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Reportable

IN THE SUPREME COURT OF INDIA
ORIGINAL CIVIL JURISDICTION

Writ Petition (Civil) No. 838 of 2019

M K Ranjitsinh & Ors. **…Petitioners**

Versus

Union of India & Ors. **…Respondents**

And with

Civil Appeal No. 3570 of 2022

J U D G M E N T

Dr Dhananjaya Y Chandrachud, CJI

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1. The jurisdiction of this Court has been invoked for protecting the Great Indian Bustard[1] and the Lesser Florican, both of whom are on the verge of extinction. Given the importance of the issue at hand, a brief background of various aspects which pertain to the matter are discussed below.

A. The Great Indian Bustard

2. The GIB (the scientific name of which is *ardeotis nigriceps*) is native to southern and western India. It typically occupies grasslands or arid regions. The State of Rajasthan is home to a majority of the current population. With time, the country has seen a rapid and steady decline in the population of the GIB. As of 2018, the International Union for Conservation of Nature, or IUCN as it is popularly known, classified the GIB as a 'critically endangered' species. In IUCN's system of classification, only two categories indicate a graver threat to a particular species – 'extinct in the wild' and 'extinct'. The GIB has been classified as a critically endangered species from 2011 until the most recent assessment in 2018. From 1994 to 2008, it was classified as 'endangered' and in 1988, it was labelled 'threatened'. IUCN notes the justification for its classification of the GIB as a critically endangered species in the following terms:[2]

> "This species is listed as Critically Endangered because it has an extremely small population that has undergone an extremely rapid decline owing to a multitude of threats including habitat loss and degradation, hunting and direct disturbance. It now requires an urgent acceleration in targeted

[1] "GIB"
[2] IUCN Red List, 'Great Indian Bustard' <https://www.iucnredlist.org/species/22691932/134188105#population>

> conservation actions in order to prevent it from becoming functionally extinct within a few decades."

3. The Rajasthan government estimated that only about 125 GIBs were present in the year 2013[3] while IUCN placed the number of mature GIBs between 50 and 249.[4] There are significant factors bearing upon the dwindling numbers and low rate of reproduction of the existing population of these species. Pollution, climate change, predators and competition with invasive species are among the many threats that exacerbate the challenges faced by these vulnerable species. The attrition of the existing population of these endangered birds has been partly attributed to overhead transmission lines. GIBs usually lay a single egg which has an incubation period of approximately one month. The GIBs nest on open ground or in cavities in the soil. Consequently, their eggs are also laid and incubated on the ground. The eggs are therefore at risk of being preyed upon by local predators including mongooses, monitor lizards, and other birds. Cows may also trample on or crush the eggs while grazing in the grasslands. The loss of habitat is also a serious concern. As humans have expanded their settlements and economic activities into the grasslands, the natural habitat of the GIB has diminished. The expansion of human population and accompanying activities has also resulted in the fragmentation of the GIB's habitat. The expansion of infrastructure such as roads, mining and farming activities have cumulatively contributed to the dangers faced by the avian species.

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[3] Government of Rajasthan, Forest Department, 'Project Great Indian Bustard' <https://forest.rajasthan.gov.in/content/raj/forest/en/footernav/department-wings/project-great-indian-bustard.html>
[4] IUCN Red List (n 2).

4. In the context of the dwindling population of GIBs and the existential threat looming over them, a writ petition invoking the constitutional jurisdiction under Article 32 - Writ Petition (Civil) No 838 of 2019 - was instituted for seeking directions relating to the conservation of the species. The petitioner *inter alia* sought that this Court:

   a. Issue directions to the respondents to urgently frame and implement an emergency response plan for the protection and recovery of the GIB, including directions for the installation of bird diverters, an immediate embargo on the sanction of new projects and the renewal of leases of existing projects, dismantling power lines, wind turbines, and solar panels in and around critical habitats, installation of predator-proof enclosures in breeding habitats, implementation of a population control program for dogs, provision of no-grazing zones and restricted grazing zones in critical and semi-critical habitats, a prohibition on the use of insecticides and pesticides within a radius of 5 km of critical habitats and a prohibition on the encroachment of grasslands in and around critical and semi-critical habitats;

   b. Issue directions to the concerned respondents to submit a report on the status of the breeding centres at Jaisalmer, Sorsan, and Velavadar;

   c. Issue directions to the concerned respondents to take all measures necessary for the protection of grasslands including by ensuring that no remaining grasslands are classified as ‘wastelands’ and diverted to other uses, adopting a grasslands conservation policy, and adopting a national grazing policy;

d. Issue directions to the Ministry of Defence (Respondent No. 2) to sensitise the armed forces about the need for conservation of the GIB and to collaborate with scientific bodies in conservation efforts;

e. Appoint an Empowered Committee to oversee the implementation of the directions issued by the Court, to preserve and manage the endangered species and their habitats; and

f. Issue a declaration that the two endangered birds constitute one meta population of the nation and that all state authorities are bound to cooperate and take all steps necessary to ensure their conservation and to implement the decisions of the Empowered Committee.

B. The judgment dated 19 April 2021 and subsequent developments

5. In the order of this Court dated 19 April 2021, restrictions were imposed on the setting up of overhead transmission lines in a large swath of territory of about 99,000 square kilometres. These directions were in IA No 85618 of 2020 in Writ Petition (Civil) No 838 of 2019. In the operative directions, this Court, observed :

> " 14. In the light of the contentions urged on this aspect of the matter, we are conscious that the laying of the underground power line more particularly of high-voltage though not impossible, would require technical evaluation on case-to-case basis and an omnibus conclusion cannot be reached laying down a uniform method and directions cannot be issued unmindful of the fact situation. Though that be the position the consensus shall be that all low voltage powerlines to be laid in the priority and potential habitats of GIB shall in all cases be laid

> underground in future. In respect of low voltage overhead powerlines existing presently in the priority and potential habitats of GIB, the same shall be converted into underground powerlines. In respect of high-voltage powerlines in the priority and potential habitats of GIB, more particularly the powerlines referred in the prayer column of I.A. No.85618/2020 and indicated in the operative portion of this order shall be converted into underground power line."

6. This Court appointed a committee for assessing the feasibility of laying high voltage underground power lines. In paragraph 18 of its order, this Court directed that in all cases where overhead power lines exist as on date in the priority and potential GIB areas, steps shall be taken to install bird diverters pending consideration of the conversion of overhead power lines into underground power lines. Moreover, the court directed that in all cases, where it is found feasible to convert the overhead lines to underground power lines, this shall be undertaken and completed within a year.

7. The order of this Court has been implemented by the Committee by granting case-specific sanctions to projects where undergrounding was found not to be possible. Respondent Nos 1, 3, and 4 (the Ministry of Environment, Forests, and Climate Change, the Ministry of Power, and the Ministry of New and Renewable Energy respectively) filed IA No 149293 of 2021 on 17 November 2021 for modification of the directions issued by the judgment of this Court dated 19 April 2021. The grounds on which modification was sought are indicated below in brief:

    a. The judgment has vast adverse implications for the power sector in India

and energy transition away from fossil fuels;

b. Respondent No. 4 was not heard before passing the judgment;

c. India has made International commitments including under the agreement signed in Paris in 2015 under the United Nations Framework Convention on Climate Change[5] for transition to non-fossil fuels and for the reduction of emissions. The area in respect of which the directions were issued is much larger than the actual area in which the GIBs dwell. Moreover, that area contains a very large proportion of the solar and wind energy potential of the country;

d. Undergrounding high voltage power lines is technically not possible; and

e. The coal fired power which would be used to replace the untapped energy from renewable sources in the concerned area would cause pollution.

