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## **CASE COMMENT: GENE CAMPAIGN VS. UNION OF INDIA (JULY 23, 2024) 2024 INSC 545**

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### **ABSTRACT**

The Supreme Court's landmark case, Gene Campaign vs. Union of India, addressed the approval procedure of the Genetic Engineering Appraisal Committee (GEAC), an agency under the Ministry of Environment, Forest and Climate Change, for the commercial cultivation of the genetically modified mustard hybrid DMH-11. The petitioner, a non-governmental organization called Gene Campaign, contested the approval, raising concerns about insufficient scientific examination and irregularities in the evaluation process, as well as its possible risks to human health and the environment. The court produced a divided decision: Justice Nagarathna revoked GEAC's approval, highlighting the public health dangers and its implications under Article 21 of the Constitution, which ensures the right to life and a healthy environment. In contrast, Justice Sanjay Karol underlined the government's responsibility to encourage scientific advancement and strengthen food security.

**Keywords:** Genetically Modified Organisms (GMOs), precautionary principle, Article 21, intergenerational equity, ethical governance.

### **BRIEF INTRODUCTION AND FACTS OF THE CASE**

The case of Gene Campaign & Another vs. Union of India & Others (2024) is a watershed moment in the intersection of biotechnology regulation, environmental law, and public policy in India. At its core, the dispute revolved around the approval granted by the Genetic Engineering Appraisal Committee (GEAC) for commercial cultivation of genetically modified mustard, specifically the HT Mustard DMH-11, proposed as the first transgenic food crop for release in India. This sparked widespread opposition from non-governmental organizations (NGOs), scientific experts, and civil society activists, all of whom raised concerns about ecological risks, potential health hazards, and flaws in the regulatory process. The case, elevated via Public Interest Litigations (PILs), resulted in an extraordinary split verdict from the Supreme Court, with profound implications for India's biotechnology governance.

GMOs have long been at the centre of debate for developing nations, balancing the promises of higher agricultural yields and food security against uncertain long-term impacts on human health, biodiversity, and agricultural traditions. The Gene Campaign case brought into sharp focus the need for comprehensive policies, strong institutional mechanisms, and transparent processes for the management and oversight of GMOs - particularly as India stands at the cusp of embracing new agricultural technologies under global pressure for productivity and sustainability.

### **PETITIONERS' ARGUMENTS**

The principal Petitioners, Gene Campaign (an NGO led by Suman Sahai) and other interest groups, presented a multi-layered challenge to the GEAC's approval of HT Mustard DMH-11. Their contentions can be summarised as follows

1. **Environmental Concerns:** Petitioners argued that the environmental release of genetically modified mustard could lead to irreversible damage to native biodiversity, risk contaminating conventional mustard crops, and potentially impact pollinators like honey bees critical for India's ecosystem.
2. **Health and Safety Risks:** Citing international studies and expert opinions, the petitioners raised alarms about unknown health effects on consumers-emphasizing that there was insufficient indigenous research on GM mustard's safety for India's unique biological and cultural settings.
3. **Socio-Economic Impacts:** Petitioners pointed out the threat GM crop cultivation posed to small and marginal farmers, who might become dependent on patented seeds and agrochemicals supplied by multinational corporations.
4. **Regulatory Lapses:** One of the strongest pillars of their argument was the assertion that the GEAC had acted in haste and failed to adhere to established principles of good governance, transparency, and scientific accountability. They referred to a 2012 Technical Expert Committee (TEC) Report, which described India's GMO regulatory system as "in complete disarray"—and accused the GEAC of ignoring this even after Supreme Court directives requiring proper consideration.
5. **Violation of Constitutional Principles:** The petitioners contended that the approval procedure violated public trust doctrine, intergenerational equity, and the right to health and environment as protected under Article 21 of the Constitution. The principle of public accountability, they argued, had been disregarded by not engaging meaningfully with farmers, states, and independent scientists.

- 6. Procedural Irregularity:** They also questioned the expert credentials of those involved in GEAC's decision, highlighting conflicts of interest and insufficient independent oversight.

