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INDIA'S "GREEN HYDROGEN" MIRAGE

Built by Jeopardizing Water Security, Communities, and Climate Integrity

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Abstract

India's National Green Hydrogen Mission (NGHM), launched with the ambition of making the country a global hub and exporter, is promoted as a cornerstone of its climate strategy. This article argues that, far from being a genuine solution, the mission constitutes a dangerous mirage that sacrifices water security, environmental justice, and climate integrity for corporate profit. By exempting projects from environmental clearance and fast-tracking them in water-stressed regions, the policy systematically dismantles ecological safeguards under the banner of "ease of business."

The critique is structured around three fundamental flaws. First, the mission ignores the profound water-energy nexus, revealing that achieving its 2030 production target would consume 150 billion liters of water—a catastrophic redistribution of a scarce resource from citizens to industry in a water-scarce nation. Second, it functions as a sophisticated greenwashing mechanism for the very industries responsible for the current polycrisis. By providing a "green" label to hydrogen used in petroleum refining and fertilizer production, the NGHM offers a public-funded technological patch that allows polluters to claim decarbonization while continuing their core, polluting operations and sidestepping essential detoxification.

Finally, drawing on global experiences from Germany, Australia, and Namibia, the article demonstrates how the green hydrogen push replicates patterns of resource colonialism, leading to land dispossession, ecological damage, and broken promises for frontline communities. The conclusion asserts that true climate justice requires a radical shift from mere decarbonization stunts to comprehensive detoxification. This entails challenging the underlying industrial paradigm and redirecting vast public funds from corporate hydrogen hubs toward healing poisoned lands, securing community water sovereignty, and building decentralized, community-controlled energy systems. The article ultimately calls for a rejection of technological solutions that extend the life of the fossil fuel economy and advocates for a transition that ends this paradigm, rather than finding new ways to fuel it.

Keywords: Green Hydrogen, Environmental Justice, Greenwashing, Water Scarcity, India Energy Policy

Background

In recent times, a week doesn't pass by without news on Green Hydrogen. The Green Hydrogen (GH) industry is seen as a sunrise sector and India aims to assume technology and market leadership in Green Hydrogen. Many corporations such as Reliance Industries Ltd, Larsen & Toubro, ACME, Adani, Avaada energy Ltd, Essar, Greenko, Tata Steels SEZ, Sembcorp green, Welspun New Energy Ltd, NTPC, Oicor, ReNew, ONGC, Waaree Clean Energy, and more are lining up in the hope of making bumper profits from India's Green Hydrogen push[1].

In January 2023, the government of India launched the National Green Hydrogen Mission (NGHM) with the goal of becoming the new global hub of green hydrogen and also its largest exporter. Under NGHM, India aims to produce 5 Million Metric tonnes (MMT) by 2030 with a budget outlay of ₹17,490 crores through a programme called 'Strategic Interventions for Green Hydrogen Transition (SIGHT)'. The SIGHT programme allocates the aforementioned amount for two components- ₹4,440 Crores for domestic manufacturing of electrolysers (Component-1), and ₹13,050 crores for green hydrogen production (Component-2)[2]. In addition to the SIGHT budget, a sum of ₹1,466 crores for pilot projects, ₹400 crores for research and development (R&D), and ₹388 crores for other components of the Mission were allocated, making the total budget for the mission to ₹19,744 crores[3].

The Many Shades of Hydrogen (H2)

H2 is the first element in the periodic table. It is the lightest, simplest and abundant element in the universe. H2 is an energy carrier, not a primary energy source[4]. Unlike sunlight or wind, which are energy sources, hydrogen must be produced using energy, much like electricity. It exists in two forms: gaseous in ambient temperatures and as a liquid at -253°C (-423°F)[5]. Gaseous H2 is colorless, odorless and highly inflammable[6].

1. https://nghm.mnre.gov.in/project?language=en
2. https://nghm.mnre.gov.in/supply-incentives?language=en
3. https://gh2.org/countries/india
4. https://www.energy.gov/eere/articles/hydrogen-flexible-energy- carrier#:~:text=Hydrogen%20can%20be%20used%20in%20fuel%20cells,while%20transportation%20and%20utilities%20are%20emerging%20markets
5. https://h2tools.org/bestpractices/best-practices-overview/hydrogen-basics/liquid-hydrogen-properties-and- behaviors
6. https://h2tools.org/bestpractices/best-practices-overview/hydrogen-basics/gaseous-hydrogen-properties- and-behaviors

Although H2 is abundantly present on earth, it is not available in its purest forms but nearly always found as part of another compound, such as water (H2O) or hydrocarbons (eg: CH4). Therefore, H2 must be separated from these compounds using chemical or electrochemical reactions before it can be used. Currently, H2 is majorly produced from natural gas (68%), oil (16%), coal (11%) and from water via electrolysis (5%)[7].