8. By an order dated 19 January 2024, this Court directed as follows:

> "1 (The) Attorney General for India states that a comprehensive status report will be filed before this Court indicating the way forward as proposed by the Union Government which would take into account both the need for preservation of the Great Indian Bustard which faces a danger of extinction and need to ensure the development of solar power keeping in mind India's commitments at the international level.
>
> 2 The Union of India shall place its status report on the record...

[5] "UNFCCC"

> 3 In the meantime, we direct (i) the Chief Secretaries of the States of Gujarat and Rajasthan; and (ii) the Committee appointed by this Court, to file updated status reports.
>
> …"

9. In pursuance of this order, the Union of India has filed an additional affidavit and an updated, comprehensive status report. In the course of its affidavit, the Union of India has submitted that:

   a. The reduction in the population of GIBs began in the 1960s, much before the electrification of the area and the construction of transmission lines. Research indicates that the reasons for the dwindling population include a low birth rate, poaching, habitat destruction and predation. The use of insecticides and pesticides has resulted in the reduction of locusts and grasshoppers, which form an essential part of the prey of GIBs. The livestock population has also increased due to which there has been overgrazing in the pastures;

   b. The direction by this Court for laying high voltage, or as the case may be, low voltage lines underground is practically impossible to implement;

   c. The Union Government has a commitment at the international level to reduce India's carbon footprint and recourse to renewable sources of energy including solar installations provides the key to the

implementation of these commitments;

d. The Union of India as well as the concerned state governments are taking comprehensive steps for the conservation and protection of the endangered species of the GIB. They are:

i. The GIB is listed in Part III of Schedule I of the Wild Life (Protection) Act 1972. The species listed in Schedule I are granted the highest level of protection from hunting, in terms of this statute;

ii. Under the centrally sponsored scheme titled 'Development of Wildlife Habitats', financial and technical assistance is being provided to the state governments for the conservation of the habitat of the GIB;

iii. The Forest departments of the states of Rajasthan, Maharashtra, and Gujarat, in collaboration with the Wildlife Institute of India,[6] Dehradun, are carrying out conservation breeding with the aim of building a captive population of the species for release in the wild and promoting in-situ conservation of the species;

iv. The Government of India has launched a program called the 'Habitat Improvement and Conservation Breeding of Great Indian Bustard' in 2016 for in-situ conservation of the GIB. It is being implemented in

[6] "WII"

collaboration with the Government of Rajasthan;

v. At present, conservation breeding facilities are operational at Sam and Ramdeora in Jaisalmer. A partial founder population of the GIB consisting of twenty-one individuals and seven chicks has been secured. The chicks were artificially hatched from eggs collected from the wild. Captive breeding has been commenced;

vi. The conservation project is being supervised by a team of three scientists, three veterinarians, eighteen project associates, and forty local support staff;

vii. The WII has entered into a Memorandum of Understanding with the International Fund for Houbara Conservation which is dedicated to the conservation of the Houbara Bustard. The MoU outlines various areas of collaboration including training of staff, technical support and advice, and the supply of bird cages and food pellets in the initial stages of the conservation program; and

viii. A study of international efforts to conserve other species of bustards as well as other birds indicates that large swathes of land have not been closed off as a strategy of conservation. Instead, artificial insemination techniques have been used in concert with constructing enclosures in which chicks are nurtured until they are less vulnerable to predators. Such chicks are then released into the wild. This

strategy has proved successful and the Government of India is replicating it with respect to the GIB.

e. A blanket direction of the nature that has been imposed by this Court, besides not being feasible to implement, would also not result in achieving its stated purpose, i.e., the conservation of the GIB.

10. Prior to adjudicating the application for modification, it is necessary to briefly advert to India's obligations towards preventing climate change and tackling its adverse effects. This will assist the Court to take a decision based upon a holistic view of competing considerations.

C. The mission to combat climate change

I. India's commitment under international conventions

11. India has made significant international commitments in its pursuit of global environmental conservation goals. India was a participant in the Kyoto Protocol, which came into force on February 16, 2005. This international agreement, linked to the UNFCCC, obligates its Parties to establish binding emission reduction targets. The Protocol allows countries to meet these targets through national measures and offers additional mechanisms such as International Emissions Trading, Clean Development Mechanism, and Joint Implementation.

12. The UNFCCC is founded on the recognition that climate change is a global issue

demanding a collective global response.[7] As greenhouse gas emissions originate from the territories of all nations and also impact all nations, it is imperative that all countries undertake measures to address this challenge. This fundamental premise is articulated in the preamble of the UNFCCC:

> "Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions,
>
> …
>
> Recalling also that States have … the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."

13. The primary objective of the UNFCCC is to stabilize greenhouse gas concentrations in the atmosphere to prevent dangerous human-induced interference with the climate system, as articulated in Article 2.[8] Article 3 elaborates on the principles guiding this objective. Notably, Article 3(1) underscores the responsibility of parties to protect the climate system for the benefit of present and future generations, based on equity and in line with their capabilities.[9] Article 3(3) emphasizes the importance of precautionary measures to anticipate, prevent, or minimize the causes and

[7] United Nations Framework Convention on Climate Change: resolution / adopted by the General Assembly (Adopted 20 January 1994).
[8] *Ibid*, art 2.
[9] *Ibid*, art 3(1).

adverse effects of climate change.[10]

14. At the 18th Conference of the Parties in Doha, Qatar in December 2012[11], States reaffirmed their commitment to addressing climate change and laid the groundwork for greater ambition and action. Among various decisions, they set a timetable to adopt a Universal Climate Agreement by 2015. The objective was to build consensus on a binding and universal agreement which would limit greenhouse gas emissions to levels that would prevent global temperatures from increasing more than 2 degrees Celsius (3.6 degrees F) above the temperature benchmark set before the Industrial revolution. The COP 21 meeting was convened in Paris in December 2015, where 196 countries, including India signed a new Climate Change Agreement on 12 December 2015.[12] This is termed as the Paris Agreement.[13]

15. In the build-up to the Paris meeting, the UN had called upon parties to submit their plans on how they intended to reduce their greenhouse emissions. India submitted its Intended Nationally Determined Contribution (NDC) to the UNFCCC on October 2, 2015. The Paris Agreement mandates that each Party communicate a nationally determined contribution every five years. India communicated an update to its first NDC submitted earlier on 2 October 2015, for the period up to 2030. India's

[10] *Ibid*, art 3(3).
[11] "The Doha Climate Gateway"
[12] Conference of the Parties, Adoption of the Paris Agreement (Adopted 12 December 2015). U.N. Doc. FCCC/CP/2015/L.9/Rev/1.
[13] "Paris Agreement"

commitment under the Paris Agreement includes the following key features[14]:

a. To achieve approximately 50 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with support from the transfer of technology and low-cost international finance, including from the Green Climate Fund;

b. To enhance investments in development programs in sectors vulnerable to climate change, particularly agriculture, water resources, the Himalayan region, coastal areas, health, and disaster management, to better adapt to climate change impacts; and

c. To establish domestic frameworks and international architectures for the rapid dissemination of cutting-edge climate technology in India and to engage in joint collaborative research and development for future climate technologies.

As part of its pledge, India has committed to transitioning to non-fossil fuel sources and reducing emissions.

