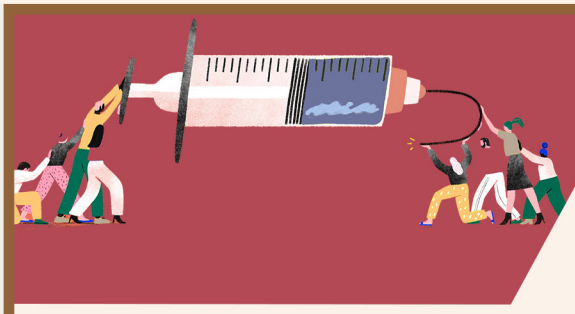

PICT MUN

PICT MUN OFFICIAL NEWSLETTER

THE INQUISITOR

Issue 7.0

Featured Article

Vaccines- A race to Cure or Struggle for Perfection

By Karthik Panicker

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Introduction

The PICT MUN Club consists of a group of students who are passionate about social and political aspects of events that have and are taking place throughout the world. Our main goal is to enhance the spread of such awareness and information, which has a direct and imperative relevance, among the general public.

Our organization abides by the motto- 'Think. Discuss. Prosper.'.

The PICT MUN team has developed Issue 7.0 of 'The Inquisitor' from scratch. It consists of In-house articles that have been written by the club's members after carrying out extensive research in order to serve reports to the readers with the maximum possible factual accuracy. We plan on expanding the outreach of this esteemed newsletter with each edition and would love to accept articles from individuals who would be interested to get their work published. Feel free to communicate with us on - newsletterpictmun@gmail.com regarding the same.

Our authors have ensured that the content is accurate up to the date on which the article was written. The views expressed in the articles reflect the author's opinions and do not necessarily represent the opinions of the organisation publishing this document.

With this, we invite you to indulge in controversial propagandas, urgent and relevant coverage of events taking place over the globe, and fresh, new perspectives on raging, intriguing topics of today's day and age.

The members of the club have poured their heart and soul into this newsletter and we hope that the readers realise and appreciate these emotions.

Happy Reading!

Regards,

The Secretariat

PICT MUN

How Is Artificial Intelligence Changing Our World?

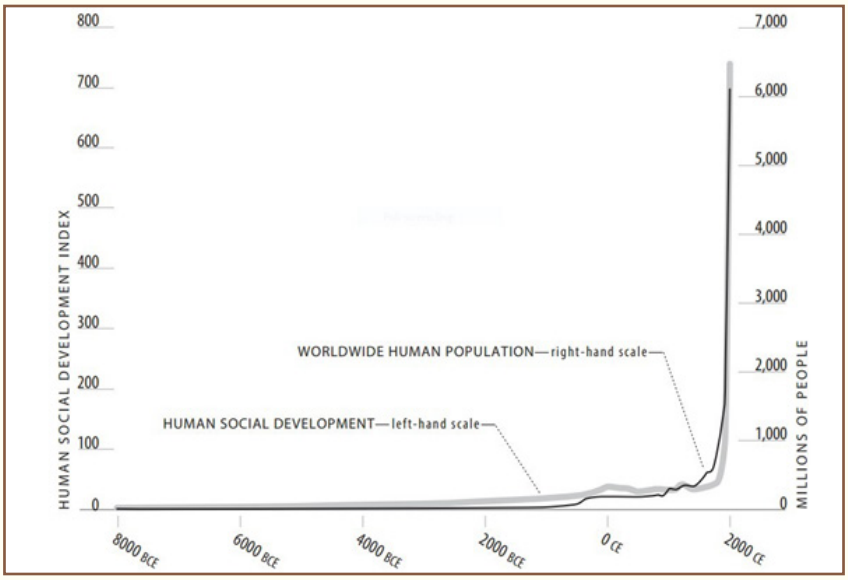
Anuja Patil

History has always witnessed wars, fights, and struggles of many empires, countries, and nations to gain global supremacy in terms of leadership, economic influence, political influence, strong international alliances, and strong military alliances. But since the 21st century a new race, or a new 'tech war' has begun: to approach the Artificial Intelligence Supremacy. Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines equipped to perform tasks that ordinarily require human intelligence. This revolution has started making its remarks from jobs to privacy, and at the same time has become an ignition in the US-China rivalry.

