



Republic of the Philippines
Court of Appeals
Manila

FOURTH DIVISION

MAGSASAKA AT SIYENTIPIKO
PARA SA PAG-UNLAD
AGRIKULTURA (MASIPAG),
GREENPEACE SOUTHEAST ASIA
- PHILIPPINES (GREENPEACE),
SOUTHEAST ASIA REGIONAL
INITIATIVES FOR COMMUNITY
EMPOWERMENT (SEARICE),
KILUSANG MAGBUBUKID NG
PILIPINAS (KMP), CLIMATE
CHANGE NETWORK FOR
COMMUNITY-BASED
INITIATIVES (CCNCI),
SALINLAHI ALLIANCE FOR
CHILDREN'S CONCERNS
(SALINLAHI), INC., ORLANDO
MERCADO, TEODORO
MENDOZA, LIZA MAZA,
REGINALD VALLEJOS, MAE
PANER, VIRGINIA NAZARENO,
JOCELYN JAMANDRON, and
LAURA DIEGO,

Petitioners,

CA-G.R. SP No. 00038

Members:

Bruselas, Jr., *Chairman*
Fiel-Macaraig, and
Ong, JJ.

-versus-

SECRETARY OF THE
DEPARTMENT OF

AGRICULTURE, SECRETARY OF
THE DEPARTMENT OF
ENVIRONMENT AND NATURAL
RESOURCES, SECRETARY OF
THE DEPARTMENT OF HEALTH,
DIRECTOR OF THE BUREAU OF
PLANT INDUSTRY OF THE
DEPARTMENT OF
AGRICULTURE, PHILIPPINE
RICE RESEARCH INSTITUTE, and
UNIVERSITY OF THE
PHILIPPINES - LOS BAÑOS,
Respondents.

Promulgated:
April 17, 2024

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DECISION

Ong, J.J.C., L:

Before this Court is the *Petition for Writ of Kalikasan and Continuing Mandamus (with Prayer for Issuance of a Temporary Environmental Protection Order)*¹ originally filed by herein petitioners Magsasaka at Siyentipiko para sa Pag-unlad Agrikultura (**MASIPAG**), Greenpeace Southeast Asia - Philippines (**Greenpeace**), Southeast Asia Regional Initiatives for Community Empowerment (Searice), Kilusang Magbubukid ng Pilipinas (**KMP**), Climate Change Network for Community-Based Initiatives (CCNCI), Salinlahi Alliance for Children's Concerns (Salinlahi), Inc., Orlando Mercado, Teodoro Mendoza, Liza Maza, Reginald Vallejos, Mae Paner, Virginia Nazareno, Jocelyn Jamandron, and Laura Diego (collectively, the **petitioners**) before the Supreme Court on 17 October 2022, docketed therein as G.R. No. 263595.

Acting thereon, the Supreme Court *En Banc* issued a *Resolution* dated 18 April 2023,² resolving to:

¹ *Rollo*, vol. 1, pp. 4-102, *sans* Annexes.

² *Rollo*, vol. 2, pp. 770-771.

....

- (a) **ISSUE** a **WRIT OF KALIKASAN** against the respondents; and
- (b) **REQUIRE** the respondents to file a **VERIFIED RETURN** of the Writ of *Kalikasan* before [the Supreme Court] within a **NON-EXTENDIBLE** period of ten (10) days from receipt hereof as provided in Section 8, Rule 7 of the Rules of Procedure for Environmental Cases.

....³

In compliance therewith, respondents Secretary of the Department of Agriculture (**DA**), Secretary of the Department of Environment and Natural Resources (**DENR**), Secretary of the Department of Health (**DOH**), Director of the Bureau and Plant Industry (**BPI**), and University of the Philippines – Los Baños (**UPLB**), represented by the Office of the Solicitor General (**OSG**), filed their *Return on the Writ of Kalikasan* on 15 May 2023.⁴ Likewise, respondent Philippine Rice Research Institute (**PRRI**), represented by the Office of the Government Corporate Counsel (**OGCC**), filed its *Verified Return* on 24 May 2023.⁵

Thereafter, in its *Resolution* dated 13 June 2023,⁶ the Supreme Court *En Banc* resolved, among others, to:

....

- (b) **REFER** the case to the **COURT OF APPEALS** for acceptance of the following returns on the Writ of *Kalikasan*, and for hearing, reception of evidence, and rendition of judgment:
 - (i) Return on the Writ of *Kalikasan* dated May 15, 2023 filed by the OSG for the Secretaries of the Department of Agriculture, Department of Environment and Natural Resources, and Department of Health, the Director of the

³ *Id.*, at 770; Emphasis in the original.

⁴ *Id.*, at 785-872.

⁵ *Rollo*, vol. 4, pp. 1541-1604, *sans* Annexes.

⁶ *Id.*, at 1780-1782.

- Bureau of Plant Industry, and the University of the Philippines – Los Baños, and;
- (ii) Verified Return dated May 15, 2023 filed by counsel for respondent Philippine Rice Research Institute.

....⁷

The *Petition* was thus referred to this Court on 10 August 2023⁸ for hearing, reception of evidence, and rendition of judgment.

Factual Antecedents

The instant *Petition* concerns two (2) genetically-modified organisms (**GMOs**): Golden Rice (with transformation event name GR2E) and *Bacillus thuringiensis* Eggplant, or Bt Eggplant⁹ (with transformation name EE-1 Eggplant).

Golden Rice

Golden Rice was developed through recombinant-DNA techniques to express levels of pro-vitamin-A (mainly beta-carotene) in the rice endosperm, which is converted in the body to Vitamin-A. Golden Rice is intended to complement existing efforts to mitigate Vitamin-A deficiency by supplying consumers in societies whose diet is primarily rice-based with a portion of the estimated average requirement for Vitamin-A. PRRI, in partnership with the International Rice Research Institute (**IRRI**), is the lead agency that develops and deploys Golden Rice in the Philippines.¹⁰

On 28 February 2017, PRRI filed an application with the BPI to conduct field trials for Golden Rice.¹¹ On even date, PRRI and IRRI

⁷ *Id.* at 1780-1781; Emphasis in the original.

⁸ The letter dated 10 August 2023 of the Supreme Court's Judicial Records Division – Judgment Division referring the case to this Court is attached to vol. 4 of the *Rollo*.

⁹ Also referred to as Bt Talong.

¹⁰ *Rollo*, vol. 21, pp. 12183 and 12185.

¹¹ *Rollo*, vol. 1, pp. 155-163, Executive Summary of the Consolidated Report of Golden Rice.

also filed with the BPI an application for the Direct Use as Food and Feed, or For Processing, of Golden Rice.¹²

These applications were opposed by several groups, including petitioners MASIPAG and Greenpeace, through their submission to the BPI of a Joint Protest Letter dated 07 April 2017.¹³ They demanded an administrative proceeding to hear their opposition to said applications.¹⁴

On 11 August 2017, the National Anti-Poverty Commission (NAPC) held a dialogue with various civil society sectors about Golden Rice. Based thereon, the NAPC submitted a Public Comment letter dated 15 September 2017¹⁵ to the BPI on the concerns of the civil society organizations, to wit: (i) lack of genuine public consultation; (ii) lack of transparency and access to information; (iii) absence of independent risk assessments and evaluations; and (iv) lack of comparative studies on Golden Rice.¹⁶

In the meantime, on 07 September 2017, MASIPAG sent a follow-up letter to the BPI, reiterating its demand for an administrative process to allow it to present information and testimonies in support of its opposition to the Golden Rice applications.¹⁷

On 04 April 2018, an “Inter-Agency and Stakeholders Dialogue on Golden Rice” organized by the NAPC was conducted.¹⁸ In attendance were representatives from the BPI and DOH, and stakeholders KMP, Amihan National Federation of Peasant Women, Salinlahi, and Health Alliance for Democracy (the **Stakeholders**). The Stakeholders reiterated their opposition to the commercialization of Golden Rice

¹² *Id.* at 164-185, Executive Summary of the Consolidated Report of Golden Rice.

¹³ *Rollo*, vol. 5, pp. 2392-2393.

¹⁴ *Id.*

¹⁵ *Id.* at 2396-2398.

¹⁶ *Id.*

¹⁷ *Id.* at 2394-2395.

¹⁸ *Id.* at 2414-2426.

due to the alleged harmful and adverse effects of GMOs on public health and the environment.¹⁹

Despite the opposition, the BPI issued a *Consolidated Report* for Field Trial of Golden Rice,²⁰ and on 20 May 2019, approved the issuance of a Biosafety Permit (**BSP**) for Field Trial of Golden Rice.²¹

On 08 August 2019, the Stakeholders submitted their letter-opposition²² to DOH, calling for the stoppage of the field trials of Golden Rice. This follows the latest study from India confirming that the beta-carotene content of Golden Rice is negligible and degrades quickly, and farmers would still need to vacuum-pack the unmilled rice to extend the beta-carotene shelf life.²³

Still, the BPI issued a *Consolidated Report* for Direct Use of Golden Rice.²⁴

On 15 October 2019, Greenpeace submitted a comment-opposition to the BPI,²⁵ stating that the experimental design of the field trials for Golden Rice is insufficient, and there is no genetically-modified rice grown commercially in the world. According to Greenpeace, the BPI did not hear its opposition.²⁶

On 16 October 2019, several groups submitted a consolidated opposition letter to the BPI,²⁷ calling for the disapproval of the application for Direct Use as Food and Feed, or for Processing of Golden Rice due to the absence of safety feeding tests, and the lack of

¹⁹ *Id.*

²⁰ *Supra* note 11.

²¹ *Rollo*, vol. 1, pp. 147-148.

²² *Rollo*, vol. 5, pp. 2436-2438.

²³ *Rollo*, vol. 1, p. 458.

²⁴ *Supra* note 12.

²⁵ *Rollo*, vol. 5, pp. 2466-2498.

²⁶ *Id.*

²⁷ *Rollo*, vol. 5, pp. 2461-2462.

data and research on its socio-economic, ethical, and cultural (SEC) impacts.²⁸

Bt Eggplant

Bt Eggplant was developed using genetic engineering techniques to provide resistance against the eggplant fruit and shoot borer (EFSB) pests. It is owned and licensed by UPLB.²⁹

On 29 September 2009, UPLB filed an application for a field trial of Bt Eggplant, pursuant to DA Administrative Order (DAO) No. 8-2002.³⁰ DA then issued BSPs for Field Trial in favor of UPLB in 2010.³¹

Accordingly, UPLB commenced the field testing of Bt Eggplant. However, environmental groups and other individuals complained that no peer-reviewed study was conducted on Bt Eggplant's safety for human consumption and the environment.³²

2016 Writ of Kalikasan Case

On 26 April 2012, MASIPAG and Greenpeace, together with other environmental groups, filed a Petition for Writ of Continuing *Mandamus* and Writ of *Kalikasan* with Prayer for the Issuance of Temporary Environmental Protection Order (TEPO) before the Supreme Court³³ (the **2016 Writ of Kalikasan Case**), alleging that Bt Eggplant field trials violated their constitutional right to a healthful and balanced ecology as follows: (i) the Environmental Compliance Certificate, as required by Presidential Decree No. 1151, was not

²⁸ *Id.*

²⁹ *Rollo*, vol. 8, pp. 3859-3864; 3934-3939.

³⁰ Rules and Regulations for the Importation and Release into the Environment of Plants and Plant Products Derived from the Use of Modern Biotechnology.

³¹ *Rollo*, vol. 1, pp. 153-154.

³² *Supra* note 23.

³³ *International Service for the Acquisition of Agri-Biotech Applications, Inc. v. Greenpeace Southeast Asia (Philippines), et. al.*, G.R. No. 209271, 209276, 209301 & 209430, December 8, 2015.

secured before the field trials; (ii) the required public consultations under the Local Government Code were not conducted; and (iii) as a regulated article, Bt Eggplant is presumed to be harmful, more so that no independent, peer-reviewed study on the safety of Bt Eggplant for human consumption and the environment was performed. Further, since the scientific evidence on the safety of Bt Eggplant remained insufficient or uncertain, and preliminary scientific evaluation showed reasonable grounds for concern, the precautionary principle should be applied, and thereby, the field trials be enjoined.³⁴

On 02 May 2012, the Supreme Court issued a Writ of *Kalikasan* against the Bt Eggplant proponents, ordering them to submit a verified return. Subsequently, the Supreme Court referred the case to this Court for acceptance of the return of the writ and hearing, reception of evidence, and rendition of judgment.

In the *Decision* dated 17 May 2013, this Court ordered the Bt Eggplant proponents to cease and desist from conducting field trials. This Court considered the possible irreversible effects of the field trials and the introduction of Bt Eggplant to the market, and found that the existing regulations for Bt Eggplant activities issued by the DA and DOST were insufficient to guarantee the safety of people's health and the environment.

The case was subsequently appealed to the Supreme Court, which affirmed this Court's ruling in its *Decision* dated 08 December 2015. The Supreme Court explained that the risk of severe and permanent harm from the field trials of Bt Eggplant remains uncertain. Moreover, eggplants are a staple vegetable in the country, grown mainly by small-scale farmers who are poor and marginalized; thus, given the country's rich biodiversity, the consequences of contamination and genetic pollution would be disastrous and irreversible. Accordingly,

³⁴ *International Service for the Acquisition of Agri-Biotech Applications, Inc. v. Greenpeace Southeast Asia (Philippines), et. al.*, G.R. No. 209271, 209276, 209301 & 209430 (Resolution), July 26, 2016.

the Supreme Court permanently enjoined the field testing of Bt Eggplant, declared DAO No. 08-2002 null and void for failure to consider the provisions of the National Biosafety Framework (NBF) established under Executive Order No. 514, series of 2006³⁵ (EO 514), and temporarily enjoined any application for contained use, field testing, propagation, commercialization, and importation of GMOs until a new administrative order is promulgated in accordance with law.

However, in its *Resolution* dated 26 July 2016, the Supreme Court set aside its *Decision* dated 08 December 2015, and dismissed the Petition on the ground of mootness. Pertinent portions of the *Resolution* are quoted hereunder:

....

In contrast to the foregoing cases, no perceivable benefit to the public - whether rational or practical - may be gained by resolving respondents' petition for Writ of *Kalikasan* on the merits.

To recount, these cases, which stemmed from herein respondents petition for Writ of *Kalikasan*, were mooted by the undisputed expiration of the Biosafety Permits issued by the BPI and the completion and termination of the *Bt talong* field trials subject of the same. These incidents effectively negated the necessity for the reliefs sought by respondents in their petition for Writ of *Kalikasan* as there was no longer any field test to enjoin. Hence, at the time the CA rendered its Decision dated May 17, 2013, the reliefs petitioner sought and granted by the CA were no longer capable of execution.

At this juncture, it is important to understand that the completion and termination of the field tests do not mean that herein petitioners may inevitably proceed to commercially propagate *Bt talong*. There are three (3) stages before genetically-modified organisms (GMOs) may become commercially available under DAO 08-2002 and each stage is distinct, such that "[s]ubsequent stages can only proceed if the prior stage/s [is/]are completed and clearance is given to engage in the next regulatory stage."

....

³⁵ Requires public participation in all stages of biosafety decision-making, pursuant to the Cartagena Protocol on Biosafety.

As the matter never went beyond the field testing phase, none of the foregoing tasks related to propagation were pursued or the requirements therefor complied with. Thus, there are no guaranteed after-effects to the already concluded *Bt talong* field trials that demand an adjudication from which the public may perceivably benefit. Any future threat to the right of herein respondents or the public in general to a healthful and balanced ecology is therefore more imagined than real.

In fact, it would appear to be more beneficial to the public to stay a verdict on the safeness of *Bt talong* - or GMOs, for that matter - until an actual and justiciable case properly presents itself before the Court. In his Concurring Opinion on the main, Associate Justice Marvic M.V.F. Leonen (Justice Leonen) had aptly pointed out that "the findings [resulting from the *Bt talong* field trials] should be the material to provide more rigorous scientific analysis of the various claims made in relation to *Bt talong*." True enough, the concluded field tests - like those in these cases - would yield data that may prove useful for future studies and analyses. If at all, resolving the petition for Writ of *Kalikasan* would unnecessarily arrest the results of further research and testing on *Bt talong*, and even GMOs in general, and hence, tend to hinder scientific advancement on the subject matter.

More significantly, it is clear that no benefit would be derived by the public in assessing the merits of field trials whose parameters are not only unique to the specific type of *Bt talong* tested, but are now, in fact, rendered obsolete by the supervening change in the regulatory framework applied to GMO field testing. To be sure, DAO 08-2002 has already been superseded by Joint Department Circular No. 1, series of 2016 (JDC 01-2016), issued by the Department of Science and Technology (DOST), the DA, the DENR, the Department of Health (DOH), and the Department of Interior and Local Government (DILG), which provides a substantially different regulatory framework from that under DAO 08-2002 xxx. Thus, to resolve respondents' petition for Writ of *Kalikasan* on its merits, would be tantamount to an unnecessary scholarly exercise for the Court to assess alleged violations of health and environmental rights that arose from a past test case whose bearings do not find any - if not minimal - relevance to cases operating under today's regulatory framework.

....

Notably, the new framework under JDC 01-2016 is substantially different from that under DAO 08-2002. In fact, the new parameters in JDC 01-2016 pertain to provisions which prompted the Court to invalidate DAO 08-2002. In the December 8, 2015 Decision of the Court, it was observed that: (a) DAO 08-2002 has no mechanism to mandate compliance with international biosafety protocols; (b) DAO

08-2002 does not comply with the transparency and public participation requirements under the NBF; and (c) risk assessment is conducted by an informal group, called the Biosafety Advisory Team of the DA, composed of representatives from the BPI, Bureau of Animal Industry, FPA, DENR, DOH, and DOST.

Under DAO 08-2002, no specific guidelines were used in the conduct of risk assessment, and the DA was allowed to consider the expert advice of, and guidelines developed by, relevant international organizations and regulatory authorities of countries with significant experience in the regulatory supervision of the regulated article. However, under JDC 01-2016, the CODEX Alimentarius Guidelines was adopted to govern the risk assessment of activities involving the research, development, handling and use, transboundary movement, release into the environment, and management of genetically modified plant and plant products derived from the use of modern biotechnology. Also, whereas DAO 08-2002 was limited to the DA's authority in regulating the importation and release into the environment of plants and plant products derived from the use of modern biotechnology, under JDC 01-2016, various relevant government agencies such as the DOST, DOH, DENR, and the DILG now participate in all stages of the biosafety decision-making process, with the DOST being the central and lead agency.

JDC 01-2016 also provides for a more comprehensive avenue for public participation in cases involving field trials and requires applications for permits and permits already issued to be made public by posting them online in the websites of the NCBP and the BPI. The composition of the Institutional Biosafety Committee (IBC) has also been modified to include an elected local official in the locality where the field testing will be conducted as one of the community representatives. Previously, under DAO 08-2002, the only requirement for the community representatives is that they shall not be affiliated with the applicant and shall be in a position to represent the interests of the communities where the field testing is to be conducted.

JDC 01-2016 also prescribes additional qualifications for the members of the Scientific and Technical Review Panel (STRP), the pool of scientists that evaluates the risk assessment submitted by the applicant for field trial, commercial propagation, or direct use of regulated articles. Aside from not being an official, staff or employee of the DA or any of its attached agencies, JDC 01-2016 requires that members of the STRP: (a) must not be directly or indirectly employed or engaged by a company or institution with pending applications for permits under JDC 01-2016; (b) must possess technical expertise in food and nutrition, toxicology, ecology, crop protection,

environmental science, molecular biology and biotechnology, genetics, plant breeding, or animal nutrition; and (c) must be well-respected in the scientific community.

....

Moreover, the situation respondents complain of is not susceptible to repetition. As discussed above, DAO 08-2002 has already been superseded by JDC 01-2016. Hence, future applications for field testing will be governed by JDC 01-2016 which, as illustrated, adopts a regulatory framework that is substantially different from that of DAO 08-2002.

Therefore, it was improper for the Court to resolve the merits of the case which had become moot in view of the absence of any valid exceptions to the rule on mootness, and to thereupon rule on the objections against the validity and consequently nullify DAO 08-2002 under the premises of the precautionary principle.

....

All told, with respondents' petition for Writ of Kalikasan already mooted by the expiration of the Biosafety Permits and the completion of the field trials subject of these cases, and with none of the exceptions to the mootness principle properly attending, the Court grants the instant motions for reconsideration and hereby dismisses the aforesaid petition. With this pronouncement, no discussion on the substantive merits of the same should be made.

....

With the Supreme Court's pronouncement, UPLB thus continued its research on Bt Eggplant and processed the data it gathered from the field trials. Since the field trials had already been conducted, on 24 August 2020, UPLB applied for a BSP for Direct Use as Food and Feed and Processing of Bt Eggplant.³⁶

³⁶ *Rollo*, vol. 1, pp. 372-373.

The Present Petition

Sometime in August 2021, petitioners, through the DA's website, learned about the following BSPs issued by the BPI in favor of PRRI and UPLB:

- i. BSP for Field Trial of Golden Rice, issued on 20 May 2019³⁷ in favor of PRRI;
- ii. BSP for Direct Use as Food and Feed, or for Processing of Golden Rice, issued on 10 December 2019³⁸ in favor of PRRI and the IRRI;
- iii. BSP for Commercial Propagation of Golden Rice issued on 21 July 2021³⁹ in favor of PRRI; and
- iv. BSP for Direct Use as Food and Feed, or for Processing of Bt Eggplant, issued on 21 July 2021⁴⁰ in favor of UPLB.

On 23 August 2021, some of the petitioners and few other individuals⁴¹ (the **DA Appellants**) filed a *Petition for Review*⁴² before the DA, docketed as DA-OSEC-2021-001, to appeal the decision of the BPI in issuing the foregoing BSPs. The DA Appellants argued that:

³⁷ *Supra* note 21.

³⁸ *Rollo*, vol. 1, pp. 149-150.

³⁹ *Id.* at 151-152.

⁴⁰ *Supra* note 31.

⁴¹ Magsasaka at Siyentipiko Para sa Pag-Unlad ng Agrikultura (**MASIPAG**), Southeast Asia Regional Initiatives for Community Empowerment (**SEARICE**), Greenpeace Southeast Asia-Philippines (**GREENPEACE**), Rice Watch Action Network, Inc. (**R1**), Kilusang Magbubukid ng Pilipinas (**KMP**), Climate Change Network for Community-Based Initiatives, Inc. (**CCNCI**), Orlando Mercado, Teodoro Mendoza, Virginia Nazareno, and Reginald Vallejos.

⁴² *Rollo*, vol. 1, pp. 374-408.

- i. the BSP for the Field Trial of Golden Rice should be revoked for non-compliance with the procedural requirements under the Joint Department Circular (JDC) No. 1-2016,⁴³ such as:
 - a. a local elective official from the Province of Isabela was not included in the Institutional Biosafety Committee (IBC) as a community representative;⁴⁴
 - b. the application for field trial submitted to the BPI did not attach all the necessary supporting documents;⁴⁵
- ii. the BSP for Commercial Propagation of Golden Rice should be revoked because the field trial was improperly conducted;⁴⁶
- iii. the BSP for Direct Use as Food and Feed, or for Processing of Golden Rice should be revoked because it was issued without prior approval for the commercial propagation of Golden Rice;⁴⁷
- iv. the BSP for Direct Use of Bt Eggplant should be revoked because the Supreme Court in the 2016 Writ of Kalikasan Case had already found Bt Eggplant to be unsafe;⁴⁸
- v. the BSPs for Golden Rice and Bt Eggplant should be revoked since:
 - a. the applications and evaluations/assessment reports were not posted on the BPI website;

⁴³ Rules and Regulations for the Research and Development, Handling and Use, Transboundary Movement, Release into the Environment, and Management of Genetically-Modified Plant and Plant Products Derived from the Use of Modern Biotechnology; *Rollo*, vol. 1, pp. 486-522.

⁴⁴ *Rollo*, vol. 1, pp. 386-389.

⁴⁵ *Id.* at 389-391.

⁴⁶ *Id.* at 391.

⁴⁷ *Id.* at 391-392.

⁴⁸ *Id.* at 392-394.

- b. there is no proof of public participation; and
 - c. oppositions to the applications were not addressed in the evaluations/assessments of the concerned agencies;⁴⁹
- vi. the recommending and approving government agencies violated their mandate under JDC No. 1-2016, by their:
- a. failure to conduct an independent review of the applications; and
 - b. failure to notify or provide the petitioners with a copy of the reports;⁵⁰
- vii. global debate is intense on the safety and impacts of GMOs, especially Golden Rice and Bt Eggplant; thus, there is no consensus as to their safety and effects;⁵¹
- viii. the claim that the safety status of Golden Rice has been approved in the United States, Australia, New Zealand, and Canada, is incorrect and is out-of-context; Golden Rice is not generally planted and eaten in those countries;⁵²
- ix. Filipinos will be exposed to biosafety, health, and environmental risks, impacts, and uncertainties without liability and redress safeguards upon eventual release to the environment of said GMOs by virtue of the BSPs issued;⁵³ and

⁴⁹ *Id.* at 394-398.

⁵⁰ *Id.* at 398-400.

⁵¹ *Id.* at 400-403.

⁵² *Id.* at 403-404.

⁵³ *Id.* at 404-406.

- x. several studies show that GMOs are harmful to health, environment, and livelihood.⁵⁴

The Ruling of the DA Secretary

After the filing of the necessary pleadings by the parties,⁵⁵ on 30 June 2022, DA Secretary William D. Dar issued a *Resolution*⁵⁶ (the **DA Resolution**) that dismissed the DA Appellants' *Petition for Review*, ruling that the issuance of the BSPs strictly complied with the procedural requirements of JDC No. 01-2016, as follows:

First, before the BSPs for both Golden Rice and Bt Eggplant were issued, the application forms⁵⁷ and consolidated assessment reports⁵⁸ were posted on the BPI Biotechnology website for public information. Public consultations were done by posting the Public Information Sheets (**PIS**) in conspicuous places where the field trials were to be conducted. There were also public hearings and deliberations on whether or not field trials should be allowed.⁵⁹

Second, risk assessment on the possible impacts of the applications was conducted by the DOH, DENR, and DA, as well as the Scientific and Technical Review Panel (**STRP**), which is composed of a pool of non-DA scientists with expertise in evaluating the potential risks of regulated articles to the environment and human health. The SEC experts provided an analysis on the potential impacts of the genetically-modified crops. The DA Biosafety Committee also reviewed the application and public comments submitted to the BPI.⁶⁰

⁵⁴ *Id.* at 406-407.

⁵⁵ *Rollo*, vol. 3, pp. 1228-1243, 1246-1259, 1260-1275, 1276-1293.

⁵⁶ *Rollo*, vol. 1, pp. 457-471.