16. One of the key strategies in India's efforts towards sustainability is the ambitious target for renewable energy capacity installation. By 2022, India aimed to achieve an installed renewable energy capacity (excluding large hydro) of 175 GW (Gigawatts), a goal that signifies the country's commitment to clean energy adoption.

[14] See UNFCCC, India's Updated First Nationally Determined Contribution Under Paris Agreement (2021-2030). https://unfccc.int/sites/default/files/NDC/202208/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf

Looking ahead, India has set an even more ambitious target for 2030, aiming to ramp up its installed renewable energy capacity to 450 GW. This long-term goal underscores India's recognition of the urgent need to accelerate the transition towards renewable energy to mitigate the impacts of climate change and achieve sustainable development.

17. To achieve these targets, India has implemented various policy measures and initiatives to promote renewable energy investment, innovation, and adoption. As highlighted in the Union's additional affidavit, India's commitment to transitioning to non-fossil fuels is not just a strategic energy goal but a fundamental necessity for environmental preservation. Investing in renewable energy not only addresses these urgent environmental concerns but also yields a plethora of socio-economic benefits. By shifting towards renewable energy sources, India enhances its energy security, reducing reliance on volatile fossil fuel markets and mitigating the risks associated with energy scarcity. Additionally, the adoption of renewable energy technologies helps in curbing air pollution, thereby improving public health and reducing healthcare costs.

18. The promotion of renewable energy sources plays a crucial role in promoting social equity by ensuring access to clean and affordable energy for all segments of society, especially in rural and underserved areas. This contributes to poverty alleviation, enhances quality of life, and fosters inclusive growth and development across the nation. Therefore, transitioning to renewable energy is not just an environmental

imperative but also a strategic investment in India's future prosperity, resilience, and sustainability.

II. *The right to a healthy environment and the right to be free from the adverse effects of climate change*

19. India's efforts to combat climate change are manifold. Parliament has enacted the Wild Life (Protection)Act 1972, the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act 1986, the National Green Tribunal Act 2010, amongst others. In 2022, the Energy Conservation Act 2001 was amended to empower the Central Government to provide for a carbon credit trading scheme.[15] The Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules 2022 were made in exercise of the powers under the Electricity Act 2003 to ensure access to and incentivise green energy. The executive wing of the government has implemented a host of projects over the years including the National Solar Mission (discussed in greater detail in the subsequent segment), the National Mission for Enhanced Energy Efficiency, the National Mission for a Green India, and the National Mission on Strategic Knowledge for Climate Change, amongst others. Despite governmental policy and rules and regulations recognising the adverse effects of climate change and seeking to combat it, there is no single or umbrella legislation in India which relates to climate change and the attendant concerns.

[15] Energy Conservation Act 2001, Section 14(w).

However, this does not mean that the people of India do not have a right against the adverse effects of climate change.

20. Article 48A of the Constitution provides that the State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country. Clause (g) of Article 51A stipulates that it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures. Although these are not justiciable provisions of the Constitution, they are indications that the Constitution recognises the importance of the natural world. The importance of the environment, as indicated by these provisions, becomes a right in other parts of the Constitution. Article 21 recognises the right to life and personal liberty while Article 14 indicates that all persons shall have equality before law and the equal protection of laws. These articles are important sources of the right to a clean environment and the right against the adverse effects of climate change.

21. In **M.C. Mehta** v. **Kamal Nath**,[16] this Court held that Articles 48A and 51A(g) must be interpreted in light of Article 21:

> "8. …. These two articles have to be considered in the light of Article 21 of the Constitution which provides that no person shall be deprived of his life and liberty except in accordance with the procedure established by law. Any disturbance of the basic environment elements, namely air, water and soil, which are necessary for "life", would be hazardous to "life" within the meaning of Article 21 of the Constitution."

[16] (2000) 6 SCC 213.

22. In **Virender Gaur** v. **State of Haryana**,[17] this Court recognised the right to a clean environment in the following terms:

> "7. … The State, in particular has duty in that behalf and to shed its extravagant unbridled sovereign power and to forge in its policy to maintain ecological balance and hygienic environment. Article 21 protects right to life as a fundamental right. Enjoyment of life and its attainment including their right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution. Environmental, ecological, air, water, pollution, etc. should be regarded as amounting to violation of Article 21. Therefore, hygienic environment is an integral facet of right to healthy life and it would be impossible to live with human dignity without a humane and healthy environment. Environmental protection, therefore, has now become a matter of grave concern for human existence. Promoting environmental protection implies maintenance of the environment as a whole comprising the man-made and the natural environment. Therefore, there is a constitutional imperative on the State Government and the municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve both the man-made and the natural environment."

23. In **Karnataka Industrial Areas Development Board** v. **C. Kenchappa**,[18] this Court took note of the adverse effects of rising sea levels and rising global temperatures. In **Bombay Dyeing & Mfg. Co. Ltd. (3)** v. **Bombay Environmental Action**

[17] (1995) 2 SCC 577.
[18] (2006) 6 SCC 371.

Group,[19] this Court recognised that climate change posed a "major threat" to the environment.

24. Despite a plethora of decisions on the right to a clean environment, some decisions which recognise climate change as a serious threat, and national policies which seek to combat climate change, it is yet to be articulated that the people have a right against the adverse effects of climate change. This is perhaps because this right and the right to a clean environment are two sides of the same coin. As the havoc caused by climate change increases year by year, it becomes necessary to articulate this as a distinct right. It is recognised by Articles 14 and 21.

25. Without a clean environment which is stable and unimpacted by the vagaries of climate change, the right to life is not fully realised. The right to health (which is a part of the right to life under Article 21) is impacted due to factors such as air pollution, shifts in vector-borne diseases, rising temperatures, droughts, shortages in food supplies due to crop failure, storms, and flooding. The inability of underserved communities to adapt to climate change or cope with its effects violates the right to life as well as the right to equality. This is better understood with the help of an example. If climate change and environmental degradation lead to acute food and water shortages in a particular area, poorer communities will suffer more than richer ones. The right to equality would undoubtedly be impacted in each of these instances.

[19] (2006) 3 SCC 434.

26. The right to equality may also be violated in ways that are more difficult to remedy. For example, a person living in say, the Lakshadweep Islands, will be in a disadvantageous position compared to person living in say, Madhya Pradesh when sea levels rise and oceanic problems ensue. Similarly, forest dwellers or tribal and indigenous communities are at a high risk of losing not only their homes but also their culture, which is inextricably intertwined with the places they live in and the resources of that place. In India, the tribal population in the Nicobar islands continues to lead a traditional life which is unconnected to and separate from any other part of the country or world. Indigenous communities often lead traditional lives, whose dependence on the land is of a different character from the dependence which urban populations have on the land. Traditional activities such as fishing and hunting may be impacted by climate change, affecting the source of sustenance for such people. Further, the relationship that indigenous communities have with nature may be tied to their culture or religion. The destruction of their lands and forests or their displacement from their homes may result in a permanent loss of their unique culture. In these ways too, climate change may impact the constitutional guarantee of the right to equality.

27. The right to equality under Article 14 and the right to life under Article 21 must be appreciated in the context of the decisions of this Court, the actions and commitments of the state on the national and international level, and scientific consensus on climate change and its adverse effects. From these, it emerges that there is a right to be free from the adverse effects of climate change. It is important

to note that while giving effect to this right, courts must be alive to other rights of affected communities such as the right against displacement and allied rights. Different constitutional rights must be carefully considered before a decision is reached in a particular case.