An American author Dr. Shoshana Zuboff has coined a new term, for a new type of Capitalism: "Surveillance Capitalism". Surveillance Capitalism is an economic system where many companies use personal data with a core purpose of profit. They train their models with user's extra-behavioural data. The Model is simply made to provide free services like social media apps and search engines and collect the data from millions. They extract sliver information like the searches made, the way one writes text messages, the kinds of posts and pages followed, etc. All these tiny signals are the behavioural surplus that turns out to have immense predictive value. Thus in 2018, the Cambridge Analytica Scandal questioned Mark Zuckerberg in front of the Congress about how the data of 87 million users is used by a UK-based Political Consultancy Company. These Companies with advanced Tech-Force can Command the public and infect as well as infiltrate the Democracy. Just as good as Surveillance Capitalism! China has deployed about 600 million Cameras by 2020 to collect real-time data for training their AI models. It is on the verge of becoming a complete Surveillance State. Chinese Authorities are not only promoting this technology in their nation, but also other inferior Countries.

China has a Plan: it has decided to Chase AI in the near future. President Xi Jinping had announced a new budget in 2017 to chase the US in AI by 2025 and lead the world by 2030. They have come up with strategies and inventions in Digital Technology, Nanotechnology, Quantum Computing, and Artificial Intelligence. China is currently leading in the E-commerce sector by introducing various technologies like Drone Systems for Delivery and has bypassed Credit Systems with Currency as Facial Recognition. In just three-and-a-half-years China's AI implementation literally went from a minimal amount to 17 or 18 Unicorns (Unicorn- A Billion Dollar Company). Chinese Entrepreneurial Companies had started as copycats; yet in the last 15 years, they have developed their own AI firms which are tenacious, very fast, and have an incredible work ethic. The Chinese government can provide funds for building an entire City (Equivalent to Chicago) with complete AI automation like an autonomous vehicle system. China is best suited for the AI implementation due to several reasons: compared to the United States they have 3 to 4× more users, 10× more deliveries, 50× more mobile payments, and 300× more users in shared bicycles (A smart Bicycle which has all types of sensors to share information with cloud). Thus, overall, 10× more Data than the United States. So, Data is a Fuel for Artificial Intelligence. The more the Data, the more the AI blooms. Hence on a global level, if we compare data with the oil then China is Saudi Arabia. This power has made the Chinese masses to

sanction their loans in an average of just 8 seconds by the provided application. Here arises a question that how a Country can dramatically evolve itself from a mimic laggard to an AI Lead which is as good as the US? They have taken Facial Recognition to commercial quality. In Shenzhen, a program is designed to discourage Jaywalking (disregarding traffic rules). The Government wants to integrate all individual behaviour or corporate records into a matrix and compute a set of numbers, or an ID associated with each individual which will be used to implement a Social Credit System. In this System, credits are created for each individual based on their behavioural data extracted through various means. If the credit numbers go high, rewards are given and if they are low, then the individual is punished. This in turn creates manipulation over the people by suppressing criticism. This can be extremely troublesome in terms of civil liberty. In the age of AI, China reflects remarkable progress and illuminates the great political paradox of Capitalism taking its roots in the Communist state.



In the current scenario, there are many aspects and problems in the world which cannot be expressed in words. Computers are made to acquire knowledge from Data, and they are providing terrific solutions that can come unexpectedly to urgent problems. AI can change the face of various concerns like Breast Cancer which is expected to be the most common site of Cancer by 2025. It is possible through Deep Learning that a computer or a System can predict whether the woman has cancer, or might it emerge in the next 4-5 years. Thus, instead of using Human capacity to recognize and formulize the data, which is inherently limited by one's cognitive capacity, Machines are making promising predictions. AI has started to overcome man's muscle as well as mental limitations.

An argument was ignited 7 years ago which still exists: AI can affect the labour force up to 47% in the next 15 years. When questioned to top AI giants, which are perhaps drawing a lot of Money, they preferred to remain silent about this cynical view. But throughout history, we analyse that there is a pattern of a shift in the workforce, which initially was intended to be a disruption in the Labour Force. If we go back 50 years, we will find that people with jobs like Telephone Operator, bowling pine setters, elevator operators, and a lot of secretaries at an office in each sector have been eliminated almost completely, today. This pattern has been repeated many times in history with each new wave of automation. Still, the current Magnitude of the AI revolution brings us to the question of Labour Force Disruption. New Machines have started penetrating every sector of the economy which include Insurance companies, Human Resource Departments, Law Firms, and even the Stock Market. AI is a driver for increased inequality because it's a form of automation, and automation is a substitute for capital for labour. In this case, Capital wins because, on the scale of the struggle between capital and labour, AI puts its finger on the side of the capital. This might lead to the creation of huge economic gaps. The Rich will get richer and the poor, even poorer, which won't be completely associated with the AI but will certainly have an impact.

