# Prelim Bits 30-11-2021 | UPSC Daily Current Affairs

## Sumi Nagas

*The wisdom of Sumi Nagas to use the ecological indicators to facilitate agricultural practices and predict seasonal variation is vanishing with time.*

- Sümi tribe are the major ethnic group among Nagas, who are **Indo-Mongoloid** tribal groups, in Nagaland, India.
- Sümi Nagas practiced Aki Kiti (a semi-contact combat sport), and headhunting like other Nagas before their conversion to Christianity.
- Sumis have two different clan heads, Swu (Sumi) and Tuku (Tukumi).
- **Festivals** - Their grandest festival, Tuluni, is marked with feasts as the occasion occurs in the bountiful season of the year.
- Ahuna is a traditional post-harvest festival of the Sumis.
- Sumi Nagas is **primarily agrarian** and depends on forests for both food and livelihood. So several of the indicators facilitate agricultural practices and predict seasonal variation.
    - For instance, fruiting of mulberry (Morus) trees indicates spring and their harvest means summer is here.
    - Then, to predict winter, the Sumi tribe uses a universal indicator - migrating birds.
- Sümi is one of the **recognised scheduled tribes** of India.

**Reference**


1. https://www.downtoearth.org.in/blog/agriculture/how-sumi-nagas-traditional-knowledge-helps-them-navigate-nature-s-vagaries-80413
2. https://ipr.nagaland.gov.in/sumi


## Rheumatic Heart Disease

*A new study has found that penicillin can prevent latent Rheumatic Heart Disease from progressing in children and adolescents.*

- Rheumatic Heart Disease (RHD) is the most commonly acquired heart disease in people under age 25, caused by rheumatic fever.
- [Rheumatic fever is an autoimmune inflammatory reaction to throat infection with group A streptococci.
- It arises from poorly treated, repeat infections of streptococcus bacteria.]
- It most commonly occurs in childhood, and can lead to death or life-long disability.
- **Risk groups** - Rheumatic fever mostly affects children and adolescents in low- and middle-income countries.
- People who live in overcrowded and poor conditions are at greatest risk of developing the disease.
- **Treatment** - There is no cure for RHD and the damage to the heart valves is permanent.
- Patients with severe RHD will often require surgery to replace or repair the damages valve or valves.

- Depending on the severity of disease, medications that thin the blood to reduce the risk of blood clots may also be needed.
- **Prevention** - Since RHD results from rheumatic fever, treatment of strep throat with appropriate antibiotics will prevent rheumatic fever.

Worldwide, around 40.5 million people, mostly people under the age of 25, suffer from the disease and 306,000 people die of it every year.

**Reference**


1. https://www.downtoearth.org.in/news/health/penicillin-can-prevent-latent-rheumatic-heart-disease-from-progressing-in-children-study-80225
2. https://www.who.int/news-room/fact-sheets/detail/rheumatic-heart-disease


# Impact of Global Warming on Crop Cultivation

*A new study has found that the continuation of the current trends of global warming could impact the wheat cultivation positively, but the maize cultivation negatively.*

- If global warming trends continue, there will be higher levels of carbon dioxide in the atmosphere.
- This could expand the cultivation of wheat to higher latitudes by 2030, increasing its global yield.
- However, the nutritional value of such wheat would be reduced.
- Also, the increase in global wheat yield could level off by 2050.
- While wheat yield would increase 17% by 2030, global maize (or corn) yield would decline 24%.
- Maize is grown all over the world and large quantities are produced in countries near the equator (North and Central America, west Africa, central Asia, Brazil and China).
- So, farmers need to adapt much faster by changing the planting dates and using different crop varieties to avoid severe losses.

**Reference**


https://www.downtoearth.org.in/news/climate-change/wheat-could-expand-to-higher-latitudes-if-warming-trends-continue-study-80020


# Negative Real Interest Rate

*As the RBI in its latest Monetary Policy Review has projected retail inflation to be at 5.3% for 2021-22, the investors may need to worry about earning negative real rates.*

- **Real rate** of return on an investment is its actual rate of return minus the prevailing inflation rate.
- While real interest rates can be effectively negative if inflation exceeds the nominal interest rate.
- Unless the return on investments beat inflation, it isn't logical to postpone your consumption or to save for the future.
- The real rate would be even worse, if taxes on interest income are considered.
- By understanding the concept of negative real interest, one may make their purchase decision.

- Even safe investments can erode your capital if they offer negative real returns.
- **Government intervention** - The central banks around the world increase interest rates when inflation begins to exceed their desired threshold.
- But as economic growth needs a lower interest rate regime to kick-off investments, central banks may decide to keep the rates lower or hike at lower pace going ahead.
- This may lead to continuation of lower real interest rate scenario in the short to medium term.

As interest rates in India are now at a record low, this makes negative real returns a significant risk to your investments.

**Reference**


1. https://www.thehindubusinessline.com/opinion/columns/slate/all-you-wanted-to-know-about/article3705816ece
2. https://www.investopedia.com/terms/n/negative-interest-rate.asp


# Employee Stock Option Plan

*With the Zomato IPO paving the way for other Indian ventures to consider listing, it's been raining Employee Stock Option Plans in the start-up world.*

- Employee Stock Option Plan (ESOP) gives employees the right to buy shares of their company at a future date at a pre-decided price.
- Companies grant ESOPs to their employees as part of their compensation package.
    - As ESOPs are part of a person's compensation, these are taxed, when they exercise the option to buy and when they make capital gains on selling them.
- While ESOPs have traditionally been granted to senior employees, many firms, mainly start-ups, are extending them beyond the top echelons.
- ESOPs come with an exercise price and a vesting and exercise period.
    - Vesting period is the waiting period for a person before they get the right to buy shares.
    - Exercise period is the period during which one can buy the ESOPs at any time at the exercise price.
- Some companies also grant ESOPs where the vesting period is staggered. An ESOP may be staggered over three years.
    - That is, you can exercise 20, 35 and 45% of your ESOPs at the end of each year from the date of their grant.
- Once you have exercised the option, you can sell your shares any time or after the lock-in period specified by the company is over.
- **Importance -** ESOPs give employees a sense of ownership in a company and to work keeping in mind the interests of the company's shareholders.
- ESOPs help businesses, particularly cash-strapped start-ups, attract and retain talented people.
- A significant proportion of the salary at many start-ups may come in the form of ESOPs.
- While this may imply lower cash in hand for the employees, the potential for windfall gains on sale of these shares at some point in the future makes employees value them.
- ESOPs can bring windfall gains not only for employees but also for the taxman, as the option buyer pays tax on it.
- **Flip side** - If the financial performance of the company you're working with turns out to be subpar, your salary and wealth will be put at risk.

**Reference**

https://www.thehindubusinessline.com/opinion/columns/slate/all-you-wanted-to-know-about/article37058161.ece