28. In 2019, the Committee on the Elimination of Discrimination Against Women, the Committee on Economic, Social and Cultural Rights, the Committee on the Protection of the Rights of All Migrant Workers and Members of their Families, the Committee on the Rights of the Child, and the Committee on the Rights of Persons with Disabilities jointly issued a statement in which they recognised that "…*State parties have obligations, including extra-territorial obligations, to respect, protect and fulfil all human rights of all peoples. Failure to take measures to prevent foreseeable human rights harm caused by climate change, or to regulate activities contributing to such harm, could constitute a violation of States' human rights obligations*."[20]

29. Of late, the intersection between climate change and human rights has been put in sharp focus, underscoring the imperative for states to address climate impacts through the lens of rights. For instance, the contribution of the UN High Commissioner for Human Rights to the 2015 Climate Conference in Paris emphasized that climate change directly and indirectly affects a broad spectrum of

[20] UN Office of the High Commissioner, Five UN human rights treaty bodies issue a joint statement on human rights and climate change, 16 September 2019. <https://www.ohchr.org/en/statements/2019/09/five-un-human-rights-treaty-bodies-issue-joint-statement-human-rights-and>.

internationally guaranteed human rights.[21] States owe a duty of care to citizens to prevent harm and to ensure overall well-being. The right to a healthy and clean environment is undoubtedly a part of this duty of care. States are compelled to take effective measures to mitigate climate change and ensure that all individuals have the necessary capacity to adapt to the climate crisis.

30. This acknowledgement of human rights in the context of climate change is underscored in the preamble of the Paris Agreement, which recognizes the interconnection between climate change and various human rights, including the right to health, indigenous rights, gender equality, and the right to development:

> "Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity."

31. The 2015 United Nations Environment Programme report also outlined five human rights obligations related to climate change, including both mitigation and adaptation efforts.[22] In 2018, the UN Special Rapporteur on Human Rights and the Environment emphasized that human rights necessitate states to establish effective laws and

[21] UN Human Rights Office, Understanding Human Rights and Climate Change. Submission of the Office of the High Commissioner for Human Rights to the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change, 26 November 2015.
[22] M. Burger and J. Wentz (eds.), Climate Change and Human Rights, UNEP: December 2015, p.11, 19. <wedocs.unep.org/handle/20.500.11822/9934>

policies to reduce greenhouse gas emissions, aligning with the framework principles on human rights and the environment.[23]

32. The Inter-American Court of Human Rights[24] issued an advisory opinion in 2017 affirming the right to a healthy environment as a fundamental human right. The IACtHR delineated state obligations regarding significant environmental harm, including cross-border impacts, recognizing the inherent relationship between environmental protection and the enjoyment of various human rights. Violations of the right to a healthy environment can reverberate across numerous rights domains, including the right to life, personal integrity, health, water, and housing, as well as procedural rights such as information, expression, association, and participation.

33. In her comprehensive study exploring climate obligations under international law, Wewerinke-Singh underscores the imperative for states to both adapt to and mitigate the impacts of climate change in alignment with human rights principles.[25] This resonates deeply with the burgeoning recognition of the right to a healthy environment as a fundamental human right within the global discourse on environmental protection and sustainability. When discussing the right to a healthy environment, it is crucial to address access to clean and sustainable energy. Clean energy aligns with the human right to a healthy environment, as first recognized by

[23] J.H. Knox, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Human Rights Council, A/HRC/37/59 of 24 January 2018 (available at <undocs.org/A/HRC/37/59>; See also D.R. Boyd, Statement on the human rights obligations related to climate change, with a particular focus on the right to life, 25 October 2018, p. 2 -8.
[24] "IACtHR"
[25] M. Wewerinke-Singh, State Responsibility, Climate Change and Human Rights under International Law, Oxford etc.: Hart 2019, pp. 108-109 and 130.

the UN Special Rapporteur on Human Rights and the Environment in 1994.[26]

34. Unequal energy access disproportionately affects women and girls due to their gender roles and responsibilities such as through time spent on domestic chores and unpaid care work. Women in many developing countries spend on average 1.4 hours a day collecting fuelwood and four hours cooking, in addition to other household tasks that could be supported by energy access.[27] The importance of prioritizing clean energy initiatives to ensure environmental sustainability and uphold human rights obligations cannot be understated.

35. India faces a number of pressing near-term challenges that directly impact the right to a healthy environment, particularly for vulnerable and indigenous communities including forest dwellers. The lack of reliable electricity supply for many citizens not only hinders economic development but also disproportionately affects communities, including women and low-income households, further perpetuating inequalities. Therefore, the right to a healthy environment encapsulates the principle that every individual has the entitlement to live in an environment that is clean, safe, and conducive to their well-being. By recognizing the right to a healthy environment and the right to be free from the adverse effects of climate change, states are compelled to prioritize environmental protection and sustainable development,

[26] UN Special Rapporteur on Human Rights and the Environment (1994). "Draft Declaration of Principles on Human Rights and the Environment." Report to the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities, UN Doc. E/CN.4/Sub.2/1994/9, Appendix.
[27] UN Sustainable Development Goals, Accelerating SDG 7, Achievement Policy Brief- 12 Global Progress of SDG 7—Energy and Gender, UN High-Level Political Forum. 2018. <https://sustainabledevelopment.un.org/content/documents/17489PB12.pdf>

thereby addressing the root causes of climate change and safeguarding the well-being of present and future generations. It is imperative for states like India, to uphold their obligations under international law, including their responsibilities to mitigate greenhouse gas emissions, adapt to climate impacts, and protect the fundamental rights of all individuals to live in a healthy and sustainable environment.

III. Importance of solar power as a source of renewable energy

36. There are many sources of air pollution which harm public health and infringe upon the right to a healthy environment. High levels of pollution caused by industries and vehicular pollution has left Indian cities amongst those with the poorest air quality in the world, posing significant health risks to citizens. Addressing these challenges requires prioritizing the transition to clean and sustainable energy sources, ensuring a healthier environment for all individuals in India, and safeguarding the well-being of future generations, with particular attention to the rights and needs of vulnerable communities. Therefore, while speaking about climate change, the importance of solar power cannot be overstated. In addition to being sustainable and renewable, solar energy stands out as a pivotal solution in the global transition towards cleaner energy sources. Its significance lies in its capacity to significantly reduce reliance on fossil fuels, thereby curbing greenhouse gas emissions responsible for global warming and climate change.

37. India is endowed with vast solar energy potential and receives about 5,000 trillion kWh per year of solar energy, with most regions receiving 4-7 kWh per sqm per

day.[28] Solar photovoltaic power offers immense scalability in India, allowing for effective harnessing of solar energy. Moreover, solar energy facilitates distributed power generation, allowing for rapid capacity addition with short lead times. The impact of solar energy on India's energy landscape has been tangible in recent years. Decentralized and distributed solar applications have brought substantial benefits to millions of people in Indian villages, addressing their cooking, lighting, and other energy needs in an environmentally friendly manner. These initiatives have led to social and economic benefits, including reducing drudgery among rural women and girls, minimizing health risks associated with indoor air pollution, generating employment at the village level, and ultimately improving living standards and fostering economic activities. Additionally, the solar energy sector in India has emerged as a significant contributor to grid-connected power generation capacity. It aligns with India's agenda of sustainable growth and plays a crucial role in meeting the nation's energy needs while enhancing energy security.

