



# PLUTUS ACADEMY

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## Current Affairs

[6th January 2021]

### Content:

1. South Korea & Iran Relations
2. Status of Avian Influenza in India
3. India Argentina Pact on Lithium Exploration
4. Periodic Labour Force survey Report ( PLFS)
5. End of Qatar crisis
6. ISRO to develop Green fuel

# Topic-1: South Korea & Iran Relations

## Context:

- Recently, Iran's Revolutionary Guard Corps have seized an oil tanker that was passing through the Persian Gulf and detained its crew members.

## **Relations between South Korea and Iran:**

- South Korea is a strong ally of the United States of America.
- The United States and Iran have very straining diplomatic relations because of Iran's nuclear enrichment program. So, the US has put economic sanctions on Iran.



- Under US pressure, South Korea has blocked Iranian funds that were lying with the banks of South Korea.

## **What does the recent step mean?**

- The recent step of Iran is being viewed as a retaliatory step by Iran against South Korea to put pressure on the latter for releasing the frozen funds.

## **What was the US sanction on Iran?**

- The United States has put sanctions on Iran because the US is of the view that Iran has been constantly doing nuclear enrichment that can be used as a nuclear weapon.

## **What is the Nuclear deal?**

- The Nuclear deal is known as the **Joint Comprehensive Plan of Action**. It was signed between Iran and a group of major powers in 2015.
- The major powers include P5 + Germany and the European Union.
- The P5 comprises the United States, the United Kingdom, Russia,

France, and China. They are the permanent members of the United Nations Security Council.

### Purpose:

- The main purpose of the deal was to put pressure on Iran for nuclear non proliferation.

### Why were sanctions re-imposed on Iran?

- The United States re-imposed sanctions on Iran in 2018 after it withdrew from the 2015 nuclear deal. Under that deal, Iran had agreed to curb its nuclear work in exchange for the lifting of sanctions.

### How Iran responded to the sanctions?

- Iran has retaliated by bypassing the restrictions of the deal step-by-step. In a move that could complicate efforts by US President-elect Joe Biden to rejoin the deal, Iran recently said that **it had resumed 20% uranium enrichment** at its underground Fordow nuclear facility.

## Topic-2: Status of Avian Influenza in India

### What is Avian Influenza?

- Avian influenza is a disease that is caused by infection with **avian (bird) influenza (flu) Type A viruses**.
- These viruses occur naturally among wild aquatic birds worldwide and can infect domestic poultry and other bird and animal species.

**Influenza Type A Viruses**

**Subtypes**

- Hemagglutinin (HA)
- Neuraminidase (NA)

(Viruses are divided into subtypes on the basis of two proteins on the surface of the virus)

- 18 known HA subtypes
- 11 known NA subtypes

**Different combinations of HA and NA proteins are possible**

- An H7N2 virus designates an influenza A virus subtype that has an HA7 protein and an NA2 protein
- H5N1 virus has an HA5 protein and an NA1 protein

All known subtypes of Influenza A viruses can infect birds, except subtypes H17N10 and H18N11, which have only been found in bats

**Influenza A H5**

- There are nine known subtypes of H5 viruses
- H5N1, H5N2, H5N3, H5N4, H5N5, H5N6, H5N7, H5N8, H5N9

- Avian flu viruses **do not normally infect humans**. However, sporadic human infections with avian flu viruses have occurred.

### **Background:**

- Avian Influenza (AI) viruses have been circulating worldwide for centuries with **four known major outbreaks recorded in the last century**. India notified the first outbreak of avian influenza in 2006.

### **Does it infect humans?**

- **Infection in humans is not yet reported in India** though the disease is **zoonotic**. There is no direct evidence that AI viruses can be transmitted to humans via the consumption of contaminated poultry products.

### **How does this disease spread in India?**

- In India, the disease **spreads mainly by migratory birds** coming into India during winter months i.e. from September – October to February – March. The secondary spread by human handling (through fomites) cannot be ruled out.

### **What steps has the Government of India taken?**

- In view of a threat of global outbreak of AI, **the Department of Animal Husbandry and Dairying (DAHD), Government of India** had prepared an action plan in 2005 which was revised in 2006, 2012, 2015 and 2021 for guidance of State Government for prevention, control and containment of **Avian Influenza in the Country**.

## Present outbreak:

- Avian Influenza has been reported from the following States (at 12 epicentres) –
  - **Rajasthan** (crow) – Baran, Kota, Jhalawar
  - **Madhya Pradesh** (crow) – Mandsaur, Indore, Malwa
  - **Himachal Pradesh** (migratory birds) - Kangra
  - **Kerala** (poultry-duck) - Kottayam, Alappuzha (4 epicentres)

## How do we control Avian Influenza?

- We can implement management practices that **incorporate bio security principles, personal hygiene, and cleaning and disinfection protocols**, as well as cooking and processing standards, are effective means of controlling the spread of the AI viruses.