AI is a technology that can do Good as well as Evil. It entirely depends on the respective governments, how they limit themselves in providing a smart environment to the masses or using individual rights and privacies.

Nagorno-Karabakh Issue

Soham Naik

Nagorno-Karabakh or as the people there call "Republic of Artsakh" is a disputed piece of land between Armenia and Azerbaijan in the south Caucasus mountain region. This oblast is a de facto part of Armenia but a de jure part of Azerbaijan meaning it comes under the jurisdiction of Azerbaijan but is in reality controlled by Armenia. The main cause of the dispute is that the population of Nagorno-Karabakh is majority Armenian citizens.

The roots of the problem date back to the end of World War I when the British occupied Karabakh after the defeat of the Ottoman empire. The British agreed to the appointment of Khosrov bey Sultanov, who was an Azeri and was appointed as the governor-general of Karabakh. This decision was opposed by Karabakh Armenians as they felt that, since 90% of the population of Karabakh was Armenian, they should have an Armenian governor-general. The Britishers ignored their protests which in turn agitated the Armenians and they adopted guerrilla methods to counter the forces. Little did the Britishers know then that this ignorance of theirs was going to lay the foundations of one of the major conflicts of the region till date.

While the Azerbaijani army was engaged in Karabakh fighting the local Karabakh forces, Azerbaijan was taken over by Russians. Subsequently in 1920, Armenia signed a preliminary agreement with the Russians, allowing a temporary Russian occupation of the disputed areas until final settlement would be reached. But, in 1921, Armenia was also taken over by the Russians. After the Sovietization of Armenia

and Azerbaijan, it was decided that Karabakh would remain within Azerbaijan SSR (Socialist Soviet Republic) with a broad regional autonomy. With the Soviet Union in firm control of the region, the conflict over the oblast died down for several decades until the beginning of the dissolution of the Soviet Union in the late 1980s and early 1990s, that is when the question of Nagorno-Karabakh re-emerged. Accusing the Azerbaijani SSR government of conducting forced Azerification of the region, the majority Armenian population, with ideological and material support from the Armenian SSR, started a movement to have the autonomous oblast transferred to the Armenian SSR. Karabakh Armenians sent a petition for union with Armenia to Moscow in August 1987, but the proposal was rejected.

On 13 February 1988, Karabakh Armenians began demonstrating in Stepanakert- the largest city of Nagorno-Karabakh, in favour of unification with the Armenian republic. Six days later they were joined by mass marches in Yerevan- the capital of Armenia. On 20 February, the Soviet of People's Deputies in Karabakh voted 110 to 17 requesting the transfer of the region to Armenia. This unprecedented action by a regional Soviet brought out tens of thousands of demonstrations both in Stepanakert and Yerevan, but once again Moscow rejected the demands.

Soviet Union got dissolved in 1991 and Armenia gained independence along with Azerbaijan. Taking advantage of the lack of certainty surrounding the dissolution of the USSR, the people of Nagorno-Karabakh declared themselves as an independent state- the 'Republic Of Artsakh'. Azerbaijan naturally was agitated by this and started militarizing the zone to calm down the situation and re-assert their dominance in the region but simply succeeded in further agitating the locals. Tensions escalated on both sides and finally erupted in a full-scale fighting between Azeri forces on one side and Nagorno-Karabakh forces backed by Armenia on the other. This war continued for almost two years with heavy casualties on both sides. It finally ended in 1994 with a Russian brokered ceasefire leading to diplomatic mediation.

Since the ceasefire brokered by Russia, peace was maintained in the area for two decades with the exceptions of a few minor clashes. In 2016, there was a major skirmish along the border which re-ignited the series of ceasefire violations and tensions arose in the area once again. It all erupted on 27th Sept, 2020 when high intensity clashes began along the LoC between Artsakh and Azerbaijan. On that day itself, Armenia and Artsakh immediately announced martial law and total mobilization of the armies while Azerbaijan announced martial law and a curfew. Once again Russia had to intervene and a new peace agreement was signed on 9th Nov, 2020 to end the hostilities. In this agreement, all the parties have agreed to the deployment of a unit of 2000 Russian soldiers for a period of at least five years.