38. Solar energy holds a central place in India's National Action Plan on Climate Change, with the National Solar Mission[29] being one of its key initiatives. Launched on 11 January 2010, NSM aims to establish India as a global leader in solar energy by creating favourable policy conditions for the diffusion of solar technology across the country. This mission is in line with India's Nationally Determined Contributions

[28] Ministry of New and Renewable Energy, Solar Overview (2023). See also, Ref. REN21's Global Status Report 2023 & IRENA's Renewable Capacity Statistics 2023.

[29] "NSM"

target, which aims to achieve about 50 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources and reduce the emission intensity of its GDP by 45 per cent from 2005 levels by 2030. India's goal to achieve 500 GW of non-fossil-based electricity generation capacity by 2030 aligns with its efforts to be Net Zero by 2070. In 2023-24, out of the total generation capacity of 9,943 MW added, 8,269 is from non-fossil fuel sources. According to the Renewable Energy Statistics 2023 released by the International Renewable Energy Agency (IRENA), India has the 4th largest installed capacity of renewable energy. [30]

39. The International Solar Alliance[31] was formed at the COP21 held in Paris in 2015, as a joint effort by India and France. It is an international platform with 94 member countries.[32] It works with governments to improve energy access and security worldwide and promote solar power as a sustainable way to transition to a carbon-neutral future. ISA's mission is to unlock USD 1 trillion of investments in solar energy by 2030 while reducing the cost of the technology and its financing. It is partnering with multilateral development banks, development financial institutions, private and public sector organisations, civil society, and other international institutions to deploy cost-effective and transformational energy solutions powered by the sun, especially in the least Developed Countries[33] and the Small Island Developing States[34]

[30] IRENA, 'Renewable capacity statistics 2023'. International Renewable Energy Agency, Abu Dhabi. < https://www.irena.org/Publications/2023/Mar/Renewable-capacity-statistics-2023>
[31] "ISA"
[32] See International Solar Alliance, 'Background' <https://isolaralliance.org/about/background>
[33] "LDCs"
[34] "SIDS"

40. The idea for the One Sun One World One Grid [35]initiative was put forth by India at the First Assembly of the ISA in October 2018. [36] The vision behind the OSOWOG initiative is the mantra that "the sun never sets". This initiative aims to connect different regional grids through a common grid that will be used to transfer renewable energy power and, thus, realize the potential of renewable energy sources, especially solar energy.

41. In 2021, the Green Grids Initiative[37] was launched in partnership with OSOWOG during the COP26 World Leaders' Summit. The UK and India jointly adopted the One Sun Declaration which was endorsed by 92 countries. [38] This represented a flagship area for climate collaboration and established the partnership between the two initiatives to tackle arguably the greatest global challenge to a clean powered future: how to build and operate electricity grids capable of absorbing ever greater shares of renewable energy while meeting growing power demands sustainably, securely, reliably, and affordably.

42. It is imperative for India to not only find alternatives to coal-based fuels but also secure its energy demands in a sustainable manner. India urgently needs to shift to solar power due to three impending issues.[39] Firstly, India is likely to account for 25% of global energy demand growth over the next two decades, necessitating a

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[35] "OSOWOG"
[36] International Solar Alliance, 'Annual Report 2020', pp. 4. <https://isolaralliance.org/uploads/docs/20469ea05e2b897ca9ffec8a17273f.pdf >
[37] "GGI"
[38] Ministry of New Renewable Energy, Green Grids Initiative-One Sun One World One Grid Northwest Europe Cooperative Event, (2022) <https://pib.gov.in/PressReleasePage.aspx?PRID=1763712>
[39] See Invest India, 'One Sun, One World, One Grid: Empowering Sustainability', 10 January 2024. < https://www.investindia.gov.in/team-india-blogs/one-sun-one-world-one-grid-empowering-sustainability>

move towards solar for enhanced energy security and self-sufficiency while mitigating environmental impacts. Failure to do so may increase dependence on coal and oil, leading to economic and environmental costs. Secondly, rampant air pollution emphasizes the need for cleaner energy sources like solar to combat pollution caused by fossil fuels. Lastly, declining groundwater levels and decreasing annual rainfall underscore the importance of diversifying energy sources. Solar power, unlike coal, does not strain groundwater supplies. The extensive use of solar power plants is a crucial step towards cleaner, cheaper, and sustainable energy

43. The geographical landscape of Gujarat and Rajasthan, characterized by vast expanses of arid desert terrain and an abundance of sunlight, positions these regions as prime areas for solar power generation. The arid climate of these desert regions ensures minimal cloud cover and precipitation, resulting in uninterrupted exposure to sunlight for prolonged durations throughout the year. The consistent and intense sunlight creates ideal conditions for photovoltaic (PV) solar panels to efficiently convert solar radiation into electricity. Additionally, the relatively flat topography of these areas facilitates the installation and operation of large-scale solar energy projects, further enhancing their suitability for solar power generation. By harnessing this natural advantage, India can significantly reduce its reliance on fossil fuels and transition towards cleaner energy sources. Solar power not only meets the country's growing energy demands but also helps mitigate the adverse effects of climate change by reducing greenhouse gas emissions.

IV. Climate change litigation in other jurisdictions

44. Climate change litigation serves as a pivotal tool in advancing rights-based energy transitions and promoting energy justice, intertwined with human rights principles.[40] Article 3(1) of the UNFCCC underscores the imperative for parties to safeguard the climate system for the well-being of present and future generations, grounded in equity and is reflective of their differentiated responsibilities and capabilities. This obligation places a particular onus on developed countries to take the lead in addressing climate change and its adverse impacts. Moreover, the mechanisms established under international climate change law contribute to a more comprehensive and cohesive approach to monitoring and implementing Sustainable Development Goal 7 (SDG7) (i.e., ensuring access to affordable, reliable, sustainable and modern energy for all) and related international obligations.[41]

45. Internationally, courts have been confronted with the challenging task of adjudicating cases where significant issues related to climate change are at stake. The topics of environmental degradation, pollution, industries, and infrastructure projects have long formed the corpus of cases before courts across countries. Of late, however, an increasing number of cases are to do with climate change, in one way or another. It is necessary to advert to the judgments from other jurisdictions, not because they have precedential value in the adjudication of this case but to

[40] J Setzer and R Byrnes, 'Global Trends in Climate Change Litigation: 2023 Snapshot', London School of Economics and Political Science, (2023). < https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/06/Global_trends_in_climate_change_litigation_2023_snapshot.pdf>
[41] D Bodansky, 'The Paris Climate Change Agreement: A New Hope?' (2016) 110 American Journal of International Law, 288.

highlight global trends in climate change litigation and to assess the manner in which courts have understood their own role in such litigation.

46. In **State of the Netherlands** v. **Urgenda Foundation,**[42] the respondent sought directions to the State of the Netherlands directing it to reduce the emission of greenhouse gases. The District Court and the Court of Appeal ruled in favour of the respondent. On appeal, the Dutch Supreme Court affirmed the decisions of the lower courts. It acknowledged the obligations under Articles 2 (right to life)[43] and 8 (right to private and family life)[44] of the European Convention on Human Rights,[45] compelling the State to adopt more ambitious climate policies. The case addressed whether the Dutch government was obligated to reduce greenhouse gas emissions originating from its territory by at least 25% compared to 1990 levels by the end of 2020, and whether a judicial intervention was warranted.