## Suggestions:

- As per the **Action Plan on Influenza**, various measures have been suggested to the states where avian influenza outbreak has happened. These measures include -
  - strengthening the biosecurity of poultry farms,
  - disinfection of affected areas,
  - proper disposal of dead birds/carcasses,
  - timely collection and submission of samples for confirmation and further surveillance,
  - intensification of surveillance plan as well as the general guidelines for prevention of disease spread from affected birds to poultry and humans.
  - Coordination with the forest department for reporting any unusual mortality of birds was also suggested to the States.

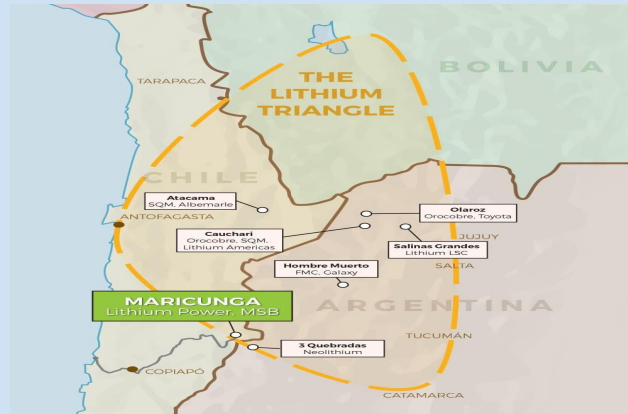
# Topic-3: India Argentina Pact on Lithium Exploration

## Context:

- India and Argentina have signed a pact in order to jointly prospect the Lithium from the Lithium reserves found in the lithium triangle.

### **Lithium Triangle:**

- It is the region in the Andes which is highly rich in lithium.
- It encompasses borders of Argentina, Bolivia and Chile



## About the pact:

- The pact is signed between a Publicly owned company of India i.e Khanij Bidesh India Ltd ( KABIL) which is made by three companies of India i.e NALCO and Hindustan copper and mineral ltd. and Jujuy Energía y minería Sociedad del Estado of Argentina (JEMESE).

### **Jujuy-**

- This area of argentina is the big source of Lithium



## Objective of KABIL:

- To acquire strategic minerals such as Lithium and Cobalt which is important for development, security and sovereignty of India

## Mandate of the pact

- To explore and extract products including lithium and polymetallic minerals.
- To work in the projects which are related to the value addition of lithium carbonate and production- transmission of electricity.

### Lithium:

- This is the first alkali matter in the periodic table
- It is the lightest solid metal which is silvery white in colour
- It is a reactive metal
- The melting point of Lithium is very low
- It is insoluble in hydrocarbon
- It has a high specific heat and very low density

### Highest Lithium reserve countries-

Chile> Australia> Argentina

## Significance for India

- India is one of the largest importers of Lithium from China, Therefore scholars view this pact as an economic offensive step against China.
- Lithium is the most important metal used in solar panels and India has ambitious projects of International solar alliance so the pact becomes crucial.

- India is moving towards digitalisation at a very fast pace. Lithium is one of the important sources of the rechargeable batteries of mobiles, laptops and other electronic vehicles.
- Lithium is a crucial part of space exploration. ISRO is working at a high pace in it so the pact is very beneficial for it.

## **Topic-4: Periodic Labour Force survey Report ( PLFS)**

### **Context:**

- According to the data given by the quarterly PLFS report which is released by the Ministry of statistics and programme implementation (MoSPI) has shown that the urban unemployment rate is increasing day by day.

### **Highlights of the report:**

- In the quarterly report of PLFS in jan 2020- march 2020 has shown that the unemployment rate is 9.1% from 7.9% in october 2019 to december 2019
- Urban unemployment rate in the age group of 15- 29 yrs was 21% in january 2020 to march 2020 from october 2019 to december 2019
- The quarterly report of PLFS in 2019 has stated that urban unemployment was at the 47yrs old high, this kind of unemployment has never witnessed earlier, scholars argued that by comparing the present data with the previous one, this become an alarming condition



## Reasons-

- In the first quarter of the economy i.e April to June 2020, the GDP was at its 6 yrs low that is why it has created problems in the economy and results in economic slowdown.
- Banking sector in these years has shown that they are highly loaded with NPAs.

**What is Non Performing Assets (NPA):** It is known as the loans which is overdue for a period of 90 days

- Our education system is not providing skill oriented knowledge to the students therefore it has been seen that companies are very least interested in hiring them.
- After demonitisation digitalisation is taking place in each of every sector very fast but each section of society is not able to match the pace with it.
- Population rate is increasing in the country but jobs can be created in that proportion by the government
- COVID pandemic has also impacted job creation in a very negative way.

## Initiatives of the Government

- **Pradhan Mantri Mudra yojna-** It has been initiated to provide collateral free loan to MSMEs and individuals to help them to expand and enhance their operation network
- **Pradhan Mantri Rojgar Protsahan Yojana-** It has been initiated by Ministry of Labour and employment for incentivising employer in employment creation
- **Pradhan Mantri Kaushal Vikas Yojna-** It has the objective to develop the skill and give training to one crore people

- **National Urban Livelihood Mission-** It has been initiated by Ministry of Housing and Urban Affairs to give skill and education to poor and vulnerable sections of society
- **Atma Nirbhar Bharat Yojna-** India's economy has five pillars i.e Vibrant Demography, Infrastructure, system, demand and Technology which need to be boosted to make India Vocal for its local products.

