



“We Have a Great Responsibility Towards Our Planet”

Prachur Shah is Deputy CEO, Cairn Oil & Gas, Vedanta Ltd. Here, he is in an exclusive email conversation with Abhas Mukherjee for *TerraGreen*.

Does your organization commit itself to adopt best available technologies to minimize its impact on local ecosystem with an aim to achieve net positive gain of biodiversity?

Cairn Oil & Gas is committed to protect and enhance the local biodiversity. With a robust biodiversity plan, the company is focussed to adopt the

best technologies to minimize any harmful impact and achieve net positive gain (NPG) of biodiversity. Biodiversity assessments are conducted at all the assets and specific action plans are prepared to aid biodiversity conservation. We are pursuing emission reduction and carbon sequestration targets, following guidelines from the Central Pollution Control Board (CPCB) and the Ministry of Environment, Forest and Climate Change (MoEFCC). There is strict adherence to standards along with diversity in techniques. The result is visible today as initiatives by Cairn have sequestered 42,687 tonnes of CO₂.

We read that Cairn Oil & Gas, Vedanta Ltd is operating in Thar Desert, which is a unique ecosystem and home to diverse plant species and wildlife. Kindly enlighten us on the Floral Biodiversity Park developed by you at MPT.

Cairn's Rajasthan block, RJON, is situated in one of India's most unique ecosystems—the Thar Desert. The block is dominated by scrubland and sparse high-storied vegetation comprising both native and exotic plant species. Tree species with economic and religious importance such as khejri (*Prosopis cineraria*), ker (*Capparis decidua*) and rohida (*Tecomella undulata*) are common in the block area. Cairn has taken source receptor approach to develop its greenbelt in and around its facilities, in consultation with the local forest department, and has developed ~121 ha of greenbelt cover on community land and ~105 ha in and around its facilities in Barmer and Jalore districts. These greenbelts provide good shelter for wild animals and help in balancing the local ecology.

A floral biodiversity park named MPT Desert Park, hosting over 50 species now dots the landscape of Barmer's Mangala Processing Terminal, while a ~48 ha green belt of indigenous trees, such as khejri, kumta, neem has also been developed. Desert parks make a unique



self-sustained ecosystem with diverse types of fruits (pomegranates, chickoo, dates, jungle jalebi, mulberry, etc.) and shelter plant species, which support good bird and butterfly diversity. STP-treated water is being used through drip network in desert park for irrigation.

Cairn has also taken up the sand dune stabilization initiative in and around its facility. The organization has developed a nursery at MPT & RGT to prepare sapling on native species as well as to acclimatize the procured saplings with local weather conditions before putting them in ground for better survival rate. Also, our greenbelt at facility area is connected with drip irrigation network.

Please tell us about the Ravva greenbelt programme implemented by your organization.

In Ravva, we have followed the guidelines provided by the CPCB and the MoEFCC to develop a plan that will reduce harmful emissions and promote natural sequestration of carbon through the development of a green belt. After commissioning of the Ravva plant in 1996, the 'Consent to Operate' conditions issued by the Andhra Pradesh Pollution Control Board (APPCB) stipulated requirements for planting and maintaining trees in the vacant premises of the terminal. According to the directive, the planted area should be four times the built area. Cairn initiated activities to develop a green belt around

the terminal. A green belt is pivotal to ecosystem maintenance as it allows land reuse and regeneration along with mitigation of adverse environmental impacts. This is particularly important for the oil & gas industry, which is required to maintain high standards of operational efficiency to avoid environmental damage and destruction. The green belt in Ravva was developed in five phases, the first being in 1996. For the formation of the green belt, a large variety of salt-tolerant species were chosen. Development of the green belt has enabled Cairn to comply with statutory requirements and also contribute to ecological conservation. Ravva is also a hotspot for mangrove plantation and provides excellent roosting site to several avifaunal species. A total of 22 species of trees, shrubs and herbaceous mangrove associates have been enumerated from the habitats.

What are the key features of the de-silting of natural waterbodies programme?