## **RESPONDENT'S ARGUMENTS**

Defending the approval, the Union of India and its agencies made the following countervailing arguments:

- 1. Scientific Advancement and National Interest:** The State maintained that GM mustard promised higher crop yields and would substantially contribute to food security, national productivity, and agricultural competitiveness. They cited the successful adoption of GM crops in other major agricultural economies, suggesting that India stood to benefit from similar advancements.
- 2. Regulatory Sufficiency:** The Union asserted that India's biosafety frameworks, especially those overseen by the GEAC, already meet international standards for GMO risk assessment and management. They claimed that strict monitoring mechanisms ensured that safety concerns were adequately addressed.
- 3. Balancing Innovation and Safety:** The State emphasized the need to balance scientific progress with public interest, insisting that procedural gaps cited by the petitioners did not amount to substantial violations of fundamental rights. They further argued that conditional approvals and phased field trials allowed for practical, evidence-based implementation while minimizing risk.
- 4. Expertise and Institutional Integrity:** Rejecting allegations of regulatory ad hocism, the respondents claimed that the GEAC was a statutory expert body properly constituted under the law, and its composition and procedures had not been shown to be in manifest violation of due process.
- 5. Compliance with Parliamentary Legislation:** The Union Government insisted that all activities regarding GM mustard were in keeping with the Environment Protection Act, 1986 and related regulations and that the Supreme Court's prior orders were not breached in substance.

## **THE SUPREME COURT'S JUDGMENT**

The Supreme Court delivered a split verdict on July 23, 2024, comprising separate judgments by Justices BV Nagarathna and Sanjay Karol. The division within the Bench illustrates the complexity and contestation inherent in regulatory decision-making around GMOs.

### **JUSTICE BV NAGARATHNA'S OPINION**

1. **Quashing the Approval:** Justice Nagarathna invalidated the GEAC's approval of the environmental release of HT Mustard DMH-11, finding that the process was vitiated by serious lapses in public interest safeguards and procedural compliance.
2. **Principles Invoked:** Her judgment invoked the principles of public trust and intergenerational equity, stressing that any action impacting the environment must be undertaken with utmost caution, thorough research, and broad-based stakeholder consultations.
3. **Regulatory Critique:** She was particularly critical of the GEAC's disregard of the 2012 TEC report, which had previously been accepted by the Court as authoritative to guide regulatory reform.
4. **Transparency and Accountability:** Justice Nagarathna emphasized that expert committees, particularly those making decisions with irreversible public and environmental consequences, must strictly verify credentials and proactively avoid conflicts of interest.

### **JUSTICE SANJAY KAROL'S DISSENTING OPINION**

1. **Upholding the Approval:** Justice Karol, in contrast, upheld the GEAC's decision, finding that the approval aligned with scientific progress and did not amount to an infringement of constitutional rights.
2. **Conditional Sanction and Oversight:** He underlined that conditional approval—specifically for field trials and not unrestrained commercial release—reflected a prudent, measured approach, subject to continuing oversight and monitoring by government and regulatory agencies.
3. **Balancing Act:** Justice Karol saw the Court's task as balancing competing interests: the societal apprehensions about new technology and the imperative for agricultural advancement in a country faced with food security challenges.
4. **Institutional Integrity:** He noted that the composition and function of GEAC are in keeping with statutory mandates and that procedural shortcomings alone should not override legitimate expert decisions taken in the national interest.

## **CONSENSUS AND DIRECTIONS**

Despite the split verdict, the Division Bench agreed on certain critical issues:

1. The need for a central, transparent National Policy on GM crops, developed in consultation with all stakeholders, including state governments and farmers, and framed within four months.
2. Mandatory application of Food Safety and Standards Authority of India (FSSAI) rules in relation to import, labelling, and standards of GM foods.
3. The necessity for strict expert verification and institutional mechanisms to avoid conflict of interest.
4. The matter was referred to the Chief Justice of India for the constitution of a larger bench, and the Union agreed to maintain the status quo regarding implementation pending further proceedings.

