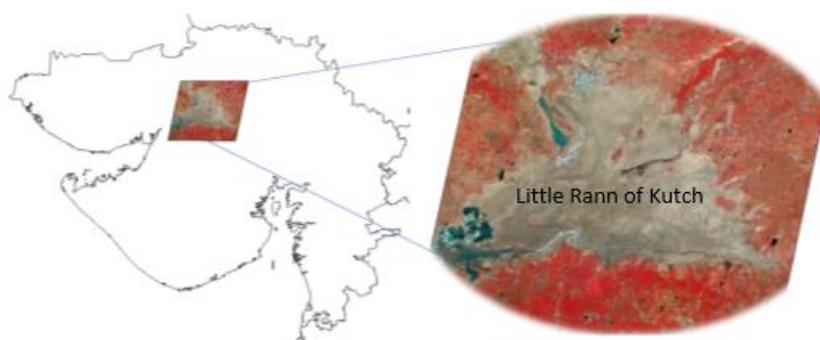


Assessment of Encroachment Using Satellite Data in Wild Ass Sanctuary, Little Rann of Kutch, Gujarat

National Green Tribunal (NGT), Principal Bench, New Delhi has taken suo moto cognizance of news clip published in Times of India on 31-01-2023 alleging encroachment inside Wild Ass Sanctuary at Little Rann of Kutch (LRK). Space Applications Centre is one of the members of joint committee, constituted by NGT.

Indian Wild Ass Sanctuary (IWAS) is protected under Wildlife protection act 1972. Wild Ass Sanctuary is located in Little Rann of Kutch, Gujarat having an area about 3900 sq km. Further in 1986, the Central Government hereby notifies an area with an extent from zero to 1.2 km around the boundary of the Wild Ass Sanctuary in the State of Gujarat as Wild Ass Sanctuary Eco-sensitive Zone. Sanctuary is famous for Wild Ass (locally known as Ghudkhar). This is only the place in the world, where wild ass are exists. It is necessary to conserve and protect the area of Wild Ass Sanctuary, as eco-sensitive zone from ecological, environmental and biodiversity point of view and to regulate or prohibit industries or class of industries and their operations and processes in the said eco-sensitive zone.



This is a preliminary report prepared by SAC for further discussion and planning course of action by the committee appointed by NGT.

It is observed that there is significant increase in salt pan activities inside the LRK. This is threat to wild ass habitat, migratory birds breeding ground and overall ecosystems. Using satellite data, quantification of salt pan activities over a period of time with ecological effect can be studied in details as required.

Remote sensing and GIS techniques are very useful to identify and delineate salt pan areas and their temporal growth. Indian Remote Sensing Satellite data (IRS-LISS4) having resolution 5m is excellent to delineate existing salt pans and assessment of encroachment due to increase in number of salt pans and its area of extent. This is useful to identify illegal encroachment areas inside the wild ass sanctuary, LRK.

