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To,
Mr. Leo Saldanha,
Environment Support Group,
Bangalore

20/08/13

Dear Mr. Saldanha

I have critically reviewed the Fact Finding Committee's Report to the National Green Tribunal with regard to the Challekere Amrit Mahal Kavals meant for diversion for various projects.

Unfortunately, it seems that the members of the FFC have fallen into the colonially propagated misconception that the native semi-arid savanna systems of peninsular India are barren wastelands that have very little inherent value, and only through their conversion are likely to benefit human enterprise.

I am attaching a short commentary on what I see are major short-comings of the ecological description of the region and a massive undervaluation of the impacts that the proposed activities are likely to have on this endangered and fast vanishing biome.

Best Wishes



Dr. Abi Tamim Vanak
National Environmental Sciences Fellow
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&
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Specific comments on the Fact Finding Committee Report

1) Characterisation of the Challakere Amrit Mahal Kavals.

The Challekere scrub and woodland savannas are in a similar eco-climatic zone (Koppen-Geiger climate classification; Peel et. al. 2007) as that of large parts of eastern and southern Africa with a dominant grass layer interspersed with shrubs and trees. The FCC report seems to be self contradictory in its description of the Kavals as it describes them historically of having “*kept the natural vegetation without disturbance*” (Page 6, Para 4), but also calls them “*undeveloped and barren*”, and having “*nothing but rocky surface and some hillocks with the kind of soil loaded with red gravel*” (Page 47). Such an assessment is neither scientifically valid, nor accurate. **The FCC has made a single site visit for one day (7th May 2013) at the peak of the dry season, and when these seasonal grasslands have lost much vegetative cover, but only require the onset of the monsoons to return to a lush green status.** Furthermore, characterization of rocky surface and hillocks as having no ecological value is highly misleading, as these rocky outcrops have been shown to have several endemic plant species as well as harbouring a range of arid-land fauna.

2) Ecological value of the Challakere Amrit Mahal Kavals

The Planning Commission of Government of India set up a Task Force on Grasslands and Deserts (Singh et al. 2006), has stated that “*it is imperative to recognize the ecological, hydrological, economic and sociological role of grasslands as a source of survival for millions of livestock and rural people, as protector of soil and water, of rare wildlife species and biodiversity conservation in general*”.

However, it is clear that the FCC undervalues grasslands, as it finds that the landscape will “*be improved by planting 8000 sapling of 5 species of Bio Fuel (Honge, Neem, Hippe, Harali and Simaruba) plants*” (Page 21) because of the greening and tree planting activities of the project beneficiaries. The lack of a detailed biodiversity and ecological survey of these areas does not seem to have been a hindrance in drawing these conclusions. Several studies have shown that grassland dependent species, such as the **endangered blackbuck, Indian wolf, lesser florican and critically endangered great Indian bustard, all belonging to Schedule 1 of the Indian Wild Life Protection Act 2001, are obligate grassland species, and that loss of habitat is one of the biggest challenges for conserving them** (Singh et al 2006, Vanak et al 2008, Vanak and Gompper 2009). The report states that there is no evidence that the Great Indian Bustard (GIB) has been sighted in these grasslands. **However, the GIB has been sighted in four neighbouring districts in the recent past (see Figure 1).** The Bustard Recovery Plan of the Ministry of Environment and Forests clearly articulates a role for protecting the last remaining habitat patches, so that future recovery plans can be formulated, and habitat available for either natural re-expansion or reintroduction of this iconic grassland species. Indeed, the Government of Maharashtra, has taken steps to curb conversion of pasture land to industrial and residential purposes in areas that are potentially GIB habitat. It should also be noted that various studies have assigned this whole area as a high priority for conservation of the Great Indian Bustard (Ghose et. al., 2012). Another recent study by WWF recommends the protection of ‘core areas’



by preventing human disturbances in existing breeding areas and restricting infrastructural development.

Encouraging plantations of non-native trees can destroy that the habitat of grassland obligate species. Rannebennur WLS in Karnataka is a clear example where blackbuck and Indian fox detections have declined and the Great Indian Bustard has gone locally extinct. The plantation of 8000 saplings by IISC is going to replace the Kaval ecosystem at their plantation site as they intend on planting Neem and other species which are not native to this biome and are for biofuel extraction experiments. The FFC is clearly biased in its report by stating that plantations will not alter the landscape and the greenery will improve. Plantations of non-native and forest species will seriously impact the grasslands by creating greater demand for water in an already drought prone and naturally arid-hot-steppe climatic zone.

The report states that the area is suitable for the proposed activities because of the area being arid, 'barren' and unsuitable for human settlement or agriculture. This is, however, taking into consideration only socio-economic benefits arising from agricultural or industrialisation of the area. Figure 1. shows the network of the last grassland patches, along with the locations of recent Great Indian Bustard sightings. It can be seen that these Kavals serve as a part of a network of grassland, which serves as a habitat for several species. **The assessment of suitability and impact on the landscape has been done on a very local scale, but it is clear that the proposed activities will fragment this imperilled biome even more.**

3) Historical and cultural legacy of the Amrit Mahal Kavals

The report of the FFC has overlooked a key aspect of the ecological history of the Kavals. Chandran (1997) reports that large portions of the central dry zone of Karnataka were primal in domestication of cattle and other livestock 3800 - 4300 years before present. The Amrith Mahal, Hallikar and Chitaldoog breeds are an outcome of hundreds of years of breeding, nurturing and maintenance for draught purposes in an ecological limiting arid savanna grassland zone. These points are crucial to establishing the uniqueness of these cattle and savanna grasslands. Chen et. al. (2010) have used molecular data of cattle from across the subcontinent to infer that Zebu cattle *Bos indicus* (Amrith mahal breeds are assigned to this species) are an exclusive south Asian legacy from the Neolithic (2000 BC – 10,200 BC). Although the report has a voluminous section on the Amrit Mahal breed, and also notes that more than 46% of Kavals have been diverted for other reasons, it finds that diverting one of the largest remaining Kavals will not have a threatening impact on the survival of this indigenous breed.

