NAVJEEVAN EXPRESS
"Voice of the Common Man"

'Kavasam' Software developed by CVRDE to contain COVID-19 pandemic

The KAVASAM software developed by Combat Vehicles Research & Development Establishment (CVRDE), is a unique framework formulated for tracking and resource allocation thereby aiding to identify and suppress the COVID 19 pandemic in Avadi Corporation.

Chennai: The KAVASAM software developed by Combat Vehicles Research & Development Establishment (CVRDE), is a unique framework formulated for tracking and resource allocation thereby aiding to identify and suppress the COVID 19 pandemic in Avadi Corporation.

The Software has four level hierarchy of Super admin, Epicentre head, team leader and health worker are defined. The software framework consists of a web based application for centralized supervision and approval by the super admin and Epicentre heads.

The Super admin will be the overall responsible authority, he can create epicentres and allocate it to the concerned Epicentre heads. Reports can be created and the overall status can be visualized in the dashboard. Highlighting of the houses in map with different colours and legends is also provided to easily identify suspects.

Epicentre head/ health officer will be responsible for the Epicentre allotted and he has the privilege to create team leaders and streets and houses for survey within the radius automatically/manually to the also select 1.5km/3km/5km radius from Epicentre and assign the team leaders.

Android based app is developed for the Team leaders consisting of a set of doctors to create health workers and assign the streets manually or automatically to them based on the number of houses in a street for house to house surveillance and data using the same app the health workers can collect the relevant data from the collection and also the data collected by them can be approved.

The App is developed for geofencing of the home or institutionally quarantined/allotted houses and submits their recommendations to the team leader.

Another App developed to monitor the movement of quarantined persons. This App provides notification to Super admin, Epicentre Head and Team Leader/police if the quarantined person moves 100m away from their bi-directional approval and monitoring process is formulated and SMS notification at all stages is also provided to ensure authentication. Map views and generation of various reports required at different levels is also configured.

A resourceful database for the corporation is created with Geocoding of streets and number of houses in each street. This database will be automatically appended with the data collected by the health worker at allocated streets can be used for any resource allocation like vaccine for COVID

19 by the health department or distribution of other resources viz food, water, ration by the revenue departments at a later stage. Also, counselling of people and effective communication conducting surveys and also aid during disaster like flood etc.

The spin of strategies can be established. The software can be enhanced for benefits include creation of GIS map for house/population attributes due to systematic data collection across the area, a release from Defence PRO said.

https://navjeevanexpress.com/kavasam-software-developed-by-cvrde-to-contain-covid-19-pandemic/

THE NEW INDIAN EXPRESS

New app to ease workload of frontline staff
City-based defence lab develops Kavasam app to track patients, resource allocation
By SV Krishna Chaitanya

Chennai: Though no medicine has been discovered to fully cure COVID-19, Kavasam, a new software could prove a panacea for strengthening the support system tackling the crisis. Developed by Chennai-based Combat Vehicles Research and Development Establishment (CVRDE), the software offers a unique framework for tracking patients and resource allocation. Unlike the application Arogya Setu, which is being widely promoted by the Central government, Kavasam is expected to ease the workload of frontline workers, street-level surveillance and aid in quick decision making by epicentre heads and other authorities.

CVRDE director V Balamurugan told Express that Kavasam was developed following a request from the Avadi Corporation. "Our team took two weeks to develop the software and android application for the end-users. We have used services of MapmyIndia to digitally view street-level details like number of households, etc. We are currently training Avadi Corporation staff to use the application, and Special Nodal Officer for Greater Chennai Corporation J Radhakrishnan has also sought a demonstration," he added.

The software facilitates geofencing of homes or institutionally quarantined persons, whose movement can be monitored. An automatic notification will be sent to super admin, epicentre head and team leader or police if the quarantined person moves 100 metres away from their bi-directional approved spot. Monitoring process is also formulated and an SMS notification will be provided at all stages to ensure authentication. Balamurugan further said that a resourceful database for the corporation is created with geocoding of streets and number of houses in each street. Different colour codes are used for authorities to know which streets have been surveyed.