⁵⁷ *Supra* note 11, 12, pp. 299-300, 372-373.

⁵⁸ *Rollo*, vol. 1, pp. 155-209, 210-224.

⁵⁹ *Supra* note 23.

⁶⁰ *Rollo*, vol. 1 pp. 465-467; vol. 8, pp. 3892-3896.

Third, records show that the BPI approved the applications based on available scientific evidence and the individual risk assessments conducted by the different committees. These assessors recommended the issuance of the BSPs after finding that Golden Rice and Bt Eggplant will not pose a greater risk to biodiversity, human and animal health, and the environment. Their consolidated risk assessment reports⁶¹ were posted on the BPI Biotechnology website, copies of which were also furnished to the petitioners' counsel upon request.⁶²

Fourth, the *Notice of Biosafety Approval* for direct use of Golden Rice was published in the Manila Bulletin newspaper on 18 December 2019,⁶³ while for commercial propagation, it was published on 26 July 2021. As for the *Notice of Biosafety Approval* for direct use of Bt Eggplant, it was published in the Business Mirror newspaper on 12 August 2021.⁶⁴

Fifth, both Golden Rice and Bt Eggplant were assessed based on internationally-accepted standards such as the CODEX Alimentarius Commission Guidelines on risk assessment of foods, derived from modern biotechnology, the Cartagena Protocol on Biosafety to the Convention on Biological Diversity, and the Organization for Economic Cooperation and Development (OECD) documents.⁶⁵

Sixth, the BPI Biotechnology Secretariat examined UPLB's application for its completeness in form and substance. As required by the BPI, said application was evaluated by the Interagency Technical Working Group composed of the DENR and DOH Biosafety Committees, the BPI Plant Product Safety Services Division (PPSSD), and the Bureau of Animal Industry (BAI). The application's risk assessment report was also evaluated by the STRP, and its socio-

⁶¹ *Supra* note 58.

⁶² *Rollo*, vol. 1, p. 464.

⁶³ *Rollo*, vol. 13, p. 7077.

⁶⁴ *Id.* at 7078.

⁶⁵ *Rollo*, vol. 1, p. 465.

economic, ethical, and cultural indicators were assessed by the SEC consideration experts.⁶⁶

Aside from the foregoing, the DA Secretary held that the *Petition for Review* was not anchored on any of the grounds for the revocation of the BSPs, as provided in Sections 11(L), 16(J), and 21(J) of JDC No. 01-2016. As the DA Secretary explained:

First, the application documents submitted to the BPI contained the endorsement of the IBC. The composition of the IBC for the field trial of Golden Rice in Isabela was reconstituted in 2019, with a local elective official included. This was approved by the DA Biosafety Committee.⁶⁷

The DA Secretary noted that JDC No. 1-2016 requires the complete composition of the IBC upon the conduct of the field trial and not upon the application thereof. Moreover, the requirement in Department of Interior and Local Government Memorandum Circular No. 18-121 to include a city or municipal mayor or sanggunian member who chairs the Committee on Agriculture to be part of the IBC, only became effective after the formation of the IBC for the BSP application; hence, the composition of the IBC in Isabela is not affected thereby. Thus, there was no violation of the IBC composition for the field trial of Golden Rice in said area.⁶⁸

Second, the application of PRRI for the field trial of Golden Rice was sufficient in both form and substance. PRRI complied with the documentary requirements under JDC No. 1-2016, which were reviewed and found to be sufficient in form and substance by the BPI Biotechnology Secretariat. The IBC members endorsed the application

⁶⁶ *Id.* at 465.

⁶⁷ *Id.* at 466-467.

⁶⁸ *Id.*

for field trial of Golden Rice,⁶⁹ the *Risk Assessment Report*,⁷⁰ and the *Project Description Report Form*.⁷¹ Golden Rice had also undergone contained use or confined testing by the DOST Biosafety Committee prior to its application for field trial. The STRP, and the DOH and DENR Biosafety Committees, conducted risk assessment, and the DA Biosafety Committee conducted its final deliberation on the proposed trial, consequently recommending the issuance of the BSP.⁷²

Besides, according to the DA Secretary, the BSP for the Field Trial of Golden Rice expired in May 2021; hence, the DA Appellants' request to revoke it is already moot.⁷³

Third, the BSP for Direct Use of Golden Rice, which was issued prior to the BSP for Commercial Propagation, is valid since the latter is not a condition for the former's issuance. Citing an opinion from its Legal Service office, the DA Secretary held that "[t]hese procedures are separate and distinct from each other and can proceed without relying on the other procedures."⁷⁴

Fourth, JDC No. 1-2016 does not require the BPI to provide individuals or interested parties with a copy of the BSPs. Nonetheless, the BSP for Direct Use as Food and Feed, or for Processing of Bt Eggplant was posted on the official DA-BPI Biotechnology website on 02 August 2021.⁷⁵

The DA Secretary also clarified that in the 2016 Writ of Kalikasan Case, the Supreme Court *En Banc* reversed its December 2015 ruling and granted therein petitioners' motion for reconsideration, stating that there is "*no perceivable benefit to the public, whether rational or partial*

⁶⁹ *Supra* note 57.

⁷⁰ *Rollo*, vol. 1, pp. 252-278, 301-350.

⁷¹ *Id.* at 363-365.

⁷² *Id.* at 467.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.* at 468.

– may be gained by solving respondent’s petition for Writ of Kalikasan on the merits. The cases were mooted by the undisputed expiration of the Biosafety Permits issued by the BPI and the completion and the termination of the Bt Talong Field Trials.”⁷⁶

Lastly, the DA Secretary held that the benefits of commercial propagation of Golden Rice and Bt Eggplant outweigh the adverse effects.⁷⁷

In the meantime, the petitioners discovered that PRRI filed an application for registration of Golden Rice seeds with the BPI on 04 March 2022. PRRI submitted a *Crop Entry Recommendation* Form for Golden Rice,⁷⁸ which is the requisite step for its commercial propagation. Under the *Form*, Golden Rice seeds shall be bred nationally by PRRI and IRRI. The BPI approved said application on 07 April 2022.⁷⁹

Furthermore, the petitioners learned that on 31 March 2022, UPLB filed before the BPI an application for commercial propagation of Bt Eggplant.⁸⁰

Hence, this *Petition*.

In its *Return on the Writ of Kalikasan*,⁸¹ the OSG contended that the *Petition* must be dismissed since the elements for the issuance of a writ of *kalikasan* are not present. For the writ to be issued, the following elements must be shown: (i) the petitioner/s must sufficiently allege and prove the actual or threatened violation of the constitutional right to a balanced and healthful ecology; (ii) the actual or threatened

⁷⁶ *Id.*

⁷⁷ *Id.* at 469.

⁷⁸ *Id.* at 472-479.

⁷⁹ *Id.*

⁸⁰ *Id.* at 480-481.

⁸¹ *Rollo*, vol. 2, pp. 785-860, 907-974.

violation must arise from an unlawful act or omission of a public official or employee, or private individual or entity; and (iii) the actual or threatened violation must involve or must be shown to lead to environmental damage of such magnitude as to prejudice the life, health or property of inhabitants in two or more cities or provinces.⁸²

On the first element, the OSG averred that the intended commercial propagation of Golden Rice and Bt Eggplant does not violate the petitioners' constitutional right to a balanced and healthful ecology. The observations and statements by several scientists cited by the petitioners that GMOs may cause irreparable environmental challenges are insufficient to amount to an actual or threatened violation of said right.⁸³

On the contrary, the OSG raised the DENR's findings that the commercial propagation of Golden Rice poses no significant adverse effect on the environment because it is similar and comparable to its conventional rice counterpart. In the *Technical Report – Environmental Risk Assessment of Golden Rice with Provitamin-A (GR2E) for Commercial Propagation*⁸⁴ submitted to the BPI on 25 May 2021, the DENR Biosafety Committee specified the scientific bases for such disposition, and concluded that Golden Rice is safe and free from any characteristic of known toxins and is unlikely to pose a significant risk to cross-pollination, given the self-pollinating characteristic of rice. Furthermore, Golden Rice does not contain insecticidal or herbicidal traits.⁸⁵

The OSG further stated that the foregoing findings were based on the series of meetings and consultations conducted by the DENR Biosafety Committee between 04 November 2020 and 25 May 2021,

⁸² *Id.*, at 801-802; citing *Dela Cruz v. Manila Electric Co.*, G.R. No. 197878, November 10, 2020.

⁸³ *Id.* at 802-544.

⁸⁴ *Rollo*, vol. 8, pp. 4118-4120.

⁸⁵ *Id.* at 804-805.

during which the commercial propagation of Golden Rice was discussed.⁸⁶

Moreover, the OSG explained that the results of the risk assessments for the direct use as food and feed, and for processing of Golden Rice, show that it: (i) is safe for human consumption and has health and nutritional benefits, particularly, that it can contribute up to 30%-50% of our daily vitamin- A requirement; (ii) is safe relative to its conventional counterpart, with a history of safe use; (iii) can be managed in the same way as other varieties with unique characteristics; and (iv) has no adverse effects on heirloom rice varieties, since Golden Rice is deployed in irrigated lowland farms, which is far from known production areas of heirloom rice varieties that are primarily planted in the highlands.⁸⁷

As for Bt Eggplant, the OSG stated that the Joint Assessment Group (**JAG**), composed of qualified representatives from the respective Biosafety Committees of the DA, DENR, DOH, and the DOST, the creation of which is prescribed under JDC No. 1-2021,⁸⁸ concluded that Bt Eggplant is as safe as its conventional counterpart and is not expected to pose any significant risk to human and animal health, and to the environment. The JAG recommended the issuance of the BSP for Commercial Propagation of Bt Eggplant in favor of UPLB, following a thorough evaluation of the technical dossier.⁸⁹

In addition, the OSG pointed out that the World Health Organization, in deference to the growing field of biotechnology and GMOs, declared that no effects on human health have been shown as a result of the consumption of such foods by the general population in countries where they have been approved, provided there is a continuous application of safety assessments based on the CODEX

⁸⁶ *Id.* at 806.

⁸⁷ *Id.* at 806-807.

⁸⁸ *Id.* at 808.

⁸⁹ *Rollo*, vol. 1, pp. 233-251.

Alimentarius principles. Here, UPLB complied with said principles and standards.⁹⁰

With respect to the second element, the OSG contended that the BPI Director lawfully issued the BSPs in favor of PRRI and UPLB, in accordance with the provisions of JDC No. 1-2016.

The OSG claimed that, for one, the BPI approved PRRI and UPLB's applications for BSPs based on available scientific evidence and the individual risk assessments conducted by different committees – the STRP, SEC, BAI, and BPI. The BPI issued the BSPs based on the assessors' recommendation and findings in their *Consolidated Reports*⁹¹ that Golden Rice and Bt Eggplant will not pose a greater risk to biodiversity, human and animal health, and the environment. Stated differently, the assessors found scientific evidence that the regulated articles applied for were as safe as their conventional counterparts.⁹²

For another, the OSG averred that the petitioners' allegations that the proponents did not conduct any field testing prior to the issuance of the BSPs for Golden Rice and Bt Eggplant are untrue. On 13 June 2018, BPI issued a *Certification*⁹³ attesting that UPLB has satisfactorily completed the field trial for Bt Eggplant, pursuant to DAO No. 08-2002. Similarly, on 26 August 2020, the BPI issued a *Certificate of Field Trial Completion*⁹⁴ for Golden Rice in favor of PRRI, after the latter completed and complied with the conditions in the BSP for Field Trial.

The OSG also asserted that while the Supreme Court, in the 2016 Writ of Kalikasan Case, nullified DAO No. 08-2002, it would be

⁹⁰ *Rollo*, vol. 2, pp. 823.

⁹¹ *Supra* note 58.

⁹² *Rollo*, vol. 2, p. 829.

⁹³ *Rollo*, vol. 3, p. 995; vol. 8, p. 3842.

⁹⁴ *Rollo*, vol. 1, p. 371.

unreasonable and superfluous for UPLB to conduct another field test under JDC No. 1-2016. Besides, in its *Resolution*, the Supreme Court clarified that it should not have delved into the constitutionality of DAO No. 08-2002 as it was merely collaterally challenged based on the constitutional precepts of the people's right to information, to public participation, to a healthful and balanced ecology, and health. At any rate, the results of the Bt Eggplant field testing conducted pursuant to DAO No. 08-2002 must be recognized under the doctrine of operative fact, which means that a judicial declaration of invalidity may not necessarily obliterate all the effects and consequences of a void act prior to such declaration.⁹⁵

As regards Golden Rice, the OSG raised that the DA Biosafety Committee approved the composition of the IBC of Isabela in compliance with JDC No. 1-2016. Assuming *arguendo* that the IBC composition in 2017 was defective, it was cured in 2019 when the IBC was reconstituted, and a local elective official was included as a member. Moreover, Section 6 of JDC No. 1-2016 only requires the complete composition of the IBC upon the conduct of the field trial and not upon the application for the field trial. Here, a local elective official was already endorsed as a member of the IBC of Isabela when the field trial for Golden Rice began in 2019 and culminated in 2020.⁹⁶

Furthermore, the OSG argued that PRRI submitted all supporting documents pursuant to the *Checklist of Requirements*⁹⁷ used internally by the BPI. The BPI posted the PIS for Field Trial application⁹⁸ of Golden Rice in conspicuous places in the Science City of Muñoz, Nueva Ecija, and the Municipality of San Mateo, Isabela – the areas where field trials were conducted – for the information of the public and the stakeholders. Afterwards, public hearings during

⁹⁵ *Id.* at 831-832.

⁹⁶ *Id.* at 832-834.

⁹⁷ *Rollo*, vol. 1, p. 420.

⁹⁸ *Id.* at 289-294.

the official sessions of the Sangguniang Panlungsod of the Science City of Muñoz, Nueva Ecija, and the Sangguniang Bayan of San Mateo, Isabela were held to deliberate on whether they would allow the field trials in their areas. Resultantly, both Sanggunians fully supported PRRI's field trials for Golden Rice.⁹⁹

On the third element, the OSG asserted that the petitioners failed to adduce evidence of environmental damage or prejudice to the life, health, or property of inhabitants of two (2) or more cities or provinces, to refute the findings of the proponents and assessors which were adopted by the BPI.¹⁰⁰

For Golden Rice, the OSG averred that the health and environmental impacts enumerated in the *Petition* have already been addressed in the risk assessments conducted by the relevant Biosafety Committees of the member agencies under JDC No. 1-2016, which were done in accordance with internationally-accepted standards.¹⁰¹

As for Bt Eggplant, the OSG explained that the DENR Biosafety Committee concluded that: (i) its direct use will not cause any significant adverse effect on the environment and non-target organisms; (ii) the chances of unintended release or planting thereof are very minimal and will not cause any lasting damage to the environment; and (iii) it is as safe as its conventional counterpart.¹⁰²

The OSG also asserted that the respondents need not be compelled by *mandamus* to perform their respective mandates by reason of the following:

⁹⁹ *Rollo*, vol. 2, pp. 837-838.

¹⁰⁰ *Id.* at 838-841.

¹⁰¹ *Id.* at 838-839.

¹⁰² *Id.* at 840-841.

First, the OSG maintained that PRRI and UPLB complied with the requirements under JDC No. 1-2016, warranting the issuance of the BSPs.¹⁰³

Second, the OSG claimed that the petitioners have no right to demand the revocation of the BSPs. The resolution of the applications, therefore, involves the exercise of the BPI's discretionary powers, which cannot be subjected to the petitioners' whims and caprices.¹⁰⁴

Third, the OSG argued that the writ of continuing *mandamus* should not be used to supplant executive or legislative privileges, or when the remedies required are political or administrative in nature.¹⁰⁵

Fourth, the OSG opined that the petitioners' prayer for the revocation of the BSPs for the Field Trial of BT Eggplant and Golden Rice had already been rendered moot by their expiration.¹⁰⁶

Lastly, the OSG stated that the mere circumstance that the respondents permitted the activities relating to Golden Rice and Bt Eggplant does not mean they neglected their avowed duties to promote health and environmental safety. They simply took a position that apparently clashed with the petitioners' values.¹⁰⁷

Even then, according to the OSG, the respondents enjoy in their favor the presumption of regularity which can only be overturned by evidence of partiality and malice, which the petitioners do not possess.¹⁰⁸

¹⁰³ *Id.* at 841-843.

¹⁰⁴ *Id.* at 843.

¹⁰⁵ *Id.* at 843-844.

¹⁰⁶ *Id.* at 844-845.

¹⁰⁷ *Id.* at 845.

¹⁰⁸ *Id.* at 845-846.

For its part, PRRI, in its *Verified Return*¹⁰⁹ raised defenses such as: (i) the instant *Petition* is procedurally defective, in that it is barred by administrative *res judicata* and violates the rule against forum-shopping; (ii) the petitioners are not entitled to the privilege of the writ of *kalikasan*; and (iii) the petitioners are not entitled to a writ of continuing *mandamus*.

In its first argument, PRRI explained that the DA Resolution had already become final and executory because the petitioners had not filed a motion for reconsideration. There is no question that the proceedings leading to the issuance of the DA Resolution were quasi-judicial in nature, as they involved: (i) taking and evaluation of evidence; (ii) determining facts based on the evidence presented; (iii) and rendering an order or decision supported by the facts proved. Pursuant to applicable jurisprudence,¹¹⁰ since no appeal was filed, administrative *res judicata* has thus set in.¹¹¹

Further, PRRI stated that under the concept of *res judicata* on bar by prior judgment, the petitioners are precluded from filing the instant *Petition* since there are: (i) substantial identities of the DA Appellants and the petitioners herein; (ii) identity of the subject matter; and (iii) identity of causes of action.¹¹²

According to PRRI, the petitioners also committed forum-shopping in filing the instant *Petition* in an attempt to extricate themselves from the DA Resolution, which they failed to appeal.¹¹³

For its second argument, PRRI maintained that the instant *Petition* lacks substance as it failed to establish any unlawful act or omission on the part of any of the respondents that resulted or may result in

¹⁰⁹ *Rollo*, vol. 4, pp. 1541-1604.

¹¹⁰ *Ligtas v. People*, G.R. No. 200751, August 17, 2015.

¹¹¹ *Rollo*, vol. 4, pp. 1548-1550.

¹¹² *Id.*

¹¹³ *Id.* at 1550-1551.

environmental damage of serious magnitude, as to entitle them to the extraordinary writs prayed for.¹¹⁴

On the first element for the issuance of a writ of *kalikasan*, PRRI asserted that the BSPs issued for Golden Rice and Bt Eggplant do not violate the petitioners' constitutional right to a healthful and balanced ecology. While the petitioners made averments on the supposed adverse effects of said GMOs, such as seed contamination, development of pest resistance, "superweeds," secondary pests, harm to non-target insects, and general harm to humans, they miserably failed to state in particular how the commercial propagation of these GMOs will result in the purported adverse effects. Between the petitioners' general averments and the BSPs for Golden Rice and Bt Eggplant, the latter should prevail.¹¹⁵

PRRI pointed out that the petitioners attached affidavits of scientists involved in the study of GMOs to support their contentions. However, the perceived harms raised are not supported by relevant data. Thus, they cannot overcome decades of research and development, regulatory compliance, rigorous application procedures, and trials that have sustained GMO technology throughout the years amidst unfounded opposition.¹¹⁶

In addition, PRRI asseverated that the precautionary principle cannot be invoked in this case because the petitioners failed to identify the causal connection between the issuance of the BSPs and the alleged detrimental effects they will cause to humans and the environment. The BSPs were also issued pursuant to strict regulatory measures promulgated to address actual or threatened serious damage or injury to the environment and public health.¹¹⁷

¹¹⁴ *Id.* at 1555-1556.

¹¹⁵ *Id.* at 1557-1558.

¹¹⁶ *Id.* at 1558.

¹¹⁷ *Id.* at 1559.

Moreover, PRRI insisted that the concerns raised in the instant *Petition* have already been addressed by JDC No. 1-2016, which imposed adequate control mechanisms to tackle the uncertainties of GMO technology. Golden Rice was assessed and evaluated under this issuance, which resulted in the BPI's approval of the BSPs.¹¹⁸

Likewise, PRRI raised that the applications, permits, and field trials for Bt Eggplant were undertaken pursuant to DAO No. 08-2002 before it was nullified. Bt Eggplant was also assessed and evaluated under JDC Nos. 1-2016 and 1-2021, which resulted in the BPI's approval of its BSPs for Direct Use as Food and Feed, or for Processing, and for Commercial Propagation.¹¹⁹

According to PRRI, the DA Secretary in the DA Resolution correctly found that the Golden Rice and Bt Eggplant applications have undergone rigorous safety and risk assessment procedures. They have passed several levels of review and individual risk assessments from various constituted committees. Based on the consolidated risk assessment, both Golden Rice and Bt Eggplant will not pose a greater risk to biodiversity, human and animal health, and the environment. The BPI also approved the applications based on available scientific evidence and in accordance with internationally-accepted standards such as the CODEX Alimentarius Guidelines on risk assessment of foods derived from modern biotechnology, Cartagena Protocol on Biosafety, and the OECD documents.¹²⁰

As for the second element, PRRI argued that the BPI issued the BSPs in compliance with relevant regulations; thus, the respondents did not commit any unlawful act or omission from which the alleged actual or threatened violation could have arisen. The BSPs enjoy the presumption of regularity in the performance of official duties,

¹¹⁸ *Id.* at 1566-1568; vol. 1, pp. 151-152.

¹¹⁹ *Id.* at 1568; *Supra* note 36.

¹²⁰ *Id.* at 1568.

especially since this is a matter falling within the BPI's technical expertise.¹²¹

Also, PRRI maintained that the petitioners merely claimed that the respondents committed unlawful acts, and simply enumerated such alleged unlawful acts, without sufficiently establishing how these acts are unlawful.¹²²

On the third element, PRRI contended that the petitioners failed to show any evidence of environmental damage to two (2) or more cities or provinces. Scientific evidence shows that planting of Golden Rice has not resulted in any negative impact on the environment, and that it is safe for human consumption.¹²³

Anent its third argument, PRRI claimed that the petitioners' request for the issuance of a writ of continuing *mandamus* against the respondents is misplaced because they merely seek for the respondents to act or decide in a certain way, on a matter that is not ministerial, but discretionary. Worse, the petitioners wish to supplant the respondents' discretion with their own biased and erroneous preferences.¹²⁴

Further, PRRI alleged that the petitioners also failed to satisfy the requisite for the issuance of a writ of *mandamus* of having no other plain, speedy, and adequate remedy in the course of law. Even assuming the petitioners' appeal of the DA Resolution to the Office of the President was unavailable, for the reason that the DA Secretary is an alter ego of the President whose acts bear the implied approval of the latter, they could have still filed a petition for review under Rule 43 of the Rules of Court before this Court.¹²⁵

¹²¹ *Id.* at 1572-1573.

¹²² *Id.* at 1573-1579.

¹²³ *Id.* at 1579-1580.

¹²⁴ *Id.* at 1580-1583.

¹²⁵ *Id.* at 1583-1585.

Lastly, PRRI posited that the issue involved in the instant *Petition* is a political question, an inquiry into which is proscribed under the doctrine of separation of powers. The petitioners would have this Court usurp the Legislative Department's power to create laws and policies, and the Executive Department's power to determine the manner by which such laws and policies shall be implemented.¹²⁶

PRRI concluded that the instant *Petition* is an indiscriminate and unfounded attack against the government's policies on GMOs and biotechnology as a whole. Moreover, the GMO policies of other states are completely irrelevant to the Philippines, which is an independent and sovereign nation capable of formulating its policies on the study, development, and production of GMOs. The Philippines should not depend on the policy decisions of other countries, especially when the circumstances of the countries differ.¹²⁷

According to PRRI, granting the instant *Petition* would effectively undo the years of biotechnology development and erode the country's biotechnology leadership status, which may impact its long-term agricultural competitiveness and food security, particularly in light of trade liberalization initiatives.¹²⁸

Proceedings before this Court

Upon the submission by the parties of their respective *Pre-Trial Briefs*¹²⁹ pursuant to this Court's *Resolution* dated 18 August 2023,¹³⁰ the case was set for preliminary conference¹³¹ in accordance with Section 11, Rule 7 of the Rules of Procedure for Environmental Cases (RPEC), which included the marking of documents or exhibits; the

¹²⁶ *Id.* at 1585-1590.

¹²⁷ *Id.* at 1590-1597.

¹²⁸ *Id.* at 1597-1602.

¹²⁹ *Rollo*, vol. 5, pp. 1797-1824, *sans* Annexes; vol. 7, pp. 3680-3700; vol. 9, pp. 4808-4824.

¹³⁰ *Rollo*, vol. 4, pp. 1784-1788.

¹³¹ Preliminary Conference Report dated September 27, 2023.

listing of witnesses and the gist and purpose/s of their testimonies; stipulation of facts; simplification of issues; the proposed trial dates; and the manner of conducting the hearing.

Thereafter, hearings were conducted where the parties presented their respective evidence.

Ordinary Witnesses

The petitioners presented three (3) ordinary witnesses, namely: (i) Mael Jethel Kapunan (**Jethel**); (ii) Jocelyn Jamandron (**Jocelyn**); and (iii) Farida Akhter (**Farida**), whose testimonies are summarized in this wise:

Jethel has been an organic farmer for 25 years. He testified through his *Judicial Affidavit*¹³² that he plants traditional rice varieties, such as black rice, in Barangay San Vicente, Sto. Niño, South Cotabato. He does not use chemicals and GMO seeds since the same are prohibited for organic farmers who were issued Participatory Organic Certificates (**POC**) by the government. The POC states that they are prohibited from using GMOs under the Philippine National Standards for Organic Agriculture.¹³³

Jethel opposes the commercialization of Golden Rice, claiming that it is a source of contamination of the seed and milling facility. It could be blown away by the wind, carried by birds, or planted without their knowledge. Since there is no monitoring system in place, contamination is possible. Contamination would also result in the revocation of his POC.¹³⁴

¹³² *Rollo*, vol. 7, pp. 3426-3431.

¹³³ *Id.* at 3428.

¹³⁴ *Id.* at 3431.