Depending on the type of chemical process and energy used for producing, H2 is classified after different colours such as grey, brown/black, blue, green, pink/purple, turquoise, yellow, etc[8]. This does not refer to its appearance. The 'green' in green hydrogen refers to its ostensibly renewable origin: it is sourced through relatively clean water using renewable energy.

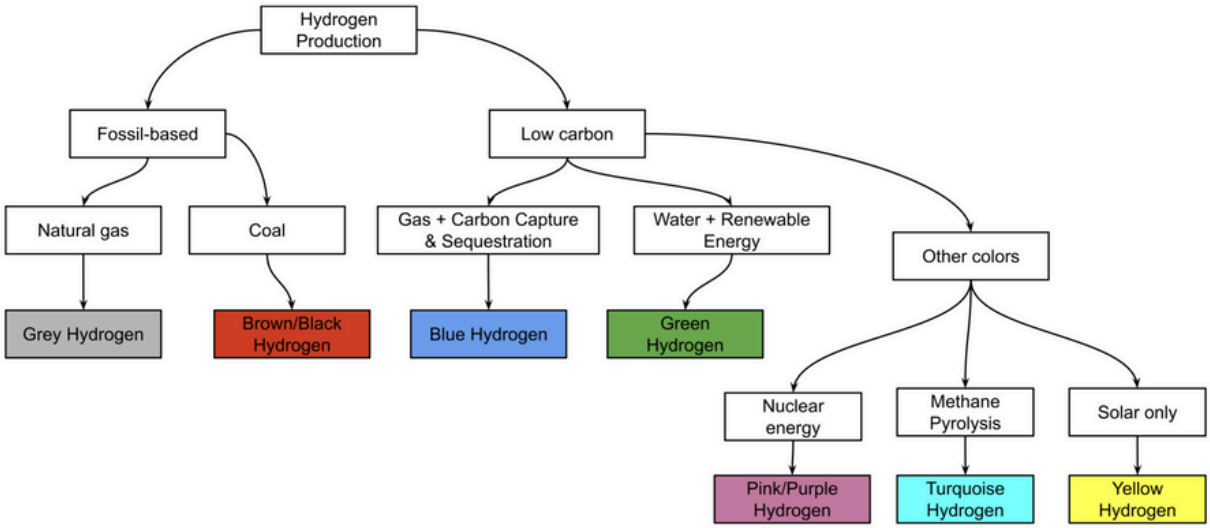

Image Showing Different Shades of Hydrogen

How Is Hydrogen Used as a Fuel

Globally, 90% of the H2 is used as an industrial feedstock[9] and this is where green H_2 is intended as a "drop-in" replacement. Thus, this replacement does not change the industrial process, only its carbon footprint. Here are the details of hydrogen consumption by industrial sector (Fig 1):

- In the Agricultural and Chemical Industry (55%): H2 is the basic raw material necessary to produce one of the most important fertilizers used in the agricultural sector, Ammonia (NH3).

7. https://www.sciencedirect.com/science/article/abs/pii/S0360319924026090
8. https://www.belfercenter.org/research-analysis/colors-hydrogen
9. https://wha-international.com/hydrogen-in-industry/

- In the Petroleum Refining and Methanol production Industry (35%): H2 is most commonly used in this sector in the process of 'hydrocracking' to break down complex hydrocarbon molecules into smaller molecules to produce petroleum products, including gasoline and diesel. It is also used to remove contaminants like sulfur and to create methanol (CH3OH).
- Other Sectors (10%) include:
  - Food industry: To convert unsaturated fats into saturated oils and fats, including hydrogenated vegetable oils.
  - Metalworking: It is used in processes like metal alloying to enhance properties like strength and corrosion resistance.
  - Welding: It is used in a type of welding to create a flame that melts metals called atomic hydrogen welding (AHW).
  - Flat Glass Production: In production of this type of the glass which is mainly used for windows and glass doors, H2 and nitrogen are used to prevent oxidation and defects during manufacturing.
  - Electronics Manufacturing It's used to create semiconductors, LEDs, displays, photovoltaic segments, and other electronics.
  - Medical: It is used to produce hydrogen peroxide (H2O2), a commonly used antiseptic.
  - Energy industry: Currently, H2 is used as an energy carrier in a limited capacity and is principally limited to road vehicles[10]. The technology behind this is the hydrogen fuel cell, an electrochemical cell that uses the chemical energy of hydrogen to generate electricity.