Till date, none of the member states of the United Nations recognize the sovereignty of the Republic of Artsakh and it is still considered within the international borders of Azerbaijan, and therefore, a break-away state. The manner of the end of this decades of unresolved conflict is yet uncertain but considering the past one thing's for certain that no amount of mediation can guarantee an absolute solution until and unless the concerned parties consciously reach an amicable solution.

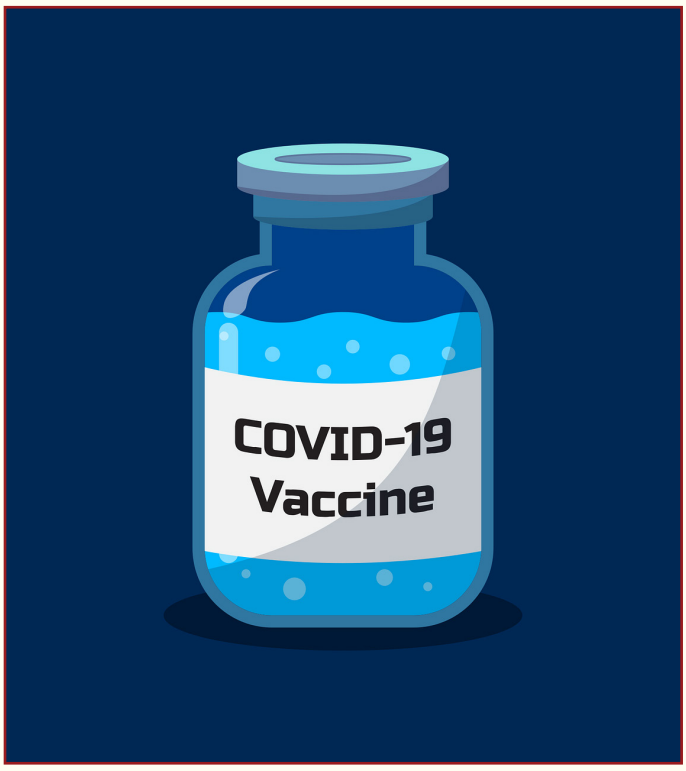
A Race to Cure Or the Struggle for Perfection?

Karthik Panicker

Nearly a year after the first case of the Coronavirus in Wuhan city, China, the world is at a standstill, having been caught off guard by the once in a century kind of pandemic. The high counts of mortality and the crumbling state of the economies seem to be the sole concerns for all the countries at the moment. Adding to their fears is the fact that it took almost 20 years to prepare a vaccine for an equally dangerous Spanish flu almost a century ago. But considering the advancements in the field of Medicine ever since, it is safe to say that learning from past experiences is a glimmer of hope in the race to manufacture a vaccine as soon as possible.

Apart from the individual attempts at research and production of COVID-19 vaccines by the countries, concerted efforts are being taken by the global community to participate in COVAX, a worldwide initiative aimed at working with manufacturers to provide all countries with equitable access to safe and effective vaccines, once they are licensed and approved. COVAX currently has the world's largest COVID-19 vaccine portfolio – including nine candidate vaccines, with further nine under evaluation. It is also the only global initiative that is working with governments and manufacturers to ensure COVID-19 vaccines are available worldwide to both higher income as well as the lower income countries.