According to Jethel, commercialization of Golden Rice should not be allowed unless there is a program, budget, insurance, risk, and impact analysis.¹³⁵

Jethel also narrated that on 07 November 2023, he went to the Office of the Municipal Agriculturalist in South Cotabato, where he saw Golden Rice grains displayed on the shelf of the Municipal Agricultural Officer. Upon inquiry with the Municipal Officer, Jethel was informed that the Golden Rice grains were from the Field Operations Officer of PRRI, who encouraged the planting of Golden Rice. As proof thereof, Jethel presented in evidence a brown envelope containing said grains.¹³⁶

On cross, Jethel clarified that his views on GMOs were based on what he learned from MASIPAG. He admitted that he had no experience planting golden rice and that, were it not for his POC, he would not have opposed it.¹³⁷

On re-direct examination, Jethel said that he was not forced to believe in MASIPAG's statements. He formed his opinion based on the knowledge he gained from MASIPAG's forums and seminars.¹³⁸

On clarificatory questions from this Court, Jethel said that he is still against Golden Rice even if there are programs, budgets, liability insurance, complaint mechanisms, and other ways to mitigate the risks and impacts of GMOs because the same would not address the adverse effects of Golden Rice to the health of farmers. Aside from livelihood, he is also concerned about the farmers' health. Moreover, if it is discovered that organic farmers like him use chemicals or GMO seeds, their POCs would be revoked.¹³⁹

¹³⁵ *Id.* at 3432.

¹³⁶ *Transcript of Realtime Machine Stenographic Notes (TSN)* dated November 20, 2023, pp. 19-22.

¹³⁷ *Id.* at 24-25.

¹³⁸ *Id.* at 27-28.

¹³⁹ *Id.* at 29-34.

The next witness, Jocelyn, is an Antique organic farmer. She testified *via* her *Judicial Affidavit*¹⁴⁰ that she subscribes to the organic method of farming which prohibits the use of GMOs. Organic farming improves the quality of land, environment, crops, and people's health. On the other hand, the use of chemicals harms the quality of land, and results in frequent landslides.¹⁴¹

Sometime in July 2022, Jocelyn discovered that Golden Rice was being planted in Sibalom and other nearby places in Patnongon. Planting and harvesting Golden Rice would lead to contamination and revocation of the farmers' POCs, without crop insurance and a liability mechanism for affected farmers. She learned about the risks of GMO contamination from years of experience, the internet, and MASIPAG.¹⁴²

Nonetheless, Jocelyn stated that farmers have the right to choose organic farming, as much as other farmers have the right to choose GMO farming despite being aware of the risks.¹⁴³

The petitioners' last witness, Farida, is a Bangladeshi researcher on Bt Eggplant or Bt *brinjal*,¹⁴⁴ and the Founding Executive Director of Unnayan Bikalper Nitinirdharoni Gobeshona (**UBINIG**), the Policy Research for Development Alternative in Bangladesh. She testified through her *Judicial Affidavit*¹⁴⁵ that UBINIG conducted research on the adverse effects of Bt Eggplant by interviewing Bangladeshi farmers who cultivated the same. According to a farmer-interviewee, it is not true that Bt Eggplant produces a higher yield due to pest-repelling properties. The *brinjal* blossoms were plagued by flower-devouring leeches, necessitating the application of pesticides. Thus, the

¹⁴⁰ *Rollo*, vol. 7, pp. 3442-3449.

¹⁴¹ *Id.* at 3445.

¹⁴² *Id.* at 3446-3447.

¹⁴³ *Id.* at 3448.

¹⁴⁴ Bt *brinjal* is the counterpart of Bt *talong* in Bangladesh.

¹⁴⁵ *Rollo*, vol. 7, pp. 3411-3415.

production costs were higher than what was used to spend for non-GMOs or plants grown by the farmers.¹⁴⁶

Another farmer narrated that the plant growth of Bt Eggplant was very low, and its market price is comparatively low due to lack of demand. The success stories about Bt Eggplant on the internet are false.¹⁴⁷

Farmers also suffered income losses due to farming Bt Eggplant. They worry that their non-genetically modified, traditional eggplants may have been contaminated by Bt Eggplant.¹⁴⁸

On cross, Farida explained that farmers who plant normal *brinjal* have not complained about Bt Eggplant because they are still unaware of its effects. While she mentioned that the success stories about Bt Eggplant are untrue, she admitted that there are reports from the Bangladesh Agricultural Research Institute that there is a six-fold increase in net returns in planting Bt Eggplant compared to non-Bt *brinjal*, and that there are different video recordings and interviews available online showing Bangladeshi farmers who are satisfied with the results of them farming Bt Eggplant.¹⁴⁹

On re-direct examination, Farida explained, among others, that in Bangladesh, the Department of Agriculture gives out seeds to farmers who are unaware that these are actually GMO seeds. Said farmers are persuaded to take the seeds. Noticeably, farmers who received said GMO seeds for the first time would not go back for a second round in the next season.¹⁵⁰

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 3415.

¹⁴⁸ *Id.* at 3416.

¹⁴⁹ TSN, November 20, 2023 (Morning Session), pp. 68-70.

¹⁵⁰ *Id.* at 75-76.

On re-cross examination, Farida stated that the government of Bangladesh did not conduct any environmental impact assessment on Bt Eggplant.¹⁵¹

Upon clarificatory questions from this Court, Farida admitted that while she has done research work with farmers, she has not engaged in actual farming work or cultivation.¹⁵²

For its part, the OSG presented two (2) ordinary witnesses, Danilo M. Marzan (**Danilo**) and Geronima P. Eusebio (**Geronima**).

Through his *Judicial Affidavit*,¹⁵³ Danilo stated that he is a farmer who has been primarily cultivating eggplants and corn since 1995. He explained that the primary concern in planting eggplants is the EFSB pests, which are difficult to purge because of the worms that grow inside the sprout, flower, and fruits. EFSB has destroyed eighty percent (80%) of their eggplant crops.¹⁵⁴

According to Danilo, EFSB can oftentimes be managed by strong insecticides. Yet, while insecticides are initially effective, they do not address the pests that are difficult to purge. Using insecticides is expensive and kills good beetles, spiders, bees, and dragonflies. Further, people near the plantation would complain of the foul smell of insecticides. Despite the same, farmers have no choice but to use insecticides against EFSB.¹⁵⁵

The development of Bt Eggplant has provided an alternative way to control EFSB. Danilo learned about Bt Eggplant through the Sta. Maria, Pangasinan farmers, when UPLB conducted a public consultation. During the public hearings, he discovered that it was

¹⁵¹ *Id.* at 76.

¹⁵² *Id.* at 57.

¹⁵³ *Rollo*, vol. 5, pp. 9087-9096.

¹⁵⁴ *Id.* at 9088-9090.

¹⁵⁵ *Id.* at 9090-9091.

possible to plant eggplant without the need for insecticides which harm people's health. Also, farmers such as Danilo would be able to allot their money for other things rather than for purchasing insecticides.¹⁵⁶

On cross-examination, Danilo testified that during the seminar conducted by UPLB on Bt Eggplant, only its positive effects were discussed; they were not informed of its adverse effects.¹⁵⁷

On re-direct examination, Danilo explained that during UPLB's seminar, they were informed that Bt Eggplant would lessen expenses and aid farmers whose eggplant crops are always destroyed by worms. During the seminar, he and other farmers raised their hands to express their agreement with Bt Eggplant.¹⁵⁸

Through clarification of this Court, Danilo stated that aside from saving on costs, Bt Eggplant is good for their health since they need not use insecticides.¹⁵⁹

The OSG's next witness, Geronima, is the Supervising Agriculturist and Officer-in-Charge Head of the Biotechnology Office of the BPI. Her functions include overseeing the implementation of biosafety regulations and related activities under the BPI's jurisdiction. Among the matters she discussed in her *Judicial Affidavit*¹⁶⁰ are the following:

- i. The BPI issues three (3) kinds of BSPs relative to a regulated article: (a) BSP for Field Trial; (b) BSP for Direct Use as Food and Feed, or for Processing; and (c) BSP for Commercial Propagation. These BSPs are separate and distinct from each

¹⁵⁶ *Id.* at 9092.

¹⁵⁷ TSN, November 20, 2023 (Afternoon Session), p. 11.

¹⁵⁸ *Id.* at 20-21.

¹⁵⁹ *Id.* at 21.

¹⁶⁰ *Rollo*, vol. 14, pp. 7242-7272.

other, in that they do not follow a sequential order. As an exception, however, an applicant for a BSP for Commercial Propagation must show that it had previously secured a BSP for Field Trial;¹⁶¹

- ii. Before a regulated article is released into the environment for field testing, it must have been tested under contained conditions in the Philippines. As proof that a regulated article has undergone confined testing, the DOST Biosafety Committee, composed of scientists representing the biological, physical, environmental, health, and social sciences, and the *ex-officio* members from the DA, DOH, DENR, and DOST, issue a Certification of Completion;¹⁶²
- iii. The DOST Biosafety Committee issued *Certificates of Completion*¹⁶³ as part of the respective applications for the BSPs for Field Testing of Golden Rice and Bt Eggplant;¹⁶⁴
- iv. The application for the BSP for Field Trial of Bt Eggplant was governed by DAO No. 08-2002, as the BPI received it on 29 September 2009. The following steps were then taken in accordance with DAO No. 08-2002: (a) the IBC, which is the monitoring arm of the BPI that ensures that proponents comply with the prescribed conditions under the issuance and the BSP, conducted an initial review of the application. Said review included risk assessment and risk management strategies to guarantee that the testing did not pose any significant risk to human health and the environment; (b) the IBC endorsed the application to the BPI; (c) the BPI, through its Secretariat, reviewed the application and determined that

¹⁶¹ *Id.* at 7245.

¹⁶² *Id.* at 7246-7248.

¹⁶³ *Id.* at 7248.

¹⁶⁴ *Id.*

it is sufficient in form and substance, and thereafter transmitted the same to the BPI's Biotechnology Core Team; (d) after the BPI's Biotechnology Core team likewise found the same to be compliant in form and substance, it farmed out copies of the application to three (3) selected members of the STRP for independent evaluation; and (e) after receipt of the STRP Reports,¹⁶⁵ the BPI Biotechnology Core Team collated the same into one *Consolidated Report*, for deliberation and then for final approval of the BPI Director;¹⁶⁶

- v. Since UPLB complied with all requirements under DAO No. 08-2002, the BPI, on 26 August 2009, issued BSPs for Field Trial of Bt Eggplant for the field test sites in Laguna, Pangasinan, and Camarines Sur. Subsequently, on 28 June 2010, the BPI issued another BSP for Field Trial for field test sites in Iloilo, Leyte, North Cotabato, and Davao. When UPLB requested the renewal of the BSPs, the BPI granted the same for the first three (3) sites up to 15 March 2013, and the other remaining sites, except the one in Davao, up to 27 June 2013;¹⁶⁷
- vi. Following UPLB's submission of its *Terminal Report* on 12 April 2018,¹⁶⁸ the BPI issued a *Certificate of Completion* dated 13 June 2018¹⁶⁹ for the sites in Pangasinan, Laguna, Camarines Sur, and North Cotabato;¹⁷⁰
- vii. As for the BSP for Field Trial of Golden Rice, JDC No. 1-2016, the governing rule, was complied with through the following steps taken: (a) the Golden Rice field trial application was

¹⁶⁵ *Id.* at 7248-7253.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* at 7254.

¹⁶⁸ *Id.* at 7255.

¹⁶⁹ *Rollo*, vol. 8, p. 384.

¹⁷⁰ *Rollo*, vol. 14, p. 7255.

signed by two (2) community representatives, who formed part of the IBC's composition; (b) the required *Project Description*,¹⁷¹ which is the summary of the project outlining the objectives, phases, and processes involved, was replaced with the Environmental Health Impact Assessment (EHIA) Form per the DOH Biosafety Committee's directive. The EHIA is a more comprehensive document than the Project Description; (c) copies of the application were transmitted by the BPI to the STRP and the Biosafety Committees of the DENR, DOH, and SEC, for their respective evaluations; (d) the BPI Biotechnology Office consolidated the evaluation reports for submission to the DA Biosafety Committee, which in turn evaluated the documents and made recommendations to the BPI Director; and (e) public consultation was conducted;¹⁷²

- viii. Considering that PRRI complied with the requirements under JDC No. 1-2016, the BSP for Field Trial of Golden Rice was issued on 20 May 2019;¹⁷³
- ix. After the field trials were completed, PRRI submitted its *Terminal Report* on 24 February 2020,¹⁷⁴ and thereafter, the BPI issued a *Certificate of Completion* on 26 August 2020¹⁷⁵ for the sites in Nueva Ecija and Isabela;
- x. The BPI received PRRI's application¹⁷⁶ for BSP for Direct Use as Food and Feed, or for Processing of Golden Rice on 28 February 2017, and UPLB's application¹⁷⁷ for BSP for Direct Use as Food and Feed, or for Processing of Bt Eggplant on 24

¹⁷¹ *Supra* note 71.

¹⁷² *Rollo*, vol. 14, pp. 7256-7259.

¹⁷³ *Id.* at 7259.

¹⁷⁴ *Id.* at 7409.

¹⁷⁵ *Supra* note 94.

¹⁷⁶ *Rollo*, vol. 1, pp. 295-297.

¹⁷⁷ *Supra* note 36.

August 2020. Both applications were governed by JDC No. 1-2016;¹⁷⁸

- xi. The following actions were then taken: (a) the BPI Biotechnology Office determined that the applications were sufficient in form and substance, and forwarded the same to the Biosafety Committees of the DENR and DOH for environmental and health impact assessment; (b) the BPI also referred the application to the BPI-PPSSD for determination of compliance with food safety standards; to the BAI for determination of compliance with feed safety standards; to the SEC experts for their consideration; and to the STRP for evaluation of the applicants' risk assessment reports; (c) comments from the public were obtained through the posting of the applications on the websites of the National Committee on Biosafety of the Philippines (NCBP) and the BPI, and the offices of the DA and DOST nationwide; (d) a copy of the approved PIS was published in two (2) newspapers of general circulation; (e) the applicants submitted a written report to the BPI on the public comments and issues raised; (f) the BPI forwarded the written report on public comments, as well as the application documents, to the DA Biosafety Committee for evaluation, which in turn recommended to the BPI Director the issuance of the BSPs;¹⁷⁹
- x. Considering compliance with the requirements under JDC No. 1-2016, the BPI issued BSPs for Direct Use as Food or Feed, or for Processing to PRRI for Golden Rice on 10 December 2019,¹⁸⁰ and to UPLB for Bt Eggplant on 05 August 2021;¹⁸¹

¹⁷⁸ *Rollo*, vol. 14, p. 7260.

¹⁷⁹ *Id.* at 7261-7263.

¹⁸⁰ *Supra* note 38.

¹⁸¹ *Supra* note 31.

- xi. The BPI received PRRI's application¹⁸² for BSP for Commercial Propagation of Golden Rice on 20 October 2020, which is governed also by JDC No. 1-2016;¹⁸³
- xii. The following steps were taken in accordance therewith: (a) the applicant submitted the application form and supporting documents; (b) the BPI Biotechnology Office determined the application to be sufficient in form and substance, and submitted the same to the Biosafety Committees of the DENR and DOH, BPI-PPSSD, BAI, STRP, and SEC for their respective evaluations; (c) the BPI Biotechnology Office also considered the submitted comments from the public, similar to the procedure adopted for the direct use applications; (d) a copy of the approved PIS was published in two (2) newspapers of general circulation; (e) the applicant submitted a written report to the BPI on the public comments and issues raised; (f) the BPI consolidated the technical reports, the comments from the public, and applicants' responses thereto; (g) after consolidation, the BPI forwarded the documents to the DA Biosafety Committee for evaluation, which in turn recommended to the BPI Director the issuance of the BSPs;¹⁸⁴
- xiii. Considering compliance with the requirements under JDC No. 1-2016, the BPI issued the BSP for Commercial Propagation of Golden Rice to PRRI on 21 July 2021;¹⁸⁵

¹⁸² *Rollo*, vol. 1, pp. 299-300.

¹⁸³ *Rollo*, vol. 14, pp. 7263-7264.

¹⁸⁴ *Id.* at 7264-7266.

¹⁸⁵ *Id.* at 7266.

- xiv. The BPI received UPLB's application¹⁸⁶ for the BSP for Commercial Propagation of Bt Eggplant on 31 March 2022, thus said application is governed by JDC No. 1-2021;
- xv. The following steps were taken: (a) the proponent submitted to the BPI its application, together with a certification of field trial completion, a technical dossier, its risk assessment report for commercial propagation, PIS, and proof of payment of application fee; (b) the BPI Biotechnology Office found the application to be compliant in form and substance, and thus forwarded the same to the Biosafety Committees of the DOST, DA, DENR, and DOH, for review; (c) the BPI reviewed the PIS and found it to be sufficient; (d) the PIS was published in the official website of the applicant and the BPI website; (e) public comments and responses thereto were forwarded to the BPI Director; (f) the Biosafety Committees designated two (2) representatives from the JAG to review and evaluate the application; (g) the JAG submitted its report to the BPI Director, who in turn made a decision on the application;¹⁸⁷ and
- xvi. Considering compliance with the requirements under JDC No. 1-2021, the BPI issued the BSP for Commercial Propagation of Bt Eggplant to UPLB on 18 October 2022.¹⁸⁸

On cross-examination, Geronima clarified that the difference between DAO No. 08-2002 and JDC No. 1-2016 is that under the former issuance, only the STRP conducted the assessments, while the assessments in the latter involved the DENR, DOH, DOST, and the agencies and bureaus under the DA.¹⁸⁹

¹⁸⁶ *Supra* note 80.

¹⁸⁷ *Rollo*, vol. 14, pp. 7266-7268.

¹⁸⁸ *Id.* at 7268.

¹⁸⁹ TSN, November 20, 2023 (Afternoon Session), p. 43.

Geronima explained that if the field trial commenced without strict compliance with the rules on the constitution and functions of the IBC, the BSP could be revoked on the grounds of non-compliance with the conditions thereunder. It is the BPI which monitors compliance with the conditions under the BSP issuance. For Golden Rice specifically, the BPI Biotechnology Office monitors compliance with its BSPs.¹⁹⁰

According to Geronima, when new information or complaints from the public are received by the BPI Biotechnology Office, the technical staff checks the internet and monitors the progress of the field trials.¹⁹¹

Geronima also explained that as to the applications, there is a distinction between the required publication for field trial and that for direct use as food and feed, for processing, and for commercial propagation. For field trial, the PIS, which is prepared by the applicant and evaluated by the BPI, will be posted in conspicuous places where the same will be conducted. For direct use as food and feed, or for processing, as well as for commercial propagation, the proponent or applicant is required to have the PIS published in a newspaper of general circulation. The PIS is required to be in a language understood by the locality where the field trial will be conducted. However, there is no mechanism to verify whether the people understand said notices.¹⁹²

On re-direct examination, Geronima explained that one of the bases of DAO No. 08-2002, JDC No. 1-2016, and JDC No. 1-2021, is the NBF, which ensures that local policies on GMOs are aligned with the international guidelines and policies on modern biotechnology, such as the Cartagena Protocol and CODEX Alimentarius Guidelines. The

¹⁹⁰ *Id.* at 54-56.

¹⁹¹ *Id.* at 56.

¹⁹² *Id.* at 66-67; 70.

NBF provides a mechanism where products of modern biotechnology are being assessed for potential risks and the measures to address said risks. The independence of the STRP is also a matter covered by the guided principles on risk assessment.¹⁹³

Upon clarificatory questions of this Court, Geronima stated that informal invitations were extended to experts to attend an STRP orientation, where the responsibilities of STRP members were explained. Formal invitations were sent to those who agreed to become STRP members.¹⁹⁴

According to Geronima, given that JDC No. 1-2021 has retroactive application, the BSPs for Direct Use as Food and Feed, or For Processing, and for Commercial Propagation of Golden Rice and Bt Eggplant now have no expiration. The BSPs for Field Trial, however, only have a two (2)-year validity period.¹⁹⁵

Geronima also clarified that their office received negative comments from farmers that the products are risky and unsafe. Negative comments are forwarded by their office to the proponents, and the STRP could again be engaged to address said feedback. However, they have also received positive comments from farmers who are willing to plant Bt Eggplant instead of using chemicals.¹⁹⁶

On the part of PRRI, it adopted the testimony of Geronima as stated above and in addition thereto, presented Dr. Vivencio Mamaril (**Dr. Mamaril**), a technical consultant of the DA and the previous chairperson of the DA Biosafety Committee when BPI was processing the BSPs of Golden Rice. Apart from corroborating Geronima's testimony on the proper procedure for application of the BSPs for field

¹⁹³ *Id.* at 73-74.

¹⁹⁴ *Id.* at 82.

¹⁹⁵ *Id.* at 84.

¹⁹⁶ *Id.* at 87-88.

testing, direct use, and commercial propagation of Golden Rice under JDC No. 1-2016, as well as PRRI's compliance therewith, Dr. Mamaril testified that:

- i. Biotechnology regulations are instrumental to the development of the plant industry because the purpose of the biotechnology regulatory framework is to ensure the safe and responsible use of products of modern biotechnology so that benefits may be reaped while avoiding or minimizing the risks associated with its use;¹⁹⁷
- ii. Among the relevant biosafety regulations are Executive Order No. 413, series of 1990, DAO No. 08-2002, and EO 514, which govern the establishment and formulation of the NBF, including the framework of the precautionary principle and national policy consistent with the Cartagena Protocol;¹⁹⁸
- iii. The precautionary principle guides biosafety decisions, including the issuance of BSPs. Under the precautionary principle enshrined in JDC No. 1-2016, the lack of scientific certainty or consensus regarding the extent of the potential adverse effects of a GMO on the environment shall not prevent concerned government departments or agencies from making the appropriate decision to avoid or minimize such potential adverse effects;¹⁹⁹
- iv. Among the requirements for the application for BSP for field trial under JDC No. 1-2016, is that the applicant must first constitute an IBC prior to the contained use, confined test, or field trial of the regulated article since the application form to be filed with the BPI must contain the endorsement of the

¹⁹⁷ *Rollo*, vol. 16, p. 9110.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.* at 9111.

IBC, duly signed by the majority of its members, among others;²⁰⁰

- v. After reviewing the technical dossier submitted by PRRI, as well as the assessments conducted by the STRP, the Biosafety Committees of the DENR and DOH, the BAI, and the SEC experts, the DA Biosafety Committee agreed that the environmental and health impacts of Golden Rice are comparable to conventional rice; thus, the DA Biosafety Committee recommended the issuance of the BSP for Field Trial in favor of PRRI, provided that PRRI complies with certain conditions contained in DA Biosafety Committee's technical report;²⁰¹
- vi. In applications for direct use for food and feed, or for processing, JDC No. 1-2016 provides a different set of requirements for the applicant. Unlike applications for field trial, where the applicant must constitute an IBC prior to the conduct of the confined test, contained use, or field trial, and secure its endorsement, there is no such requirement for applications for direct use for food and feed, or for processing;²⁰²
- vii. After reviewing the technical dossier submitted by PRRI, as well as the assessments conducted by the STRP, the Biosafety Committees of the DENR and DOH, the BAI, and the SEC experts, the DA Biosafety Committee agreed that Golden Rice is as safe as its conventional counterpart and is not expected to pose any significant risk to human and animal health, and the environment; thus, the DA Biosafety Committee recommended the issuance of the BSP for Direct

²⁰⁰ *Id.* at 9117.

²⁰¹ *Id.* at 9119.

²⁰² *Id.* at 9122.

Use for Food and Feed, or for Processing, in favor of PRRI, provided that PRRI complies with certain conditions contained in the DA Biosafety Committee's technical report;²⁰³

- viii. For a BSP for Commercial Propagation to be given due course by the BPI, the application therefor must include a BPI Certification on the satisfactory conduct of a field trial of the regulated article. This presupposes that a BSP for Field Trial had been secured by the applicant;²⁰⁴ and
- ix. After reviewing the technical dossier submitted by PRRI, as well as the assessments conducted by the STRP, the Biosafety Committees of the DENR and DOH, the BAI, and the SEC experts, the DA Biosafety Committee found scientific evidence that Golden Rice is similar to and as safe as the conventional rice; thus, the DA Biosafety Committee recommended to the BPI the issuance of the BSP for Commercial Propagation in favor of PRRI, provided that PRRI complies with certain conditions contained in DA Biosafety Committee's technical report.²⁰⁵

On cross, Dr. Mamaril explained that there are three risks related to regulated articles – environmental safety, food safety, and animal safety.²⁰⁶

Dr. Mamaril admitted that he did not witness the completion of the contained testing of Bt Eggplant and Golden Rice, and only checked the documents for the issuance of the certificate of completion.²⁰⁷

²⁰³ *Id.* at 9124.

²⁰⁴ *Id.* at 9129.

²⁰⁵ *Id.* at 9127.

²⁰⁶ TSN, November 20, 2023 (Afternoon Session), p. 102.

²⁰⁷ *Id.* at 104-105.

Further, Dr. Mamaril explained the specific actions taken to assess and manage the risks associated with Golden Rice. Upon receipt by the DA Biosafety Committee of PRRI's application, with details on how, when, and where Golden Rice will be planted, and the kinds of activities to be conducted from the planting to the harvesting thereof, the Committee identified specific risks involved. The BPI exercised oversight and supervisory functions over the field trials, and ensured that all risk measures were implemented and strictly enforced.²⁰⁸

On re-direct examination, Dr. Mamaril stated that as an assessor, he relied heavily on scientific literature, which are fair reviews published by respected scientists who have conducted experiments in the laboratory or field. This is why there is no need to duplicate the experiments already conducted by experts.²⁰⁹

On re-cross, Dr. Mamaril confirmed that no contamination study was conducted by the DA Biosafety Committee after the issuance of the BSP for Commercial Propagation of Golden Rice, and no health impact assessment was performed after the issuance of all BSPs for Golden Rice.²¹⁰

Upon clarificatory questions of this Court, Dr. Mamaril explained that no risk assessment is done after field testing because everything used therein is destroyed.²¹¹ Further, the BPI Director cannot become a member or chairperson of the DA Biosafety Committee.²¹²

²⁰⁸ *Id.* at 107-108.

²⁰⁹ *Id.* at 130-131.

²¹⁰ *Id.* at 138.

²¹¹ *Id.* at 140.

²¹² *Id.* at 141.

To Dr. Mamaril's knowledge, the BPI does not monitor the labeling of GMO products such as BT Corn that are sold in the market.²¹³

Moreover, Dr. Mamaril stated that studies concerning scientific tests conducted in other countries are still being tested in the Philippines through field trials, because the environments of countries vary. In issuing the BSP for Field Trial, reliance is placed on the DOST certificate for field testing to proceed.²¹⁴

Furthermore, Dr. Mamaril affirmed that the DOST, BPI, and DA have the facilities, equipment, apparatus, and infrastructure, to assess the environmental impact of GMOs.²¹⁵

Expert Witnesses

After the presentation of the ordinary witnesses, the expert witnesses of the parties testified *via* the "hot-tubbing" method, a trial procedure whereby experts in a given field or discipline present their evidence simultaneously.²¹⁶ Pertinent portions of the testimonies of the expert witnesses, lifted or taken from their respective *Judicial Affidavits*, are summarized as follows:

Petitioners

Dr. Teodoro Mendoza²¹⁷ (**Dr. Mendoza**) testified on the unintended traits of GMOs, which include seed germination; weed suppression; pest resistance; drought tolerance; height, yield, and flowering time that are not intended but may have been acquired or

²¹³ *Id.* at 142.