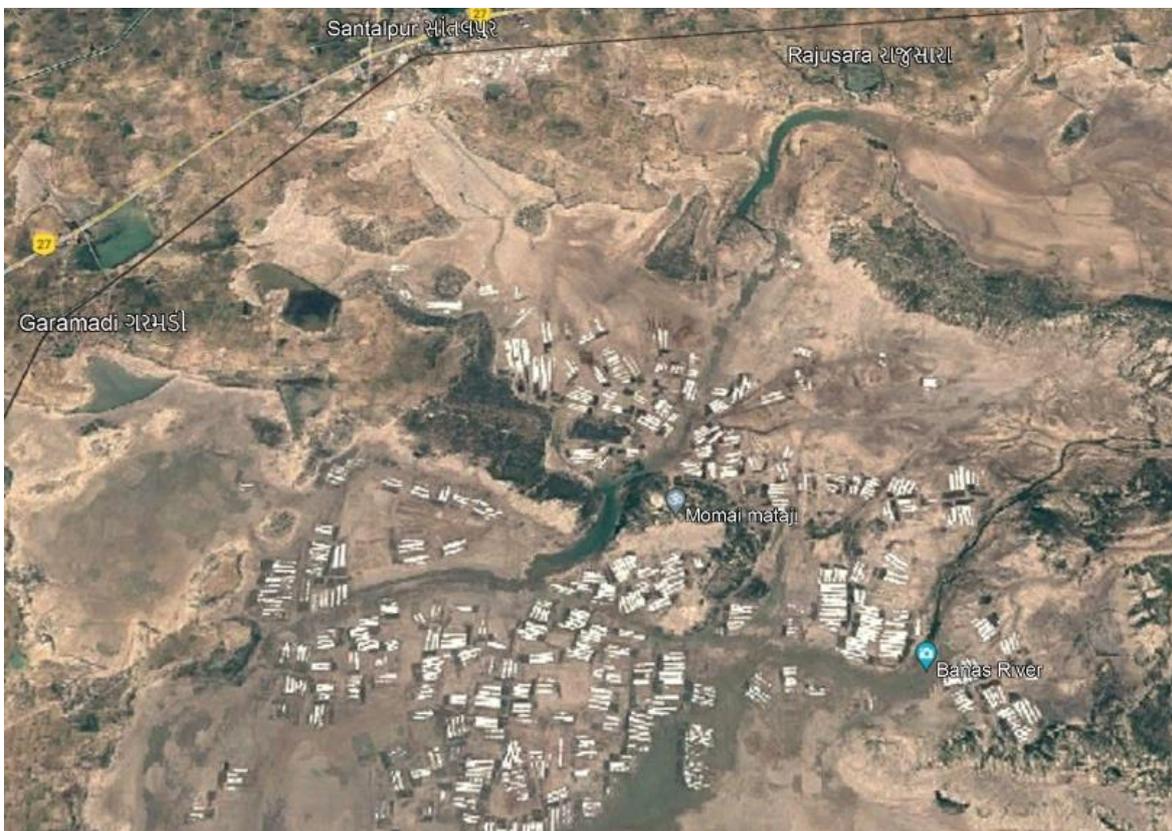
Unchecked salt pan activities in LRK will result in ecological imbalance. It is observed from satellite data that, increase in salt pans, intertidal flow obstruction, river flow blockage, and chemical plant activity may lead towards ecological deterioration. Following images captured from google earth for two-time frames (1985 and 2022) indicates impact of salt pan activities in LRK.

4

1. **Significant increase in Salt pans:** Salt pan activities increased many folds as shown in the following images of 1985 and 2022 of Little Rann of Kutch near Satalpur.