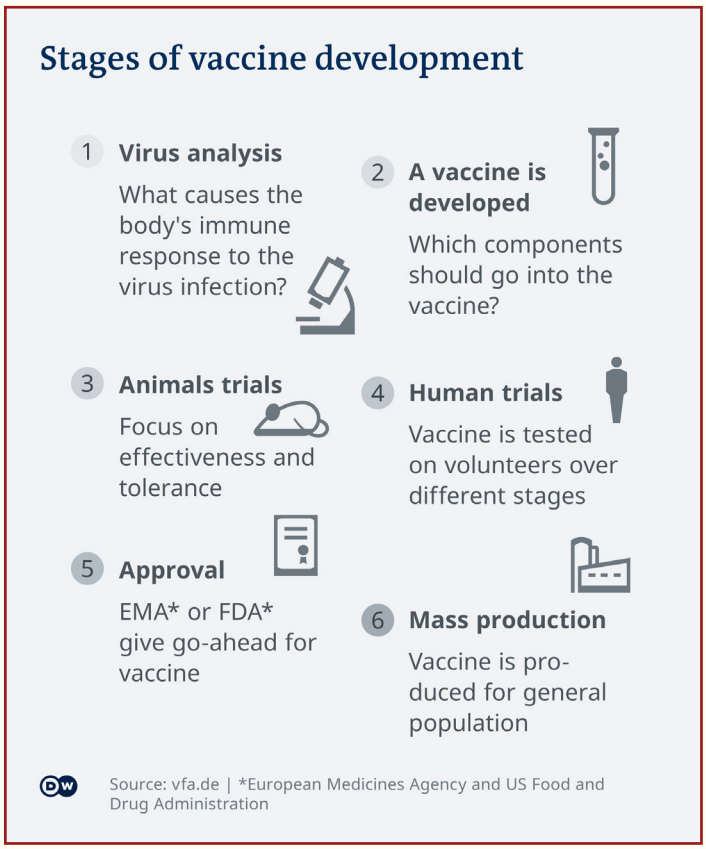
Meanwhile, The United States of America decided that although it would continue to engage with its international partners to ensure the defeat of the virus, it would not be constrained by multilateral organisations in their efforts and therefore decided to forgo being the part of the COVAX initiative. As an alternative, Operation Warp Speed was set up by the U.S. government to facilitate and accelerate the research, manufacturing and the distribution of vaccines in the U.S., with billions of dollars allocated by Congress for the same. The operation was considered by many as a risky bet, as the funds had been allocated to the production of six promising COVID vaccines in large quantities before the clinical trials were even finished. But the gamble seems to have paid off, as Pfizer Inc. and BioNTech



SE recently announced that, after conducting the final efficacy analysis in their ongoing Stage 3 study, their mRNA-based COVID-19 vaccine candidate, BNT162b2 met all of the study's efficacy points with data indicating up to 95% success rate in participants without prior SARS-COV-2 infection. Extensive review of data from the final analysis which consisted of a randomized subset of 8000 participants in phase 2 and 3 showed that the vaccine was well tolerated. Although there were some Grade 3 adverse effects observed among the test subjects like fatigue and headache after the second dose of vaccinations with around 3% frequency of occurrence.

Although this breakthrough seems to be an extraordinary feat by the medical manufacturing giants, the accelerated speed of development has public health experts concerned that the vaccines might be approved with incomplete data and analysis as seems to be the trend elsewhere. For example, in China, CanSino Biologic's experimental vaccines had been approved for the country's military before Phase 3 trials had finished along with instances of global regulators loosening animal test requirements for some Phase 1 COVID-19 vaccines. Medical experts including Byram Bridle, a viral immunologist at the University of Guelph in Canada, suggested that one potential adverse effect of the vaccination is Antibody-dependent enhancement (ADE), a type of immune reaction where vaccination makes subsequent exposure to the virus more dangerous. According to Bridle, the extent of ADE cannot be pinpointed but he suggested that the U.S. National Institute of Allergy and Infectious Diseases (NIAID) Vaccine Research Centre, which is currently collaborating on Moderna's vaccine, has significantly downplayed the possibility of ADE in the COVID-19 vaccine.

A flawless vaccine, one suggesting swift action while also considering the least long-term adverse effects, would in general take years to be developed. But as the saying goes- 'Time is of the essence'.



COVID-19 Vaccine Stats

Vaccine Phase Development Stages

Pre - clinical

Vaccine candidates undergoe screening and evaluation. This phase is performed on animals.

Phase I

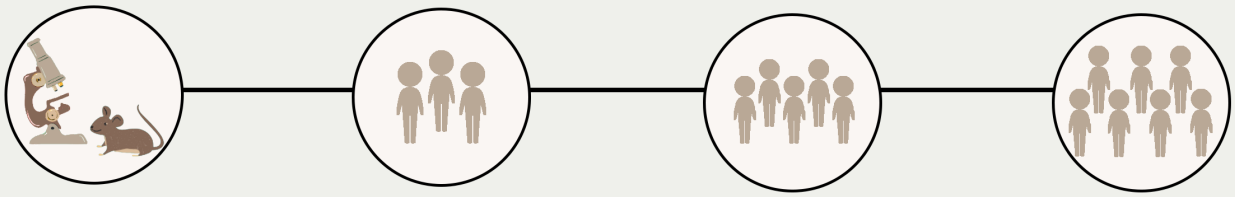
Vaccine is given to a small number of volunteers to confirm generation of immune response and determine right dosage.