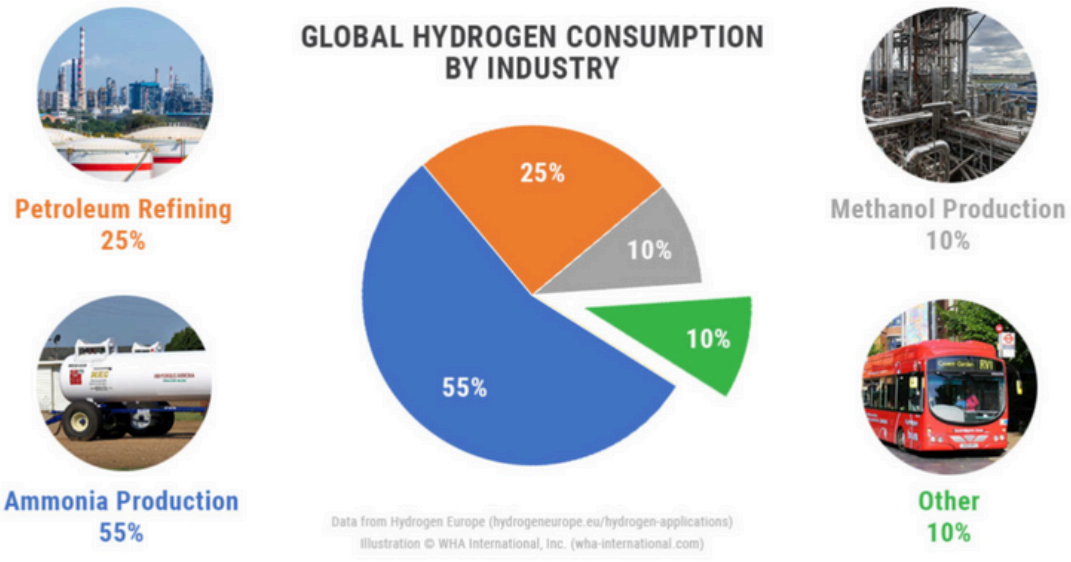

Image Source: WHA International, Inc.

10. https://www.irena.org/Energy-Transition/Technology/Hydrogen#:~:text=As%20at%20the%20end%20of,is%20further%20converted%20to%20derivatives

Currently, India uses about 5 million metric tons per annum (MMTPA) of grey H2 produced using natural gas. About 99% of this is used in petroleum refining and manufacturing of ammonia for fertilizers[11]. The subject of discussion here is “Green Hydrogen”, which is produced through splitting of water into H2 and O2 gases by the process of electrolysis which is powered entirely by renewable electricity (from solar or wind). The overall equation for the electrolysis of water is: $2H_2O \longrightarrow 2H_2 + O_2$

The "green" refers solely to this production method and does not say about the sustainability of its eventual use or the water/resources consumed to make it.

The Water Heist: Dollars Fueling Droughts

On an average, nearly 11 liters of demineralised water is required for electrolysis and additionally, approximately 20 liters is required for cooling processes and water treatment to produce 1 kilogram of Hydrogen (H2)[12]. That is, on a conservative approach, the total water footprint for producing 1 Kg H2 is nearly 30 liters of water. To achieve its ambitious target of producing up to 5 MMT of green H2, India would require approximately 150,000,000,000 liters- that is, 150 billion liters of water by 2030. In other words, this volume could nearly solve the year-long water crisis of Chennai, a city that faced 'Day Zero' in 2019. With Chennai's projected 2030 water demand-supply deficit at 466 million liters per day (MLD)[13], 150 billion would satisfy nearly 88% of the city's annual shortfall. The above conservative estimate shows that to achieve the government's 5 MMT by 2030 target would require approximately 150 billion liters of water annually. However, this analysis likely understates the scale of the impending water demand. According to a November 2025 report from the Institute for Energy Economics and Financial Analysis (IEEFA), the total announced green hydrogen capacity in India has already reached 11.2 MMTPA, which is nearly 2.4 times the official 2030 target. Should these announced projects materialize, the annual water footprint could scale up to an estimated 336 billion liters, drastically escalating the pressure on the nation's already stressed water resources.