47. The Supreme Court of the Netherlands recognized the direct correlation between anthropogenic greenhouse gas emissions and global warming, emphasizing the potentially severe consequences of exceeding a 2°C temperature rise, which could threaten the right to life and disrupt family life.[46] Additionally, it observed that the right to private and family life applies to environmental matters where pollution directly impacts these rights, requiring States to implement "reasonable and

[42] The State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Urgenda Foundation, HR 20 December 2019, ECLI:NL:HR:2019:2006, para 2.1
[43] Convention for the Protection of Human Rights and Fundamental Freedoms (European Convention on Human Rights, as amended), art 2.
[44] *Ibid*, art 8.
[45] "ECHR"
[46] *Ibid.*

appropriate measures" to safeguard individuals from significant environmental harm.[47]

48. In **Sacchi, et al.** v. **Argentina, et al**[48] sixteen children from different countries sent a communication to the Committee on the Rights of the Child[49] alleging violations of their rights under the UN Convention on the Rights of the Child[50] by Argentina, Brazil, France, Germany, and Turkey. The communication asserted that these nations had not reduced their greenhouse gas emissions to an adequate level and that they had failed to curb carbon pollution. Although the CRC found that the communication was inadmissible for failure to exhaust domestic remedies, it affirmed that States exercise effective control over carbon emissions and bear responsibility for transboundary harm arising from such emissions. Notably, it observed that while climate change necessitates a global response, individual states retain accountability for their actions or inactions concerning climate change and their contribution to its effects.

49. In **Ioane Teitiota** v. **The Chief Executive of the Ministry of Business, Innovation and Employment**,[51] the appellant travelled to New Zealand from Kiribati, a small island country in the Pacific Ocean, and remained there after his permit expired. He later applied for refugee status and / or protected person status on the ground that sea levels in Kiribati were rising due to climate change. He anticipated being forced

[47] *Ibid.* Para 5.2.3.
[48] Committee on the Rights of the Child, Sacchi et al. v. Argentina (dec.), 22 September 2021, CRC/C/88/D/104/2019.
[49] "CRC"
[50] "UNCRC"
[51] [2015] NZSC 107.

to leave Kiribati in the future due to this. The relevant authorities rejected his application and the concerned tribunal dismissed the appeal. The appellant sought leave to appeal the decision of the tribunal, which was rejected by two appellate courts. Finally, the Supreme Court of New Zealand dismissed his application for leave to appeal. It held that the appellant would not face serious harm if he returned to Kiribati and that there was "*no evidence that the Government of Kiribati [was] failing to take steps to protect its citizens from the effects of environmental degradation*." Significantly, it also held that its decision in this case would not rule out the possibility of a similar application succeeding in an appropriate case in the future.

50. These cases, all instituted and decided in the past decade, indicate the type of concerns which will travel to the courts in the next few years.

D. The reasons for the modification of the judgement dated 19 April 2021

51. During the course of the hearing, reference has been made to several reports which were prepared by the Wild Life Institute of India, identifying 13,663 square kilometres as the "priority area"; 80,680 square kilometres as "potential areas"; and 6,654 square kilometres as "additional important areas" for the GIB. These areas are distributed between the States of Rajasthan and Gujarat. The tabulation is reproduced below:

AREAS	State of Rajasthan	State of Gujarat	Total

Priority Areas	13,163 sq. kms.	500 sq. kms.	13,663 sq. kms
Potential Areas	78,580 sq. kms	2,100 sq. kms.	80,680 sq. kms
Additionally Important Areas	5977 sq. kms.	677 sq. kms.	6654 sq. kms.

52. During the course of the hearing and by its previous orders, this Court has underscored the importance of taking proactive measures to protect the GIB. The GIB is seriously endangered as a species. At the same time, it has emerged in the course of the hearing that there is no basis to impose a general prohibition in regard to the installation of transmission lines for the distribution of solar power in an area about 99,000 square kilometres. There are several reasons due to which it is not feasible to convert all transmission lines into underground power transmission lines:

a. In view of the diverse factors responsible for the reduction in the population of the GIB as discussed in the preceding paragraphs, the conversion of overhead into underground transmission lines is not likely to lead to the conservation of the species. Other factors such as low fecundity, fragmentation, habitat loss, predators, and loss of prey must be addressed;

b. Underground power transmission cables are available only in 400 kV. The drum size for such cables is 250 m. These cables have a greater number of joints. The current is more likely to leak from joints. For a 1 km stretch, about 4 to 5 joints will be present. When laid for longer distances spanning thousands of kilometres, the number of joints will

increase proportionately. As the number of joints increases, there is a corresponding rise in the risk to safety, especially to farmers under whose land the cables are laid. The downtime of electricity plants will also increase. Further, 400 kV lines can be laid for a maximum of 5 to 8 km;

c. 220 kV lines have been laid underground in some areas. In those places where they have been laid underground, flag marks were placed to trace the route of the cable and to avoid accidents while digging around the cable. However, such marks do not serve their intended purpose in desert regions because of strong winds which blow and carry sand. The effect is that the landscape and sand dunes change. This may cover or otherwise impact the flag markings. In the absence of functional markings, it is unsafe and impractical to underground high voltage cables in deserts;

d. Underground cables do not efficiently transmit AC power. The transmission loss in such cables is higher by about five times;

e. It is difficult and time-consuming to detect faults with underground cables. If there is a delay in attending to and repairing problems with such cables, the rise in the temperature of the cable may result in it bursting. This would endanger the safety of GIBs;

f. The Electricity Act does not contemplate the acquisition of land.

However land may be required to be acquired if cables are to be undergrounded. In contrast, overhead transmission lines require only the right of way;

g. Underground cables may give rise to environmental issues for many vulnerable species. They may also result in forest fires or other fires;

h. The cost of laying underground cables is prohibitive. It is about four to five times higher than laying overhead transmission lines. The cost is estimated to run into thousands of crores. If the cables are undergrounded in their entirety, the cost of harnessing renewable energy would be prohibitive;

i. Cables are not generally used for the evacuation of power from a generating station;

j. The report prepared by the technical expert committee constituted by the Ministry of Power indicates that the undergrounding of transmission lines of 60kV and above is not technically feasible because any outage would result in large generation losses;

k. It is essential to harness power from sources of renewable energy in Rajasthan and Gujarat to meet the rising power demand in the country in an expeditious and sustainable manner. This is also necessitated by India's international commitments with respect to climate change;

l. The area in which undergrounding has been directed to be implemented is about 80,688 sq km, which is larger than many states in India. Even globally, undergrounding of cables in such a large area has not been attempted; and

m. The same area in which undergrounding has been directed to be implemented contains the lion's share of the potential areas from which wind and solar energy may be harnessed. Until now, only 3% of this potential has been tapped. If the remaining potential remains untapped, an additional 93,000 MW of coal would be required in the future. An estimated 623 billion kg of carbon dioxide would be released from coal fired power generation. This would significantly damage the environment and hinder global efforts to combat climate change. Thermal power plants would also adversely impact the health of the local populace.

53. In addition to the reasons listed above, it is imperative to recognize the intricate interface between the conservation of an endangered species, such as the Great Indian Bustard, and the imperative of protecting against climate change. Unlike the conventional notion of sustainable development, which often pits economic growth against environmental conservation, the dilemma here involves a nuanced interplay between safeguarding biodiversity and mitigating the impact of climate change. It is

not a binary choice between conservation and development but rather a dynamic interplay between protecting a critically endangered species and addressing the pressing global challenge of climate change.

54. India's commitment to promoting renewable energy sources, particularly in regions like Gujarat and Rajasthan, aligns with its broader sustainable development objectives. By transitioning towards solar power and other renewable energy sources, India aims to not only reduce carbon emissions but also improve energy access, foster economic growth, and create employment opportunities.