²¹⁴ *Id.* at 149-150.

²¹⁵ *Id.* at 152.

²¹⁶ <https://www.lexisnexis.co.uk/legal/guidance/hot-tubbing-concurrent-expert-evidence> (last accessed 21 March 2024).

²¹⁷ *Rollo*, vol. 6, pp. 2836-2849.

developed; compositional differences in nutrients, toxins, and other biochemicals.²¹⁸

Dr. Mendoza explained that the unintended traits must be known because the adverse unintended traits that eventually manifest in Golden Rice and heirloom rice, landraces, and traditional rice cannot be undone, deleted, or repaired. Moreover, Golden Rice commercialization may introduce unnecessary agronomic and biosafety risks into the food system. The vacuum packaging of Golden Rice, which has been suggested to slow beta-carotene degradation, would further undermine the food system's sustainability. There are no independent studies or assessments on the unintended traits of Golden Rice and Bt Eggplant approvals.²¹⁹

Dr. Mendoza stated that there are concerns about the cross-pollination of genetically modified and non-genetically modified crops: winds increase the travel of pollens, which in turn increase the chance of Golden Rice reaching remote farms and rice terraces and outcrossing with landraces and heirloom rice varieties. Seed mixing and other accidents may also lead to contamination, the effects of which may be irreversible.²²⁰

According to Dr. Mendoza, contamination of Golden Rice may alter or lose the germination, height, color, size, nutritional content, taste, weed and pest resistance, and safety of heirloom rice, landraces, and traditional rice.²²¹

He also pointed out that to get the required amount of Vitamin-A from Golden Rice, a person would have to eat 20 kilograms of rice per day, which is excessive and unhealthy.²²²

²¹⁸ *Id.* at 2839-2840.

²¹⁹ *Id.* at 2841.

²²⁰ *Id.*

²²¹ *Id.* at 2845.

²²² *Id.* at 2847.

Dr. Mendoza opined that the respondents should perform unintended traits assessments, compositional studies, test conditions for laboratory and field trials, and studies on the long term and sublethal effects of Golden Rice and Bt Eggplant before these GMOs are allowed to be introduced to the Philippine environment.²²³

Dr. Charito Medina²²⁴ (**Dr. Medina**) explained that the following are the risks associated with Bt Eggplant:

- i. Bt Eggplant may harm or contaminate non-targeted insects and organisms. Bt toxins produced by GMOs significantly differ from those of standard insect sprays. Bt toxins in GMOs could damage the ecosystem by reducing other species, insects, or organisms which would naturally help control pest species;
- ii. Bt crops is a “single pest approach;” hence, targeted pests could quickly become resistant to its toxin, and a secondary pest outbreak may occur;
- iii. Bt Eggplant and other cultivated varieties can revert to wild phenotypes and establish feral populations that are not safe for consumption; and
- iv. Long-term toxicology studies on pigs fed with GMO soy and maize exhibited heavier uteri and higher rate of severe stomach inflammation than pigs fed with non-GMO diet.²²⁵

As for Golden Rice, Dr. Medina testified that the following are its associated risks:

- i. Golden Rice can contaminate non-genetically modified rice through seed-mixing and cross-pollination, and may have health risks to humans;

²²³ *Id.* at 2847-2848.

²²⁴ *Id.* at 3097-3103.

²²⁵ *Id.* at 3100-3104.

- ii. Health impacts of GMO rice have not been properly assessed. The concentration of beta-carotene in Golden Rice is too low to warrant a nutrient contention claim. GMO rice also degrades rapidly during storage and cooking, and is expensive and unnecessary; and
- iii. The health assessment conducted by the DOH, DENR, and DA is grossly inadequate since in the health impacts questionnaire distributed for Golden Rice, the proponent answered “N/A” or “Not Applicable” to 44 out of 48 questions therein.²²⁶

Dr. Debal Deb (**Dr. Deb**) stated that a growing body of experimental evidence shows that genetically modified crops have unintended and deleterious effects on non-target organisms. Further, there are uncertainties in GMOs, such as Golden Rice and Bt Eggplant, which are inherently risky for the environment, ecosystem, and human health.²²⁷

For the ecosystem, Dr. Debal testified that if GMOs, with their suite of transgenes, contaminate local, non-genetically modified rice and vegetables, these genes and gene products will likewise be inherited by the local varieties. Thus, rice and eggplant biodiversity is at risk of genetic deterioration.²²⁸

On human health, Dr. Debal explained that the regular consumption of beta-carotene beyond certain levels may have adverse health effects. Excessive retinoic acid, which is derived from beta-carotene, is dangerous to infants, pregnant women, certain age groups, and people living under certain conditions.²²⁹

²²⁶ *Id.* at 3104-3106.

²²⁷ *Id.* at 3038.

²²⁸ *Id.* at 3036.

²²⁹ *Id.*

According to Dr. Debal, GMO proponents have also not presented any study or proof that they have looked into the biosafety issues under the Cartagena Protocol.²³⁰

Dr. Debal concluded that with the uncertainties and identified risks of Golden Rice and Bt Eggplant, it is a rational recourse to adopt the precautionary principle before the commercialization or consumption thereof.²³¹

Alfie Pulumbarit²³² (**Alfie**) testified that MASIPAG opposes the release of Golden Rice and Bt Eggplant to the environment and for commercial propagation because based on the case areas computation of their cost of production in the last cropping season, small-holder farmers became bankrupt. Farmers who are unable to pay usually end up losing control over their lands or are forced to leave, lease, or give up their land to evade legal action. New pests were documented in the genetically-modified corn farms in San Dionisio, Iloilo, leaving most farmers bankrupt.²³³

Alfie explained that Mexico's Supreme Court already allowed authorities to ban the development, production, ownership, marketing, import, transport, storage, and use of GMOs that are harmful to human health and/or threaten food security or ecosystems. Moreover, many countries in Europe are against GMOs.²³⁴

According to Alfie, there is widespread opposition to GMOs in the Philippines. For example, in 2013, for fear that their non-genetically modified crops would be contaminated, farmers from Camarines Sur uprooted the experimental Golden Rice field trial.

²³⁰ *Id.*

²³¹ *Id.* at 3037.

²³² *Rollo*, vol. 9. pp. 5041-5042.

²³³ *Id.* at 4053.

²³⁴ *Id.* at 5044.

More than 20,000 Filipinos have also signed *Petitions*²³⁵ against Golden Rice and submitted the same to the DA.²³⁶

Furthermore, Alfie raised the issue that the DA, which is supposed to regulate GMOs, is promoting GMOs and the public's consumption of Golden Rice. This is clearly a conflict of interest.²³⁷

Dr. Ricarda Steinbrecher²³⁸ (**Dr. Steinbrecher**) stated that recent works and publications focus on the unintended effects and risks of GMOs, which include transformation-induced mutations. Mutations constitute a risk, which can only be ascertained through detailed sequencing and identification, and only through assessment and testing. A much higher degree of analysis and testing is required to address the possible unintended mutation in Golden Rice and Bt Eggplant, and to investigate the lack of knowledge and uncertainty.²³⁹

Elenita Daño²⁴⁰ (**Elenita**) testified that the introduction of GMOs in developing countries is not intended to benefit marginalized communities, but mainly farmers who could afford the technology and have access to resources and infrastructure needed to make GMO-technology work. Costs of GMO-technology are not affordable to smallholders and subsistent farmers who have to deal with GMO contamination in traditional and local genetic pools in surrounding farms. Evidence points to the reality of GMO contamination of conventional crops.²⁴¹

According to Elenita, governments may have adopted biosafety regulations but often lack the capacity and infrastructure to enforce rules and monitor compliance, especially with the transboundary

²³⁵ *Rollo*, vol. 10, pp. 5313-5429.

²³⁶ *Rollo*, vol. 9, pp. 5044.

²³⁷ *Id.* at 5045.

²³⁸ *Id.* at 4908-4910.

²³⁹ *Id.*

²⁴⁰ *Id.* at 4961-4973.

²⁴¹ *Id.*

movement of GMOs. There is virtually no effective mechanism that allows communities to challenge the introduction of GMOs, much less refuse the technology therefor.²⁴²

Also, Elenita opined that GMOs have significant adverse consequences on biodiversity in agricultural and forest ecosystems. Genetically modified crops have resulted, among other things, in the displacement of traditional and local varieties and have contaminated traditional genetic pools of crops.²⁴³

Elenita also mentioned that socio-economic considerations are essential in GMO testing as they are covered under Article 26 of the Protocol on the Convention on Biological Diversity.²⁴⁴

As for Dr. Gene Nisperos²⁴⁵ (**Dr. Nisperos**), he pointed out that the problem of Vitamin-A deficiency is not one of the major health issues in the country; it is not so severe as to warrant such a high technology as Golden Rice. There is also a high probability that not only those with Vitamin-A deficiency will consume Golden Rice, but also healthy children and individuals. Unmitigated accumulation of Vitamin-A in the body may lead to toxicities that have adverse effects on organs like the brain and the liver.²⁴⁶

Respondents (represented by the OSG)

Dr. Lourdes Taylo²⁴⁷ (**Dr. Taylo**) explained that EFSB is the most destructive insect pest of eggplants, causing yield loss as high as 80%. To control EFSB, spraying pesticides is ineffective because the larval

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ *Rollo*, vol. 7, pp. 3315-3322.

²⁴⁶ *Id.* at 3319.

²⁴⁷ *Rollo*, vol. 3, pp. 1047-1062.

stage of the EFSB, which is the most destructive stage, is spent inside the plant, where it remains protected from insecticide sprays.²⁴⁸

Dr. Taylo stated that based on multilocational trials, open-pollinated and hybrid- derived Bt Eggplants consistently showed high efficacy against EFSB compared to non-Bt comparators across locations and growing seasons.²⁴⁹

According to Dr. Taylo, Insect Resistance Management is employed to mitigate the development of pest resistance. However, regular insect resistance monitoring of Bt Eggplant before and after pre-exposure to the Bt toxin is imperative to determine significant change in the susceptibility of the EFSB to the Bt toxin.²⁵⁰

For Dr. Taylo, Bt Eggplant technology can increase farmers' marketable yields by 192%, with a cost advantage of 15%.²⁵¹

Dr. Sergio Francisco²⁵² (**Dr. Francisco**) testified that shoot borers are the most common and serious pest of eggplants, which are controlled mainly through chemical means, or spraying insecticides.²⁵³

Dr. Francisco explained that while there are other Integrated Pest Management (**IPM**) strategies available in controlling EFSBs in the Philippines, these are not widely used because of the severity and urgency to control the EFSBs; the unavailability and costs of materials required by IPM strategies; and the continued aggressive promotion of the use of insecticides by chemical companies.²⁵⁴

²⁴⁸ *Id.* at 1043.

²⁴⁹ *Id.* at 1044.

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Rollo*, vol. 15, pp. 8270-8279.

²⁵³ *Id.* at 8239-8240.

²⁵⁴ *Id.* at 8243-8244.

Moreover, Dr. Francisco stated that Bt seeds may be expected to increase in price premium — a price that Bt Eggplant farmers have to pay for an improved trait that will significantly reduce the EFSB damage, increase marketable yield, and reduce pesticide volume and application. However, fertilizer and herbicide are not expected to change since Bt Eggplant is similar to non-Bt eggplants.²⁵⁵

According to Dr. Francisco, projected savings from the risk avoided for health costs due to reduced pesticide application would be about Php6.28 million a year.²⁵⁶

Dr. Desiree Hautea²⁵⁷ (**Dr. Hautea**) opined that Bt Eggplant is an effective, safer, and cheaper alternative to the current practice of frequent spraying of a mixture and more toxic insecticides to control EFSB, which is known to cause serious harm to human and animal health, and the environment.²⁵⁸

Dr. Hautea explained that Bt Eggplant exhibits the same botanical characteristics and nutritional composition found within the range of natural variation observed in conventional eggplants. Bt Eggplant is cultivated like conventional eggplant, and looks and tastes like conventional eggplant, but with reduced pesticide sprays. Planting Bt Eggplant can co-exist with planting non-Bt conventional eggplants.²⁵⁹

Further, Dr. Hautea testified that Bt works as an insecticide by producing crystal-shaped protein (cry toxins) that specifically kill certain insects. Humans do not have the same receptors as insects, which means that cry toxins pass through humans with no effect, and are digested like proteins from food such as meat, beans, and tofu.²⁶⁰

²⁵⁵ *Id.* at 8248-8249.

²⁵⁶ *Id.* at 8250.

²⁵⁷ *Rollo*, vol. 3, pp. 1399-1402.

²⁵⁸ *Id.* at 1384.

²⁵⁹ *Id.* at 1385.

²⁶⁰ *Id.*

Dr. Hautea stated that the risk of contamination through cross-pollination of Bt Eggplants with local varieties, landraces, and heirloom varieties is negligible, meaning the risk is insubstantial, and there is no present need to invoke mitigation actions.²⁶¹

As per Dr. Hautea, the only identified new component present in Bt Eggplant but not in non-Bt Eggplant that may pose a risk to non-target organisms is Bt Cry1Ac protein, which has been used safely for decades as Bt pesticides and Bt crops.²⁶²

Further, Dr. Hautea mentioned that Bt Eggplants are assessed for food and feed safety prior to commercial release. The process and methodology in these assessments are fairly established and harmonized worldwide.²⁶³

According to Dr. Hautea, genetically modified crops have been produced and marketed commercially for over twenty (20) years. The foods obtained from them have been consumed by millions of people and billions of livestock animals with no verified report on adverse health or nutritional effects.²⁶⁴

For her part, Dr. Nina Gloriani²⁶⁵ testified that based on the results of certain studies, the protein produced by Bt Eggplant, Cry1Ac, is safe for humans. Bt Cry1Ac and other related proteins comply with the CODEX Alimentarius principles and standards.²⁶⁶

Professor Anthony Shelton²⁶⁷ (**Professor Shelton**) remarked that Bt plants do not pose possible risks to humans or important non-targeted organisms. Bt Eggplant eliminates the use of other

²⁶¹ *Id.* at 1387.

²⁶² *Id.* at 1388.

²⁶³ *Id.* at 1389.

²⁶⁴ *Id.* at 1391.

²⁶⁵ *Id.* at 1419-1445.

²⁶⁶ *Id.* at 1418.

²⁶⁷ *Id.*

insecticides for control of the EFSB; hence, it is a safer way to cultivate eggplant. Growing Bt Eggplant has dramatically decreased EFSB infestations, increased farmers' income, significantly reduced insecticide spraying, decreased health risks to farmers, and benefits the environment and consumers. Bt Eggplant improves human health because it dispenses with conventional toxic insecticides. Bt Eggplant also does not affect non-targeted organisms as it even helps conserve the important arthropods within the crops.²⁶⁸

Professor Shelton stated that conventional insecticides are not as effective in eliminating pests since the larvae of the EFSB are hidden inside the eggplant stems and fruit. The eggplant absorbs the insecticide first before killing the larvae. Meanwhile, with Bt Eggplant, the protein that will kill the larvae is already inside, so it kills the larvae quicker and has no adverse effect on humans.²⁶⁹

As explained by Professor Shelton, the main risk with Bt Eggplant is that the insects may eventually evolve resistance to the Bt protein, which is the same risk involved in conventional insecticides.²⁷⁰

Dr. Monica Garcia-Alonso²⁷¹ (**Dr. Garcia-Alonso**) testified that Bt Eggplant is a genetically-engineered eggplant that expresses a Cry1Ac protein that confers effective control of EFSB. The food and feed risk assessment conducted for Bt Eggplant was prepared according to the CODEX Alimentarius guidelines. Care was taken to address all the questions posed in the risk assessment guidelines in the Philippines, comparing the compositional parameters and characteristics between Bt Eggplants and conventional eggplants. The assessment concluded that Bt Eggplant is safe for human and animal consumption, which is equivalent to conventional eggplants.²⁷²

²⁶⁸ *Rollo*, vol. 15, pp. 8494-8553.

²⁶⁹ *Id.* at 8478-8482.

²⁷⁰ *Id.* at 8479.

²⁷¹ *Rollo*, vol. 17, pp. 10406-10410.

²⁷² *Id.*

According to Dr. Garcia-Alonso, an environmental risk assessment was also prepared according to international standards and the principles set forth in the Cartagena Protocol, while addressing the questions posed in the Philippine guidelines. The assessment showed that Bt Eggplant does not pose more environmental harm than its conventional counterpart.²⁷³

Dr. Flerida Cariño²⁷⁴ (**Dr. Cariño**) elucidated that the NCBP adopted internationally-accepted standards on biosafety, such as the Cartagena Protocol on Biosafety, CODEX Alimentarius Commission Guidelines, Principles for the Risk Analysis of Foods Derived from Modern Biotechnology (CAC/GL 44-2003, modified in 2011), among others. These are products of multiple consultations and negotiations among designated experts from members of the United Nations. They focus on risk assessments for GMOs for environmental releases, and for food and feed.²⁷⁵

Dr. Cariño explained that the risk assessment of GMOs is done on a step-by-step and case-to-case basis. Different assessments are made based on the type of activity proposed. Risk assessments for the confined testing and field trial of Bt Eggplant were conducted. Risk assessments for laboratory, and contained and confined activities of Golden Rice, were likewise conducted.²⁷⁶

PRRI

According to Dr. Reynante Ordonio²⁷⁷ (**Dr. Ordonio**), based on scientific reports or peer-reviewed, open-access, scientific mega journals, G2RE, which is the basis of Golden Rice, is a genetically engineered event that contains a specific insertion of genes intended

²⁷³ *Id.* at 10407-10410.

²⁷⁴ *Rollo*, vol. 15, pp. 8462-8468.

²⁷⁵ *Id.* at 8439.

²⁷⁶ *Id.* at 8451.

²⁷⁷ *Rollo*, vol. 19, pp. 11330-11344.

to complete the beta-carotene biosynthetic pathway in the rice endosperm. The breeding process to introduce the G2RE event into different popular rice varieties showed no indication that the genetic modification had altered the agronomy of rice.²⁷⁸

Dr. Ordonio stated that the inadequate level of dietary Vitamin-A remains a significant public health concern, especially in high rice-consuming Southeast Asian countries such as the Philippines. Severe Vitamin-A deficiency can lead to disorders and weakened host resistance to infection, which can increase the severity of infectious diseases and the risk of death.²⁷⁹

As per Dr. Ordonio, the Golden Rice project seeks to address insufficient intakes of Vitamin-A through developments in biotechnology. The adoption of rice varieties containing Golden Rice event G2RE is the specific complementary intervention approach to increase dietary intakes of beta-carotene, which is converted into Vitamin-A by the body on an “as needed” basis.²⁸⁰

Further, Dr. Ordonio mentioned that from samples derived from Golden Rice grain harvest from four (4) locations over two (2) growing seasons and components measured in samples of straw and derived bran, there was no meaningful difference between Golden Rice and conventional rice, except for the intended production of provitamin-A carotenoids measured in milled Golden Rice.²⁸¹

The Golden Rice project, according to Dr. Ordonio, introduced the G2RE event into locally adapted indica rice varieties, and completed several years of testing to verify agronomic performance under contained conditions. In addition to product quality testing, the

²⁷⁸ *Id.* at 11319-11321.

²⁷⁹ *Id.*

²⁸⁰ *Id.* at 11319-11321.

²⁸¹ *Id.* at 11322-11323.

Golden Rice Project completed a rigorous food, feed, and environmental safety assessment to meet the data and information requirements of the Philippine biosafety regulatory system.²⁸²

Moreover, Dr. Ordonio explicated that based on research by experts in the field of biosafety and plant breeding, the data collected on the molecular-genetic characterization, safety of newly expressed proteins, nutrient compositional assessment, and phenotypic characterization to determine whether there were any unintended effects of the genetic modification, did not identify potential environmental hazards, or health and safety concerns over Golden Rice, and supported the conclusion that it is as safe as conventional rice.²⁸³

For Dr. Cecilia Cristina Acuin²⁸⁴ (**Dr. Acuin**), current scientific evidence on Golden Rice does not support the petitioners' claims, which are not based on facts. All biological activities run the risk of unintended traits regardless of whether they are genetically modified. GMO food has been the subject of intensive studies on unintended traits because of biosafety regulations.²⁸⁵

Dr. Acuin stated that Golden Rice presents negligible risks to human health and the safety of the environment. Its unintended traits have a very low probability of happening, and its potential impact is very low.²⁸⁶

According to Dr. Acuin, Vitamin A, taken from the consumed beta-carotene-rich food, is present in Golden Rice. Golden Rice offers

²⁸² *Id.* at 11324.

²⁸³ *Id.* at 11325-11326.

²⁸⁴ *Rollo*, vol. 11, pp. 5497-5512.

²⁸⁵ *Id.* at 5480-5481.

²⁸⁶ *Id.* at 5481.

more nutritional value than ordinary rice, especially for populations at risk of Vitamin-A deficiency.²⁸⁷

In addition, Dr. Acuin explained that beta-carotene, which still needs to be converted to its active form to be used by the body based on need, ensures that Golden Rice would not likely cause Vitamin-A toxicity. To develop hypervitaminosis A, a person must consume 625 kilograms per day of cooked Golden Rice.²⁸⁸

Dr. Russel Reinke²⁸⁹ (**Dr. Reinke**) testified that Golden Rice does not have unintended traits as there were no observed measured changes in toxicity, seed dormancy, germination, or grain fertility. Such findings are based on contained and field trials.²⁹⁰

As per Dr. Reinke, since rice is a self-pollinated crop, there were no unintended changes in gross pollen morphology or pollen viability due to the genetic modification process. Hence, Golden Rice is the same as ordinary rice and is expected to have the same yield as ordinary rice. There is also no risk of contamination since heirloom rice grows in specific regions in the Philippines, and is separated from ordinary rice production areas.²⁹¹

Moreover, Dr. Reinke explained that Golden Rice is grown in the same manner as conventional rice in terms of the application of fertilizer, crop protection products, and labor. There are no changes in the type of production input, or the amounts needed for its cultivation.²⁹²

²⁸⁷ *Id.* at 5486.

²⁸⁸ *Id.*

²⁸⁹ *Id.* at 5995-5999.

²⁹⁰ *Id.* at 5980.

²⁹¹ *Id.* at 5982.

²⁹² *Id.* at 5986.

Dr. Reinke also stated that Golden Rice has sufficient nutritional benefits. It does not accumulate Vitamin-A; Vitamin-A is not actually present in Golden Rice. It only contains beta-carotene, which is then converted into Vitamin-A upon consumption.²⁹³

Dr. Reinke clarified that seed-mixing of Golden Rice and conventional rice does not have any environmental impact; it is only an issue of product quality and seed quality. Standard management practices for seed hygiene and product handling can minimize the risk of admixture.²⁹⁴

During the hot-tubbing, and in response to the questions propounded by this Court, the following matters were raised, discussed, explained, and/or clarified by the expert witnesses, apart from those already stated in their *Judicial Affidavits*:

Petitioners

- i. JDC No. 1-2016 is a “step-up” from DAO No. 08-2002, but is still insufficient. The questionnaire submitted as part of said assessment did not genuinely determine compliance with risk assessment standards. While JDC No. 1-2016 requires the conduct of environmental risk assessment and health impact assessment, the manner in which these were conducted for this case is inadequate;²⁹⁵
- ii. Genetic engineering is a precise science but genetic modification is not;²⁹⁶
- iii. While the risk assessors of Bt Eggplant looked into the function of the gene and where it landed inside the plant, said

²⁹³ *Id.*

²⁹⁴ *Id.* at 5989.

²⁹⁵ TSN, December 11, 2023 (Morning Session), pp. 28-31; 34-35.

²⁹⁶ *Id.* at 54.

risk assessors did not check or investigate whether the gene itself activates all other genes around it;²⁹⁷

- iv. The Bt gene has been expressed, for example, in Bt Cotton in India. Bt gene was designed in the bud of the cotton or flower to protect the plant from infection. It was introduced in 1999. Two (2) years later, however, it was detected that the expression was not in the bowl, but in the root, leaf, or stem, resulting in the failure of the Bt toxin to protect the plant from unwanted attacks. This resulted in the massive destruction of crops in certain states, and 20,000 farmer suicides within ten (10) years. Because of such disaster, Bt *brinjal* was banned in India upon the overview of several scientists;²⁹⁸
- v. In addition to the uncertainties and unpredictability of the Bt gene at the molecular level, unintended traits must be checked at the organismal level, which requires long-term study. As to its health effects, this may only be determined after several years. Feeding experiments must also be conducted;²⁹⁹
- vi. There is an actual experience in Isabela involving hybrid Bt Corn, where farmers were promised a yield as high as eleven (11) tons per hectare, only to find out that the corn did not yield well because it exhibited unintended traits. In effect, the farmers were not compensated, ended up with huge debts, and were denied loans by banking institutions;³⁰⁰
- vii. One of the unintended, unpredicted effects of Golden Rice is its golden color, which is a consequence of the overexpression of altered genes like zeaxanthin and lutein. Golden Rice also displayed two (2) complications: *first*, the yield was one-third (1/3) less than the Isogenic line, which is the original line from where it was derived; and *second*, the ecosystem

²⁹⁷ *Id.* at 57-58.

²⁹⁸ *Id.* at 66, 68.

²⁹⁹ *Id.* at 67.

³⁰⁰ TSN, December 11, 2023 (Afternoon Session) p. 14.

- uncertainties, showing interactions of Bt genes even with untargeted species;³⁰¹
- viii. There is no such thing as negligible contamination in biological systems;³⁰² and
- ix. Vitamin-A deficiency is classified as a moderate public health concern. For pregnant, lactating, and elderly women, Vitamin-A deficiency has a low prevalence. There is also no sense of urgency to address Vitamin-A deficiency through Golden Rice. Moreover, there are other sources for Vitamin-A in animals and plants. In fact, there are many plant sources that have more Vitamin-A and are safer than Golden Rice.³⁰³

Respondents

- i. Tests conducted to determine unintended traits of Bt Eggplant were based on data that have been approved in different countries, have been peer-reviewed, and have been reviewed by other regulatory agencies;³⁰⁴
- ii. To ascertain food and environmental safety, a regulatory system was implemented to allow the use of data not generated in the Philippines but which are internationally accepted. Studies are also conducted under local conditions. Moreover, experts provide their own inputs based on their expertise.³⁰⁵
- iii. An initial evaluation for food and feed could have three (3) outcomes: *first*, substantial equivalence, wherein no problem is found with the genetically-modified plants; *second*, there is some difference found in said genetically-modified plant which might need further observation; and *third*, the genetically-modified plant is not a substantial

³⁰¹ *Id.* at 11-12.

³⁰² *Id.* at 52.

