

Demand of the question

Phenomenon associated with

El Niño

Should focus upon the movement of ocean currents (warm/cold) in Pacific ocean

Role of Walker cell atmospheric circulation & its direction

Regions of low pressure/high pressure

Corresponding regions that get rainfall (Eastern part of Indonesia/Australia) & dryness in west coast of Chile/Peru etc

Explain the phenomenon of El-Niño and La Nina. How do they affect the weather system in various parts of the world?

I. El Niño

El Niño is a climate pattern that describes the unusual warming of surface waters in the eastern tropical Pacific ocean. Reversal of wind circulation ocean current

It occurs more frequently than La Nina and lasts not more than a year. wetling region - replaced by warm ocean current etc

Impact on Global Weather Pattern.

The warmest waters causes the Pacific jet stream to move south of its neutral position. upward

(Eastern part of Indonesia/Australia) & dryness in west coast of Chile/Peru etc

2<sup>nd</sup> part of 4

Though your approach to explain the phenomenon & its impact is good, but explanation about the weather phenomenon needs

Question No. (प्रश्न संख्या)

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Without explaining the El-nino phenomenon you're missing its impact on other parts of world! Please avoid such a lapse! address the demand

→ With this shift, areas in the northern US and Canada are dryer and warmer than usual.

→ But in the US Gulf coast & southeast these periods are wetter than usual and have increased flooding.

→ El Nino brings rain to south America and brings droughts to Indonesia & Australia.

## II. La Nina

La Nina, the cool phase of ENSO (El Nino Southern Oscillation), is a pattern that describes the unusual cooling of the tropical eastern pacific.

La Nina events last between one and three years.

You could explain the weather phenomenon created during El-nino

Which part of S. America? W. or East? similar? W/E of NA/Australia?

Need to explain with clarity!

Impact on Global Weather Pattern:

- It causes the jet stream to move northward and to weaken (over the eastern pacific), which causes drought in the south America countries of Peru and Ecuador.
- These are increased temperatures in Western Pacific, Indian Ocean and off the Somalian coast.

→ It also leads to heavy floods in Australia.

El Nino phenomenon often leads to dry weather in India, whereas as La Nina phenomenon increases the rainfall in some parts of the country.

Surface / Troposphere  
J/S  
Which

area recd!  
Power change!

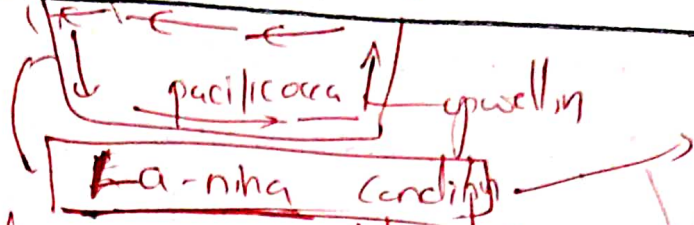
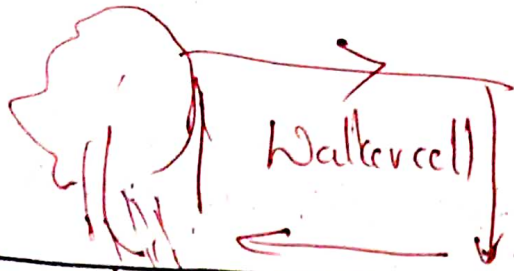
Ind part of the  
Impact of El Niño

El Niño in

from where?  
why?  
explains  
the given statement

please complete your answer

Ok, but why? This is the important demand of Q. 2



El-nino  
reversed

1st part of the dc: - Need elaboration

- & Conceptual clarity  
Clarity of thought

2nd part of Q

- Draw diagram

needs improvement  
please address  
the demand.

Impact across the world

Need to be more organized

Coherence/flow is missing!