4) Environmental Impact on the Amrit Mahal Kavals

The FFC report under point 9 regarding the compliance of the various project proponents to the Environmental Protection Act, 1986, Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, Forest Conservation Act, 1980, Forest Rights Act, 2006 read with Scheduled Caste Tribes and Others Forest Dwellers (Recognition of Forest Rights) Act, 2006, and Biological Diversity Act, 2002, **have not included arguments for the Forest Conservation Act, 1980, Forest Rights Act, 2006, Wildlife Protection Act, 1972, Biological Diversity Act, 2002**, without reason even as the report by Saldhana et al. (2013) find the project proponents in clear violation of all these acts. The FFC must consider the report by Saldhana et. al. (2013) especially sections VIII and IX for additional violations that have been



articulated.

The loss of Ullarthi, Kudapara and Varavu Kavals will set a precedent for establishing other developmental projects in grassland habitats across the country. The loss will not be restricted to the context of the land alone, but also loss of a historical benchmark in the development and maintenance of the Kavals. This will also lead to a loss of opportunity to scientifically investigate how ecological systems with human interventions function. **I urge the National Green Tribunal to reject this massive transformation of land, instead propose the Kavals as a Conservation Reserve under the Wild Life Protection Act 1972.**



Karnataka: Large contiguous grassland areas

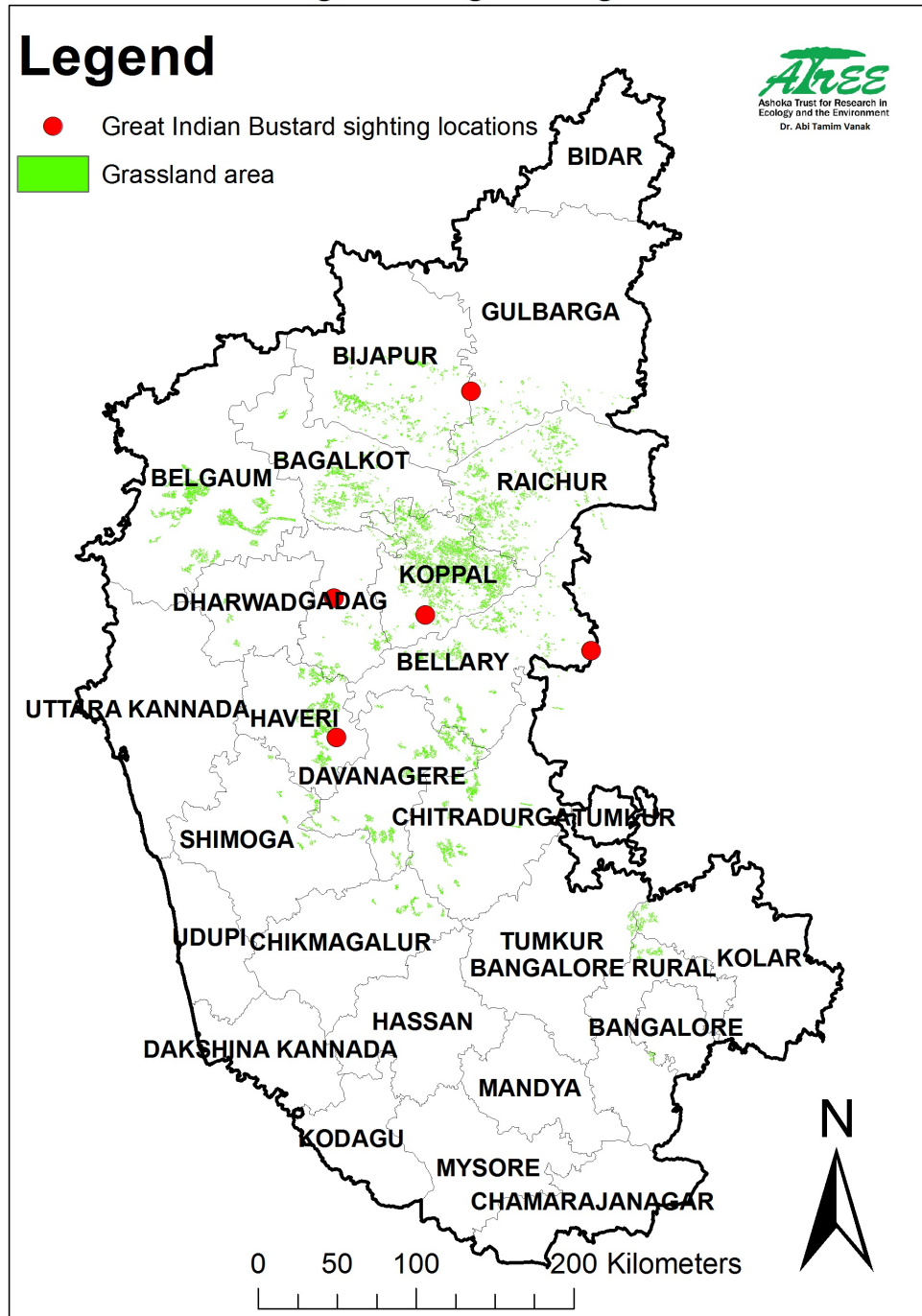


Figure 1. Map of Karnataka showing the last remaining savanna grassland areas and recent sightings of the critically endangered Great Indian Bustard.

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