Re-curving cyclones

Why in news?

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Scientists have revealed that re-curving cyclones play an important role in sensing the movement of cyclones.

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What is the movement of Cyclones in Indian context?

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- The cyclone ones that typically strike the Indian neighbourhood in the northern hemisphere rotate anticlockwise.
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- Their normal behaviour is to derive strength from the moisture in waters such as the Bay of Bengal, move west, incline in a northerly direction and peter out into the sea or land, depending on their origin.
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- Eg. Mora, which formed over the Bay of Bengal on May 26.
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- It rapidly strengthened on May 28, with the India Meteorological Department classifying it as a “depression” and eventually as a cyclonic storm.
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- It kept north, almost parallel to the Myanmar coast and then made landfall in Bangladesh and blew over Nagaland.
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What is Re- curving cyclones?

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- On its way to diminishif cyclone gets a sort of second wind by deflected right or eastwards is known as re-curving cyclones.
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- This is due to air currents in the local atmosphere that push cold air from the poles towards the equator and interfere with cyclone formation.

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- In the southern hemisphere, the cyclones spin clockwise and therefore also re-curve in the opposite direction.
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- During the monsoon months, cyclones in the Western Pacific move westwards towards India and aid the associated rain-bearing systems over the country.
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- However, in the years of a re-curve, they do not give as much of a push to the rain as they do in the good monsoon years.
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What is its relevance with Ockhi cyclone?

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- A challenge with re-curving cyclones is that it is hard for weather models to pick them early on as was the case with Ockhi.
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- August rains in India was dampened, which was 13% short of Cyclone Ockhi.
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- The whirlwind that arose in the Bay of Bengal and revved up over Sri Lanka was expected to pass over Lakshadweep and then ease into the Arabian Sea, far away from India’s west coast.
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- However, the cyclone ended up sharply swerving into parts of Maharashtra and Gujarat.
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- It did not blow in very strongly because there it had not gained as much moisture from the Arabian Sea like it had over the Bay of Bengal and the Indian Ocean boundary.
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- And though it wreaked havoc in Kerala and Tamil Nadu, and destroyed several beaches in Goa when it curved back to the land.
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What are its implications?

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- In general, cyclone activity in India peaks around November, by which time, the summer monsoon has already passed.

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- Rarely do re-curving cyclones pose a mortal threat to Indian coasts and Cyclone Ockhi raised hackles because it had already left a certain amount of damage and threatened Gujarat and Maharashtra.
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- Long-term data suggest that while there has been an increase in the number of tropical cyclones in India’s neighbourhood there is no clear trend in re-curving ones.
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Source: The Hindu

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