Another very pertinent paragraph stated: 'We were informed by the learned Additional Solicitor General that show cause notices have now been issued to some mining lease holders demanding huge amounts some running into hundreds of crores of rupees towards value of ore extracted in excess of the environmental clearance. We were handed over some sample show cause notices (about 12) issued in September and October 2017 and figures are quite staggering – the demand raised being about Rs 1500 crores! Similarly, from the summary of Mining Audit Report submitted by the auditors (and handed over to us by the learned Additional Solicitor General for the period July 2016 to December, 2016) the amount demanded (including interest) by the State of Goa from the mining lease holders through show cause notices issues is about Rs 1500 crores! And without making any serious attempt to recover such huge amounts, the State of Goa has granted second renewal of mining leases and the MoEF played ball by lifting he abeyance order in respect of the environment clearances. The inferences that can be drawn are quite obvious.'

The Supreme Court then ordered that all necessary steps be taken to ensure that 'Special Investigation Team and the team of Chartered Accountants constituted pursuant to the Goa Grant of Mining Leases Policy 2015 give their report at the earliest and the State of Goa should implement the reports at the earliest, unless there are very good reasons for rejecting them.'

It also ordered to expedite the 'recovery of the amounts said to be due from the mining lease holders pursuant to the show cause notices issued to them and pursuant to other reports.'

## **HURDLES TO REFORESTATION**

In 2021, a media report revealed that the State had no degraded land on which to undertake mandatory reforestation, as per the provisions of the Forest (Conservation) Act, 1980, that whenever a piece of forest land is diverted for non-forestry purpose, be it mining or infrastructure, an equal area of revenue land/non-forest land or double the area of degraded forest land has to be used for compensatory reforestation. Since it had no such land to compensate for the loss of trees for a project, it had obtained permission from the Centre to plant trees in Karnataka and then had sought permission to reforest 300 hecatres of land in Madhya Pradesh.

Effectively, the forests that Goa is losing to mining or to other development projects are being lost forever with no possibility of replanting trees in compensation. This raises a very pertinent question: Should Goa consider projects that involve deforestation if the State does not have the land for reforestation and has to use its funds to grow trees elsewhere?

One doesn't need to hause even a minute to answer this question. Goa cannot allow its forests to be cleared for projects. Simple logic will indicate that creating a forest in another region will not save the area which has been denuded. It exposes that land that has had its trees felled to the wrath of nature. This is what happened in the Periyar region of Kerala that saw the floods of 2018 and this is what Goa experienced in July 2021 with its own floods. Goa's policy for reforestation in the State must take into account in what manner can the reforestation take place, when a particular area of a forest is to be cleared for a development project. Seeking to plant trees in another State indicates that there has been no thought process in the policy.

## **GLARING CLIMATE CHANGE**

There are several studies and articles that can be easily accessed on how the Western Ghats have transformed due to climate change. There are also indications that if the Western Ghats are further allowed to be hacked, then it would speed up climate change. The Western Ghats, also known to be global climate regulators and not just regional, are crucial to regulating the climate, especially monsoon patterns, acting as a barrier to the southwest monsoon winds, causing orographic precipitation on the windward side and a rain shadow effect on the leeward side. The Ghats also contribute to carbon sequestration through their dense forests, helping to mitigate climate change. Let us, in this context look at some recent phenomenon in our own land.

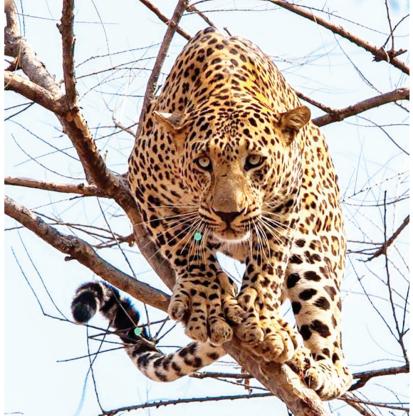
During a week in the summer month of May 2025, when Goa experienced torrential rainfall that was unseasonal, reports in the local media stated that rainfall in Goa had increased by over 60 per cent from 1901 to 2018 and that instances of 'exceptionally very high rainfall' have surged by more than 100 per cent during the same period. This was based on research by

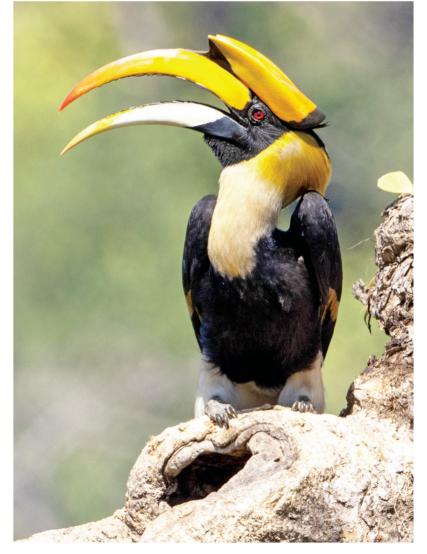
Rajiv Kumar Chaturvedi, Associate Professor at BITS Pilani, Goa, and a leading expert in rainfall patterns and climate change. Other points in his research were that Goa's temperature has risen by 1°C in 100 years, higher than the national average, cyclonic activity in the Arabian Sea has increased by over 52%, sea level at Mormugao is rising at 1.45 mm per year, up by 0.48 feet in 100 years.