11. https://nghm.mnre.gov.in/demand-creation?language=en
12. https://www.sciencedirect.com/science/article/abs/pii/S0196890424008112
13. https://www.downtoearth.org.in/water/another-bengaluru-in-the-making-chennai-s-main-drinking-water-source-veeranam-lake-dries-up-95592

According to NITI Aayog, India is experiencing severe water scarcity with almost 600 million people subjected to extreme water stress[14]. The country's per capita water availability for 2025 shows that, majority of India is experiencing water scarcity (500-1000m3) and few places in Tamil Nadu are experiencing absolute water scarcity (<500m3). While the cities such as Mumbai[15], Bangalore[16], Delhi[17], Chennai and Kolkata[18] struggle to supply the required drinking water, India's green H2 dreams aim to redistribute water from citizens to corporations.

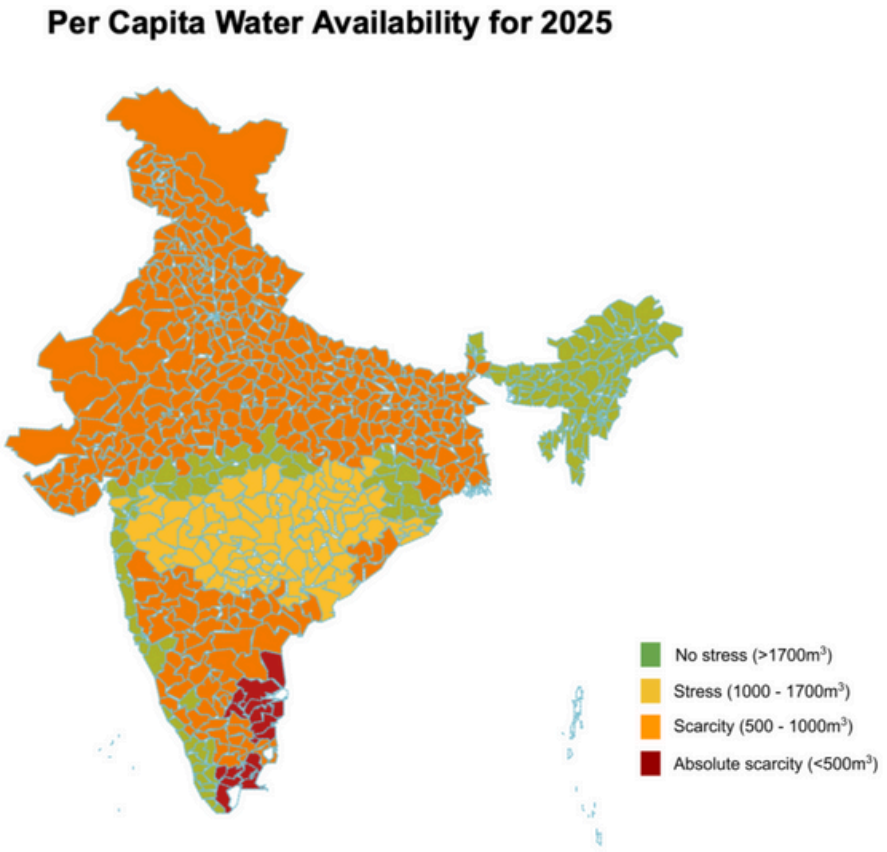

Image source: NITI Aayog's India Climate and Energy Dashboard

14. https://www.epw.in/engage/article/parched-nation-analyzing-indias-water-scarcity#:~:text=According%20to%20NITI%20Aayog's%20%E2%80%9CComposite%20Water%20Management,people%20experiencing%20high%20to%20extreme%20water%20stress.&text=Water%20scarcity%20is%20a%20multidimensional%20phenomenon%20that,sociopolitical%20factors%20affecting%20equitable%20access%20to%20water.
15. https://indianexpress.com/article/cities/mumbai/mumbai-water-supply-disparity-10018212/#:~:text=%E2%80%9CThe%20total%20water%20supply%20to,is%20supplied%20in%20slums%20daily
16. https://www.downtoearth.org.in/water/another-bengaluru-in-the-making-chennai-s-main-drinking-water-source-veeranam-lake-dries-up-95592
17. https://www.hindustantimes.com/cities/delhi-news/delhi-targets-1-000-mgd-water-supply-for-summer-101745173465529.html
18. https://www.downtoearth.org.in/environment/city-of-sorrows-12134#:~:text=As%20per%20the%20Kolkata%20Municipal,mld%20between%20demand%20and%20supply

Decarbonisation Vs Detoxification: Greenwashing of Fossil Fuel Industrial Pollution

Our Country consumes about 5MMT of Grey H2 annually, and about 99 percent of this quantity is utilized in petroleum refining for desulphurisation and hydrocracking, and manufacture of Ammonia for urea and production of other fertilizers[19]. It is crucial to understand that green hydrogen's primary application is not for new, "green" processes, but to serve as a direct substitute for the grey hydrogen already being consumed in vast quantities by the petroleum and fertilizer industries.