³⁰³ *Id.* at 100.

³⁰⁴ TSN, December 11, 2023 (Morning Session), p. 41.

³⁰⁵ *Id.* at 38, 41-42, 47.

- equivalent, and thus, a more rigorous set-up is necessary to address issues of concern. Substantial equivalence is not a safety assessment *per se*, but is only an accepted metric used as a starting point for conducting such assessment;³⁰⁶
- iv. For Bt Eggplant grown in the Philippines, compositional analysis was done where samples were collected, sent to laboratories, and compared with their counterparts to see differences in key nutritional elements, confirming that genetic modification changed nothing. Field trials conducted in some regions also confirmed that the genetic modification had no environmental effects;³⁰⁷
 - v. For Golden Rice, the location and exact sequence of the gene inserted in the plants are known. There are no unintended changes in Golden Rice because it has gone through the entire regulatory system, has been grown for multiple generations, and has undergone compositional analysis wherein it is brought for testing in independent laboratories to ensure that it matches ordinary rice;³⁰⁸
 - vi. In 2006, former President Gloria Macapagal-Arroyo issued a policy enshrined in EO 514, which came about because of the inputs of the scientific community on the available tools for improving varieties and the safe use of biotechnology and its products;³⁰⁹
 - vii. Peer-reviewed tapes have disproved the statement that the problems with Bt Cotton led to increased suicides in India;³¹⁰
 - viii. Based on interviews with growers of Bt and non-Bt Eggplants in different Bangladeshi fields, Bt Eggplant was more effective in controlling the main pest of eggplants, which is the EFSB. In the non-Bt Eggplant fields, almost

³⁰⁶ *Id.* at 46-47.

³⁰⁷ *Id.* at 60.

³⁰⁸ *Id.* at 58-59.

³⁰⁹ *Id.* at 65-66.

³¹⁰ *Id.* at 70.

every plant was completely infested with EFSB. Growers thereat had to spray insecticide hundreds of times. On the other hand, in Bt Eggplant fields, there was no infestation and all plants were perfectly clean. Growers of Bt Eggplant also said they only sprayed insecticide twice;³¹¹

- ix. At the time the Golden Rice application was made, the IBC of Isabela included a local representative. However, said local representative's term expired sometime after that, which is why the IBC of Isabela had to be reconstituted;³¹²
- x. Contrary to the petitioners' statement, Golden Rice's color is not an unintended trait, and the inventors were aware of such an effect. Moreover, the Golden Rice pertained to by the petitioners which had a different impact on the growth of plants is the GR2R event, which is a totally different event than that involved in the Golden Rice subject of this case, which is GR2E;³¹³
- xi. A study on the incidences of GM crops which was conducted in 2016 by the United States National Academy of Science showed that the same had no unintended consequences or adverse impacts on human health;³¹⁴
- xii. Resistance to insecticides should not be considered an unintended trait of Bt Eggplant. It does not matter if the crop is genetically modified or conventional, as insects have the innate ability to develop resistance. However, the benefit of Bt Eggplant is that there is no need to spray insecticides for an extended period of time. There are also Resistance Management strategies that delay the evolution of insect resistance;³¹⁵

³¹¹ *Id.* at 70-71.

³¹² TSN, December 11, 2023 (Afternoon Session), p. 6.

³¹³ *Id.* at 19.

³¹⁴ *Id.* at 21.

³¹⁵ *Id.* at 21-22.

- xiii. Eggplant is an openly cross plant, meaning, it is self-pollinated, but with very low cross-pollination;³¹⁶
- xiv. The government decided to invest in GMOs rather than focus on other IPM strategies because IPM should be a community effort, which is quite laborious and costly. IPM strategies are effective in small scales, but not in commercial scales.³¹⁷
- xv. Bt Eggplant will be considered as part of the IPM to eradicate EFSB;³¹⁸
- xvi. As part of the pilot scale deployment program of Golden Rice, acceptability studies are conducted, wherein the names of people who consume the same are listed, and follow-ups are made with them to get their feedback on Golden Rice and whether they would want to consume more of it;³¹⁹
- xvii. There is no monitoring mechanism for consumers of Bt Eggplant and Golden Rice.³²⁰ Monitoring is only focused on insect resistance;³²¹
- xviii. The DA has a process for handling complaints involving DA programs and personnel. A complaint may be filed through the DA website, which will be forwarded to the division concerned. Since the issuance of BSPs is one of the commitments under the BPI's authority, it is considered a program of the DA;³²²
- xix. While the minimum requirement for public participation with respect to the Bt Eggplant field trials was the posting of the PIS, UPLB still conducted public forums in the barangays covered by the field trials and held discussions with officials at the municipal level. During the public

³¹⁶ *Id.* at 39.

³¹⁷ *Id.* at 74-75.

³¹⁸ *Id.* at 76.

³¹⁹ *Id.* at 111.

³²⁰ TSN, December 12, 2023 (Morning Session), pp. 124-125.

³²¹ TSN, December 12, 2023 (Afternoon Session), p. 15.

³²² TSN, December 12, 2023 (Afternoon Session), p. 13.

forum, a representative explained the Bt Eggplant technology, while another representative explained the regulatory system. Similarly, for the applications for direct use as food and feed, and commercial propagation, aside from the posting of the PIS, public seminars, workshops, and outreach activities were also conducted to ensure that the general public and the local government were informed about Bt Eggplant;³²³

- xx. There are two (2) targeted categories of farmers included in the commercial propagation of Bt Eggplant: *first* are the seed growers or the producers, who are in charge of bulk productions; and *second* are the direct planters, who directly sell Bt Eggplant in the market. To monitor the movement of seeds, there are certain obligations imposed on the producer, which are indicated in the seed packets;³²⁴ and
- xxi. Aside from Bt Eggplant and Golden Rice, the BPI has already issued BSPs for Commercial Propagation of other GMOs, particularly, corn and cotton. For Bt Corn, the BPI's technology department is required to report to the BPI the adoption rate and seed sales thereof, as well as the implementation of the IRM program.³²⁵

After the presentation of expert witnesses, the parties were given forty-five (45) days within which to submit their respective Memoranda. In compliance therewith, petitioners submitted their *Memorandum* on 24 January 2024,³²⁶ while the OSG and OGCC submitted their respective *Memoranda* on 26 January 2024.³²⁷

³²³ *Id.* at 26-27.

³²⁴ *Id.* at 30, 33-34.

³²⁵ *Id.* at 56-58.

³²⁶ *Rollo*, vol. 21, pp. 12000-12051.

³²⁷ *Id.* at 12052-12173, 12183-12280.

Incidentally, the petitioners filed an *Urgent Reiterative Motion for Issuance of a [TEPO]*,³²⁸ praying that PRRI be ordered to refrain from: (i) specific acts that have the intention of feeding, and actual feeding of Golden Rice to the public; (ii) further planting and harvesting Golden Rice outside the sites of PRRI; and (iii) distributing Golden Rice to the public while the instant case is pending.³²⁹

In support thereof, the petitioners quoted the *Transcript of Stenographic Notes (TSN)* of the preliminary conference held on 17 October 2023, specifically the statements of PRRI's representative, Pia Borja, who admitted that Golden Rice was being fed to children in localities of local government units interested therein. The petitioners likewise quoted the portion of the *TSN* where they informed this Court about PRRI's website, as well as news reports and online posts, revealing the distribution of Golden Rice on certain sites.³³⁰

Thereafter, the case was submitted for decision.³³¹

Grounds for Allowance of the Petition

I.

THE PERMITS FOR COMMERCIAL PROPAGATION OF GOLDEN RICE AND FOR DIRECT USE AS FOOD OR FEED FOR BT EGGPLANT AS WELL AS THE APPLICATION FOR COMMERCIAL PROPAGATION OF BT [EGGPLANT] HAVE A CAUSAL LINK OR REASONABLE CONNECTION TO AN ENVIRONMENTAL DAMAGE OF THE NATURE AND MAGNITUDE CONTEMPLATED UNDER THE RULES ON WRIT OF KALIKASAN.

³²⁸*Rollo*, vol. 18, pp. 10425-10435, *sans* Annexes.

³²⁹ *Id.* at 10425-10432.

³³⁰ *Id.* at 10427-10428.

³³¹ *Rollo*, vol. 21, 12297. *See* MINUTE RESOLUTION dated February 8, 2024.

II.

[BPI] SHOULD BE MANDATED TO REVOKE THE BIOSAFETY PERMITS FOR COMMERCIAL PROPAGATION OF GOLDEN RICE AND FOR DIRECT USE AS FOOD AND FEED OF BT EGGPLANT AND DENY THE APPLICATION FOR COMMERCIAL PROPAGATION OF BT EGGPLANT (OR REVOKE IT IF ONE HAS ALREADY BEEN ISSUED DURING THE PENDENCY OF THIS PETITION) FOR FAILURE TO COMPLY WITH THE REQUIREMENTS OF JDC NO. 1-2016, THE REGULATION AT THE TIME OF PERMITS ISSUANCE/APPLICATION, AND OTHER ENVIRONMENTAL LAWS, OR SUSPEND THE EFFECTIVITY/IMPLEMENTATION OF THESE PERMITS UNTIL SAFETY AND COMPLIANCE ARE PROVEN, CONSISTENT WITH, THE REQUIREMENTS OF JDC NO. 1-2016 AND OTHER ENVIRONMENTAL LAWS.³³²

As agreed upon during the preliminary conference held on 17 October 2023,³³³ the issues for resolution of this Court are as follows:

Procedural

- i. WHETHER THE INSTANT *PETITION* IS BARRED BY ADMINISTRATIVE *RES JUDICATA*;
- ii. WHETHER THE PETITIONERS COMMITTED FORUM-SHOPPING IN FILING THE INSTANT *PETITION*;
- iii. WHETHER PETITIONERS DISREGARDED THE HIERARCHY OF COURTS WHEN THEY FILED THE *PETITION* DIRECTLY WITH THE SUPREME COURT INSTEAD OF A LOWER COURT WITH CONCURRENT JURISDICTION.

Factual

- i. WHETHER GOLDEN RICE AND BT EGGPLANT HAVE ENVIRONMENTAL, HEALTH, AND SOCIO-ECONOMIC RISKS AND IMPACTS;

³³² *Rollo*, vol. 1, pp. 18-19.

³³³ *Rollo*, vol. 15, pp. 8190-8211. See ORDER dated November 13, 2023.

- ii. WHETHER ENVIRONMENTAL, HEALTH, AND SOCIO-ECONOMIC RISKS AND IMPACTS ASSESSMENT OF GOLDEN RICE AND BT EGGPLANT WERE PERFORMED.

Substantive/Legal

- i. WHETHER THE PRIVILEGE OF THE WRIT OF *KALIKASAN* SHOULD BE GRANTED;
- ii. WHETHER THE ISSUANCE OF A WRIT OF CONTINUING *MANDAMUS* IS PROPER AND NECESSARY IN THIS CASE;
- iii. WHETHER THE BPI SHOULD REVOKE THE BIOSAFETY PERMITS FOR THE COMMERCIAL PROPAGATION OF GOLDEN RICE AND FOR DIRECT USE AS FOOD OR FEED AND DENY/REVOKE THE APPLICATION/PERMIT FOR COMMERCIAL PROPAGATION OF BT EGGPLANT FOR FAILURE TO COMPLY WITH JDC NO. 01-2016 (THE PREVAILING REGULATION AT THE TIME OF ISSUANCE/APPLICATION).³³⁴

Our Ruling

We **grant** the instant *Petition*.

First and foremost, the writ of *Kalikasan* is an extraordinary remedy covering environmental damage of such magnitude that will prejudice the life, health, or property of inhabitants in two or more cities or provinces. It is designed for a narrow but special purpose – to accord stronger protection for environmental rights, aiming, among others, to provide a speedy and effective resolution of a case involving the violation of one’s constitutional right to a healthful and balanced ecology that transcends political and territorial boundaries, and to

³³⁴ *Id.* at 8197.

address the potentially exponential nature of large-scale ecological threats.³³⁵ The nature of this highly prerogative writ is enshrined in Rule 7, Section 1 of the RPEC, which reads:

Section 1. *Nature of the writ.* - The writ is a remedy available to a natural or juridical person, entity authorized by law, people's organization, non-governmental organization, or any public interest group accredited by or registered with any government agency, on behalf of persons whose constitutional right to a balanced and healthful ecology is violated, or threatened with violation by an unlawful act or omission of a public official or employee, or private individual or entity, involving environmental damage of such magnitude as to prejudice the life, health or property of inhabitants in two or more cities or provinces.

That being said, it behooves this Court to address each issue raised in the instant *Petition* – be it procedural, factual, or legal – in accordance with the purpose for which the issuance of the writ of *kalikasan* is being sought, and in the context of the magnitude of ecological problems contemplated by the RPEC.

The instant Petition is not barred by administrative res judicata; no forum shopping.

Res judicata is a concept applied in the review of lower court decisions in accordance with the hierarchy of courts. But jurisprudence has also recognized the rule of administrative *res judicata*: the rule which forbids the reopening of a matter once judicially determined by competent authority applies as well to the judicial and quasi-judicial facts of public, executive, or administrative officers and boards acting within their jurisdiction as to the judgments of courts having general judicial powers. To be sure, early jurisprudence was already mindful that the doctrine of *res judicata* cannot be said to apply exclusively to decisions rendered by what are usually understood as courts without

³³⁵ *Segovia v. Climate Change Commission (CCC)*, G.R. No. 211010, March 7, 2017 [Per J. Caguioa, *En Banc*].

unreasonably circumscribing the scope thereof; and that the more equitable attitude is to allow extension of the defense to decisions of bodies upon whom judicial powers have been conferred.³³⁶

PRRI asserts that the DA Resolution had already attained finality after the DA Appellants failed to file a motion for reconsideration and appeal therefrom in accordance with Executive Order No. 292, or the Administrative Code of the Philippines. With the DA Resolution being a judgment on the merits and over which there is identity of parties, subject matter, and causes of action as that of the instant *Petition*, the *Petition* is thus barred by administrative *res judicata*.³³⁷

PRRI's averment, however, presupposes that the petitioners had to exhaust such administrative remedy before the DA prior to filing the instant *Petition*. Indeed, the rule on exhaustion of administrative remedies rests on the presumption that the administrative agency, if afforded a complete chance to pass upon the matter, will decide the same correctly. Where the enabling statute indicates a procedure for administrative review and provides a system of administrative appeal or reconsideration, the courts—for reasons of law, comity, and convenience—will not entertain a case unless the available administrative remedies have been resorted to, and the appropriate authorities have been given an opportunity to act and correct the errors committed in the administrative forum.³³⁸

Nonetheless, jurisprudence provides that exhaustion of administrative remedies is not an inflexible rule. It may be dispensed with, and judicial action may be validly resorted to immediately, in the following cases: (i) when there is a violation of due process; (ii) when the issue involved is a purely legal question; (iii) when the

³³⁶ *Malixi v. Baltazar*, G.R. No. 208224, November 22, 2017 [Per J. Leonen, Third Division].

³³⁷ *Supra* note 107, at 1547-1551.

³³⁸ *Peñafrancia Shipping Corp. v. 168 Shipping Lines, Inc.*, G.R. No. 188952, September 21, 2016 [Per J. Jardeleza, Third Division].

administrative action is patently illegal amounting to lack or excess of jurisdiction; (iv) when there is estoppel on the part of the administrative agency concerned; (v) when there is irreparable injury; (vi) **when the respondent is a department secretary who acts as an alter ego of the President bear the implied and assumed approval of the latter**; (vii) when to require exhaustion of administrative remedies would be unreasonable; (viii) when it would amount to a nullification of a claim; (ix) when the subject matter is a private land in land case proceedings; (x) **when the rule does not provide a plain, speedy, and adequate remedy**; (xi) when there are circumstances indicating the urgency of judicial intervention;³³⁹ (xiii) where there is unreasonable delay or official inaction that will irretrievably prejudice the complainant; (xiv) where the amount involved is relatively small so as to make the rule impractical and oppressive; (xv) when the issue of non-exhaustion of administrative remedies has been rendered moot; (xvi) **when strong public interest is involved**; and, (xvii) in *quo warranto* proceedings.³⁴⁰

We find it unreasonable to expect the petitioners to exhaust administrative remedies and defer judicial action. *For one*, their concern involves strong public interest concerning the perceived imminent threats and adverse effects of Golden Rice and Bt Eggplant on the people's constitutional rights to health and a balanced and healthful ecology. *Secondly*, the petitioners' appeal would have impleaded as respondent the DA Secretary, who acts as the alter ego of the President and bears the implied and assumed approval of the latter. *Lastly*, We agree that a resort to a motion for reconsideration or appeal of the DA Resolution is not a plain, speedy, and adequate recourse for the petitioners, where only the DA Secretary would be impleaded as a party to the appeal, while the other responsible

³³⁹ *The Diocese of Bacolod v. Commission on Elections*, G.R. No. 205728, January 21, 2015 [Per J. Leonen, *En Banc*] citing *Spouses Chua v. Ang*, G.R. No. 156164, September 4, 2009 [Per J. Brion, Second Division].

³⁴⁰ *Republic v. Lacap*, G.R. No. 158253, March 2, 2007 [Per J. Austria-Martinez, Third Division].

agencies under JDC Nos. 1-2016 and 1-2021, as well as the proponents of Golden Rice and Bt Eggplant, are not yet impleaded.³⁴¹ Procedural niceties must yield when there is a plea for substantial and urgent protection.

Given the foregoing, it reasonably follows that the petitioners did not violate the prohibition on forum shopping.

Forum shopping is when a party repetitively avails of **several judicial remedies** in courts, simultaneously or successively, all substantially founded on the same transactions and the same essential facts and circumstances, and all raising substantially the same issues either pending in or already resolved adversely by some other court. It can be committed in three (3) ways: (i) by filing multiple cases based on the same cause of action and with the same prayer, the previous case not having been resolved yet (*litis pendentia*); (ii) by filing multiple cases based on the same cause of action and the same prayer, the previous case having been finally resolved (*res judicata*); and (iii) by filing multiple cases based on the same cause of action but with different prayers (*splitting of causes of action, where the ground is also either litis pendentia or res judicata*).³⁴²

Here, there is no previous case which has not been resolved yet. Moreover, as discussed, no previous case was filed before any court or tribunal wherein the doctrine of *res judicata* applies.

Hierarchy of courts; exception

Likewise unmeritorious is PRRI's contention that the instant *Petition* was filed in gross violation of the doctrine of hierarchy of

³⁴¹ *Rollo*, vol. 21, pp. 12027-12028.

³⁴² *Republic v. Sandiganbayan*, G.R. Nos. 195837, 198221, 198974 & 203592, October 3, 2023 [Per J. Zalameda, *En Banc*].

courts.³⁴³ In *Segovia v. Climate Change Commission*,³⁴⁴ the Supreme Court held that the magnitude of the ecological problem contemplated under the RPEC satisfies at least one of the exceptions to the rule on hierarchy of courts, as when direct resort is allowed where it is dictated by public welfare. “Given that the RPEC allows direct resort to [the Supreme] Court, it is ultimately within the [Supreme] Court’s discretion whether or not to accept petitions brought directly before it.” It can logically be inferred from such pronouncement that the discretion of the Supreme Court to accept or reject a petition extends to its discretion to refer the same to this Court for hearing, reception of evidence, and rendition of judgment, which was the action taken by the Supreme Court in the instant case.

Evidence presented before this Court necessitates the application of the precautionary principle.

The precautionary principle states that when human activities may lead to threats of serious and irreversible damage to the environment that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that threat.³⁴⁵ Rule 20, Section 1 of the RPEC provides:

**PART V
EVIDENCE**

**RULE 20
PRECAUTIONARY PRINCIPLE**

Section 1. Applicability. - When there is a lack of full scientific certainty in establishing a causal link between human activity and environmental effect, the court shall apply the precautionary principle in resolving the case before it.

³⁴³ *Rollo*, vol. 21, pp. 12032-12033.

³⁴⁴ *Supra* note 337.

³⁴⁵ Rules of Procedure on Environmental Cases (RPEC), Rule 1, Section 4(f).

The constitutional right of the people to a balanced and healthful ecology shall be given the benefit of the doubt.

Section 2. Standards for application. - In applying the precautionary principle, the following factors, among others, may be considered: (1) threats to human life or health; (2) inequity to present or future generations; or (3) prejudice to the environment without legal consideration of the environmental rights of those affected.

The precautionary principle bridges the gap in cases where scientific certainty in factual findings cannot be achieved. By applying the precautionary principle, the court may construe a set of facts as warranting either judicial action or inaction, to preserve and protect the environment. In effect, the precautionary principle shifts the burden of evidence of harm away from those likely to suffer damage and onto those desiring to change the *status quo*. Applying the precautionary principle to the rules on evidence will enable courts to tackle future environmental problems before ironclad scientific consensus emerges.³⁴⁶

For purposes of evidence, the precautionary principle should be treated as a principle of last resort, where the application of the regular Rules of Evidence would cause an inequitable result for the environmental plaintiff – (i) settings in which the risks of harm are uncertain; (ii) settings in which harm might be irreversible and what is lost is irreplaceable; and (iii) settings in which the harm that might result would be severe.³⁴⁷ When these features – uncertainty, the possibility of irreversible harm, and the possibility of serious harm – coincide, the case for the precautionary principle is strongest. When in doubt, cases must be resolved in favor of the constitutional right to a balanced and healthful ecology.³⁴⁸

³⁴⁶ RPEC, Rule 20, sec. 1. Annotations to the Rules of Procedure for Environmental Cases.

³⁴⁷ *Id.*

³⁴⁸ *PTK2 H2O Corp. v. Court of Appeals (CA)*, G.R. No. 218416, November 16, 2021 [Per. J. Zalameda, *En Banc*] citing *International Service for the Acquisition of Agri-Biotech Applications, Inc. v. Greenpeace Southeast Asia (Phils.)*, G.R. Nos. 209271, 209276, 209301, & 209430, December 8, 2015 [Per J. Villarama, *En Banc*].

The Philippines' adoption of the precautionary principle manifests through the rules, laws, and international agreements it adheres to. Apart from the RPEC, some legal instruments which evince the country's recognition of said principle, which find relevance to the case at bench, are the following:

EO 514, which established the NBF, clearly provides that the NBF shall apply to the development, adoption, and implementation of all biosafety policies, measures, and guidelines in making biosafety decisions concerning the research, development, handling and use, transboundary movement, release into the environment, and management of regulated articles. The objective of the NBF is to enhance the decision-making system on the application of modern biotechnology products to make them more efficient, predictable, effective, balanced, culturally appropriate, ethical, transparent, and participatory. Thus, the SEC benefits and risks of biotechnology to the Philippines and its citizens, particularly for small farmers, indigenous peoples, women, small and medium enterprises, and the domestic scientific community, shall be considered in implementing the NBF. On the principle of transparency and participation, the NBF recognizes that biosafety issues are best handled with the participation of all relevant stakeholders and organizations who shall have appropriate access to information and the opportunity to participate reasonably in an accountable manner in the biosafety decision-making process.³⁴⁹

In applying the principles set forth in the NBF, the protection of public interest and welfare shall always prevail. In line with this, Section 2.6 of the NBF on the use of precaution reads:

2.6 Using Precaution. – In accordance with Principle 15 of the Rio Declaration of 1992 and the relevant provisions of

³⁴⁹ Executive Order No. 514 (2006), sec. 2.

the Cartagena Protocol on Biosafety, in particular Articles 1, 10 (par. 6) and 11 (par. 8), the precautionary approach shall guide biosafety decisions. The principles and elements of this approach are hereby implemented through the decision-making system in the NBF;

....

Mentioned in the above-cited provision are the 1992 Rio Declaration on Environment and Development and the Cartagena Protocol. Principle 15 of the Rio Declaration states:

Principle 15

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

As for the Cartagena Protocol, it reaffirmed Principle 15 of the Rio Declaration, and further states:

Article 1

Objective

In accordance with the precautionary approach contained in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, and specifically focusing on transboundary movements.

Moreover, under JDC Nos. 1-2016 and 1-2021, it is expressly stated that among the principles under the NBF that shall guide the concerned agencies in making biosafety decisions is the standard of precaution, which provides:

Lack of scientific certainty or consensus due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a GMO on the environment, particularly on the conservation and sustainable use of biological diversity, and on human health, shall not prevent concerned government departments and agencies from making the appropriate decision to avoid or minimize such potential adverse effects. In such cases, concerned government departments and agencies shall take the necessary action to protect public interest and welfare.

Guided by the standard of precaution set forth in the foregoing instruments, and after a judicious examination of the evidence on record, this Court finds that the three (3) conditions for the precautionary principle to apply - uncertainty, the possibility of irreversible harm, and the possibility of serious harm - are present in this case.

The opinions of the expert witnesses for all parties, as elicited from their Judicial Affidavits, the numerous studies they submitted in evidence, and their testimonies during the hot-tubbing, suggest that no consensus could be reached on the safety or harmful effects of Golden Rice and Bt Eggplant on humans and the environment. To reiterate, the burden of evidence of harm is placed on those desiring to change the status quo, who, in this case, are the respondents.

The respondents, through Dr. Mamaril, stated that their assessment of the possible risks of both GMOs was limited to reviews of scientific literature thereon. Thus:

....

SSS CRISTOBAL:

Q Dr. Mamaril, you mentioned earlier that the Biosafety Committee conducts an evaluation of the risk assessment based on the scientific technical dossiers submitted by the proponent and reviewed by the

STRP, correct?

A Yes, Your Honor.

Q Apart from the documents reviewed [and] the latest scientific literature contained in the dossier, are there any other ways, if any, that an assessor in the Biosafety Committee can use to evaluate the different risks involved in the production, cultivation and trial of these GMOs?

A Yes, Your Honor.

Q What are these?

A I also do my own assessment by looking through other literature and also through my own experience in seed regulations, Your Honor, and also in organic agriculture.

Q Essentially, the review all involves a review of scientific literature?

A Yes, Your Honor.

Q And you mentioned that you do not conduct experiments?

A We do not conduct.

Q Why?

A We see no reason to repeat for example for food and feed, the rice in the Philippines will also be the same as rice from other countries. Their feeds are also the same as our feeds.

....³⁵⁰

Notably, however, the petitioners also testified on and submitted several studies on the possible serious effects of said GMOs on people's health and the environment, which are irreversible and beyond acceptable and manageable levels. Stated differently, while there is comprehensive literature showing that genetically modified foods are safe, there are also independent studies and anecdotes submitted in evidence³⁵¹ showing why this Court cannot rule out the possible serious risks, as well as adverse and unintended effects of

³⁵⁰ TSN, November 20, 2023 (Afternoon Session), pp. 128-129.

³⁵¹ *Rollo*, vol. 21, pp. 12006-12012, 12034-12036. See MEMORANDUM dated January 24, 2024.

