yoga-will-burn-your-lullaby-127175636.html?art=next>

The KASHMIR MONITOR

Thu, 16 April 2020

COVID19 immunity can last for 2 years but social distancing must till 2022: Harvard Research

By Nisar Dharma

Srinagar: The world may be in for a long haul as a Harvard University research calls for intermittent social distancing till 2022 while also projecting recurrent coronavirus outbreaks each year after the ongoing initial wave of infection.

The study 'Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period' published yesterday (April 14) by five Harvard researchers says that "recurrent wintertime outbreaks of SARS-CoV-2 will probably occur after the initial, most severe pandemic wave."

"Absent other interventions, a key metric for the success of social distancing is whether critical care capacities are exceeded. To avoid this, prolonged or intermittent social distancing may be necessary into 2022," reads the [study](#) available on Science Magazine, a PDF copy of which was accessed by The Kashmir Monitor.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the official WHO name given to the virus that causes COVID-19 disease. Till Wednesday, the virus contracted over two million people globally and killed more than 1.28 lakh in at least 185 countries.

Making a very important statement, the study says that the coronavirus immunity may last for at least two years but suggests social distancing measures be kept in place.

"In our assessment of control measures in the initial pandemic period, we assumed that SARS-CoV-2 infection induces immunity that lasts for at least two years, but social distancing measures may need to be extended if SARS-CoV-2 immunity wanes more rapidly," it says.

It adds that even if novel coronavirus immunity only lasts for two years, mild (30%) cross-immunity from two other coronaviruses (HCoV-OC43 and HCoV-HKU1) could effectively eliminate the transmission of SARS-CoV-2 for up to three years before a resurgence in 2024, as long as SARS-CoV-2 does not fully die out.

“So a period of sustained or intermittent social distancing will almost certainly be necessary,” the study says.

“To implement intermittent social distancing, it will be necessary to carry out widespread viral testing for surveillance to monitor when the prevalence thresholds that trigger the beginning or end of distancing have been crossed.”

A vaccine, it says, would accelerate the accumulation of immunity in the population, reducing the overall length of the epidemic and averting infections that might have resulted in a need for critical care.

But the same, it says, will take months at best.

“Coronavirus has demonstrated an ability to challenge robust healthcare systems, and the development and widespread adoption of pharmaceutical interventions will take months at best.”

The researchers have also pointed out that if there have been many undocumented immunizing infections, the herd immunity threshold may be reached sooner.

Herd immunity happens when many people in a community become immune to an infectious disease that it stops the disease from spreading.

The researchers acknowledge that prolonged distancing, even if intermittent, is likely to have profoundly negative economic, social, and educational consequences.

“Our goal in modelling such policies is not to endorse them but to identify likely trajectories of the epidemic under alternative approaches, identify complementary interventions such as expanding ICU capacity and identifying treatments to reduce ICU demand, and to spur innovative ideas to expand the list of options to bring the pandemic under long-term control.”

The study concludes that the total incidence of COVID-19 illness over the next five years will depend critically upon whether or not it enters into regular circulation after the initial pandemic wave, which in turn depends primarily upon the duration of immunity that SARS-CoV-2 infection imparts.

<https://www.thekashmirmonitor.net/covid19-immunity-can-last-for-2-years-but-social-distancing-must-till-2022-harvard-research/>

ज्ञान प्रसार एवम् विस्तार
के 50 वर्ष