Essentially, the same refineries and plants that have historically polluted air, water, and soil are now being offered a publicly-funded technological patch. This allows them to claim "decarbonization" by switching the color of their hydrogen input, while continuing their core, polluting operations and sidestepping the necessary deeper detoxification. The "green" label thus becomes a shield for business-as-usual. Thus, India's green H2 race is rebranding industrial pollution as climate action and perpetuating the environmental discrimination against the marginalized and vulnerable communities in full swing.

Dirty Realities of the Refineries

In Haryana, the Indian Oil Corporation announced its venture into the green H2 race with a 10,000 TPA plant in its Panipat Refinery is an important case study. This move exemplifies how heavy polluters are treating green hydrogen as yet another investment arena and an opportunity to brand themselves as 'green' without addressing the ongoing environmental and health fallout of their core fossil-based operations. This green veneer masks the grim reality ofthe existing refinery which continues to processes 15 MMTPA of crude oil[20], an operation, which would contribute to approximately 46.8 MMT CO2[21]. While the CO2 aggravates the climate catastrophe, a joint inspection report[22] by a joint committee consisting of the Haryana State Pollution Control Board, Central Pollution Control Board and Council for Scientific and Industrial Research- National Environmental Engineering

19. https://nghm.mnre.gov.in/demand-creation?language=en
20. https://iocl.com/pages/panipat-refinery
21. The estimation was calculated based on the emission factors provided in the introduction chapter and the formula provided in Stationary Combustion chapter of 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
22. https://www.downtoearth.org.in/waste/plastic-s-toxic-trail-the-curious-case-of-india-s-petrochemical-refineries-95790

Research Institute (CSIR-NEERI) revealed that untreated effluent was being discharged in green belts, and ambient air quality was exceeding norms. The report also stated that more than 7,500 people around the Panipat refinery have their health impacted because of these violations between the years 2015 and 2019. Even, National Green Tribunal levied Rs 25 crore fine on Panipant refinery for its environmental violations[23].

Dirty Realities of Fertilizers

A similar situation resonates with the fertilizer industrial sector in India. The fertilizer sector's shift to adopt green H2, thus green ammonia, does not address the widespread prevalence of nitrogen contamination and deteriorating soil health[24]. For instance, in states like Punjab, a state with a strong agricultural base and produce staple crops such as rice, maize, sugarcane and barley[25], the health of the farming communities are declining and it is directly linked with the use of fertilizers and pesticides[26]. In addition to worsening soil health, the people living in the vicinity of these fertilizer industries experience countless ammonia gas leaks and resulting health impacts. The leaks sometimes will be localised and impact only the workers[27] or occur dispersed into the ambient air and impact the surrounding communities[28]. Therefore, it becomes imperative that utmost efforts need to be made to detoxify our polluting industries rather than just decarbonising.

The critical implication is this: What is the value of making hydrogen 'green' if its primary purpose is to manufacture the same polluting fertilisers that degrade soil health, contaminate water with nitrates, and harm public health? This approach does not represent a meaningful transition; it merely provides a 'green' lifeline to an unsustainable agricultural model. It focuses solely on cleaning up one input while ignoring the systemic damage caused by the final product, thereby perpetuating the cycle of pollution under a new, greenwashed guise.

23. https://indianexpress.com/article/cities/chandigarh/ngt-slaps-rs-25-crore-penalty-on-ioc-for-violation-of-green-norms-by-panipat-refinery-6524123/
24. https://www.newindianexpress.com/states/karnataka/2024/Jul/18/increasing-nitrogen-pollution-in-soil-affecting-farm-sector-says-report
25. https://www.ibef.org/states/punjab
26. https://kunakair.com/pollution-from-the-fertiliser-industry-and-its-impact-on-air-quality/
27. https://www.hindustantimes.com/lucknow/uttar-pradesh-nine-workers-faint-after-ammonia-leakage-at-fertiliser-plant/story-cvsD1NnGpVPwKSLn2u0KpN.html
28. https://www.hindustantimes.com/india-news/ammonia-gas-leak-at-tamil-nadu-unit-over-50-hospitalised-101703705403945.html