Golden Rice and Bt Eggplant, some of which were explained by the petitioners' witnesses as follows:

....

[JUSTICE] FIEL-MACARAIG:

Kanina po, sinabi niyo na yung inyong kabuhayan ang maapektuhan. Ngayon, sinasabi ninyo na yung inyong kalusugan ang inyong concern. Ano po ba talaga ang pinaka-challenge na iniisip ninyo na maapektuhan dahil dito sa golden rice?

A: Kabuhayan po, at saka worry din po namin sa kalusugan. Kasi dito po dito din po sa Affidavit ko na No. 22, nakalagay din po yung "kabuhayan" at saka worry din po namin yung kalusugan.

Q: Alam po ba ninyo kung paano maapektuhan ang inyong kalusugan? Naipaliwanag din po ba ito sa inyo ng MASIPAG?

A: Ang direct impact po, Your Honor, hindi po masiyado. Pero sa chemical base na pina-practice po namin, talagang nakakasama po sa pag-ano ng food intake po ng kemikal, dahil nago-organic na po kami.

Q: Di' po ba, yung traditional rice ngayon, gumagamit na rin ng chemicals?

A: Sa amin po--ako, bilang certified organic farmer po, hindi po kami ina-allow na gumamit ng kemikal, lalo na po yung GMO. Nakasaad po ito ayon sa Philippine National Standard for Organic Agriculture.

[JUSTICE] FIEL-MACARAIG:

Okay thank you.

....³⁵²

DR. MENDOZA:

So, what I would like to mention about the unintended effects and risks is that it concerns [sic] across different biological organization from genetic to community level. Genetic level it can, from biologist there [are] species which is something that shares an integrity of genetic make-up and so they're putting agenda that is not part

³⁵² TSN, November 20, 2023 (Morning Session), p. 30.

of the circulating genome ... therefore, it is already a pollution of the genetic make-up ... recipient genes [in the] case [of] talong or in the case of rice, the Golden Rice. Now, at the organism level, I have found that they're claiming that this is [sic] Bt Talong is safe and there is no effect and there's other things but in Bangladesh there was a report that the Bt Eggplant was susceptible to [drought] also. So, meaning it's a tie, win[-]all kind of thing. At the population level, I would like to mention that cross[-]contamination is very real. I already mentioned that eggplant is up to 48% of cross-pollination according to Poor Publication ... other publication, up to 48% insect pollination that is mediated cross[-]contamination by insects and bees as a major kind of pollinator can fly four kilometers in just one flying alone. And therefore, that indicates the extent of the contamination in our Philippine Agricultural System. So, if that is the case non-GMO adverse [sic] will be contaminated without farmer's knowledge and without famer's consent and there is no liability and there's law [sic] the Philippines to specify who will be responsible for such contamination and when you lose the varieties that are contaminated by GMOs who will be responsible, so we don't have laws yet on those things. Then when somebody eats the Bt Eggplant, who will be responsible for such illness, there's no law there. [sic] Now, when we go at in [sic] the GMO Vitamin[-]A rice [sic] it has been mentioned of course that the contamination can be through cross[-]pollination, seed mixing when you're trying the seeds or even volunteering plants in the field. Now, it is not [a] collated theoretical or hypothetical thing because it could already happen, the contamination already happened in 2005 in China, Hubei[,] China, Bt63 contaminated some rice. In 2006, the LL601 variety of GMO herbicides resistant crop rice in the US was confound [sic] to have contaminated rice that were exported to many parts in the world, and in that case, Beyer was fine[d] Seven Hundred Fifty Million Dollars (\$750,000,000.00) to pay for the losses of some farmers who are exporting rice, and lately, another contamination happened in 2021 about five hundred (500) tons of rice from India were discovered to be GMO contaminated in the European Union. In that case, contamination is very real and so how can you stop that? The regulators stop contamination by stopping the field release of such, otherwise any biological contamination in terms of the genetic is environmental cleanup is not

possible because genetics goes exponentially, and you cannot remove all the contamination in nature. Thank you.

....

DR. DEB:

Now, let me explain why these scientists did not notice this that all publication[s], I mean actually there are twenty-two publications on experiments of this cross-pollination. All of these species the scientist did not record the flower opening time and closing time of any of these varieties. The point is that all the experiments know they assumed that on the same day they will flower...so the action is that they will cross-pollinate. Now, in the case, in my own case also in one (1) parent close its flower after, sorry, before opening of the other parent, so obviously there was zero cross-pollination and this has been the case, majority of the cases and the evidence is that ... publication in 2022 of one thousand two hundred rice varieties flowering time and opening time, closing time in summer and winter. There was till day it was [sic] no publication on flower opening time or closing time of any of the varieties ... IRRI included by the IRRI scientist. [sic] The implication is that because, I'm not blaming them, simply is that, because it did not notice the flower open time and closing time overlap, it was majority of this ... zero overlap or very two minutes overlap, one minute overlap, they appear like extremely low probability of cross-pollination. So, next year I actually planted 19 pairs of this which is now a review, I cannot share, that one is published with genetic marker, DNA markers, that has been published. This is also astonishing for me and I'm happy to share with the rice scientist here also it open [sic] a new of the research too, [sic] but the point is that whether it's 84% or 2% rice cross-pollination does occur and the pollination distance is not insect pollinated, it's wind pollinated and wind pollination distance is one hundred and ten meters which is also according to publish[ed], publication by IRRI, and so any associated of [sic] non-GM crop is likely to be cross-pollinated provided the flowering date and time match with the flower data of gene. Any variety of gene rice. So, that's one, the other thing is about the ... I don't think that this could be the procedure. We cannot compare the toxin of Bt, I mean inherently toxin plant like Bt Eggplant and Bt Spray. It's a comparison between poison with poison. So, it's kind of establishing poison A

is better than poison B but the other suggest[s] that the more valid comparison with the poison with no poison be controlled this one. [sic] As I mentioned, these one thousand four (1,400) varieties of rice and fifteen (15) varieties of eggplant, six (6) varieties of okra and thirty-two (32) other crops including ... over twenty-five (25) years on my farm we have never ever encountered a major pest attack or disease attack. Of course, the pests are there but did not cause less than 2%, I mean, more than 2% of crop damage simply because of the agroecological principle of multiple diversity, I mean, multiple species and multiple varieties. The multiple varieties of crop have this pest and disease resistance canopy by dilution effect is also published by IRRI[']s own publication, free publication, and in China which are ... publish we are practicing. Now, in that case, the fifteen (15) varieties of eggplant that we are growing, few of this varieties are inherently pest [resistant] especially this temporal resistance here and infratemporal resistance inherently. So, we already have those varieties, genetic diversity which already has it as long as we have this iron fortified rice and silver fortified rice, I mean, all the Vitamin B etcetera, Vitamin B complex, and [p]est resistant eggplant. The moot question is, what is the point in developing another new kind of uncertain, unpredictable variety with uncertain effects with millions of dollars investment at the cause of this agroecosystem in this diversities country [sic] whether it's [in] India or [the] Philippines especially when, in India just because of Bt cotton cultivation of the past thirty (30) years [that] we have lost thirty[-]two (32) defect cotton varieties, indigenous cotton varieties completely run off, and this is going to happen, in the Philippines it is also recorded, IRRI[']s own publication is that Filipino varieties, indigenous varieties of rice is no longer been cultivated because of the [highly harmful] varieties. That's been documented by IRRI, it's not my opinion. So, this is what leave[s] a note, we have to make this kind of science ... observation plan and because I'm interest[ed] in biochemical reaction I'm interested with genotype reaction is like you know, an architect saying that I know this structure will collapse in two years but this beautiful structure let's wait and see, and then if it happens there will be mitigation agencies. So, this kind of argument is that we know that this pest resistance will develop. We know that this kind of disaster or other effects will develop, may develop and if it does then there will be mitigation agencies for mitigation instead

of prohibiting it in the first place, we are waiting for a cure post practical. That should not be the scientific ... especially if we know that the insect always inherently as professor already mentioned is a biological property of insect[s] to evolve resistance. It cannot be prepared, if we know already then why do we develop one insect resistant waiting to see when it develops and then we develop another technology to account that, and that's when we [are] pre-damaging genes of Bt cotton for example, free genes of ... So, that's my observation. Sorry I was bit longer.

....

DR. NISPEROS:

I'm in community medicine which means my practice...

JUSTICE BRUSELAS:

Rural practice, community medicine.

DR. NISPEROS:

Yes, Your Honor. I go exactly to the communities and see how the farmers...

JUSTICE BRUSELAS:

Yes, direct, and Dr. Acuin is what? Is a?

DR. ACUIN:

Nutritionist.

DR. NISPEROS:

Just to answer your question, Your Honor, when you say that, I agree with Dr. Acuin that pesticides being used against, to protect against insects and pests are very dangerous because if they are, they don't have just acute effects that are poisons and lethal. They also have long term effects and disruptors, they disrupt the entire body system, but when you say that Bt, the Gene O type on Bt talong is safer than let say the sprayer, it's like comparing, it's safer to use a hand gun than an Armalite they both lethal, and when you compare it to let say, the organic, the bacillus thuringiensis then the difference becomes more acute and more pronounce because the organic form of bacillus thuringiensis only effects, only takes effect when the worm eats it. Whereas the plant itself, because it is genetically modified organism has the poison all over. Now, I myself, the entire argument we're having right now regarding safety and impact of bacillus

thuringiensis as a pesticide has been going on for years and I've seen it, I've heard it during the debates regarding bacillus thuringiensis corn which was released much earlier. I have had the opportunity to see how the farmers are who planted or who live next to crops that have Bt corn.

JUSTICE BRUSELAS:

Bt corn.

DR. NISPEROS:

Yes, Your Honor. It's basically the same. It's a pesticide and it's a genetically modified organism. Now, my own observation I have seen several communities that have existed next to Bt corn or actually planted Bt corn, and I've have seen exponential or at least increase cases of epidermal or dermatologic illnesses, and in one town, I think that was in Isabela have actually, no it's not in Isabela, it's in Roxas have actually experienced women having reproductive problems. Now, we cannot, because what I did was, I was having clinic in those areas. I cannot immediately, I could not do a complete study because they will actually just say there's no one to correlation. We cannot just say that this is because of the Bt corn but my impression is before Bt corn was planted in those communities these cases were not that high. The incidence[s] were just within the normal round of case rates across the country, and then when they planted Bt corn then this rate became higher. So, from that point of view there is an impact and this is why also they can cite the studies in, I think that show nine hundred (900) studies showing no impact of GMO that's because they are looking for a one-to-one correlation, and that will never happen because all of these diseases have other factors playing in including the make-up of the people themselves. I have seen it for myself. Now, I'm wondering if those studies are being done now to show that there's actually a correlation and that is incumbent on government, I think, to do to ensure that the farmers are safe, and their health is being protected. Thank you very much. That's just my point. Thank you.

....³⁵³

³⁵³ TSN, December 11, 2023 (Afternoon Session), pp. 35-36, 43-45, 87-89.

It is in light of these scientific debates and uncertainties that the precautionary principle must be applied. While it may be argued that the trials on Golden Rice and Bt Eggplant were conducted precisely to determine the effects or risks of GMOs, as well as to obtain data and information thereon, it must be equally remembered that the overall safety guarantee thereof is still unknown. Corollary thereto, there is a necessity to adopt the precautionary approach in view of the respondents' declaration that they had begun giving out GMO fruits prior to the filing of the instant *Petition*. Thus:

....

[JUSTICE] MACARAIG:

[*To Dr. Hautea*] Dr. Hautea, you said that people came back to you to ask for seeds. How did you respond to this request for seeds?

A: Well, the first thing is, we cannot give them seeds because there [are] not enough seeds to distribute. We just finished getting the permits. There is no sense for us in multiplying. So that's the first practical [thing], we cannot distribute because we don't have something to distribute. Maybe small portions, but we did not do that. We need to increase the seeds, and then, at that time that we're doing it, in the middle of it, the *Writ of Kalikasan* was issued. And as we said, in deference to the Court, that was our last planting.

[JUSTICE] MACARAIG:

You never gave seeds to anyone asking from you?

A: No. Not seeds – fruits, the immature fruits, that's the ones which they took, not the seeds.

...³⁵⁴

Non-compliance with monitoring provisions of the JDCs.

³⁵⁴ TSN dated 11 December 2023 (Morning Session), p. 53.

What is also concerning is that the monitoring mechanism and risk assessment procedure under JDC No. 1-2016, which governs the BSPs for Golden Rice and the BSP for Direct Use as Food and Feed, or for Processing, of Bt Eggplant, and JDC No. 1-2021, which governs the BSP for Commercial Propagation of Bt Eggplant, were not complied with by the respondent government regulators. JDC No. 1-2016 provides:

ARTICLE II. BIOSAFETY DECISIONS

Section 3. **Guidelines in Making Biosafety Decisions.** The principle under the NBF shall guide concerned agencies in making biosafety decisions, including:

A. *Standard of Precaution.* Lack of scientific certainty or consensus due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a genetically modified organism on the environment, particularly on the conservation and sustainable use of biological diversity, and on human health, shall not prevent concerned government departments and agencies from making the appropriate decision to avoid or minimize such potential adverse effects. In such cases, concerned government departments and agencies shall take the necessary action to protect public interest and welfare.

B. *Risk Assessment.* Risk assessment shall be mandatory and central in making biosafety decisions, consistent with policies and standards on risk assessment issued by the NCBP; and guided by Annex III of the Cartagena Protocol on Biosafety. Pursuant to the NBF, the following principles shall be followed when performing a risk assessment to determine whether a regulated article poses significant risk to human health and the environment:

1. The risk assessment shall be carried out in a scientifically sound and transparent manner based on available scientific and technical information. The expert advice of and guidelines developed by, relevant international organizations, including intergovernmental bodies, and regulatory authorities of countries with experience in the regulatory supervision of the regulated article shall be taken into account...;
2. Lack of scientific knowledge or scientific consensus shall not be interpreted as indicating a particular level of risk, an

absence of risk, or an acceptable risk;

3. The identified characteristics of a regulated article and its use which have the potential to pose significant risks to human health and the environment shall be compared to those presented by the non-modified organism from which it is derived and its use under the same conditions;
4. The risk assessment shall be carried out case-by-case and on the basis of transformation event. The required information may vary in nature and level of detail from case to case depending on the regulated article concerns, its intended use and the receiving environment; and
5. If new information on the regulated article and its effect on human health and the environment becomes available, and such information is relevant and significant, the risk assessment shall be readdressed to determine whether the risk has changed or whether there is a need to amend the risk management strategies accordingly.

C. Environment and Health Impact Assessment. In making biosafety decisions under this Circular, government departments and agencies shall consider the environment and health impact of the proposed activity. For this purpose, the evaluation of environmental and health risks and impacts are integrated into this Joint Department Circular, consistent with the substantive requirements of the EIS System pursuant to P.D. No. 1586, the NBF, and R.A. No. 10611. Specifically, the public consultation requirements shall be integrated in the various public participation components under this Circular. The DENR and DOH, through their respective Biosafety Committees, shall conduct the evaluations and submit their findings on compliance with environmental and health impact assessment to the BPI for consideration in the processing of biosafety permits. DOH evaluation shall be based on the Philippine National Framework and Guidelines for Environmental Health Impact Assessment.

D. Socio-economic, Ethical and Cultural Considerations. In making biosafety decisions for the commercialization of a regulated article, concerned departments shall take into account socio-economic, ethical and cultural considerations arising from the impact of regulated articles on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.

....

F. Transparency and Public Participation. Decision taken under this Joint Department Circular shall be arrived at in a transparent and participatory manner. Biosafety issues are best handled with the participation of all stakeholders and organizations. They shall have access to information and the opportunity to participate in a responsible and accountable manner in biosafety decision-making processes. In the conduct of public participation, the following minimum requirements shall apply.

....

ARTICLE V. FIELD TRIAL OF REGULATED ARTICLES

....

K. Permit Conditions. - The permit holder shall comply with the following conditions and such other conditions which the BPI shall state in the biosafety permit for field trial:

1. The permit holder shall submit to the BPI monitoring reports on the performance characteristics of the regulated article in accordance with the monitoring and reporting requirements specified in the biosafety permit;
2. The permit holder shall notify the Director of BPI, within the periods and in the manner specified below, in case of any of the following occurrences:
 - a. Immediately upon discovery, not exceeding twenty-four (24) hours, through verifiable means of communication (email, text message, etc.) in the event that new information becomes available indicating that the regulated article could pose greater risks to biodiversity, human and animal health than its conventional counterpart; and
 - b. In writing, as soon as possible, but not to exceed three (3) working days, if the regulated article or associated host organism is found to have characteristics substantially different from those listed in the application, or suffers from any unusual occurrence (e.g., excessive mortality or morbidity, unanticipated effect on non-target organisms).

....

ARTICLE VI. COMMERCIAL PROPAGATION OF REGULATED ARTICLES

....

H. Permit Conditions. - The permit holder shall comply with the

following conditions and such other conditions which the BPI shall state in the Biosafety Permit for Commercial Propagation:

1. The permit holder shall notify the Director of BPI, within the time periods and in the manner specified below, in case of any of the following occurrences:
 - a. Immediately upon discovery, not exceeding twenty four (24) hours, through verifiable means of communication (email, text message, etc.) in the event that new information becomes available indicating that the regulated article could pose greater risks to biodiversity, human and animal health than its conventional counterpart; and
 - b. In writing, as soon as possible, but not to exceed three (3) working days, if the regulated article or associated host organism is found to have characteristics substantially different from those listed in the application, or suffers from any unusual occurrence (e.g., excessive mortality or morbidity, unanticipated effect on non-target organisms).
2. In the event new information becomes available indicating that the regulated article could pose greater risks to biodiversity, human and animal health than its conventional counterpart, the applicant shall, on its own, immediately take measures necessary to protect human health and the environment;
3. The permit holder shall not cause the commercial propagation in areas where the local government unit has a known policy or ordinance prohibiting the propagation or entry of regulated articles. For this purpose, it shall include in the labeling of products that these are not intended for propagation in prohibited areas.

....

**ARTICLE VII. DIRECT USE OF REGULATED ARTICLES
FOR FOOD AND FEED, OR FOR PROCESSING**

....

H. Permit Conditions. - The permit holder shall comply with the conditions by the BPI as stated in the Biosafety Permit for Direct Use.

....

ARTICLE X. MISCELLANEOUS PROVISIONS

Section 35. **Monitoring.** The field trial and commercial propagation of the regulated article shall be monitored by the BPI, DENR, DOH and other appropriate government authorities (including the IBC, in the case of field trials), and submit to the DA-BC the results of monitoring activities at intervals specified in the approved monitoring schedule. The BPI shall prepare a consolidated monitoring report and post it in the NCBP and BPI website.

Section 39. **Management of Regulated Article.** The Biosafety Committees of the DOST, DA, DENR and DOH shall conduct regular review of, recommend, and monitor compliance to, management strategies/measures of regulated articles by Biosafety Permit holders.

....

JDC No. 1-2021 essentially provides similar monitoring provisions as that under JDC No. 1-2016, with some changes such as:

ARTICLE V. FIELD TRIAL OF REGULATED ARTICLES

....

K. Permit Conditions. - The permit holder shall comply with the following conditions and such other conditions which the BPI shall state in the biosafety permit for field trial:

1. The permit holder shall submit to the BPI monitoring reports on the performance characteristics of the regulated article in accordance with the monitoring and reporting requirements specified in the biosafety permit;
2. The permit holder shall immediately notify the Director of BPI, in writing, should any of the following cases occur:
 - a. In the event that new information becomes available, indicating that the regulated article would pose greater risks to biodiversity, human and animal health as compared to its conventional counterpart; and
 - b. In cases wherein risk mitigation measures implemented were found to be insufficient; and
 - c. In cases wherein contingency measures had to be implemented.

....

**ARTICLE VI. COMMERCIAL PROPAGATION OF
REGULATED ARTICLES**

....

H. Permit Conditions. - The permit holder shall comply with the following conditions and such other conditions which the BPI shall state in the Biosafety Permit for Commercial Propagation:

1. The permit holder shall immediately notify the Director of BPI, in writing, in the event that new information becomes available, indicating that the regulated article would pose greater risks to human health and the environment as compared to its traditional counterpart;
2. In the event new information becomes available indicating that the regulated article could pose greater risks to human health and the environment as compared to its conventional counterpart, the applicant shall, on its own, immediately take measures necessary to protect human health and the environment;
3. The permit holder shall not cause the commercial propagation in areas where the local government unit has a known policy or ordinance prohibiting the propagation or entry of regulated articles. For this purpose, it shall include in the labeling of products that these are not intended for propagation in prohibited areas.

....

ARTICLE X. MISCELLANEOUS PROVISIONS

Section 35. **Monitoring for Compliance with Permit Conditions.** Compliance with the conditions of the biosafety permit for field trial, commercial propagation, or direct use shall be monitored by the BPI, with the assistance of other agencies.

Section 39. **Management of Regulated Article.** The Biosafety Committees of the DOST, DA, DENR and DOH shall conduct regular review of, recommend, and monitor compliance to, management measures of regulated articles by biosafety permit holders. They shall also monitor compliance with permit conditions and may recommend improvements in the conduct of activities detailed in this Circular.

....

While the JDCs indicate that monitoring shall be done by the BPI, with assistance from the other agencies, this Court finds that the following matters were established during the hot-tubbing: *first*, the monitoring activities being conducted by UPLB with respect to Bt Eggplant is only for the purpose of determining its insect resistance; and *second*, there is actually no compliance monitoring activities being conducted by the BPI and government agencies over the issued BSPs. Thus:

....

[MR.] PULUMBARIT:

Thank you, Your Honor. This is just a reply to the thing that the respondent said about the social economic aspects of biotechnology because I think it is being over as not part of biosafety decision, but I think because we are also forwarding the right of a balanced and healthy ecology. I think it is also good to check on the impacts of GM crops to the lives and livelihood of our farmers as part of taking care of the environment. Like what has been mentioned earlier by Dr. Ted Mendoza. One of the unwanted effects of genetically modified corn is the [use] or the rampant [use] of glycoside and it has been diluting a lot of forest and even [a] study by Dr. Sirena of UP Marine Science Institute has also stated that. The massive planting of genetically modified corn or roundup ready corn using herbicides has contributed to the flooding in Cagayan, and apart from that, it was said that the study by Dr. Francisco about Ex-Ante because it is a projection. In our JA, one of the discussing it [sic] because it's going to be too long. It will take around five to ten years to really see the exact magnitude of the social economic impacts, like what we have seen among GM corn farmers who are among the poorest in the Philippines. Thank you very much.

JUSTICE BRUSELAS:

Thank you, Dr. Pulumbarit. Dr. Mendoza?

DR. MENDOZA:

Yes, I was very interested in your topic and in question to the proponents about monitoring, post release monitoring because I was involved in the debate as well as some informal monitoring that Bt GM corn that was

approved in 2002, December 2002 and first planted on 2003. When farmers were experiencing some illness, allergy when they are passing through a corn field, we reported that to the Bureau of the Plant Industry and what they're saying is, prove to us that it is due to the Bt corn, to the GMO corn. Meaning to say, that the burden of proof still is in the victim and there's no monitoring or fact-finding mission than the government. So, in that case, what kind of monitoring system to be effective and what is the system? What are to be monitored? Mr. Pulumbarit is [sic] mentioned about the environmental, about social economic [sic], about health, about biodiversity, about contamination. The seeds also, all the [sic] monitored by a system to make paying [sic] by the government, and in this case, it looks like there is none. It looks like that they are [sic] monitoring with PhilRice and UPLB are quite narrow to keep this scope of the potential impacts and effects of such GM products that are being released to the environment. Thank you.

....

DR. HAUTEA:

Your Honor, I'm just going back to the question that you propounded earlier about monitoring.

JUSTICE BRUSELAS:

Mechanism.

DR. HAUTEA:

Yes.

JUSTICE BRUSELAS:

Monitoring is just one of those. Mechanism if any?

DR. HAUTEA:

Yes, part of the permit system it is having permit commission and in the case of Bt Eggplant...

JUSTICE ONG:

Having permit?

DR. HAUTEA:

The permit. The permit is issued for propagation there are permit conditions and in the case of Bt Eggplant or any GM that has been, that has insecticide of properties there is a requirement for insect resistance monitoring and products stewardship. So, the thing that does done

[sic], so it is a post release. So, this is after...

JUSTICE ONG:

Yes, but Dr. Hautea, that refers to the insect monitoring. My question earlier was because this is a food product. So, this will be consumed by us. So that's my question because I knew there is an insect monitoring already. My question refers to the consumer monitoring.

DR. HAUTEA:

Yes, that's what I'm saying that part of, the IPM is one of the components of products stewardship. So, product stewardship is done by UPLB, the proponent, and so one of the things that we do is when we release a variety, we follow-up on the adaption, and so reporting on how the product is being consumed. So, there are mechanism[s] for us because we continuously provide technical assistance in different municipalities where we deployed. So, part of the Data would be also looking at acceptability and reporting system. The other thing is, there is nothing that we dense [sic] anyone who can, to submit to the BPI, if there are things that, so [i]t's just like the European system if there are data that support, that there is a reason for revocation then that can be submitted to the BPI. That's my understanding of how the mechanism works. So, there is a mechanism for reporting and once it is reported, it triggers the regulatory review for risk assessment and looking back at whether, you know, the new data merits revocation or continuation of the...

JUSTICE BRUSELAS:

Okay, Thank you very much. Do I still [sic] from your explanation two (2) points, the mechanism that we are talking about, we're trying to extract from you, find out for you, so one. The proponent has the obligations stewardship must see to it that the product is how it's consumed, where it's consumed, etcetera? And second, it's up to the consumer to raise his hand and say, something is happening to me please. Is that the mechanism that you are talking about? Is that it? Is that the mechanism you are talking about? In other words, the regulator does [not] have any system of finding out, what's happening there. [It] just leaves it to the proponent and for the consumer to raise his hand, to wiggle out there and say, something is happening to me. Is that the mechanism that you were talking about? I have no judgment about it I'm just trying, [we're] trying

to find out what we are doing?

DR. HAUTEA:

So, I will speak about the complete one which is the insect monitoring, which is also, I know you are referring to health, but this is also part of possible permit regulation. So, that's why in the particular case of monitoring it's not just us, we do it with BPI, we do it with the local government.

JUSTICE BRUSELAS:

Here is what we're trying to convey. Very well and find that there is a conditionality in the BSP ... by safety permit provided 1,2,3,4,5, are met if these are met BSP will be cancelled. The question to be asked is, how will that be triggered this 1,2,3,4, how will that be triggered? If you will be triggered by what, you yourself proponents [are] saying this, I made a mistake or somebody out there saying this but in the part of the [sic] who is supposed to be doing something else. I mean, there seems to be nothing, that's how we are seeing it and may be wrong at this time.