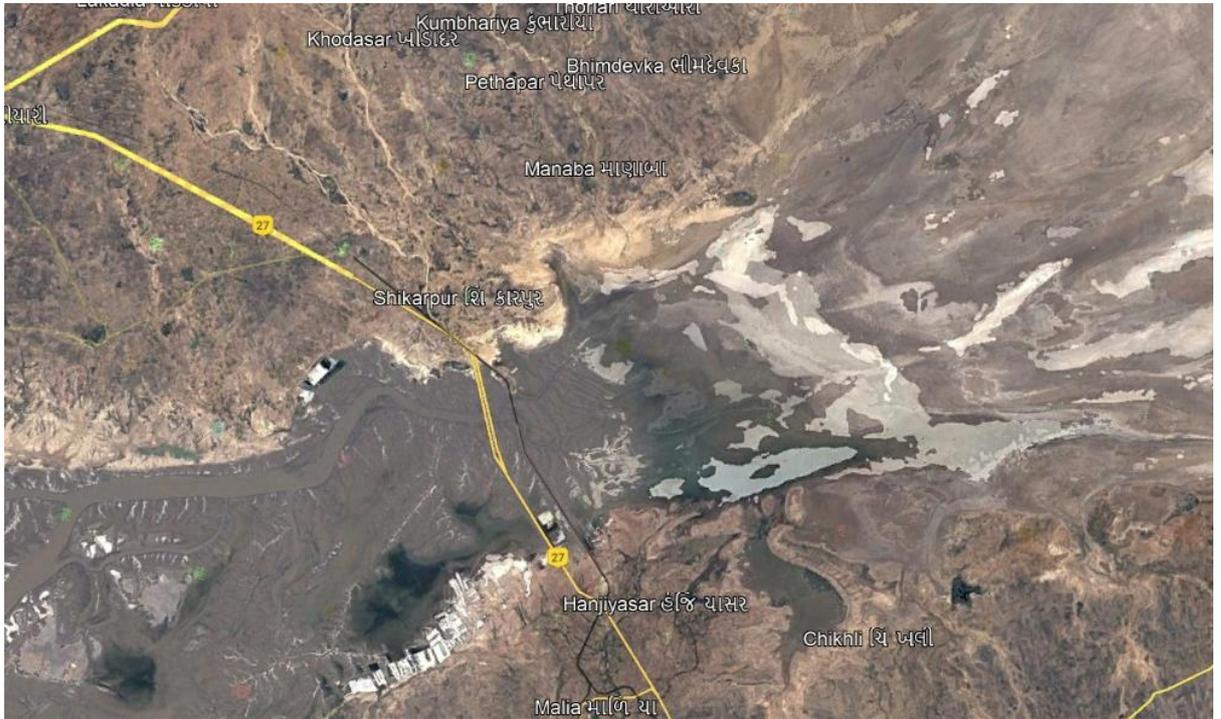


1985



2022

- 2. **Intertidal blockage:** intertidal flow obstructed due to increase in large scale salt pan activities near Malia.



1985



2022

6

- River channel blockage:** Salt pans are constructed across / near river channel and it is obstructing natural flow of the river. Following examples of Banas and Rupen river shows blockage of river flow in LRK.

