

4. IBM's Weather Forecast system to Tap Users' Phones for Data

Prelims Level: Science and Technology- Scientific Exploration

Mains Level: GS-III Indigenization of Technology and Developing New Technology.

Why in News?

- International technology company IBM plans to make a high-resolution weather forecast model that will also rely on user-generated data to improve the accuracy of forecasts available in India.

About IBM-GRAF:

- **IBM Global High-Resolution Atmospheric Forecasting System** (IBM GRAF), as the forecast system is called, can generate forecasts at a resolution of 3 kilometres.
- This is a significantly higher resolution than the 12-kilometre models currently used by the Indian Meteorological Department to generate forecasts .
- These weather forecast techniques rely on dynamic modelling and collect a trove of atmospheric and ocean data, crunch it in supercomputers and generate forecasts over desired time-frames — three days, weekly or fortnightly.
- IBM relies on a global network of sensors — automatic weather station, data buoys and barometric pressure data from cell phones of users who've downloaded the application.
- A combination of observations, computing and equations underlies the forecasts, since forecasting tropical conditions over India is particularly tricky.

Benefits:

- Since the local economy faces huge disruption due to severe weather events and disasters, this forecast model could play a major role in averting such issues.
- The forecasts are considered to be 30% more accurate than those generated by 12-km resolution models.
- Weather forecasts will be available to individuals for free download and can be used by farmers.
- The forecast engine will also be used to provide custom forecasts for energy companies, consumer brands, insurance businesses and satellite imagery analysts.