JUSTICE ONG:

Meaning, the BPI just waits. That's what Justice Chair [Bruselas] is saying. The BPI will not do anything to check or what, it will just wait if the PRRI or UPLB will say, oh there is something wrong with our, we need to or a consumer submits a report that has to be proven, that [it] is because of the product, and that's when BPI will reevaluate. That's what Ms. Eugenio said during our last hearing, verified, proven, scientific basis, etcetera.

DR. CARIÑO:

May I?

JUSTICE BRUSELAS:

Sige, Dr. Cariño, although as I recall you are risk assessor not part of the regulator, but she wants to speak for them. Go ahead.

DR. CARIÑO:

Yes, I just want to say that in the Cartagena [it] says in the other meeting [sic] even Codex Alimentarius has always have [sic] three conditions, but should new information become available then it is [sic] ... to actually review the decision that has been made, and I would like to say that PPSSD...

JUSTICE BRUSELAS:

Which is what? Short for what?

DR. CARIÑO:

Plant Products Safety Services Division. That's part of the BPI but it is independent on biotech group. It is also the safety assessment. The people I worked with actually do regular scanning of literature to see whether other countries...

JUSTICE BRUSELAS:

Scanning of literature.

DR. CARIÑO:

Scanning of literature but that can actually trigger a review of a decision if there is something significant in the literature that they have read. And as I said, another trigger perhaps is going to be the actual manifestation by a consumer that this thing is happened, and so it will also trigger a review, but at least I know that PPSSD...

JUSTICE BRUSELAS:

This what you have just described is something that's part of their procedure. You know it for a fact that they have this written down that these are their task[s], there is also be doing [sic] or you noticed because you know these guys should be working on them, they are very, very contentious guys.

DR. CARIÑO:

Because they have to periodically check the literature to see whether or not they have to incorporate something in the risk assessment for produce and not only for GM but for whatever produce that they import also.

....

DR. ALONSO:

Just a quick comment that if the risk assessment doesn't show any address ... potential adverse effects and the authorities are satisfied with the result, it doesn't make sense to establish a monitoring system. You know[,] like it is safer if[,] on the contrary[,] like it happens in Europe, for example, you identify a potential risk then you set up a monitoring system, and here in the Philippines the only risk that was identified after the results the risk assessors was confront [sic] by authorities of the potential development for resistance that's why there is

a name here, but there was not foreseen or there's no one said about human safety. [sic] It doesn't make sense to establish a monitoring program, yes, hypothesis based so if you think there could be a problem then you ... but if there is, you know, the effort should be placed on things [that] are more dangerous than some that [have] been considered it [sic] safe.

JUSTICE BRUSELAS:

As I gather from Dr. Alonso, it's not necessary, you are saying that necessary if this determination that there is no risk for safety issue there's no need for any mechanism to monitor this or that, that's what you are trying to say? If it is established already by the risk assessors that there is no safety issue. What you are saying is, there is, does [not] make sense to have any sort of mechanism by which you can monitor or look at?

DR. ALONSO:

I can give you the example of Europe...

JUSTICE BRUSELAS:

Just a theoretical question. It would make [a] difference if this were about Golden Rice or Bt talong, this have been already widely consumed, propagated in several countries, and we are amenable to use this in the Philippines would it be a difference. You can just say, anyway, it's safe out there, so here, is that something, because Golden Rice right now is being introduced in the Philippines for the first time as we gather. Is it something, just a theoretical question. No need to be answered. The court was just thinking aloud.

([Ms.] Daño raising her hand)

JUSTICE BRUSELAS:

Yes, Ms. Daño.

MS. DAÑO:

I'd like to contribute to this discussion on the need for a mechanism or whether there is a mechanism by citing [a] very specific case. Based on our experienced [sic] in Mindanao, those who are working with communities who are impacted by sige-sige corn. Sige-sige corn is actually a crossbreed between GM, Genetically Modified corn and traditional corn, tinigib, it calls tinigib the white, I know those people in Luzon don't know tinigib because like those in the Visayas the white corn is

actually...

JUSTICE BRUSELAS:

White kernels.

MS. DAÑO:

Yes, Your Honor. It's actually for consumption, Your Honor, and the Cebuanos and also the Cebuanos in Mindanao actually eat this.

JUSTICE BRUSELAS:

They mix with rice...

MS. DAÑO:

The pure Cebuano, Your Honor, will not mix it with rice. Only pure that's the real staple. My parents did that, and I'd like to cite this because this is a very specific case where it actually shows that there is either a failure or an absence of [a] mechanism for monitoring. This is corn and this implicates Bt corn, Bt corn, because of the absence or failure of a mechanism to monitor you have actually a number of issues that [are] actually being studied by two universities in Belgium, University of Louvain and University of Namur, and together with one center in Ateneo de Manila University which actually raises questions on the triggers. If you have a study, then how come the regulators did not look into this. This is illegal because there is no regulation, there is no permit to do sige-sige, it's actually just crossbred between genetically modified corn which is regulated and tinigib and there is no permit for that, but it actually spread like those of us working with communities in Mindanao we were so shocked.

....

MS. DAÑO:

Your Honor, that's why it really raises questions on monitoring. Don't the regulators monitor this? Is this part of their job because this is also an example of contamination whether that is deliberate or not you bred something that is not regulated. [sic] That is not covered by any permit and also it implicates a very serious questions [sic] because tinigib is not like the original corn, hybrid that is for feeds, tinigib is for human consumption, and now that you are actually in the exchange [sic] it's very clear that the onus is on the victim. Do we expect the indigenous communities in

Bukidnon who are very poor, don't even have electricity or would walk for days to go to the highway to report to the BPI? I have this. Can you check if this is related to sige-sige? I think that's so unfair. It is so irresponsible on the part of the regulators. So, it's a very concrete case. This is not theoretical, and this has grown so widespread that it became even. [sic] Even a headache for organic corn farmers, even for Masipag parties.

JUSTICE BRUSELAS:

Has that been elevated to the BPI or the DA?

MS. DAÑO:

This was actually brought to the BPI in Region 11, no action, and this is also a paper that was published by these three universities in Belgium. So, what triggers do you need for you to act on it, to revoke or just look into this because the case in risk assessment is really plain and simple. If you don't look you won't find. So, you close your eyes you won't find. There is nothing.

JUSTICE BRUSELAS:

So, just to put that in perspective, we are not sure about whether that is GMO or, okay, just to be clear. The mechanism that we are talking about is related to the introduction of a transgenic gene, but will...

MS. DAÑO:

Your Honor, just to say that there are actually, the Department of Agriculture Region 11 already told us that it's actually GM. Now, it's actually a crossbreed like, we were in touch with region 11 DA on this, like many years ago. So, what triggers the monitoring...

...³⁵⁵

JUSTICE ONG:

So, maybe we can start with that, with your responses to those two questions.

Ms. EUSEBIO:

So, regarding, Your Honor, for the mechanism of BPI for complaints?

JUSTICE ONG:

Yes, for complaints, for evaluation monitoring.

³⁵⁵ TSN, December 11, 2023 (Afternoon Session), pp. 122-123, 124-127, 128-130, 131-132.

MS. EUSEBIO:

Yes. Actually, the Department of Agriculture has its processes of if you have complaints against DA programs, personnel, it's a general [sic]. So, it's in their website, the mechanism, there is this division that will handle the complaint, so any person can file the complaint. Since the issuance of Biosafety Permit is one of the commitments of the Bureau of Plant Industry, so it considers [sic] one of the programs of DA.

JUSTICE ONG:

So, just to clarify, there is no formal monitoring being done by the DA, it's because we were able to discuss yesterday, like for the Golden Rice, it's the proponents, it's PhilRice, when they distribute it, they linked up with local government, they provide a briefing and they get names of those who will get rice, but for Bt Talong, there's no such system yet. You don't have a system, the proponent, UPLB, has no, does not have a similar system with PhilRice. I think that was discussed yesterday, am I correct?

....

JUSTICE ONG:

[It is] BPSSD who monitors the literature. So, that one is focused just on literature review, so what my... what the Court is concerned about is, as regulators, for purposes of the Philippine setting, because for sure the literature review is a result of studies being done, research being done and as we've heard from the experts yesterday, after studies and research it takes like many years before it comes out into a paper and then that paper has to be peer-reviewed. So, it's not immediate. So, what does the DA do, I mean the regulators, the regulators do for the, like for the Philippine setting, because I've heard it's the proponent who you know, monitors, who does some sort of monitoring, there is nothing here I can see where the regulators monitors [sic]. So, aside from the literature review, I guess there is no other way to question, because the DA, if you question in the website, that's very, the DA covers so many things, BFAR, FTI, the DA covers so many agencies. So, if you tell me that that's just the only way to raise complaints, I'm kind of concerned with that.

MS. EUSEBIO:

Your Honor, we monitor base[d] on the conditions indicated in the Biosafety permit and that includes Insect

Resistance Management wherein, we do monitoring at 45 days and 75 days and we also monitor the effect of the GMO on non-target organism[.] So, we conducted that since 2008 until now, we do monitoring every season, twice a year, at 45 and 75 days.

JUSTICE ONG:

So your focus is on Insect Resistance...

MS. EUSEBIO:

Yes. And then we have the opportunity to meet farmers, so if they have problems, they can raise their problems or concern on the field, directly in the field...

JUSTICE ONG:

So, for example for this Golden Rice and Bt Talong, were there risk assessors who are like experts in the health and safety of the...

MS. EUSEBIO:

Yes, Your Honor.

JUSTICE ONG:

Of the consumers and they were the one[s] who said that there's no issue as to the health and safety, that's why there's no need to put such monitoring condition for the DOH.

MS. EUSEBIO:

Yes, Your Honor, they have established substantial equivalence of the GM and non-GM rice.

JUSTICE ONG:

Rice and Bt Talong?

MS. EUSEBIO:

Yes.

JUSTICE ONG:

Okay.

....

JUSTICE ONG:

Yes, that you gave. Actually, my question is more of on the health and safety of the consumers, because the rice and the eggplant will be consumed by Filipino[s]. That's [where] my questioning is, so as you mentioned earlier, Ms. Eugenio, you already mentioned that the conditions

focused on Insect Resistance Management because that was where the experts found that there's need to be [sic] some sort of monitoring. So, there's none for the consumers for the consumption, because as you said, it's [a] substantial equivalent, substantially equivalent to the parent, to the original product...

DR. HAUTEA:

In the Commercial Propagation. So, there are two categories of farmers, one is a seed grower, so that means to say that they produce what UPLB cannot produce in bulk. And the other one is the farmers who are direct planters of Bt Eggplant that will go directly to the market. So, we have two target[s], one is producer and the other one is the actual farmers, that you know, sell it to the market.

JUSTICE ONG:

So, it's possible in the future, the Bt Eggplant farmers will not buy the seeds from you?

DR. HAUTEA:

They have that option.

JUSTICE ONG:

They will buy from other, from fellow farmers.

DR. HAUTEA:

Yes.

....

JUSTICE ONG:

And so, if in that case, then you will have no record anymore of who are the farmers who are planting the Bt Eggplant?

DR. HAUTEA:

Because of the IRM, the monitoring, we have to do it...

JUSTICE ONG:

Even if, for example, Justice [Bruselas] is the seed producer, I'm you, UPLB, seed producer Justice [Bruselas] will sell it to Justice Macaraig, so are you going to require Justice [Bruselas] to report?

DR. HAUTEA:

Yes, that would be part of the requirement if you are going to engage as seed producer. So, there's a mechanism in UPLB to do this.

JUSTICE ONG:

But if just the seeds that Justice [Macaraig] got, she can sell it to DCC Ogsimer, so there's no requirement for Justice [Macaraig] to report.

DR. HAUTEA:

But we are doing monitoring on adoption rates. So, how many hectares are being planted and it's very, when we do the monitoring because of the Insects Resistance Management, the level of adaptation, of adoption, the level of adoption is a trigger for us to look at certain, you know, if it's very small, then you still have a lot of non-Bt Eggplant, so there's not much pressure for the...

JUSTICE ONG:

No, my question is, because the requirement for the reporting is only to that immediate seed producer, that seed producer can sell it to somebody else and that third person has no more reportorial requirement. So, that third person can sell it to other people, I think that was what happened to that Sige Sige Corn that was being asked yesterday. So, how do you, you know, what is the system in place to monitor and trace it?

....

JUSTICE BRUSELAS, JR.:

So, the Court gathers that there is not such a [sic] requirement anymore. So, I mean, from the answer that you've been giving, it seems that it stops, the monitoring stops at the level of the one who would like to produce, seed producer and seller? That seems to be the, is there a requirement for the subsequent buyer of the seed who sells it to another one and another one, is there a requirement for this guy in a chain to report?

DR. HAUTEA:

Yes, Your Honor, because in the p[a]cket, there is, there are actually requirements...

JUSTICE BRUSELAS, JR.:

So, what is this requirement, that p[a]cket of the seed will be returned to UPLB, is that it? Please, just be candid so

that we couldn't go around the bush. If there is none, there is none, so that we can go move on to other points. We are not making a decision here about is that bad or good, that there is no requirement, not at all, not at all.

DR. HAUTEA:

Yes, I know...

....

DR. HAUTEA:

Hindi ko lang po ma-recall iyong actual wordings sa p[a]cket, pero nandoon po sa p[a]cket ang conditions when you buy the seeds...

JUSTICE BRUSELAS, JR.:

So, what are these conditions on the p[a]cket?

DR. HAUTEA:

Iyon nga po ang sinasabi ko. As of now, may I request the Justices to allow us, to allow me to get the actual p[a]cket and submit at a later time.

....

DR. HAUTEA:

Yes yes po.

JUSTICE BRUSELAS, JR.:

And you're saying is the p[a]cket...

DR. HAUTEA:

Contains conditions...

JUSTICE BRUSELAS, JR.:

Is a mechanism for you to be able to monitor the movement of the seeds on the p[a]cket.

DR. HAUTEA:

Opo.

JUSTICE BRUSELAS, JR.:

Okay. Understood.

DR. HAUTEA:

And also the obligation of the one who will plant.

....

JUSTICE BRUSELAS, JR.:

Look at this from the broader perspective. You have quarantine laws which prohibit entry into the transboundary movement of plant product, because [these] product[s] are foul, they may have an effect on the domestic environment. So, could not that be the same principle that you should look at with this Sige Sige Corn which appears to have emanated from enterprising farmers who used Bt Corn Seeds with them to produce a, what you claim, is a better seed. Is it that not what you concern about and therefore put a stop to it. Are you going to wait for a law says that we have to wait for a law to be drafted by Congress for us to be able to act that way. I, to the mind of the Court, that that does not seem how things ought to work.

...³⁵⁶

Based on the foregoing, it is clear that no genuine, exhaustive, independent, and active monitoring activity is being conducted by the BPI or the other government agency regulators. Geronima confirmed that no monitoring is being done by the government to find out if there are health and safety issues that may arise from Golden Rice since the proponents have already established its substantial equivalence with ordinary or non-GM rice. Moreover, as explained by Dr. Cariño, when the BPI receives new information on a GMO product from a consumer, scanning of literature is what triggers a review of the regulators' decision on how to act thereon. However, monitoring through literature review, while important, takes a considerable length of time and does not factor in the possible urgency of a given situation.

Evidently, the approach of the government is merely to wait or receive information from the proponents or the public, or to be reactive, rather than to effectively initiate monitoring activities, or to be proactive. As it stands, the burden is being placed on the proponents and the people to perform the obligation or responsibility of the regulators.

³⁵⁶ TSN, December 12, 2023 (Morning Session), pp. 13-15, 17-19, 30-34, 61.

It must be stressed that monitoring of GMO activities by the government cannot be taken lightly. It is not an empty formality that can be disregarded or passed on to others. Proper monitoring is a crucial part of risk assessment as it is one of the means to determine the possible impacts and effects of GMOs on the people and environment. This is because it is through actual and proper monitoring that the government regulators can observe, identify, and address possible risks of GMO activities which they may not have read or encountered in their study of scientific literature.

Furthermore, Geronima explained that the DA's complaint mechanism, where complaints may be filed through the DA website, fails to consider stakeholders or concerned citizens, such as farmers or those living in remote areas, who have no readily available access to their website or the Internet.

No less than the Constitution imposes the bounden duty on the government to serve and protect its people.³⁵⁷ The enactment and implementation of laws, policies, and regulations on matters such as GMOs, which could adversely affect our lives in more ways than one, must always be harmonized with the people's constitutional right to health, and a balanced and healthful ecology.

Suffice to state, the Philippines, being a signatory to the Cartagena Protocol, has adopted as a state policy the safe and responsible use of modern biotechnology and its products as one of the several means to achieve and sustain food security, equitable access to health services, sustainable and safe environment, and industry development.³⁵⁸ Yet, to emphasize, the very same state policy does not merely sanction the use of modern biotechnology, but for its safe and responsible use in consideration of the people's general welfare.

³⁵⁷ CONST., art. II, sec. 4; *See also Macalintal v. Commission on Elections and the Office of the President*, G.R. No. 263590 & 263673, 27 June 2023 [Per J. Kho, *En Banc*].

³⁵⁸ *Rollo*, vol. 21, p. 12054. *See* MEMORANDUM dated January 26, 2024.

Insufficiency of JDC provisions.

Next, We take this opportunity to point out the clearly lacking provisions of the JDCs, which must be addressed by the government regulators before it can be said that they have conducted full safety assessments on GMOs or regulated articles such as Golden Rice and Bt Eggplant.

First, the monitoring provision in JDC No. 1-2021³⁵⁹ is too broad or general. While it indicates that the BPI and the Biosafety Committees should monitor compliance by BSP holders of the conditions indicated in the permits, it fails to specify the manner in which said monitoring will be performed. Unlike the provisions on securing BSPs, which provide the step-by-step procedure that must be complied with by the proponent and the regulators, no such detailed procedure is provided with regard to monitoring.

Second, JDC No. 1-2021 failed to include a provision on the labeling of GMOs so as to distinguish the same from non-genetically modified products. During the hearing, it was confirmed that there is no requirement for Golden Rice or Bt Eggplant to be labeled as GMOs when sold in the market.³⁶⁰ Thus, consumers would only be able to distinguish them from non-GMO products if they were aware of the supposed distinctive characteristics of the GMOs. Thus:

....

JUSTICE ONG:

Is there any requirement that products that will come out from them will be marked as GM? Or when you put them out to the market?

³⁵⁹ **ARTICLE X. MISCELLANEOUS PROVISIONS**

Section 35. **Monitoring for Compliance with Permit Conditions.** Compliance with the conditions of the biosafety permit for field trial, commercial propagation, or direct use shall be monitored by the BPI, with the assistance of other agencies.

³⁶⁰ TSN, December 11, 2023 (Afternoon Session), pp. 79-81.

DR. REINKE:

No, the case of Golden Rice, Your Honor, Golden Rice announces itself because it's a yellow in color so you can clearly see it there and then in all of the provinces which we've been active, we've been educating to ensure that consumers know the source of what Golden Rice is and the fact that it's come from a [biotech] project.

DR. TAYLO:

For the Bt Eggplant there are two (2) seeds system, one is the seeds p[a]ckets they could be bought in seed p[a]ckets. It will be temporary or provisionally made as Bt talong, of course, it's very obvious, and then the other one is a transplant or seedlings, they could buy seedlings that is ready for...

JUSTICE ONG:

What if I'm talking about the finish[ed] product, eggplant itself. So, when you sell the Bt Talong in the grocery is there a marking that it's GMO or it's in the regular eggplant section?

DR. TAYLO:

No more. There is no mandatory labeling for Bt Eggplant, and it will be very, expensive if you're going...

JUSTICE ONG:

Because now if you want to buy an organic eggplant you can buy it, there's a section and there's a merely a stamp that it's organic but for all the other eggplants, so there's Dizon eggplant, etcetera eggplant, so it's just going to be one of those. So, for example, I'm a Dizon farm customer, I don't know if the plant, the eggplant that they are producing is Bt talong or not. That's what I want to clarify because there is no required marking.

DR. TAYLO:

There's no requirement.

JUSTICE ONG:

So, it depends if the farmer from where I buy my eggplants from will get their seeds from UPLB then it's possible the eggplant that I'm eating is Bt Eggplant. I mean, not right now because obviously its stop production. Assuming that there is no such case right now, assuming is everything is, you know, ongoing and all, so that's how the Bt Eggplant will be sold. It's that how it is?

(Dr. Hautea raising her hand)

JUSTICE ONG:

Yes, Dr. Hautea.

DR. HAUTEA:

The way we market eggplant to see it's in the market and **no eggplant is labelled but you can actually distinguish the variety, by the variety characteristics, so that's one. So, like for example, the variety [F]ortuner, it's very long, it has a characteristic color, it has a shape, and it has bang. So, variety characterization is one way to distinguish it if you are interested to know.** The other thing we can, the other possibility is labeling it, this is the fruit we are talking in the market, so putting individual labels would be difficult but we can put truthfully that if it is unsprayed or we can opt to UPLB. There is a commercial name that we are proposing, and it will be Bt Talong. So, you cannot mistake it for anything else.

JUSTICE ONG:

Yes, but it's not a requirement?

DR. HAUTEA:

It is not a requirement.

JUSTICE ONG:

Just depends on the proponents.

DR. HAUTEA:

Yes, Your Honor. We are required to have a, when we register the variety, we are required to have common names or trade names.

JUSTICE ONG:

Yes. My concern is for the public, for the consumer because as you were saying that you can recognized [sic] it by the hybrid, by the features, but...

DR. HAUTEA:

And it will not have borer.

...³⁶¹

To simplify, Dr. Hautea explained that one reason why Bt Eggplant need not be labelled as such to distinguish it from non-Bt Eggplant is because consumers can already differentiate them based on variety characterization. Such reasoning, however, assumes that all consumers are indeed familiar with the variety characteristics of eggplants, which is not the case.

³⁶¹ *Id.* Emphasis supplied.

It is necessary that consumers, who have the freedom to choose what to eat, be accurately informed as to the nature, quality, and quantity of the food products sold to them. Through proper labeling, the consuming public is fully made aware of the food products released to the market and is adequately apprised of the contents and ingredients of the food they choose or decide to eat.

Third, the drafters of the JDC should adopt a more realistic time frame for processing BSP applications. While said applications should be timely acted upon, the periods, therefore, must not simply be based on Republic Act No. 11032, also known as the Ease of Doing Business Law or the Anti-Red Tape Law, which covers business permits and simple transactions. Said permits are of a completely different nature to the BSPs issued for GMO activities. It would be in the best interest of the people for the BSPs to first be thoroughly reviewed and evaluated by the concerned assessors and regulators, rather than be hastily issued for the sake of compliance with the shorter period prescribed by law. As already pointed out by this Court during the hearing:

....

JUSTICE ONG:

... So, my next question is on the JDC 20-21 itself. Because in the JDC 20-21, I just notice that in the whereas clause, there is focus on RA 11032, which is the ease of doing business and efficient government service delivery act and from our last hearing, I remember, I'm not sure if it was you who mentioned it or Dr. Mamaril, Dr. Choi Mamaril, who mentioned it that it was beyond the number of the days, etcetera etcetera, to review. So, I'm a bit concern[ed] about that, because from my understanding of the ease of doing business, this is for simple transactions, the limit of the time and in a document dated May 8, which was actually this is endorsed by DENR and I think we don't have representative here from DENR right, although they're one of the respondents. I just noticed that in the chronology of events of their evaluation, so for Golden Rice, it took them 6 months from the time the BPI endorsed the application and from the time they came up with their technical report, 6 months for Commercial Propagation. Then, for Bt Talong,

it took them 8 months to review the application for direct use, while it took them about 3 months to review the application for Commercial Propagation. ... The questions as to the safety, you know, I'm really concern[ed] about time it took to study these items.

JUSTICE BRUSELAS, JR.:

Go ahead.

MS. EUSEBIO:

Your Honor, I think for the simple transaction, based on EODB Law, it requires 10 days for highly technical, so it's around 45 days. So, we are just, the JDC just compliant with the law requires. [sic] So, for the assessment, because you mentioned two different policies used for the assessment, for the 500 or 300 days, it's under 2016 and the for the propagation for BPI plant is under 2021, wherein the ease of doing business is already in effect. So, we have to comply because, I think, I'm not part of the group that drafted the policy with JDC, but [I] think they have coordinated this matter to the agency when it comes to the number of days the assessment should be conducted, Your Honor.

JUSTICE BRUSELAS, JR.:

Thank you, Ms. Eusebio, but it's unfortunate that you are the only regulator around. Is there anybody else? You're the only one around. The point that's being raised by my colleague, Justice Ong, is that, there is of course, we are aware, as a regulator, there is ARTA Law, the Anti-Red Tape Law [is] supposed to tell those agencies that process applications for permits, licenses, that they should not take too long on these applications, ease of doing business, as you said, these are at stake, whether they will flounder or succeed, that's one. So, how do you appreciate this ARTA Law which prescribes [a] certain period in which agencies should process and act on applications, these procedures under the National Biosafety Framework. You are certain that you have to comply with the law and the law, as you said, it requires 15 days, 45 days, etcetera. That's what you have in mind. But, do you not consider also that what are you dealing here with, are you dealing with the application for license to operate a business, or a license to do this or do that? Is it what? It is a license, or you're asking for a permit to be allowed to (1) [sic] test, test the, an innovation, the production of a gene into an [sic] another organism which has the potential of innovating, changing things for the good or for the better. That's what we are talking about here. So, are we saying that that should be equivalent to that when you process that kind of application, it's the same thing as processing an application to open a supermarket or store somewhere. That's what the Court is trying to understand.

MS. EUSEBIO:

Yes, Your Honor. Comparing the implementation of the JDC 2016 and 2021, the 2021, I think, is more efficient but I don't think that the quality of the assessment conducted under the 2021 policy, nagreduce po. Because, although, it's stipulated that we have to process within 45 working days, but in reality hindi po sya nangyayare, because the assessors require more informations [sic], so probably now we can say that the range for one application to be 6 months or 7 months, so it depends on the requirement or the information required by the assessors, Your Honor.

JUSTICE BRUSELAS, JR.:

So, let me understand. Let us understand very very clearly. So, are you saying now that you are not too much concern[ed] with what is said in the ARTA Law, Anti-Red Tape Law, that there should be periods to comply with otherwise... you are not so much concern[ed] with that, that's what you are saying? You are more concern[ed] with, what, something else, than ensuring that the safety assessment, there are requirements of the assessors are followed? [sic] Which is which? Are you saying that you have to do both, comply with both?

MS. EUSEBIO:

No. Your Honor, when we say 45, when we returned the application to the technology, the clock stops. So, it will not count. So, it will not be counted as 45 days.