## **ANALYTICAL PERSPECTIVES**

The Gene Campaign case is a touchstone in India's legal and regulatory evolution on biotechnology. This section offers a reasoned analysis on the broader significance and possible future directions.

## **REGULATORY DISARRAY AND REFORMS**

Both the case and the underlying TEC report make it clear that India's GMO regulatory regime requires urgent strengthening. The lack of consistent, high-quality research, ambiguous standards of expertise, and insufficient transparency have undermined the credibility of oversight agencies and eroded public trust. Comprehensive legislative and regulatory reforms are thus needed to:

1. Define clear protocols for GMO field trials, environmental impact assessments, and long-term health studies
2. Ensure stakeholder engagement and inclusion, particularly of independent scientists, farmers, and local communities
3. Mandate open public access to scientific data and government reports in GMO approval processes

## **BALANCING SCIENTIFIC PROGRESS AND PRECAUTION**

The split decision eloquently captures the tension between the push towards scientific modernization and the imperatives of the precautionary principle. While GM crops can raise yield and reduce food insecurity, their ecological impacts may be irreversible and their socio-economic effects-especially for small farmers-potentially detrimental. A prudent approach must focus on adaptive governance: incremental adoption following robust, context-specific evidence and active monitoring, rather than wholesale technological leaps.

## **INSTITUTIONAL ACCOUNTABILITY AND JUDICIAL OVERSIGHT**

A pivotal facet is the judiciary's role in subjecting expert decision-making to judicial review—confirming that technocratic processes must remain open to scrutiny where public interest is at stake. This aligns with larger constitutional themes of participatory governance, environmental stewardship, and democratic accountability in science policy.

## **TOWARDS A NATIONAL POLICY ON GMOS**

The requirement to frame a national policy marks an inflection point in India's agro-biotech trajectory. Such a policy must be:

1. **Consultative:** Engaging a diverse spectrum of voices-state governments, farmers' organizations, ecological experts, and consumer groups.
2. **Transparent and evidence-driven:** Grounded in well-publicised, peer-reviewed scientific studies and risk-benefit analysis.
3. **Ethically aware:** Safeguarding intergenerational rights, and public health, alongside economic development goals.

## **INTERNATIONAL AND COMPARATIVE DIMENSIONS**

Globally, GMO policy remains contested, with the European Union exemplifying a cautious approach and countries like the United States favouring innovation. India's path, as emerging from Gene Campaign, recommends a contextualized strategy, avoiding blanket importation of external models, and prioritizing indigenous scientific capacity and societal needs.

## **PERSONAL ANALYSIS AND REFLECTIONS**

From the viewpoint of an LLM student engaged in interdisciplinary programme, Gene Campaign v. Union of India stands as a model of judicial engagement with complex scientific,

legal, and policy questions. It highlights that in the age of rapid technological advancement, courts must transcend mere legal formalism to address multifaceted challenges at the intersection of law, science, and ethics.

The split verdict, while itself not providing closure, is indicative of a healthy democratic contestation and deliberative process. If allowed to reinforce a more rigorous and transparent policy regime, this judgment could lead to substantive improvements in India's regulation of biotechnology with respect to public safety, environmental integrity, and national interest.

As the matter awaits adjudication by a larger bench, it is imperative that the government moves to strengthen institutional capacity, ensure comprehensive risk analysis, and foster a culture of transparency and accountability in scientific regulation. The next steps should prioritize not only technological advancement but also the preservation of biodiversity, rural livelihoods, and social justice.

### **CONCLUSION**

Gene Campaign & Another vs. Union of India & Others is more than a single dispute over a genetically modified crop—it is an emblematic case addressing foundational questions of regulation, science policy, and constitutional governance in India. The Supreme Court's approach, balancing innovation and precaution, sets critical benchmarks for future judicial and policy intervention in the biotech field.

As technological frontiers advance, India must adopt a holistic, participatory, and evidence-based approach to regulatory decision-making—one that truly serves both the present and succeeding generations.