Need to arrange points

If possible add diagrams/maps  
of the world

A/A

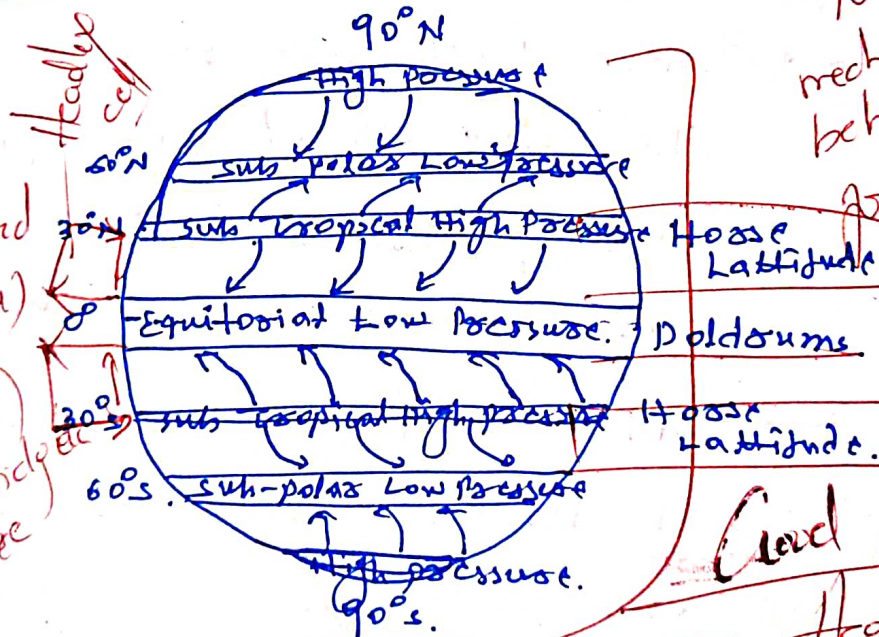
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15

All the best

\* Explain Pressure belts of the world

The earth's pressure belts are several layers of atmospheric pressure zones that encircle the earth, forming high and low air pressure bands.

Pressure Belts of The World.



Need improvements ex. Pressure related relation with the region temperature

E movement of wind which feature associated (cyclonic) with cyclonic anticyclonic (anticyclonic) etc

ok fair simple to the mechanism behind their formation

Tropical Low-Pressure Belts:-

- This belt extends from the equator to 10° N & S. latitudes
- This belt is thermally produced due to heating by the sun.
- As the sun shines almost vertically on the equator throughout the year, it heats the air & the warm air rises over

Hadley cell Ferrel & Polar cell atmospheric circulation

Avoid

Explain the mechanism behind the formation of each cell

1) Thermal origin

2) Dynamic origin

ic: Sub-tropical HP belt, Sub-polar low pressure belt

low pressure belt

Zone of Tropical over cyclonic circulation

Ant-cyclonic circulation

the equatorial region and produces equatorial low pressure.

② Sub-Tropical High Pressure Belts:

→ These belts extend roughly between 25° & 35° latitudes in both Hemispheres.

These belts are formed due to the rising air of the equatorial region, which is deflected towards pole because of the earth's rotation.

After becoming cold & heavy, it descends in these regions and piles up at 30° S latitude.

This results in the formation of a high pressure zone.

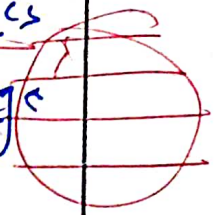
③ Sub-polar Low Pressure Belts:

→ It extends between 55° & 65° latitude in both Hemispheres.

60° N/S

Polar High

→ The winds from the subtropics and the polar regions converge in this belt and rise upward.



Sub-polar High

This gives a formation of a low-pressure belts

① Polar High-Pressure Belts:-

→ Found at 90°N and S latitude

→ Air compresses and density increases due to low temperatures.

→ Hence, high pressure is found at the pole throughout the year

why!

The shifting of pressure

belts causes seasonal changes in the climate, it can be seen in the northern Indian part.

You're rightly given the P. Belts of the world but needs more conceptual clarity in answer generally

Which belts where? Are you talking about

ITCZ

1<sup>st</sup> part - (30%)

\* Explain the seasons for formation of saline soils, mention the areas where they are found in India. what measures can be taken to restore soil fertility.

2<sup>nd</sup> (20%)  
weightage

3<sup>rd</sup> part

(50%) Soil salinity is the presence of saline salts in the soil. Although soil salinity is a natural process, it can also be caused by artificial like irrigation etc.

Excessive accumulation of water soluble salts (NaCl, Ca, Mg, etc)

ok, but why? elaborate +

Don't write outside margin

Reasons for formation of saline soils

I. Natural Causes:-

- Dry climates.
- Low precipitation
- High evaporation

Need elaboration  
You'll be penalized!

II. Human Activities:-

- Unsustainable irrigation
- Deforestation
- Excessive use of fertilizers etc.

region  
Please consider writing outside margin

a simple impact ex: affecting plant development & reduce land degradation with.