Green Gimmicks: Building Bridges to Nowhere

The surge in green H2 infrastructure such as pipelines, storage hubs, refueling stations, electrolyser clusters[29], etc are mostly done by private industrial players like Adani, Reliance Industries, ACME, etc, and also by PSUs such as IOCL, GAIL, BPCL, etc. This is a Trojan horse for fossil fuel lock-in. This is because the current policy does not mandate that electrolysers run only when renewable energy is directly available from the grid[30]. In practice, to maximize operational hours and economic returns, plants are likely to draw power 24/7. During the night or when the sun isn't shining, this electricity will inevitably come from India's grid, which is over 70% powered by coal. A 2024 report highlighted that if electrolysers run on this coal-heavy grid power, the resulting hydrogen would have higher embodied emissions than conventional grey hydrogen produced from fossil gas, making it "brown hydrogen"[31] in practice. And, only now a plant with 5 MW capacity is piloted with off-grid electricity supply by Adani[32]. Furthermore, India's Green Hydrogen Policy from February 2022 definition's inclusion of biomass as a "renewable" source[33] is equally problematic. The gasification of biomass can release significant carbon emissions, and the challenges associated with the high amount of tar formation, and the high cost and complexity of biomass collection and transportation[34].

Risk assessments done on green H2 megaprojects highlight that energy projects rushed at this scale have seen capital costs double or triple from initial estimates, with over 50% failing to meet production goals at startup due to new technology introductions, site-specific characteristics, and project complexity"[35] Additionally, the transportation of pure H2 requires specialized pipelines or by being compressed at extreme pressure or converting it into liquid form at -253°C or converting into other chemicals like ammonia[36].

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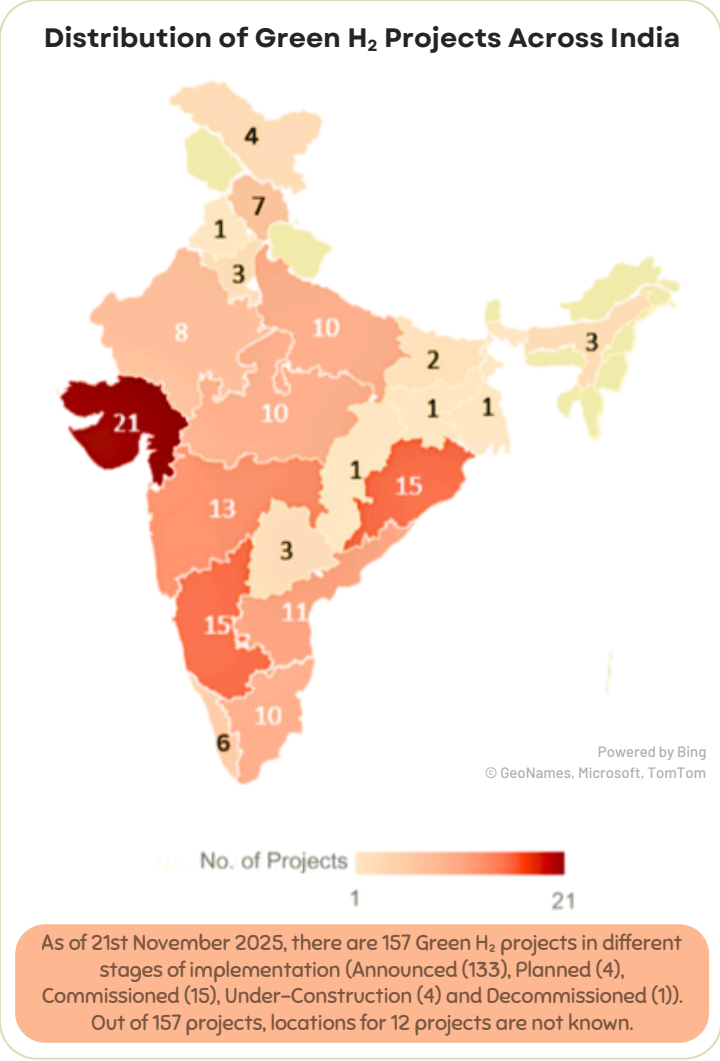
29. https://www.pib.gov.in/PressReleseDetail.aspx?PRID=2108170
30. https://powermin.gov.in/sites/default/files/Green_Hydrogen_Policy.pdf
31. https://climateriskhorizons.com/app/uploads/2025/10/Green-Hydrogen.pdf
32. https://www.angelone.in/news/adani-group-launches-india-s-first-off-grid-5-mw-green-hydrogen-plant-in-gujarat
33. Ibidis 31
34. https://www.sciencedirect.com/science/article/abs/pii/S1364032113006l4X
35. https://www.sciencedirect.com/science/article/pii/S1359431124028655?via%3Dihub
36. https://theconversation.com/green-hydrogen-is-a-clean-fuel-but-south-africas-not-ready-to-produce-it-energy-experts-explain-why-248777

During any of these processes of transportation, energy efficiency loss of up to 48% is reported, questioning the need to loop-in substitutes from fossil fuels. Also, studies state that a H2 filling station would act more like a chemical plant than a conventional pumping station as it requires either massive cooling plants and cryogenic storage tanks (which store liquefied gas at below -250°C) or high-pressure storage vessels and compressors.

