Skyglow- Light pollution

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In news- Increasing urbanisation and the installation of new streetlights, security floodlights and outdoor ornamental lighting have all contributed to sky glow, a type of light pollution.

What is Skyglow?

- Skyglow is an omnipresent sheet of light across the night sky in and around cities that can block all but the very brightest stars from view.
- It is a commonly noticed aspect of light pollution.

The natural component of sky glow has five sources:

- Sunlight reflected off the moon and earth.
- Faint air glows in the upper atmosphere (a permanent, low-grade aurora).
- Sunlight reflected off interplanetary dust (zodiacal light).
- Starlight scattered in the atmosphere and background light from faint.
- Unresolved stars and nebulae (celestial objects or diffuse masses of interstellar dust and gas that appear as hazy smudges of light).

Human-made sources:

- Electric lighting
- Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, producing a luminous background

Impact of Skyglow and Night pollution on ecosystem-

- Recent study findings confirm that **beetles exposed to**

light pollution both directly through the glare of bright artificial lights and indirectly via skyglow, **abandoned their sky compass and rely instead on earthbound artificial lights** as beacons.

- Like beetles, other species that can rely on other compass references also suffer from the loss of the stars due to skyglow.
- **Nocturnal ants** use landmarks for outbound journeys, but need their sky compass when returning home.
- **Migratory birds** have a magnetic compass, with which they check latitude and magnetic North, but use their sky compass to calibrate their magnetic compass to geographic North.
- In the worst case, animals that need the stars to find their home or breeding site may never make it.
- **Starless skies may cause them to gradually deviate off course**, wasting energy and risking predator encounters.