### **Challenges-**

- COVID pandemic which in itself is the biggest challenge is creating challenges for the economy as well.
- Banks are highly loaded with Non Performing Assets.
- These days the country is witnessing a falling credit rating by various agencies.
- Due to the COVID pandemic and USA- China trade war , countries are taking protectionism measures.

#### **Trade war-**

It is a situation when one country retaliate against other country by imposing tariffs , quota or taking other protectionist measures to slow down their economy

### **Way forward-**

- Government needs to provide quality education and employable education to the students.
- At the level of society also some reforms are needed such as society needs to be more acceptable for the people who are working in the private sector or who are working in their own Businesses etc as they are accepting the people working in the public sector or government sector.

- Employers need to incentivise so that they create jobs at a very fast pace.

## Topic-5: End of Qatar crisis

### Context:

- Saudi Arabia and Qatar have decided to sign a US brokered deal to reopen the airspace, land and the sea border for Qatar and restore the situation pre 2017.

### About the Crisis:

- It started in June 2017.
- Saudi Arabia, UAE, Bahrain and Egypt had decided to cut diplomatic relations with Qatar, they even suspended trade relations and imposed a land, sea, and air blockade.
- Many other countries downgraded their relations with Qatar.
- Millions of Dollars have been spent by Qatar Airlines, as the shorter routes were blocked.
- There were even speculations that Qatar may face shortage of food and other basic essentials.
- But Qatar stood strong and faced everything for around 3 years and 6 months.



### Why did this happen?

- Qatar's foreign policies were hurting Saudi Arabia's interest and Qatar's good relations with Iran was not appreciated by the Gulf countries.
- Al Jazeera, the state newspaper of Qatar used to criticize Saudi Arabia and other Gulf countries.
- When Qatar's relationship became very strong with Iran, Qatar was alleged of supporting terrorism and Muslim brotherhood.
- Qatar was alleged of violating a 2014 agreement with the Gulf Cooperation Council.

### **Why did Qatar have good relations with Iran?**

- The reason is South Pars/ North Dome Gas- Condensate field, it is the world's largest Natural gas field.
- Ownership of the field is shared between Qatar and Iran.

### **Some significant points:**

- During this time period Iran and Turkey came forward to help Qatar.
- This deal will hurt Iran's economic interests as exports to Qatar was boosting Iran's economy.

### Gulf Cooperation Council

- The **Gulf Cooperation Council** is a regional intergovernmental political and economic union. It comprises the members of Arabian peninsula, except Yemen.
- It has 6 members
  - Bahrain
  - Kuwait
  - Oman
  - Qatar
  - Saudi Arabia.
  - The United Arab Emirates.
- It is now known as the **Cooperation Council for the Arab States of the Gulf**.
- It was established in **1981**.



## Topic-6: ISRO to develop Green fuel

### Context:

- ISRO has announced that it is going to develop green fuel for future space missions and satellite launches along with that electrical propulsion systems is also to be developed.

### About ISRO:

- The **Indian Space Research Organisation** is the national space agency of India.
- Its headquarters are in **Bengaluru**.
- It comes under the Department of Space which is directly overseen by the Prime Minister of India.
- It was founded on **15 August 1969**.



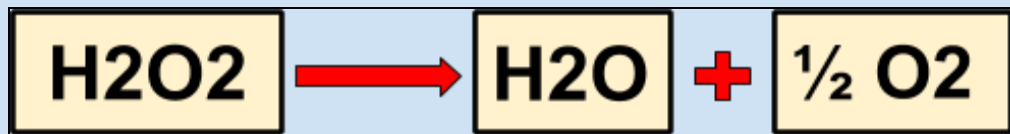
### Recent development:

- ISRO has decided to replace its existing hazardous fuel with non hazardous, storable liquid and environment friendly green fuel.

- **Hydrazine(N<sub>2</sub>H<sub>4</sub>)**, which is used commonly, is a highly toxic and unstable substance. It is not only risky when inside the rocket, but is toxic and carcinogenic for the people working on it on the ground.
- For the first time, this green fuel is to be used in the Gaganyaan Mission.
- ISRO is planning to replace chemical fuel with lightweight electric propulsions. Fuels constitute nearly 50% of the satellite weight.
- Electric propulsion system is around 200 to 300 kilograms lighter.

**Alternative fuels proposed by ISRO:**

- **Hydrogen Peroxide** is being perceived as a green alternative by the ISRO, as when Hydrogen Peroxide reacts it does not



produce any hazardous substances.

- Hydrogen Peroxide is to be used as monopropellant and bipropellant(along with ethanol). It is cheap and highly dense, which makes it economically viable.
- **LOX/ Methane-** Liquid Oxygen as oxidizer and methane as fuel. It has advantages in specific impulse, storability, low toxicity and low cost.
- **ISROSENE-** It is a rocket grade version of kerosene.

**Advantages:**

- The green fuel will be cheaper, non toxic, easy to store and environment friendly.
- The electrical propulsion will be of light weight and therefore the weight of the satellites can be increased.