It's "Just" a Transition: Prioritizing Profit Over People!

India's NGHM prioritizes technologically-driven corporate interests by exempting green H2 projects from environmental clearance scrutiny[37], while allocating ₹19,744 crores in public funds for mostly private infrastructure. The policy discrepancy is stark, only 4 H2 projects appear on MoEFCC's Parivesh portal versus 157 listed (Refer to the map given in the right) on NGHM's project portal[38]. This makes it evident that 97% of the water-intensive green H2 projects, proposed in water-stressed regions like Gujarat, Tamil Nadu, Andhra Pradesh, Rajasthan,etc operate without environmental oversight as the MoEFCC has exempted the green H_2/Ammonia plants from the compulsory requirement of environment clearance.



Map showing the distribution of green H_2 projects across India

37. https://sansad.in/getFile/loksabhaquestions/annex/184/AU3169_YbjLnq.pdf?source=pqals#:~:text=ii.%20Standalone%20plants%20producing%20Green%20Hydrogen/Green%20Ammonia,the%20Environment%20Impact%20Assessment%20Notification%202006.%20iii.
38. https://nghm.mnre.gov.in/project?language=en

Furthermore, NGHM exemplifies a dangerous diversion of political will and public finance. While the Central Pollution Control Board (CPCB) lists 196 contaminated sites that pose a direct risk to human health[39], with remediation underway at only 7, the government is actively channeling nearly ₹40,000 crore into a single green hydrogen plant in Gujarat's Kutch district[40]. This is not merely a parallel policy; it is a conscious choice. It demonstrates that the state is more willing to invest in a speculative, corporate-driven future for export-oriented industries than in remediating the proven, toxic legacy of the existing industrial model. The green hydrogen push is thus directly perpetuating environmental injustice by prioritizing profit over the remediation of past and present harms.

Global Experiences: Critical Learnings for India

The corporations paint a rosy picture about the benefits of green hydrogen, especially for the communities around the hydrogen plants, in the name of community development agreements or local benefit agreements[41]. Through such agreements, it is said that the project sponsor will directly negotiate and agree on rights, roles, responsibilities and dispute resolution mechanisms directly with impacted communities. However, the ground scenarios tell us a different story from across the globe. The on-ground situation unveils the mask and reveals to us how the fossil-fuel lobbies are driving this show. In reality, these agreements often serve as tools for corporate risk management, legitimizing projects that impose severe harms on frontline communities. The documented harms are severe and systemic:

- Resource Competition and Water Grabs: In arid regions like Namibia, massive green hydrogen projects directly compete with local communities and ecosystems for scarce freshwater, or else drive energy-intensive desalination that damages marine environments.
- Land and Territorial Dispossession: Large-scale infrastructure such as solar farms, pipelines, and plants often leads to the enclosure and acquisition of communal lands, displacing people, destroying livelihoods (like pastoralism or small-scale farming), and severing cultural and spiritual ties to the land.

39. https://cpcb.nic.in/uploads/hwmd/Brief_Contmainated_sites_in_india.pdf
40. https://economictimes.indiatimes.com/industry/renewables/ocior-energy-signs-mou-with-gujarat-govt-to-invest-rs-40000-cr-in-green-hydrogen-ammonia/articleshow/98282006.cms
41. https://gh2.org/community-engagement-and-transparency-practices

- Ecological Damage and Biodiversity Loss: The construction and operation of industrial-scale facilities degrade local ecosystems, while the infrastructure fragments habitats and can lead to significant biodiversity loss[42].
- Exclusion and Broken Promises: Despite promises of jobs and equity, projects often provide only temporary, low-skilled work for outsiders, while permanent, high-value jobs go elsewhere. Promised revenue shares, like the 30% local equity in Namibia's Hyphen project, are often overshadowed by the scale of land alienation and ecological damage, leading to fierce community resistance.

In the European Union (EU), Germany has hyped for a long time that H2 to be a 'miracle gas' and has lobbied enough to bring H2 at the core of EU's climate and industrial policies. Behind Germany's role in pushing for green H2 lies a huge network of more than 100 companies, industry associations and consultancies, which employs hundreds of lobbyists and spends millions on influencing German politics. Also, Germany has now established H2 alliances and partnerships with at least 26 potential export countries, many of them in the Global South. A mapping of 27 H2 projects in African countries revealed that all to be centralised and not a single project consulted the frontline communities prior to the decision to proceed with the project. This reveals how "green" H2 can become a fossil gas, prioritizing industry profits over emissions cuts[43].