55. India's commitment to sustainable development is also underpinned by its international obligations and commitments. As a signatory to various international conventions and agreements, including the UNFCCC and the Convention on Biological Diversity, India has pledged to uphold principles of environmental stewardship, biodiversity conservation, and climate action on the global stage. Through partnerships, knowledge sharing, and collaborative action, India seeks to amplify the impact of its sustainable development efforts, contributing to collective efforts aimed at addressing global challenges.

56. Needless to say, it is the duty of the Court to give effect to international agreements and treaties to which India is a party. In **Entertainment Network (India) Ltd.** v. **Super Cassette Industries Ltd.**,[52] this Court observed that it has relied on international law extensively including for the purpose of fulfilling the spirit of

[52] (2008) 13 SCC 30.

international obligations which India has entered into, when they are not in conflict with the existing domestic law.[53] It also rightly observed:

> "80. Furthermore, as regards the question where the protection of human rights, environment, ecology and other second-generation or third-generation rights is involved, the courts should not be loathe to refer to the international conventions."

57. In **Apparel Export Promotion Council** v. **A.K. Chopra**,[54] this Court cited numerous cases which constituted precedent for the proposition that this Court must give effect to international instruments which India is party to:

> "This Court has in numerous cases emphasised that while discussing constitutional requirements, court and counsel must never forget the core principle embodied in the international conventions and instruments and as far as possible, give effect to the principles contained in those international instruments. The courts are under an obligation to give due regard to international conventions and norms for construing domestic laws, more so, when there is no inconsistency between them and there is a void in domestic law. (See with advantage — Prem Shankar Shukla v. Delhi Admn. [(1980) 3 SCC 526 : 1980 SCC (Cri) 815 : AIR 1980 SC 1535] ; Mackinnon Mackenzie and Co. Ltd. v. Audrey D' Costa [(1987) 2 SCC 469 : 1987 SCC (L&S) 100 : JT (1987) 2 SC 34] ; Sheela Barse v. Secy., Children's Aid Society [(1987) 3 SCC 50, 54 : 1987 SCC (Cri) 458] SCC at p. 54; Vishaka v. State of Rajasthan [(1997) 6 SCC 241 : 1997 SCC (Cri) 932 : JT (1997) 7 SC 384] ; People's Union for Civil Liberties v. Union of India [(1997) 3 SCC 433 : 1997 SCC (Cri) 434 : JT (1997) 2 SC 311] and D.K. Basu v. State of W.B. [(1997) 1 SCC 416, 438 : 1997 SCC (Cri) 92] SCC at p. 438.)"

[53] This position has been reiterated by various other decisions of this Court. See, for instance, National Legal Services Authority v. Union of India, (2014) 5 SCC 438.
[54] (1999) 1 SCC 759.

58. India’s international obligations and commitments in the present case (detailed in the preceding segments of this judgment) have not been enacted in domestic law. Regardless, the Court must be alive to these obligations while adjudicating writ petitions which seek reliefs that may hinder these obligations from being fulfilled or otherwise interfere with India’s international commitments as well as the right to be free from the adverse effects of climate change.

59. Beyond mere adherence to international agreements, India's pursuit of sustainable development reflects the complex interplay between environmental conservation, social equity, economic prosperity and climate change. Its national goals in this regard require a holistic understanding of sustainable development that balances immediate needs with long-term sustainability, ensuring that present actions do not compromise the well-being of future generations. It acknowledges that solutions to today's challenges must not only address pressing issues but also lay the groundwork for a resilient and equitable future.

60. While balancing two equally crucial goals - the conservation of the GIB on one hand, with the conservation of the environment as a whole on the other hand - it is necessary to adopt a holistic approach which does not sacrifice either of the two goals at the altar of the other. The delicate balance between the two aims must not be disturbed. Rather, care must be taken by all actors including the state and the courts to ensure that both goals are met without compromising on either. Unlike other competing considerations, these do not exist in disjunctive silos. Therefore, a

dilemma such as the present one does not permit the foregrounding of one of these as a priority, at the cost of the other. If this Court were to direct that the power transmission lines be undergrounded in the entire area delineated above, many other parts of the environment would be adversely impacted. Other endangered species may suffer due to the emission of harmful gases from fossil fuels. Rising temperatures and the attendant evils of climate change may not be halted in a timely fashion, leading to disastrous consequences for humankind and civilisation as a whole. The existential threat may not be averted.

61. Moreover, the decision on whether to convert the overhead power transmission lines into underground lines is a matter of environmental policy. While adjudicating writ petitions which seek reliefs which are of the nature sought in the present case, this Court must conduct judicial review while relying on domain experts. Those who are equipped and trained to assess the various facets of a problem which is litigated before the Court must be consulted before a decision is taken. If this is not done, the Court may be in danger of passing directions without a full understanding of the issue in question. Consequently, in the absence of evidence which forms a certain basis for the directions sought, this Court must be circumspect in issuing sweeping directions. In view of the implications of the direction issuing a blanket prohibition on overhead transmission lines, we are of the view that the direction needs to be recalled and it will be appropriate if an expert committee is appointed. The committee may balance the need for the preservation of the GIB which is non-negotiable, on one hand, with the need for sustainable development, especially in

the context of meeting the international commitments of the country towards promoting renewable sources of energy, on the other hand. By leveraging scientific expertise and engaging stakeholders in meaningful consultations, this approach ensures that conservation efforts are grounded in evidence and inclusive of diverse perspectives.

62. We are accordingly of the view that the order passed by this Court on 19 April 2021 needs to be suitably modified. A blanket direction for undergrounding high voltage and low voltage power lines of the nature that was directed by this Court would need recalibration for the reasons discussed above. This task is best left to domain experts instead of an a priori adjudication by the Court. Experts can assess the feasibility of undergrounding power lines in specific areas, considering factors such as terrain, population density, and infrastructure requirements. This approach allows for more nuanced decision-making tailored to the unique circumstances of each location, ensuring that conservation objectives are met in a sustainable manner.

63. During the course of the hearing, we had requested Mr Shyam Divan, senior counsel appearing on behalf of the petitioners, Mr R Venkataramani, Attorney General for India, Mr. Tushar Mehta, Solicitor General of India, and Ms Aishwarya Bhati, Additional Solicitor General to propose names of experts for the constitution of a Committee to perform the task which the Court will assign to it.

64. Having received their suggestions and upon evaluating them, we constitute an Expert Committee, the composition of which will be as follows:

(i) Director, Wildlife Institute of India, Dehradun;

(ii) Dr Hari Shankar Singh, Member, National Board for Wildlife;

(iii) Dr Niranjan Kumar Vasu, Former Principal Chief Conservator of Forest;

(iv) Mr B Majumdar, former Chief Wildlife Warden and Principal Chief Conservator of Forest, Maharashtra;

(v) Dr Devesh Gadhavi, Deputy Director, The Corbett Foundation.

(vi) Shri Lalit Bohra, Joint Secretary (Green Energy Corridor), Ministry of New and Renewable Energy; and

(vii) Joint Secretary, Ministry of Environment, Forests and Climate Change.

65. Since the work of the Committee, as assigned below, would also traverse the area of the setting up of transmission lines to facilitate solar power generation, we direct that the Committee shall consist of the following two special invitees:

(i) Shri Ashok Kumar Rajpur, Member Power Systems, Central Electricity Authority; and

(ii) Mr. PC Garg, Chief Operating Officer, Central Transmission Utility of India Ltd.

