



Submission to National Green Tribunal

Over the past decades, there has been a growing trend of diverting ecologically sensitive areas to industrial or military activities in India. Such diversion has severe environmental impacts, which demand more and more concern as anthropogenic climate change effects become more pronounced. These activities also have disastrous consequences for local communities that are dependent on these sensitive ecosystems for their livelihoods.

The diversion of around 10,000 acres in Challakere Taluk of Chitradurga District in Karnataka, largely toward defence, industrial, and commercial purposes, provides a cautionary illustration of the potential impact of such activities. The area falls into the category of grassland ecosystems that are rich in biodiversity and protected for centuries as Amrit Mahal Kavals. Over and above the likely environmental impact, the decision will have significant social impacts on the local population, many of whom sustain their livelihoods through the Kavals, but without disturbing the fine ecological balance of the area. What is even more disturbing about the diversion is that the decision to do so appears to have been made without any form of consultation with the local communities.

The grasslands in Challakare Taluk in Chitradurga district are famed for their rich biodiversity. A number of rare animal and bird species are found in the area, including lesser floricans, blackbucks, spotted eagles and the great Indian bustard. Many of these are endangered and the diversion of the grasslands that are their habitat might well lead to severe declines in their population. The class of species that the area is most famous for are the many carefully evolved breeds of cows and oxen.

But it is not just these large animals and birds that are under threat. Even the many species of grass that grow in the area are said to be of a special quality. Biologists have increasingly realized that grasslands have several important ecological functions,



especially given the necessity for sequestering carbon dioxide. However, in the face of the likelihood of changes in climate, including extended periods of drought, these functions can be performed only if the grasslands have diverse species, including many drought-tolerant species.

It is reported that nearly 60 villages in the district depend on the grasslands for their livelihoods. Their livelihoods depend on products from the ecosystems, both the flora and the fauna. These include weaving of baskets from palm fronds and blankets from sheep. The multiplicity of projects being planned in the area will alter the life of these communities, that too without any local participation in the decision making.

What makes all these real and potential impacts even more disturbing is that the purposes for which these lands are being diverted are themselves capable of potentially devastating impacts. For example, one of the major projects being planned is the “Special Material Enrichment Facility,” which would enrich uranium using centrifuges. According to the Chairman of the Atomic Energy Commission, this facility will not be safeguarded and India is “keeping the option open of using it for multiple roles” and this includes producing slightly-enriched uranium to fuel indigenous heavy water reactors and low-enriched enriched uranium to fuel light-water reactors.¹

To operate, a centrifuge plant must be supplied with uranium-hexafluoride (UF₆) gas. As a result of regular maintenance activities, small leaks in process piping, and evaporation of residues, there are routine releases of UF₆.² When UF₆ is released into the atmosphere, it reacts with water vapor to form uranyl fluoride (UO₂F₂). The uranium compound will either be breathed in by local inhabitants or be deposited on surfaces. The latter could then be resuspended or enter the food chain. In all these cases, it could contribute to radiation doses to people and livestock.

¹ Saurav Jha, “Enrichment Capacity Enough to Fuel Nuke Subs,” *IBNLive*, November 26, 2011, ibnlive.in.com/news/enrichment-capacity-enough-to-fuel-nuke-subs/206066-61.html.

² R. Scott Kemp, “Initial Analysis of the Detectability of UO₂F₂ Aerosols Produced by UF₆ Released from Uranium Conversion Plants,” *Science & Global Security* 16, no. 3 (2008): 115–125, doi:10.1080/08929880802551172.



Further, a typical enrichment plant along with the associated facilities will require the hundreds of liters per day. This adds to the considerable water stress in the area. The region is known to be already suffering increasing depletion of groundwater resources, and the quality of water for drinking and irrigation purposes has deteriorated.

While the enrichment of uranium using centrifuges has its own environmental impacts, what is more significant is that the construction of nuclear reactors has unique environmental consequences. First, nuclear power production comes with the risk of catastrophic accidents leading to regional, if not global, environmental and public health impacts. These were made clear by the Chernobyl and Fukushima accidents and there are good reasons to expect future catastrophic accidents.³ Second, the generation of nuclear energy necessarily produces radioactive wastes that stay hazardous for tens of thousands of years. Since there is no way of removing the radioactive nature of these wastes, exposure to these wastes will continue to be harmful for hundreds of thousands of years. They have to be isolated from human contact and possibly monitored if they are not to cause radiation doses. This need for stewardship is unprecedented in human history, and iniquitous to future generations since they would bear the consequences while we use the electricity generated by these reactors.

Thus, the activities being planned in Chitradurga could have impacts that are widely spread out across space and time. The history of the nuclear programme in India suggests that the risks to health and environment from nuclear activities have so far been unequally distributed, with communities living in the vicinity of nuclear facilities bearing a predominant part of these risks.⁴ These communities have had no say in the siting, construction or operational practices of the nuclear facilities that have come to dominate

³ Charles Perrow, *Normal Accidents: Living with High Risk Technologies* (New York: Basic Books, 1984); M. V. Ramana, "Beyond Our Imagination: Fukushima and the Problem of Assessing Risk," *Bulletin of the Atomic Scientists Online*, April 19, 2011, <http://www.thebulletin.org/web-edition/features/beyond-our-imagination-fukushima-and-the-problem-of-assessing-risk>.

⁴ M. V. Ramana, *The Power of Promise: Examining Nuclear Energy in India* (New Delhi: Penguin India, 2012).



their lives in various ways. This disproportionate arrangement is one reason for the intense opposition to nuclear projects we have witnessed around the country.

The other projects that are reportedly being planned include a Defense Research and Development Organisation complex that will be used to test Unmanned Aerial Vehicles (UAVs) and Unmanned Combat Aerial Vehicles (UCAVs). Siting this next to a large uranium enrichment plant is adding to the risk of accidents at the plant. More fundamentally, the development and acquisition of such weapons should be opposed by all those desirous of peace.

For these reasons, and many more, the diversion of the grasslands in Challakare will have detrimental impacts on the environment and people's livelihoods. In an era when dealing with climatic change has become an unfortunate reality, sanctioning projects that reduce valuable biodiversity would severely restrict the abilities of local communities to adapt to shifts in weather patterns. There can be no way to compensate them, and thus the diversion of these precious lands should be stopped herewith.

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