For instance, if a health worker collects data from a particular street, the street will be shown as green in the applications. "There are a lot of spin-off benefits of the application. It can be used for allocation of any resource like vaccines by the health department or food, water or ration by the revenue department at a later stage," he said.

https://www.newindianexpress.com/cities/chennai/2020/may/06/new-app-to-ease-workload-of-frontline-staff-2139771.html

Chennai defence lab develops 'Kavasam' app to help COVID-19 warriors fight virus

V Balamurugan, Director, CVRDE, told The New Indian Express that
'Kavasam' was developed following a request from the Avadi Corporation
By SV Krishna Chaitanya

Chennai: The Chennai-based Combat Vehicles Research and Development Establishment (CVRDE) has developed an app called 'Kavasam' to contain the COVID-19 pandemic, which is wreaking havoc in the city.

Unlike currently available apps like Arogya Setu, which is being widely promoted by the Centre, Kavasam is meant to ease the work of frontline workers, enable street-level surveillance and aid quicker decision-making by those in charge.

V Balamurugan, Director, CVRDE, told *The New Indian Express* that 'Kavasam' was developed following a request from the Avadi Corporation. "Our

A health worker engaged in a Covid-19 ward, standing outside Omandurara Medical College in Chennai. Express / DEBADATTA MALLICK.

team took two weeks to develop the software and Android app for end users. We have used the services of MapmyIndia to digitally view street-level information like number of households etc. We are currently training Avadi Corporation staff to use the application and have been contacted by the Special Nodal Officer for Greater Chennai Corporation J Radhakrishnan seeking a demonstration."

The app facilitates geofencing of homes of those under quarantine to monitor their movement. An automatic notification will be sent to the super admin, epicentre head and team leader/police if the person moves 100m away from the location.

Balamurugan said a database has been created for the corporation with geocoding of streets and number of houses in each street. Different colour codes are given for authorities to know which streets have been surveyed. For instance, if health workers finish collecting data from a particular street, it will be shown as green in the app.

"There are a lot of spin-off benefits of the app. It can also be used by the health department to allocate a vaccine for COVID-19 when it is developed or by the revenue department to distribute other resources like food, water and ration."

https://www.newindianexpress.com/cities/chennai/2020/may/05/chennai-defence-lab-develops-kavasam-app-to-help-covid-19-warriors-fight-virus-2139504.html

Coronavirus lockdown: Kochi airport
set to receive evacuees from Middle East

Pilots and cabin crew of Air India's first batch of flights have been given
training in infection control practices, apart from undergoing RT-PCR test

By Shaju Philip

With Indians stranded in the Middle East to be evacuated from Thursday, elaborate safety measures have been put in place at Cochin International Airport Limited (CIAL), where the first flight from Abu Dhabi is expected that night.

Pilots and cabin crew of Air India's first batch of flights have been given training in infection control practices, apart from undergoing RT-PCR test. Twelve Air India personnel, including four pilots, were trained by Kochi government medical college.

Medical college Resident Medical Officer Dr Ganesh Mohan said, "We trained them in using PPE suits and wearing face shield on board and handling health emergencies on flight. They were also trained in infection control practices. The demonstrations were held as per the protocol, and they were given PPE kits," he said.

Captain Partha Sarkar said the training helped boost confidence of the crew for the mission.

The first flight from Abu Dhabi will have 179 passengers, and the airport is fully prepared to receive them, a CIAL spokesperson said. The aircraft, which has been disinfected, will have a special parking bay and aerobridge. Passengers will be examined with thermal scanners and temperature guns before they enter the terminal. Symptomatic passengers will have a dedicated way to an ambulance for transport to hospital, while asymptomatic passengers will be taken to a health desk for basic examination.

Baggage will be handed over to passengers after disinfection. An ultraviolet disinfection system developed by DRDO is being installed at the airport. The baggage, after disinfection, will pass through two tunnels for exposure to ultraviolet rays.

https://indianexpress.com/article/india/coronavirus-india-lockdown-kochi-airport-set-to-receive-evacuees-from-middle-east-6397462/

Airport braces for influx of
NRKs; protocols in place

Laser guns, thermal scanners for screening; UV disinfection for bags

Kochi: As the first international flight carrying Malayali expatriates from Abu Dhabi is expected to touch down at Cochin International Airport on Thursday, the airport authorities have put in place stringent measures to scan the passengers for possible Covid-19 and disinfect the luggage of the incoming passengers.