Must be



Major cause

Excess preparation  
poor drainage / water logging  
Over-irrigation with salt-rich water

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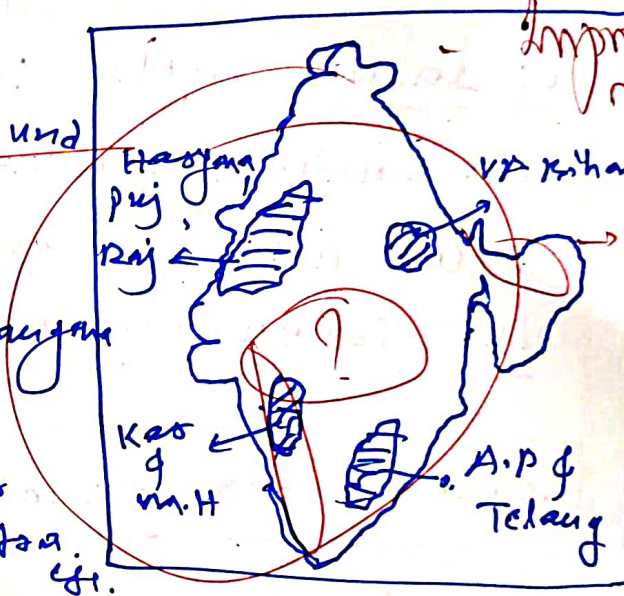
Submergence due to free & followed by Evaporation  
Saturated saline soil on land

Removal of deep-rooted vegetation & raised water table

## Saline soils found in areas of India.

These soils are formed in canal irrigated lands i.e. irrigated lands with a higher subsurface water table.

This type of soil might be found in parts of  
→ Karnataka  
→ Andhra & Telangana  
→ Punjab  
→ UP & Bihar  
→ Maharashtra etc.



## Measures to restore soil fertility

① Phytoremediation:-

Using plants to clean up contaminated soil, these plants will increase nitrogen and other nutrients in the soil.

→ Deep irrigation  
→ Organic matter  
→ Rotation from deep tillage

Use cover crops

→ Increase drainage for better flushing.

Salt tolerant crops

Mandatory of & vegetable is given!!

Conclusion is required!

3+1 up

## ② Chemical Treatment:-

→ Chemicals like gypsum = sulfuric acid can help restore the fertility of the soil.

Need elaboration

## ③ Improve Drainage:-

→ Better drainage can help flush salts from the soil surface. This include lowering the groundwater table, improving irrigation etc.

air cont.

## ③ Leaching:-

→ Use high-quality water with low electrolyte concentrations to dissolve & remove salts from the root zone.

By reducing the soil salination, we can increase the agricultural productivity in India. PM Paramparagat Krishi Yojana helps to improve soil fertility in India.

Detailed feedback given in your paper.

As per NASSCOM, B'lu - 7000 startups.  
India - Leading Startup hub - 20% of India's S

\* Explain the factors contributing to Bengaluru's emergence as the startup capital.

Bengaluru, often referred to as the Silicon Valley of India, has emerged as a major hub for technology & innovation in the country.

2/10

You're to focus upon the core factors

Govt policies for fast track growth.

ex: Karnataka Startup cell & incubation program

funding & mentorship

Factors contributing Bengaluru's emergence as startup-capital

1. Educational Institutions: -

Bengaluru boasts a number of prestigious educational institutions, including Indian Institute of Science (IISc), IIM etc.

2. Infrastructure & Connectivity: -

Like IT parks, modern office spaces, connecting through international airports, etc.

Other factors

Skilled HR Infra Weather/climate etc.

Most important factor needs more focus

ok fair can provide a context

But Q is not about IT/BT

but about new startups

So what factors contributed?

Jawabable Govt initiatives Private companies

initiatives

Udyamprastha

Should've been the 1st part of your answer

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City edge technology industries

3 Government Support:

The Karnataka govt is first in the country to form IT policy which has helped in creating many startups.

most important

Also give a few examples about various such startups

4 Climate:

Bangalore is known for its pleasant climate, quality of life, cosmopolitan litan culture.

deviation from the

5 Global Recognition:

Over the years, Bangalore has gained global recognition as a hub of technology & innovation.

Stick to the specific demand of Q.

The all above factors are contributing Bangalore's emergence as a startup capital in India.

provide suitable examples

Work on your conceptual understanding & Basics

too general & outdated type of content