In yet another example, where Origin Energy, a leading Australian utility and upstream firm, collaborated with Australian chemicals and explosives company Orica to potentially supply up to 80% of the green H2 produced at Hunter Valley Hydrogen Hub (HVHH) in New South Wales to Orica's 360,000 tons per year ammonia manufacturing facility on Kooragang Island, near Newcastle. However, in October 2024, Origin Energy announced its exit from the HVHH project due to market development uncertainties and financial risks. Australia's collapsed HVHH exposes market-first gambles, when subsidies dry up, communities bear the cost of abandoned projects and lost livelihoods[44]. Meanwhile, Namibia's Hyphen project, which is publicized as a project for community benefits, faces fierce resistance from the Nama and Herero peoples. Despite promises of 30% local equity, land grabs and ecological damage threaten ancestral territories[45].

42. https://www.observer24.com.na/hydrogen-projects-threaten-namibias-biodiversity/
43 https://corporateeurope.org/sites/default/files/2023-03/Executive%20EN%20summary_Germany%20great%20hydrogen%20race_0.pdf
44. https://fuelcellsworks.com/2024/10/03/clean-hydrogen/origin-energy-withdraws-from-hunter-valley-hydrogen-hub-project-due-to-market-uncertainties
45. https://ejatlas.org/conflict/hyphen-green-hydrogen-in-the-luderitz-region-namibia

In the 2025-26 union budget, India has allocated ₹600 crores for NGHM which is a 100% increase from the previous budget allocation of ₹300 crore in 2024-25. However, India must learn from the global realities and avoid megaprojects; instead, fund a decentralised and community-centered energy transition.

Conclusion: When "Ease of Business" Means Environmental Sabotage

India's National Green Hydrogen Mission has institutionalized environmental sacrifice under the banner of "ease of business." This is not merely deregulation, but a systematic dismantling of safeguards, consciously trading water security, environmental integrity, and community health for corporate expediency through specific, high-risk actions:

- Exempting projects from environmental clearance allows 97% of proposed plants (144 of 148, per NGHM vs. Parivesh data) to bypass mandatory public hearings, water-stress assessments, and pollution impact studies.
- Fast-tracking approvals and simplifying procedures truncates the time for ecological due diligence, pushing projects forward despite known risks in water-stressed regions.
- A 25-year waiver of Interstate Transmission System (ISTS) charges for plants commissioned before 2030 directly subsidizes energy costs for private producers.
- Offering favorable taxation and Duty Benefits under Section 26 of SEZ Act, 2005 effectively uses public funds to subsidize private infrastructure in ecologically vulnerable zones, incentivizing water grabs in critically parched areas like Kutch and Rajasthan.

A May 2025 report[46] released by Council on Energy, Environment and Water (CEEW) titled “Augmenting the National Green Hydrogen Mission: Assessing the Potential Financial Support through Policies in India” highlighted that there the total potential financial support through state-level green hydrogen policies is estimated to be around INR 5.05 lakh crore (approximately USD 61 billion) over the duration of these policies. That is nearly 26 times larger than the central government's NGHM allocation of ₹19,744 crore. This information shows the enormous financial subsidies and interests driving the green hydrogen push, beyond just the union government's mission.

46. https://www.ceew.in/sites/default/files/ceew-assessing-financial-support-through-policies-in-india.pdf

while enabling unchecked resource grabs in critically parched regions. When these projects operate without environmental scrutiny, "green H2" becomes India's most dangerous oxymoron: a state-incentivized ecological disaster disguised as progress. The mission's focus on "decarbonizing" refineries and fertilizer plants through green hydrogen strategically sidesteps the essential questions: Do we need ever-expanding production of plastics and ammonia-based fertilizers? Or should we transition toward regenerative agriculture and reduced consumption?

In conclusion, true climate justice therefore demands a radical shift from decarbonization stunts to comprehensive detoxification. It requires challenging industrial power and redirecting vast public funds from corporate hydrogen hubs toward:

- Healing poisoned lands and water
- Securing water sovereignty for communities
- Building decentralized, community-controlled energy transitions and systems

The "green" in India's hydrogen mirage is the color of corporate gain, not ecological integrity. As global evidence shows, solutions that extend the life of the industrial paradigm cannot solve the crises it created. The only “Just Transition” is one that ends this paradigm, not one that finds new ways to fuel it.