CIAL has gone for a tie-up with Defence Research Development Organisation (DRDO) for installing machines for disinfecting the luggage. As per the schedule, the Air India Express flight carrying 179 passengers from Abu Dhabi is expected to arrive at 9.40 pm on Thursday night. Special teams of officials from state health department, police, local bodies and CISF have been formed to implement various Covid protocol measures in the airport. After landing at the tarmac,

the flight will be parked at a special bay area and the passengers will be allowed to come out of the aircraft as per a specific protocol.

The passengers will be thoroughly screened for temperature using laser guns and thermal scanners before entering the terminal building. Those with symptoms will be shifted straight to ambulance while asymptomatic passengers will be taken to special health check-up counters for conducting detailed checks. Strict social distancing protocol will be followed in all areas inside the airport.

CIAL has also installed an ultraviolet system to disinfect the luggage of the passengers. The system has been developed by DRDO in association with NPOL and Government Medical College, Kalamassery. Airport staff who will be coming in close contact with the passengers will be wearing PPE. The airport premises will be disinfected continuously.

https://www.newindianexpress.com/cities/kochi/2020/may/07/airport-braces-for-influx-of-nrks-protocols-in-place-2140082.html

BioSpectrum
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Thu, 07 May 2020

DRDO designs UV disinfection tower
The equipment named UV blaster is a UV based area sanitiser

Defence Research and Development Organisation (DRDO) has developed an Ultra Violet (UV) Disinfection Tower for rapid and chemical free disinfection of high infection prone areas.

The equipment named UV blaster is a UV based area sanitiser designed and developed by Laser Science & Technology Centre (LASTEC), the Delhi based premier laboratory of DRDO with the help of New Age Instruments and Materials Private Limited, Gurugram.
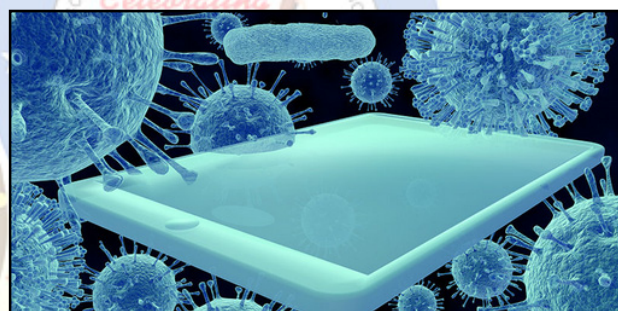
The UV Blaster is useful for high tech surfaces like electronic equipment, computers and other gadgets in laboratories and offices that are not suitable for disinfection with chemical methods. The product is also effective for areas with large flow of people such as airports, shopping malls, metros, hotels, factories, offices, etc.

The UV based area sanitiser may be used by remote operation through laptop/mobile phone using wifi link. The equipment has six lamps each with 43 watts of UV-C power at 254 nm wavelength for 360 degree illumination. For a room of about 12x12 feet dimension, the disinfection time is about 10 minutes and 30 minutes for 400 square feet area by positioning the equipment at different places within the room.

This sanitiser switches off on accidental opening of room or human intervention. One more salient safety feature of the product is the key to arm operation.

https://www.biospectrumindia.com/news/77/16386/drdo-designs-uv-disinfection-tower.html

Outlook

THE NEWS SCROLL

Thu, 07 May 2020

Railways scales up PPE production

New Delhi: The Northern Railways has manufactured 17,000 coveralls for medical professionals till Sunday, producing a record number of 2,000 in a single day, a senior official said.

Last month, the Railways altogether prepared 41,000 such units, 12,000 of them contributed by the NR, said Arun Arora, Principal Chief Mechanical Engineer, Northern Railway.

"Further, during the first two days of May, the Indian Railways produced 6,000 coveralls and our contribution is 3,000 in it," the NR representative said.

It is expected that this month, Northern Railways workshops will be able to churn out more than 30,000 coveralls for immediate supply to doctors and paramedics who are the frontline fighters against COVID-19.

Arora said the cost of coveralls prepared by the NR is Rs 447 per unit as compared to prevailing market price of Rs 805.

The railways has set a target of one lakh such PPEs coveralls to be prepared by May 31.

Samples of Personal Protective Equipment (PPE) made at a Northern Railways workshop have been cleared by the DRDO for its ability to block blood or body fluid.

The test was conducted to check the resistance of the bio-protective covering material to penetration of blood or body fluid.

These coveralls will be worn by doctors in railway hospitals while treating COVID-19 patients, the Northern Railways said.