This was not the first such warning that Goa received about climate change. Eleven years earlier, speaking at the first Matanhy Saldanha memorial lecture in 2014, Nobel laureate and UN Climate Change Panel's former chairperson, Rajendra Pachauri, had warned that Goa is vulnerable to climate change, especially to any rise in the ocean levels and had predicted that there could be a sea level rise that could have very serious consequences for the State. Another warning came in August 2021, when the 6th report of the Climate Change Inter Governmental Panel of the United Nations sent a chilling reminder that cities and towns on the west and east coasts of India are in danger of disappearing before the end of the current century. As part of the report, the National Aeronautics and Space Administration (NASA) of the United States predicted that various cities and towns of India were in danger of being submerged by up 2.7 feet of water by the year 2100, one of the towns mentioned was Mormugao. In another study, climate scientist at the Indian Institute of Tropi-









cal Meteorology, Dr Roxy Mathew Koll, writing on Cyclone Tauktae that hit the West Coast of India and Goa felt it in May 2021, began his article with the warning, 'The Arabian Sea used to be cyclone shy! But that is changing now, and changing fast!'

In August 2018 the southern State of Kerala had gone under a devastating flood. At that time, ecologist Madhav Gadgil had said, "Certainly all sorts of problems are beginning to surface on the environmental front in the Western Ghats. Goa, of course,

does not have the Western Ghats which are so high as in Kerala, but I am sure Goa will also experience all sorts of problems." That was yet another forewarning, and at that time it had been the subject of discussion in media and environmental circles, but there had been neither an agreement nor a refutation to the statement by Gadgil from the political class. The early warning from Gadgil have been dismissed by a stoic silence from the decision makers, but nature had its way and asserted that it cannot be

tampered with. The waters furiously rushed into villages and homes, and Goa could do nothing but wait for the tempest to subside.

The warnings of changing climate patterns have been coming for long, we are experiencing in, but are we learning any lessons from it and is Goa preparing for the changes that could be upon us in the future? In the UN Sustainable Development Goals report released in 2021 by National think tank NITI Aayog, Goa that had aced in several goals, featured below the national average for climate change mitigation measures. Unfortunately, there is where we stand.

## CONCLUSION

To summarise, the Western Ghats are a UNESCO World Heritage Site and one of the world's eight biodiversity 'hotspots'. The mountain range is home to some endemic species and a vital source of freshwater for millions of people and the animal kingdom. They are also an ancient mountain range and the medicinal value of the plant life has been documented over centuries. They also play a crucial role in regulating the south west monsoon and maintaining the ecological balance across peninsular India. There can be no disagreement that they should be preserved and, we must admit that efforts are on to conserve the ghats, yet they are facing unprecedented threats from deforestation, unregulated development, mining and, in current times, also climate change.

The rapid degradation of the ecosystems of the Western Ghats not only endangers the unique flora and fauna but also jeopardizes the livelihoods and cultural heritage of local communities. I urge the governments of the four States within whose boundaries the Western Ghats pass, to urgently introduce sustained conservation efforts to protect this irreplaceable natural treasure for future generations and to ensure the ecological stability in the region.

In doing so, we cannot overlook the animals. Through our interfer-

ence in the Western Ghats we have encroached into the habitat of the animals, with the result that the animals—tigers, leopards, elephants, wild boar, bison, deer—have been displaced and there are instances of them straying into human settlements, creating a nuisance to the farmers, with the government even listing out nuisance animals. What we fail to understand is that it is we humans who have been a nuisance to the animals and the animals are merely reacting, for they are distressed by human development. Instead of reducing our footprint in the forest, we humans are still planning to venture deeper into the forests.

Our focus today should be on keeping the forests pristine for the flora and fauna. It is theirs, we should not encroach, instead we should allow them to return to their habitat, not run away from it. One good development is that Goa is now planting fruit trees in the forest, instead of eucalyptus. This will produce food for many animals.

I am of the firm opinion that Goa can show the rest of India that it values animal rights and respects the forests. Let this small State that has the smallest portion of the Western Ghats lead the way in conservation of this biodiversity hotspot. We are an environment conscious State, highly literate, aware of the consequences

that ecological imbalance can bring about. I urge the government, and I am ready to partner in finding solutions to the issues that are threatening the Western Ghats. I am aware that people's livelihoods may be tied with the Western Ghats, mining being one instance, but I am certain that we can devise solutions that are acceptable to all. The Western Ghats, along with the forests, are my priority, I would like them to be our priority.

We must protect every bit of the Western Ghats as recommended by the reports and the Supreme Court. We have to also survey and identify the encroachments and any illegalities in the Western Ghats. This may necessitate the formation of an authority, similar to the authority suggested for the preservation of trees and prepare a roadmap to safeguard the Western Ghats for future generations. In this mining will have to take second place and the environment the prime concern. It may not be acceptable to certain business interests, but the long term returns will definitely outweigh the short term profits that the extraction of ore brings to the business community. I fervently appeal to the government to take up the protection of the Western Ghats as their top priority, for the future of Goa rests on the survival of these forests. Time is running out, the moment to act is now.