Phase II

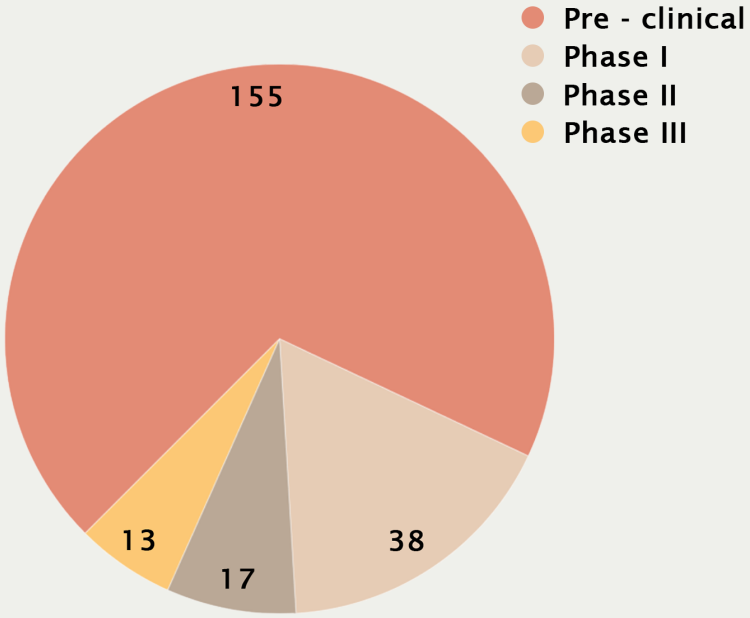
Vaccine is then given to several hundred volunteers to assess and evaluate various age groups and different formulations.

Phase III

Vaccine is given to thousands of volunteers to multiple countries and within a country to assure vaccine applies to different populations



Vaccine candidates in various development phases



Vaccines in phase III

01. The University of Oxford; AstraZeneca; IQVIA; Serum Institute of India
02. Pfizer, BioNTech
03. Moderna
04. CanSino Biologics
05. Sinovac
06. Bharat Biotech
07. Johnson & Johnson
08. Wuhan Institute of Biological Products
09. Novavax
10. Gamaleya Research Institute
11. University of Melbourne and Murdoch Children's Research Institute Radboud University Medical Center
12. Inovio Pharmaceuticals
13. Medicago; GSK; Dynavax

NORTH AMERICA

- Canadian scientists develop healthier ,cheaper, and eco-friendly substitute for palm oil to tackle large scale deforestation of biodiverse tropical rainforests for oil palm plantations.

- US is 'rounding the corner into a calamity,' expert says, with Covid-19 deaths projected to double soon.

SOUTH AMERICA

- The rescue of 39 enslaved people from an illegal gold mine run by known offender in Brazil highlights difficulty in ending modern-day slavery in a country with around 370,000 people exploited till date as per the Global Slavery Index.

- Congress building in Guatemala city set ablaze by hundreds of anti-government protesters following approval of a budget overlooking socio-economic impact of the pandemic with major cuts to education and health expenditure.

EUROPE

- Germany introduces mandatory boardroom quota for women working as senior management in the country's listed companies, drawing criticism from large companies for unjustified interference in private enterprise.

- Following the rise in tourism as borders reopen, new strain of coronavirus now dominant in several hard-hit European countries after emerging in northern Spain.

AFRICA

- A network of 13 African countries join forces with global researchers to launch the largest clinical trial, the Anticov study, of potential Covid-19 treatments in the continent.

- Ethiopia's Prime Minister launches a "final offensive" on the capital of the restive Tigray region after his 72-hour ultimatum for dissident local leaders, Tigray People's Liberation Front (TPLF), to surrender expires.

ASIA

- Indian state of Goa sees continued protests against infrastructure projects threatening the state's protected wildlife reserve belonging to a region recognized by UNESCO as one of the world's eight 'hottest hotspots' of biological diversity.

- Fearing exploitation, thousands of Indian farmers continue to march towards the National Capital in protest of recent agricultural legislation.

AUSTRALIA

- Priyanca Radhakrishnan becomes New Zealand's first ever Indian-origin minister, joining PM Ardern's newly appointed Cabinet known for its diversity.

- New Caledonia votes 'no' to independence from France in the recent referendum.