There is an acute shortage of PPEs for medical professionals in the country who are treating coronavirus patients.

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

https://www.outlookindia.com/newsscroll/railways-scales-up-ppe-production/1823606

DEFENCE AVIATION POST
Your Connect To The World Of Defence And Aviation

Thu, 07 May 2020

#Throwback: India's next generation missile boats will make Chinese aircraft obsolete

Indian Navy plans to induct six new next generation Missile Boats/Vessels under make in India program. The missile vessel primary mission indicated as surface warfare unlike most other missile boats perform only Anti shipping.previously Indian navy used the Russian missile boats that can bring down entire Karachi and did awesome work in the 1971 WAR. and get the Nickname Killer Squadron. Thus later replaced by the corvette's.

It seems navy didn't satisfied those Corvette's they need new generation missile Boats. but here the missile vessel have 8 VLS or Tubes for Surface attack this can be added with either Nirbhay LACM (Land Attack Cruise Missile) or Combination of Brahmos land attack and anti shipping cruise missiles. The Nirbhay can strike target far more than 1200 kilometers with impressive loitering capability. Also flies at low level and reduced RCS. so hard to be tracked by enemy air defence radars.

Mach 3 Capable Brahmos Cruise Missile is a fearsome Weapons system which evens a Captain of an Aircraft carrier will fear due to its kinetic punch coming from its 300kg warhead and its ability to sink largest of the warships with ease. With MTCR restriction gone 800km BrahMos MK4 will be formidable Surface to Surface weapon system too which can be used to attack port and Naval facilities when required

Missile boats will have reduced RCS. So it will be hard to be detected by enemy ships and along with lower acoustic signatures to make the ship hard to be detect by sonar's. Both of these specifications indicate the ship hull should be stealth in design and material.

These ship will be able accomodate some 100 Navy personells include 11 officers. so the ship size provide beds and other living features and stocks food.

https://www.defenceaviationpost.com/2020/05/throwback-indias-next-generation-missile-boats-will-make-chinese-aircraft-obsolete/

The Tribune

With Himalayas getting unusually higher snow in April, SASE extends avalanche warning period

By Vijay Mohan

Chandigarh: With several parts of the Himalayas experiencing unusually good snowfall during the month of April, the Snow and Avalanche Study Establishment (SASE) has extended the period during which avalanches can be experienced till mid-May.

"The snowfall over western and central Himalayas as a whole was 98.2 per cent of the long period average during the 2019-20 snow season," Naresh Kumar, Director of SASE, said. "February is the peak period for snowfall and thereafter it starts decreasing from March to April. However, this year there was relatively higher snow in April due to western disturbances and because of that we are continuing to issue avalanche warnings which we normally do till April," he added.
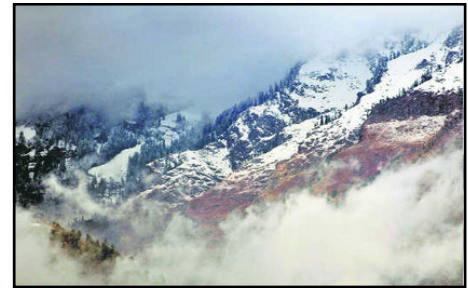
Good snowfall in the mountains will have a favourable impact on the availability of fresh water in the summers.

Avalanche warnings are issued everyday to the armed forces as well as state governments, identifying the likely areas to experience an avalanche and forecasting the level of danger, so that preventive and cautionary measures can be taken.

SASE is a laboratory under the Defence Research and Development Organisation (DRDO) that is enagged in mountain meteorology, avalanche forecasting, artificial triggering and structural control in snowbound areas. SASE has developed its own statistical model for seasonal winter precipitation forecast over western Himalayas.

Based on this model, the precipitation forecast for the winter season of 2019-20 was "good" for western Himalayas, with chances of less snowfall during mid of February to mid of March this year. In November 2019, Himalayas had received unprecedently high snowfall. The area has experienced 10 avalanches during the winters.

Good snowfall in the mountains will have a favourable impact on the availability of fresh water in the summers. Already, the Bhakra Beas Management Board, which manages two major reservoirs on the Sutlej and the Beas in Himachal, is expecting above-high inflows in the summers.

While the snowfall was in excess in the beginning of the winters, it became deficient in mid-winters, particularly in the month of February 2020 which otherwise is known as the month of highest snowfall in western and central Himalayas.