Banas river, near Satalpur



1985



2022

Rupen river, Little Rann of Kutch



1985

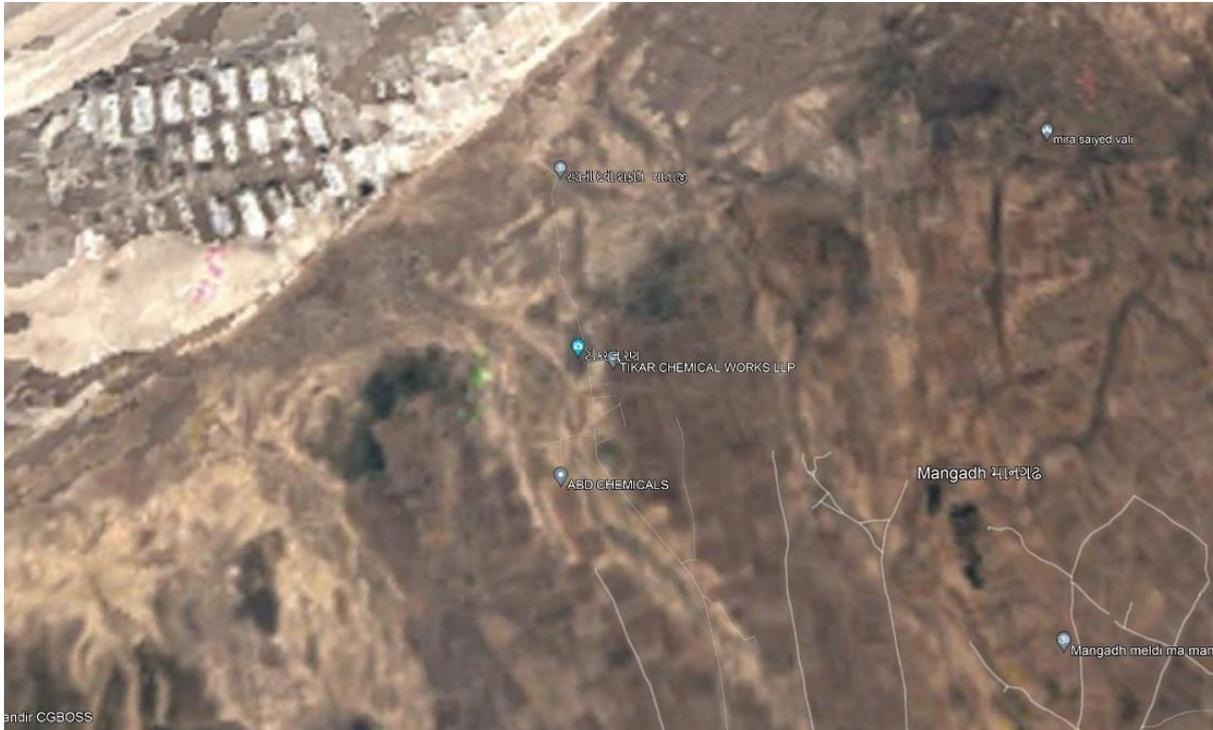


2022

8

4. **Chemical plants:** Chemical plants are located very near to the sanctuary. River and land pollution may disturb the wild ass habitat, migratory birds breeding ground and overall ecosystems.

Chemical plant near Tikar

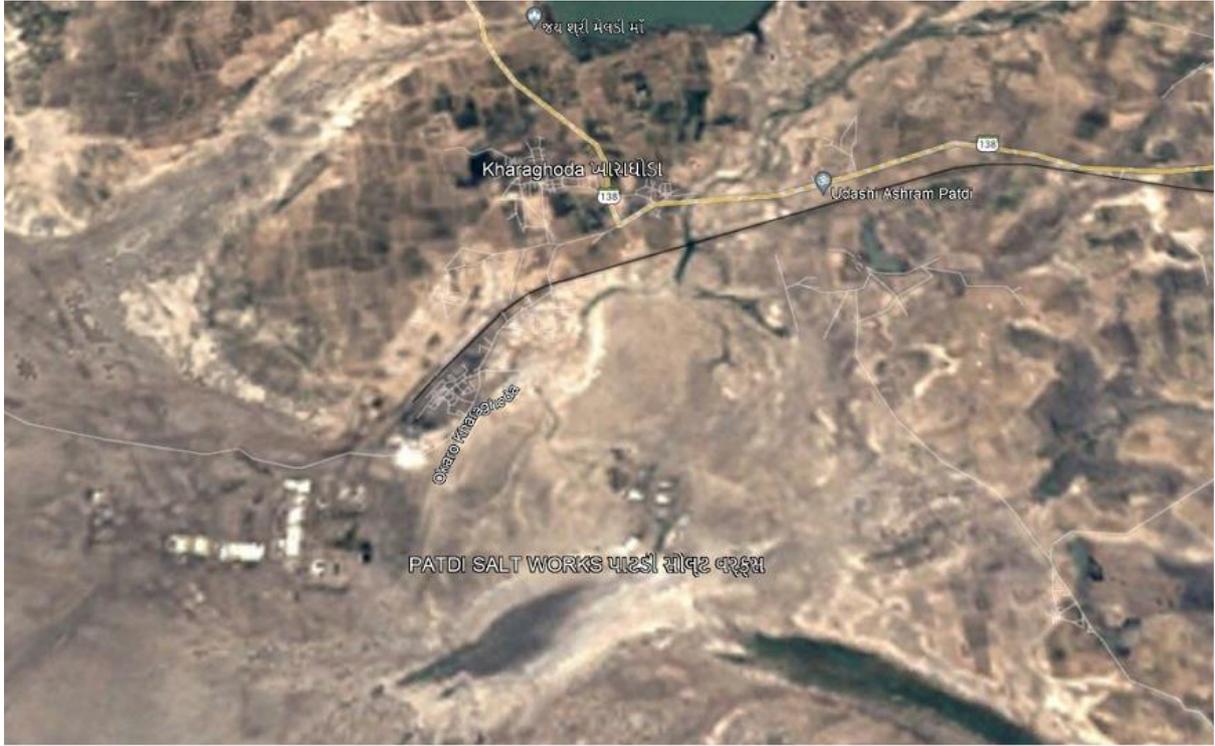


1985



2022

Chemical plant near Kharaghoda



1985



2022