Spread across 12 districts of the state, the Thar Desert and its arid conditions pose a constant challenge to the residents of Rajasthan. With 11 per cent of the country's land, Rajasthan has access to only 2 per cent of its water resources. This has led to scarcity of water for agriculture, drinking, livestock maintenance, and other domestic activities.

Traditionally, *nadis* or open water structures were used to collect rainwater.

Water from here was subsequently supplied to villages in neighbouring areas. Over time, lack of maintenance had caused massive silting in these ponds whose naturally concave floors, built to retain, had convexed with large depositions of topsoil.

Round-the-clock labour drained the topsoil and sent it back to the farmers, because of which crores of phosphate and diammonium sulphate were also recycled. Soon, the convex floor regained its concave shape and water began to collect. These common bodies or *nadis* provide water which is used for drinking, washing, for animals, agriculture, etc., and can be accessed across the year. The biggest *nadis* can be as deep as 20 ft.

Additionally, they have also assisted greatly in reviving the region's dying ecosystem. Egrets and white ibis are now common visitors here, while small birds and migratory species call it their home. Seventeen such *nadis* have been revived across Barmer, consequently. As a result of de-silting, seven waterbodies with cumulative storage of ~10 lakh cm of rainwater have now been made accessible.

Dedicated drinking water facility for wild animals sounds a very interesting programme. Please tell us about it.

The Rajasthan block is home to variety of animal and plant species. More than 120 species of birds frequently visit the block along with 11 species of mammals, 15 species of reptiles, 3 species of



amphibians, and 18 species of butterflies. We have developed a waterbody for wild animals in the Gangali forest near Dandali village. The Indian gazelle and Indian pea-fowl can be observed frequently here.

The block area is immensely rich in biodiversity with more than 300 floral and faunal species and wide distribution of waterbodies. However, these waterbodies are seasonal and hold water



mostly during monsoon. Low annual rainfall, recurring drought-like conditions, depleting groundwater table and water unavailability pose a stiff challenge to wild animals. Cairn, in discussion with the local forest department, took the initiative to provide drinking water facility to wild animals in protected forest areas.

With suggestions from the forest department and our hydrogeological team, we identified a potential area for drilling a bore well. We succeeded on our second attempt at the Gaangli Forest Area. The 200-m deep borewell is fitted with a solar-powered 5-HP submersible pump and hosts a small pond (*gajjar*) measuring 30x30x2 feet for storage of drinking water solely for wild animals, around 200 metres away from the reserved forest area of Gangali in Barmer district. The habitat here is vastly different and is known to support wildlife such as the Indian Gazelle, among others. After commissioning of the drinking water pond in June 2017, a wide variety of wild animals and bird species are being regularly observed here.

Could you throw some light on your organization's work with the Bishnoi community, who religiously works towards protection of wildlife?

The Bishnoi community is known to be the protector of wildlife and environment in Western Rajasthan, and has often gone above and beyond to support the cause. They keep vigil over poaching of wild animals and rescue injured animals, offering a big support to the forest department. Over the years, we have been working closely with the Bishnoi community. We felicitated Ranaram Bishnoi, an iconic face in the district, who has worked extensively for the environment at the Global HSE Conference, a few years ago.

Do you agree with the fact that we might have to face more pandemics in future if the current rate of deforestation, unregulated urbanization and the resulting global change and climate change continue unabated?

The danger arising from depleting environmental resources looms heavily

over us today. Human activities, over the last century, have led to ~33 per cent loss of forest land. The consequences of this are manifold. We can witness them around us today through global warming, rising sea-water levels, erratic weather events, increasing pollution, etc. On the other hand, we cannot deny progress. At this critical juncture of our recovery from a pandemic, greater importance has to be given to maintaining the ecological-economic balance. We must replenish the environment and return more than what we excavate. Corporates and industries in particular, have a large role to play in this regard which many are fulfilling through CSR activities. At Cairn, we have been steadfast in improving the ecosystem in our operational areas through building green belts and floral parks, protecting vulnerable species, providing animal shelters, supporting community initiatives and much more. As this pandemic has harshly reminded us, we have a great responsibility towards our planet. ■