Observations show that Dhundi station near Rohtang Pass in Himachal Pradesh received the highest cumulative snowfall of 1,220 cm while Bahang, the headquarters of SASE near Manali, received the lowest snowfall of 225 cm during the entire winter season.

This year, SASE also initiated a series of training programs for quick reaction teams of various state agencies, including police, home guard and central armed police forces on the management and mitigation of avalanche hazards and carrying out rescue operations. SASE has already been imparting training to Army troops on avalanche safety, rescue and movement in avalanche-prone areas for the past many years.

https://www.tribuneindia.com/news/nation/with-himalayas-getting-unusually-higher-snow-in-april-sase-extends-avalanche-warning-period-81200

China thinks India's missile defenses are no big deal

But does this reflect a problem with India – or is China trying to discourage its rival from building defenses against Beijing's ballistic missiles?

By Michael Peck

Here's what you need to remember: China is indisputably more powerful, with a larger economy and a military that is rapidly procuring advanced conventional and nuclear weapons. But India also has nuclear weapons, and an Indian missile system that could intercept Chinese ballistic missiles would enhance India's deterrence capabilities versus China.

India isn't capable of building an effective missile defense system, according to Chinese media.

But does this reflect a problem with India – or is China trying to discourage its rival from building defenses against Beijing's ballistic missiles?

"Generally speaking, although India has made considerable progress in the independent R&D and deployment of ballistic missile defense system in recent years, it is still faced with a string of difficulties, such as inadequate capital, unsmooth R&D process, heavy reliance on other countries regarding key technology, and incomplete systems," writes Fang Xiaozhi, a researcher at the BRI Institute of Strategy and International Security at Fudan University. "New Delhi has a long way to go before it can establish a truly effective ballistic missile defense system and fully exert its real combat force."

The article appeared on chinamil.com, the Chinese military's English-language Web site. Though the article included a disclaimer that it did not necessarily reflect the views of the Web site, it seems unlikely that an official People's Liberation Army site would have run the story unless it was intended to convey a message.

India has become a new player in ballistic missile defense (BMD), developing both BMD interceptors as well as an anti-satellite weapon. Indian BMD is a two-tiered system similar to the U.S. Safeguard system of the 1960s: long-range Prithvi rockets (based in the Prithvi tactical ballistic missile) for exo-atmospheric intercepts in space, and the Advanced Area Defense missile for endo-atmospheric intercepts within the Earth's atmosphere, when the target warhead is descending through the atmosphere.

In January 2020, government officials told Indian media that BMD development and testing had been successfully completed, and that the system was ready for deployment.

"The Indian Air Force and the Defense Research and Development Organization (DRDO), the system developer, are seeking the approval to install and activate this system near the capital city of New Delhi, which is expected to take three or four years," said Indian news site The Print.

However, the Chinese analyst dismissed Indian successes as invalid. "India has adopted the most conservative plan in all its anti-missile tests - only intercepting a target whose launching spot, flying velocity and direction, altitude or ballistic parameters are all known and there is no actively maneuvering and changing trajectory," Fang said. "This testing approach of 'hitting a fixed target' doesn't comply with real combat situation, nor can it truly test the anti-missile system's stability and reliability, so the testing results are hardly reliable."

Fang also asserted that India doesn't have the technological backbone for effective missile defense. "A missile defense system is a very complicated project that reflects a major country's overall strength, and it requires a thorough and solid technical foundation in terms of anti-missile early warning system, missile interception system and command and control system, in all of which India has nothing much to say for itself. Compared with Russia, the US, Israel and other

countries with strong anti-missile capabilities, India's technology is completely left behind and its R&D has had too many twists and turns. Besides, it has conducted too few tests, far from enough for it to fully understand the technology."

However, the problem with this analysis is that China isn't exactly a disinterested observer. China's rivalry with the U.S. over the Western Pacific tends to obscure China's rivalry with India. The two nations fought a brief war in 1962, in which China seized territory on India's northwest frontier.

China is indisputably more powerful, with a larger economy and a military that is rapidly procuring advanced conventional and nuclear weapons. But India also has nuclear weapons, and an Indian missile system that could intercept Chinese ballistic missiles would enhance India's deterrence capabilities versus China.

https://nationalinterest.org/blog/buzz/china-thinks-indias-missile-defenses-are-no-big-deal-151031