66. The remit of the Committee which has been appointed by the Court shall encompass the following:

a. Determining the scope, feasibility and extent of overhead and underground electric lines in the area identified as priority areas in the reports of the Wild Life Institute of India in the States of Rajasthan and Gujarat;

b. The need for adopting conservation and protection measures for the GIB as well as other fauna specific to the topography;

c. Identification of the measures to be adopted in the priority areas to ensure the long-term survival of the GIB and facilitating an increase in its population. Such measures may include habitat restoration, anti-poaching initiatives, and community engagement programs;

d. Evaluating the potential consequences of climate change on GIB habitats, considering factors such as shifting precipitation patterns, temperature extremes, habitat degradation and developing adaptive management strategies to enhance their resilience;

e. Identification of suitable options in the context of sustainable development in the matter of laying power lines in the future. The alternatives identified should balance the conservation and protection of the GIB with the arrangement of power lines in a manner that would facilitate the fulfilment of the international commitments made by India for developing renewable sources of energy.

f. Engaging with relevant stakeholders, including government agencies, environmental organizations, wildlife biologists, local communities, and energy

industry representatives, to solicit inputs, build consensus, and promote collaborative efforts towards achieving conservation and sustainable development goals;

g. Conducting a thorough review of conservation efforts and innovative approaches in similar contexts globally, such as the Houbara Bustard in the Middle East or the Black Stilt in New Zealand, to inform best practices;

h. Implementing a robust monitoring and research program to track GIB populations, habitat dynamics, and the effectiveness of conservation measures over time. This may include employing techniques such as satellite tracking, camera trapping, and ecological surveys to gather essential data for informed decision-making; and

i. Adopting any additional measures both in regard to the priority and potential areas, as the Committee considers appropriate including considering the efficacy and suitability of installing bird diverters on existing and future power lines on the basis of a scientific study. The installation of sub-standard bird diverters which are of a poor quality would give the impression that conservation efforts are underway even as such efforts are destined for failure. Hence, it is of utmost importance to ensure that any direction by the Committee to install bird diverters by any party whose activities concern the GIB (including private operators) is implemented by installing bird diverters of a requisite standard and quality. Accordingly, if the Committee is of the view that the installation of bird diverters would subserve the conservation of the GIB species, it shall identify the indicators of high-quality bird diverters and

specify the parameters that they must meet before they are installed. The Central Electricity Authority, Ministry of Power has released a document titled 'Technical Specification for Bird Flight Diverter'. These specifications concern the GIB in particular. By its undated letter to various power transmission companies and other concerned parties, the Central Electricity Authority noted that it had received complaints stating that the quality of the bird diverters being installed was unsatisfactory. It also requested the addressees to install diverters which are of a high quality. The relevant portion of the letter is extracted below:

> "We are in receipt of complaint/representation that poor quality bird flight diverters are being installed on the lines and sometimes disc of bird diverter is found strewn in the farm and land below transmission lines that may be due to poor quality of the product, inadequate designe by manufacturer, not installed properly due to lack of experienced manpower etc.
>
> CEA's "Technical Specifications for Bird Flight Diverter" were prepared after consultation with utilities and manufacturers. The document specifies that the minimum expected service life of the bird flight diverter should be at least 15 years and to ensure that the supplied bird diverter is of good quality, various tests have also been specified. To safeguard the Great Indian Bustard which is on the verge of extinction and other birds, you are requested to take necessary action so that good quality bird flight diverters are installed which shall be durable and effective for whole life and to be installed by experienced professionals so that these diverters can serve their designated purpose."

67. The Committee shall be at liberty to assess the efficacy of bird diverters and subject to its own findings on efficacy, to lay down specifications for bird diverters with due

regard to the parameters specified by the Central Electricity Authority. It shall also identify the number of bird diverters required for the successful implementation of conservation efforts. In this regard, the Committee may also consider the recommendations of the technical expert committee constituted by the Ministry of Power by OM No 25–7/42/2019 – PG dated 27 May 2022.

68. The injunction which has been imposed in the order dated 19 April 2021 in respect of the area described as the priority and potential areas shall accordingly stand recalled subject to the condition that the Expert Committee appointed by this Court may lay down suitable parameters covering both the priority and potential areas.

69. In the event that the Committee considers it appropriate and necessary to do so, it would be at liberty to recommend to this Court any further measures that are required to enhance the protection of the GIB. This may include identifying and adding suitable areas beyond the designated priority zones outlined above, if deemed crucial for the conservation of the species. Such additional areas could serve as vital habitats, corridors, or breeding grounds for the GIB, contributing significantly to its long-term survival.

70. We request the Committee to complete its task and submit a report to this Court through the Union Government on or before 31 July 2024.

71. In its affidavit, the Union of India has detailed the steps it has taken thus far and has also undertaken to implement a host of measures in the future, which are aimed at conserving the critically endangered GIB. They include:

a. The Ministry of Environment, Forest and Climate Change has implemented the national GIB Project which undertakes ex-situ conservation measures to provide and conserve habitats into which captive bred birds may be released. Insulation breeding centres will be established in range states other than Rajasthan where they do not currently exist. In-situ operations will be implemented in the desert National Park Sanctuary, Rajasthan, Kachch Bustard Sanctuary, Gujarat, Great Indian Bustard Sanctuary, Maharashtra, Rollapadu Sanctuary, Andhra Pradesh, Ranebennur Sanctuary, Karnataka and Ghatigao Sanctuary, Madhya Pradesh;

b. Predator-proof enclosures will be developed to prevent the entry of predators including foxes, mongooses, hedgehogs, and monitor lizards. Anthropogenic activities will not take place in these enclosures;

c. Local grass seed dissemination will be used to restore degraded grasslands. Water will be supplied to these grasslands;

d. Undesirable and invasive species will be eliminated to make the grasslands more friendly to GIBs released from captivity;

e. GIB movement shall be monitored using satellite telemetry;

f. Ongoing administration and maintenance will include the repair and restoration of water points and historic watch towers as well as the maintenance of existing fences and fire lines;

g. ‘National Bustard Day’ will be celebrated to highlight the need for conservation;

h. Capacity building programmes will be conducted and collaboration with scientific organisations will be fostered. Further, local stakeholders will be involved in initiatives aimed at conserving the GIB and awareness programs will be implemented in the relevant areas;

i. As the majority of villages and settlements in the concerned region depend on grasslands for the supply of fodder, the pastures in these lands are in need of revival. These lands will be revived and innovative strategies of fodder management will be implemented; and

j. The conservation activities detailed above will be upscaled from the financial year commencing on 1 April 2024 and will continue for at least ten years.

72. The Union of India and the concerned ministries are directed to implement the measures described in the preceding paragraph, which it has undertaken to implement. Further, they are directed to continue implementing the measures detailed in paragraph 8(d) of this judgment. The directions contained in the order dated 19 April 2021 shall accordingly stand substituted by those contained in the present judgment. The project clearances which have been granted pursuant to the recommendations of the earlier committee appointed in terms of the order dated 19 April 2021 shall not be affected by the present judgment.

73. This Court records its appreciation to the work which was done by the Committee which was appointed in terms of the order dated 19 April 2021.

74. List in the second week of August 2024 for consideration of the report of the expert committee appointed in terms of the present judgment.

.....CJI
[Dr Dhananjaya Y Chandrachud]

.....J
[J B Pardiwala]

.....J
[Manoj Misra]

New Delhi
March 21, 2024