JUSTICE BRUSELAS, JR.:

Okay. So, to be very very clear. Do you find the Anti-Red Tape Law, the Ease of Doing Business Law, in other words, as something that is also part of what you should take into account in performing your job as risk regulator?

MS. EUSEBIO:

Yes, Your Honor, since it's included in the policy. So, I think, the experts who drafted the policy consider that, the ARTA Law, Your Honor.

JUSTICE BRUSELAS, JR.:

Let me ask any of the experts, the risk assessors. Confront me with that. Supposing you are a risk assessor and you say this is the regulator, this is the proponent, as if you are able to be the proponent, the regulator, says that your risk assessment must be done within a certain period of time, 60 days, otherwise your assessment will not be of any use to us. How will you consider that, Madam Dr. Cariño?

DR. CARIÑO:

I was part of the drafting committee for the JDC. As part of the drafting committee it was headed by the [NAT]... president of the time, National Assessment Technology...

....

DR. CARIÑO:

Yes, Rhodora Samson. So, I was part of the drafting committee and we considered several matters, and we were looking at DENR, DOH, DOST, DILG and DA of course, and we look at 514, it has to be congruent with 514, and we considered also that by that time...

JUSTICE BRUSELAS, JR.:

514 is the current...

DR. CARIÑO:

Yes, the National Biosafety Framework. It has to be compliant with the ARTA, it has to be compliant with the 514 and the National Biosafety Framework and we also had DILG helping us draft the document, because most of the scientist[s] are totally get bored of appreciation of some of the sentences in the ARTA. [sic] We have DILG helping us and then we consulted DILG and the DOH Secretary, consulted with the ARTA to understand what is being implemented and we learned that we can stop the clock if there's no information because some cannot be provided at an instant. We also considered that the assessors from the DENR, DOH, DA and DOST have had previous experience in doing some assessments and we have some knowledge already gained and they undergone some training on Food and Feed Safety, as stated to [sic] the Codex Alimentarius, basis for the risk assessment process and the only way they would agree to be part of the approval is to say that we've only be [sic] part of the risk assessment but the decision would have go to DA because 514 specifically stated that DA would take the lead when it's become to agricultural crops. [sic]

....

JUSTICE BRUSELAS, JR.:

2021. Okay. So, you said that, you talked about stopping the clock...

DR. CARIÑO:

Right.

JUSTICE BRUSELAS, JR.:

If you feel that something has to be stopped, you can stop the clock. Is that thought of yours carried into any provision of the JDC? Is it

there, that there can be a stop page, because I am trying to assess what Ms. Eusebio said...

DR. CARIÑO:

But that's common practice...

JUSTICE BRUSELAS, JR.:

She said they [were] also concerned about the ARTA, the number of days, period to proceed that they are instructing that into their processes. So, you're saying now, that as a member of panel that drafted the JDC, that thought came to your mind that you can stop the clock.

DR. CARIÑO:

Yes, Your Honor.

JUSTICE BRUSELAS, JR.:

The question is, is that express[ed] in any of the provisions in your Joint Department Circular?

DR. CARIÑO:

I know...

JUSTICE BRUSELAS, JR.:

So, that the processors will not be doing some interpretation.

DR. CARIÑO:

On top of my head, Sir, I was trying to... the actual language... because when it comes to the actual, let's say, I was, with respect to procedure, the ones who understand the law, the DA people and the DILG will be the one drafting that part.

JUSTICE BRUSELAS, JR.:

Yes.

DR. CARIÑO:

So, I was trying to get it down on myself while it's getting...

JUSTICE BRUSELAS, JR.:

So, okay. Anybody, the bright guys, the lawyers here, anybody from both sides? Is it... can you point to the Court, is there a provision there that operational license, the thought of Dr. Cariño says that the processes can be stop[ped], is there a provision? So, well okay, you don't have to answer that now, it's a matter of, you can check. So, at least there is... as far as risk assessor is concern[ed], there is the thought that it can be done, you are not bound by, strictly bound by what ARTA Law or EODB Law says that you have to do this within 60 days, 20 days.

DR. CARIÑO:

Yes, Sir. As far as I understand from our conversations with the guys from ARTA, we went to their office, it's the one practice, I just don't know if it was expressly written in JDC 1, because that part of period, the actual language, we help [write] the language in the terms that we understand it, but then it has to be lawyerified [sic], that's what we called it.

....

JUSTICE BRUSELAS, JR.:

So, that thought of yours may not have been translated into legal language found in the circular but the practice as you said, is you are aware that is the common practice.

DR. CARIÑO:

In all of the agencies that I've been party to, like the FDA, there's always as method to stop the clock if you require more information because you can always justify that as enhancing data...

JUSTICE BRUSELAS, JR.:

Very good to know that, but that one, to be very refine[d] about it, applies to talking about food processing, etcetera, but that kind of interpretation, a practice as you said, I think will have this query moving forward, if we're talking about applications for business permits to operate some store somewhere there, different, they are bound by that specific period of time, otherwise, they might be charged or accused of doing some [hanky panky] there. So, I think that's sige, let's clear to the Court, it's would be very very clear that that thought of yours would have been reduce[d] into clear legal language. Okay.

....³⁶²

In this regard, PRRI argues that this Court is not the forum to appeal political and policy choices made by the Executive, Legislative, and other constitutional agencies and organs, stating that “[t]his Court dilutes its role in a democracy if it is asked to substitute its political wisdom for the wisdom of accountable and representative bodies where there is no unmistakable democratic deficit.”³⁶³

³⁶² TSN, December 12, 2023 (Morning Session), pp. 19-25.

³⁶³ *Rollo*, vol. 21, p. 12237.

Truly, courts continue to recognize questions of policy as a bar to the exercise of the power of judicial review.³⁶⁴ In *Macalintal v. Commission on Elections and the Office of the President*,³⁶⁵ citing the U.S. case of *Baker v. Carr*,³⁶⁶ the Supreme Court explained that the political question doctrine applies when there is found, among others, 'a textually demonstrable constitutional commitment of the issue to a coordinate political department,' 'a lack of judicially discoverable and manageable standards for resolving it' or 'the impossibility of deciding without an initial policy determination of a kind clearly for non-judicial discretion.'³⁶⁷

This notwithstanding, in a long line of cases, the Supreme Court has given a limited application to the political question doctrine. As held in *Padilla v. Congress of the Philippines*³⁶⁸ (**Padilla**):

In *The Diocese of Bacolod v. Commission on Elections*, we emphasized that the Court's judicial power as conferred by the Constitution has been expanded to include "the duty of the courts of justice to settle actual controversies involving rights which are legally demandable and enforceable, and to determine whether or not there has been a grave abuse of discretion amounting to lack or excess of jurisdiction on the part of any branch or instrumentality of the Government." Further, in past cases, the Court has exercised its power of judicial review noting that the requirement of interpreting the constitutional provision involved the legality and not the wisdom of a manner by which a constitutional duty or power was exercised.

In *Association of Medical Clinics for Overseas Workers, Inc. (AMCOW) v. GCC Approved Medical Centers Association, Inc.*, we explained the rationale behind the Court's expanded *certiorari* jurisdiction. Citing former Chief Justice and Constitutional Commissioner Roberto R. Concepcion in his sponsorship speech for Article VIII, Section 1 of the Constitution, we reiterated that the courts cannot hereafter evade

³⁶⁴ *Padilla v. Congress of the Philippines*, G.R. Nos. 231671 & 231694, July 25, 2017 [Per J. Leonardo-De Castro, *En Banc*].

³⁶⁵ G.R. Nos. 26350 & 263673, June 27, 2023 [Per J. Kho, Jr., *En Banc*].

³⁶⁶ 369 United States Supreme Court, 186, March 26, 1962.

³⁶⁷ *Belgica v. Ochoa, Jr.*, G.R. Nos. 208566, 208493, & 209251, November 19, 2013 [Per J. Perlas-Bernabe, *En Banc*].

³⁶⁸ G.R. Nos. 231671 & 231694, July 25, 2017 [Per J. Leonardo-De Castro, *En Banc*].

the duty to settle matters, by claiming that such matters constitute a political question.³⁶⁹

Lest it be forgotten, the writ of *kalikasan* is categorized as a special civil action and was, thus, conceptualized as an extraordinary remedy, which aims to provide judicial relief from threatened or actual violation of the constitutional right to a balanced and healthful ecology of a magnitude or degree of damage that transcends political and territorial boundaries. It is intended **"to provide a stronger defense for environmental rights through judicial efforts where institutional arrangements of enforcement, implementation and legislation have fallen short"** and seeks **"to address the potentially exponential nature of large-scale ecological threats."**³⁷⁰

Petitioners are entitled to the privilege of the Writ of Kalikasan.

Under Rule 7, Section 1 of the RPEC, the following requisites must be present to avail of the extraordinary remedy of the writ of *kalikasan*:

- i. there is an actual or threatened violation of the constitutional right to a balanced and healthful ecology;
- ii. the actual or threatened violation arises from an unlawful act or omission of a public official or employee, or private individual or entity; and
- iii. the actual or threatened violation involves or will lead to an environmental damage of such magnitude as to prejudice the life, health or property of inhabitants in two or more cities or provinces.³⁷¹

³⁶⁹ Citations omitted.

³⁷⁰ *Concerned Citizens of Sta. Cruz, Zambales v. Paje*, G.R. No. 236269 (Resolution), March 22, 2022 [Per J. Inting, *En Banc*] citing *Paje v. Casino*, G.R. Nos. 207257, 207276, 207282 & 207366, February 3, 2015 [Per J. Del Castillo, *En Banc*].

³⁷¹ *Osmeña v. Garganera*, G.R. No. 231164, March 20, 2018 [Per J. Tijam, *En Banc*].

In line with Our previous discussions, We are convinced that the petitioners have sufficiently established the aforementioned requirements; hence, this Court finds it proper to grant the privilege of the writ of *kalikasan*.

First, by reason of the conflicting scientific views and uncertainties on the risks and effects of Golden Rice and Bt Eggplant, potential severe and grave threats to the welfare of people and the environment arise.

Second, the BSPs granted to PRRI and UPLB for the field trial, direct use as food and feed, and processing, and commercial propagation of Golden Rice and Bt Eggplant, respectively, were issued without sufficient monitoring mechanisms in place. Such omission or defect is reasonably connected to an implicit threat of environmental damage of such magnitude as contemplated by the rules, as it significantly contributes to the uncertainty of the impacts of said GMOs to society and runs afoul to the intent of the JDCs to uphold the constitutional rights of people to life, health, and a balanced and healthful environment, as well as to protect the interests of consumers.

Third, the subject GMOs, by virtue of the BSPs, are intended to be planted and distributed in different parts of the Philippines. Thus, the possible risks and effects thereof would have a national impact, considering that there is currently no concrete way to track the movement of such regulated articles.

Worse, in the advent of JDC No. 1-2021, the BSPs for Direct Use as Food and Feed, or Processing, and Commercial Propagation, have no more expiration. As explained by Geronima:

....

Q So, during the hearing in Baguio, it was mentioned that there is a BSP now that has no expiration, what BSP is this?

A Biosafety permit, Your Honor.

Q Which one for the ones filed under JDC 1-2021, is that correct?

A Under 2021, it says that there is no expiration for biosafety permit. So, it applies to all biosafety permits issued...

Q Pursuant to JDC 2021?

A Yes.

Q And in this case, there is only one issued pursuant to JDC 2021 which is the commercial propagation for Golden Rice?

A All other issuances...

Q Commercial propagation for Bt Talong. So that's the only one that has no expiration?

A No, Your Honor. The provision in the JDC said that all issuances prior. So, what do you call that section?

JUSTICE BRUSELAS, JR.:

Retroactive?

WITNESS:

Yes, Your Honor.

JUSTICE ONG:

Q So, meaning to say, all the BSPs issued for Bt Talong and Golden Rice for field testing, direct use and commercial propagation all have no expiration now?

A Specifically for direct use and commercial propagation because the field trial has validity of two years, Your Honor.

Q So, direct use and commercial propagation has no more expiration?

A Correct, Your Honor.

...³⁷²

Therefore, there is more reason to restrain, if not defer, for the meantime, the continued activities of the GMO proponents until they can implement a more effective and realistic mechanism to ensure the protection of the people and environment.

³⁷² TSN, November 20, 2023 (Afternoon Session), pp. 83-84.

The issuance of a writ of continuing mandamus is proper and necessary in this case.

Rule 8, Section 1 of the RPEC instructs when a petition for continuing *mandamus* may be filed:

Section 1. *Petition for continuing mandamus.* - When any agency or instrumentality of the government or officer thereof unlawfully neglects the performance of an act which the law specifically enjoins as a duty resulting from an office, trust or station in connection with the enforcement or violation of an environmental law rule or regulation or a right therein, or unlawfully excludes another from the use or enjoyment of such right and there is no other plain, speedy and adequate remedy in the ordinary course of law, the person aggrieved thereby may file a verified petition in the proper court, alleging the facts with certainty, attaching thereto supporting evidence, specifying that the petition concerns an environmental law, rule or regulation, and praying that judgment be rendered commanding the respondent to do an act or series of acts until the judgment is fully satisfied, and to pay damages sustained by the petitioner by reason of the malicious neglect to perform the duties of the respondent, under the law, rules or regulations. The petition shall also contain a sworn certification of non-forum shopping.

Thus, for a writ of continuing *mandamus* to be issued, the following must be established:

- i. an agency or instrumentality of government or its officer unlawfully neglects the performance of an act or unlawfully excludes another from the use or enjoyment of a right;
 - ii. the act to be performed by the government agency, instrumentality or its officer is specifically enjoined by law as a duty;
 - iii. such duty results from an office, trust or station in connection with the enforcement or violation of an environmental law, rule or regulation or a right therein;
- and

iv. there is no other plain, speedy and adequate remedy in the course of law.³⁷³

In *Segovia v. Climate Change Commission*,³⁷⁴ the Supreme Court underscored the element that the duty sought to be enforced by a writ of continuing *mandamus* must be clearly provided by law. Thus:

Mandamus lies to compel the performance of duties that are purely ministerial in nature, not those that are discretionary, and the official can only be directed by mandamus to act but not to act one way or the other. The duty being enjoined in mandamus must be one according to the terms provided in the law itself. Thus, **the recognized rule is that, in the performance of an official duty or act involving discretion, the corresponding official can only be directed by mandamus to act, but not to act one way or the other.**³⁷⁵

Litigants must establish the breach committed by the government office or officer by alleging and substantiating the acts falling within the law which it neglected. This is satisfied when they identify the parameters and end goals which the law allows. It involves proving before the courts the inability of the government agency or officer to perform this duty and the irreparable damage that will result from this inaction.³⁷⁶

Moreover, the writ of continuing *mandamus* is not infinite. Any petition should be precise and should include clear and judicially verifiable parameters for when the duration of the *mandamus* will end. The parameters should always be based on empirical proof, as well as reasonable scientific grounds.³⁷⁷

³⁷³ *Dolot v. Paje*, G.R. No. 199199, August 27, 2013 [Per J. Reyes, *En Banc*].

³⁷⁴ *Supra* note 337.

³⁷⁵ Emphasis supplied, citations omitted; Rule 8, sec. 1. See SERENO DISSENTING OPINION in *MMDA v. Concerned Residents of Manila Bay (Resolution)*, G.R. Nos. 171947-48, February 15, 2011 [Per J. Velasco, Jr., *En Banc*].

³⁷⁶ *Abines v. Duque III*, G.R. No. 235891, September 20, 2022 [Per J. Leonen, *En Banc*].

³⁷⁷ *Id.*

What distinguishes a writ of continuing *mandamus* from an ordinary writ of *mandamus* are: (i) a writ of continuing *mandamus* is issued only in relation to the enforcement or violation of an environmental rule or regulation; and (ii) as the name indicates, in a writ of continuing *mandamus*, the courts exercise continuing jurisdiction over the respondent agency or instrumentality until full execution of judgment.³⁷⁸ Pertinent to the matter of continuing jurisdiction, courts can issue directives with the end in view of ensuring that its decision would not be set to naught by administrative inaction or indifference. The writ permits the court to retain jurisdiction after judgment in order to ensure the successful implementation of the reliefs mandated under the court's decision.³⁷⁹

Guided by the foregoing precepts, We find that the issuance of a writ of continuing *mandamus* is likewise warranted in this case.

First, the BPI and the concerned government agencies have unlawfully neglected to perform their duty of conducting monitoring activities, which, to stress, is essential to risk assessment.

Second, such duty is enjoined by JDC Nos. 1-2016 and 1-2021, the applicable issuances to the BSPs issued in favor of PRRI and UPLB.

Third, the JDCs are environmental regulations, which serve as guidelines for the release of genetically-modified plant and plant products derived from the use of modern biotechnology into the environment.

Fourth, the writ of *continuing mandamus*, as the Supreme Court declared, is available only in environmental cases;³⁸⁰ thus, this remedy

³⁷⁸ *MMDA v. Concerned Residents of Manila Bay* (Resolution), G.R. Nos. 171947-48, February 15, 2011 [Per J. Velasco, Jr., *En Banc*]. See also RPEC, Rule 8, sec. 7.

³⁷⁹ *Boracay Foundation, Inc. v. Province of Aklan*, G.R. No. 196870, June 26, 2012 [Per J. Leonardo-De Castro, *En Banc*]. Annotation to the RPEC.

³⁸⁰ *Baquirin v. Dela Rosa*, G.R. No. 233930, July 11, 2023 [Per J. Singh, *En Banc*].

could not have been resorted to by petitioners through a different action than through the instant *Petition* which, as already ruled on earlier, falls under the exception to the exhaustion of administrative remedies.

As a result of the BPI and the concerned agencies' inaction, the regulatory framework under the JDCs became inoperative.

To be clear, this Court is not imposing upon the BPI and the concerned regulators the manner in which they would perform their duties. This is, of course, discretionary upon them. However, in light of their statements during the hearings of this case, which revealed that no independent and actual monitoring is being done by them, We find it imperative under the present circumstances to compel them to perform their ministerial duty to properly enforce the monitoring provisions required under the issuances.

*Expiration of BSPs for Field Trial;
Exception to mootness principle.*

A case or issue is considered moot and academic when it ceases to present a justiciable controversy by virtue of supervening events so that an adjudication of the case or a declaration on the issue would be of no practical value or use. In such instance, there is no actual substantial relief which a petitioner would be entitled to, and which would be negated by the dismissal of the petition. Without any legal relief that may be granted, courts generally decline to resolve moot cases, lest the ruling result in mere advisory opinion.³⁸¹

There are, however, exceptions to the general principle of mootness. At present, courts will decide on cases, albeit moot and academic, if it finds that: (i) there is a grave violation of the Constitution; (ii) the situation is of exceptional character and

³⁸¹ *Ong v. Senate of the Philippines*, G.R. No. 257401 & 257916, March 28, 2023 [Per J. Inting, *En Banc*].

paramount public interest is involved; (iii) the constitutional issue raised requires formulation of controlling principles to guide the bench, the bar, and the public; and (iv) the case is capable of repetition yet evading review.³⁸²

Exception (ii) is applicable to this case.

On the paramount public interest involved, the Supreme Court in the 2016 Writ of Kalikasan Case held:

Jurisprudence in this jurisdiction has set no hard-and-fast rule in determining whether a case involves paramount public interest in relation to the mootness principle. However, a survey of cases would show that, as a common guidepost for application, there should be some perceivable benefit to the public which demands the Court to proceed with the resolution of otherwise moot questions.

In *Gonzales v. Commission on Elections*, an action for declaratory judgment assailing the validity of Republic Act No. (RA) 4880, which prohibits the early nomination of candidates for elective offices and early election campaigns or partisan political activities became moot by reason of the holding of the 1967 elections before the case could be decided. Nonetheless, the Court treated the petition as one for prohibition and rendered judgment in view of "the paramount public interest and the undeniable necessity for a ruling, the national elections [of 1969] being barely six months away."

In *De Castro v. Commission on Elections*, the Court proceeded to resolve the election protest subject of that case notwithstanding the supervening death of one of the contestants. According to the Court, in an election contest, there is a paramount need to dispel the uncertainty that beclouds the real choice of the electorate.

In *David v. Macapagal-Arroyo*, the Court ruled on the constitutionality of Presidential Proclamation No. 1017, s. 2006, which declared a state of National Emergency, even though the same was lifted before a decision could be rendered. The Court explained that the case was one of exceptional character and involved paramount public interest, because the people's basic rights to expression, assembly, and of the press were at issue.

³⁸² *Madribejos v. Gatdula*, G.R. No. 184389, September 24, 2019 [Per J. Jardeleza, *En Banc*].

In *Constantino v. Sandiganbayan*, both of the accused were found guilty of graft and corrupt practices under Section 3 (e) of RA 3019. One of the accused appealed the conviction, while the other filed a petition for *certiorari* before the Court. While the appellant died during the pendency of his appeal, the Court still ruled on the merits thereof considering the exceptional character of the appeals in relation to each other, *i.e.*, the two petitions were so intertwined that the absolution of the deceased was determinative of the absolution of the other accused.

More recently, in *Funa v. Manila Economic and Cultural Office (MECO)*, the petitioner prayed that the Commission on Audit (COA) be ordered to audit the MECO which is based in Taiwan, on the premise that it is a government-owned and controlled corporation. The COA argued that the case is already moot and should be dismissed, since it had already directed a team of auditors to proceed to Taiwan to audit the accounts of MECO. Ruling on the merits, the Court explained that the case was of paramount public interest because it involved the COA's performance of its constitutional duty and because the case concerns the legal status of MECO, *i.e.*, whether it may be considered as a government agency or not, which has a direct bearing on the country's commitment to the One China Policy of the People's Republic of China.

In contrast to the foregoing cases, no perceivable benefit to the public – whether rational or practical – may be gained by resolving respondents' petition for Writ of *Kalikasan* on the merits.

To recount, these cases, which stemmed from herein respondents' petition for Writ of *Kalikasan*, were mooted by the undisputed expiration of the Biosafety Permits issued by the BPI and the completion and termination of the *Bt talong* field trials subject of the same. These incidents effectively negated the necessity for the reliefs sought by respondents in their petition for Writ of *Kalikasan* as there was no longer any field test to enjoin. Hence, at the time the CA rendered its Decision dated May 17, 2013, the reliefs petitioner sought and granted by the CA were no longer capable of execution.

At this juncture, it is important to understand that the completion and termination of the field tests do not mean that herein petitioners may inevitably proceed to commercially propagate *Bt talong*. There are three (3) stages before genetically-modified organisms (GMOs) may become commercially available under DAO 08-2002 and each stage is distinct, such that "[s]ubsequent stages can only proceed if the prior stage/s [is/]are completed and clearance is given to engage in the next regulatory stage." Specifically, before a genetically modified organism is allowed to be propagated under DAO 08-2002: (a) a permit for propagation must be secured from the BPI; (b) it can be shown that based on the field testing conducted in the Philippines, the

regulated article will not pose any significant risks to the environment; (c) food and/or feed safety studies show that the regulated article will not pose any significant risks to human and animal health; and (d) if the regulated article is a pest-protected plant, its transformation event has been duly registered with the FPA.

As the matter never went beyond the field testing phase, none of the foregoing tasks related to propagation were pursued or the requirements therefor complied with. Thus, there are no guaranteed after-effects to the already concluded *Bt talong* field trials that demand an adjudication from which the public may perceivably benefit. Any future threat to the right of herein respondents or the public in general to a healthful and balanced ecology is therefore more imagined than real.³⁸³

Succinctly, the Supreme Court ruled that no perceivable benefit would be gained by the public in resolving the issue on the BSP for Field Trial of Bt Eggplant as the same had already expired, and the issuance covering the same, DAO 08-2002, had already been superseded by JDC No. 1-2016. The Supreme Court also ratiocinated, among others, that the matter never went beyond field testing, and the completion and termination of the field tests did not mean that the petitioners therein would inevitably proceed to commercially propagate Bt Eggplant. Since there are no guaranteed after-effects to the concluded Bt Eggplant trials, it found that there was no demand for adjudication which would have a perceivable benefit to the public.

However, as evidenced by the instant *Petition*, six (6) years after the Supreme Court's pronouncement in the 2016 Writ of Kalikasan Case, the BPI issued the BSP for Commercial Propagation of Bt Eggplant to UPLB on 18 October 2022. Clearly, the expiration of the BSP for the Field Trial of Bt Eggplant did not remove the perceived threat to the public, as said BSP was a precondition for the application and issuance of the BSP for Commercial Propagation of Bt Eggplant.

In any case, given the 2016 Writ of Kalikasan Case, where the Supreme Court deferred from ruling on the constitutionality of DAO

³⁸³ Emphasis supplied, citations omitted.

08-2002, this Court shall no longer touch upon the issue of whether the BSP for Field Trial of Bt Eggplant under that regulation was properly issued.

Similarly, for Golden Rice, the expiration of the BSP for Field Trial does not necessarily mean that the threats brought about thereby have already been addressed. Said BSP is the basis for which the BSP for Commercial Propagation of Golden Rice, which now has no expiration date, was issued. Thus, the significance of including the BSP for Field Trial in this Court's ruling cannot be undermined.

On this score, We agree with the petitioners that the reconstitution of the IBC in Isabela for the field trial of Golden Rice, which was done after the BSP for Field Trial was issued, violates JDC No. 1-2016.

The functions of the IBC and its role in the application process for field trial are clearly laid down in JDC No. 1-2016, as follows:

Section 6. Institutional Biosafety Committee (IBC). The company or institution applying for and granted permits under this Circular shall constitute an IBC prior to the contained use, confined test, or field trial of a regulated article. The membership of the IBC shall be approved by the DOST-BC for contained use or confined test, or by the DA-BC for field trial. **The IBC is responsible for the conduct of the risk assessment and preparation of risk management strategies of the applicant for contained use, confined test, or field trial.** It shall make sure that the environmental and human health are safeguarded in the conduct of any activity involving regulated articles.

The IBC shall be composed of at least five (5) members, three (3) of whom shall be designated as scientist-members and two (2) members shall be community representatives. All scientist-members must possess scientific or technological knowledge and expertise sufficient to enable them to properly evaluate and monitor any work involving regulated articles conducted by the applicant.

The community representatives must not be affiliated with the applicant, and must be in a position to represent the interest of the communities where the activities are to be conducted. One of the

community representatives shall be an elected official in the LGU. The other community representative shall be selected from the residents who are members of the Civil Society Organizations represented in the Local Poverty Reduction Action Team, pursuant to DILG Memorandum Circular No. 2015-45. For multi-location trials, community representatives of the IBC shall be designated per site. If the activity may affect ancestral domain or ancestral land, or protected area, the second community representative should represent the indigenous people or protected area management board, as applicable.

....

ARTICLE V. FIELD TRIAL OF REGULATED ARTICLES

Section 10. **Policy on Field Trial of Regulated Articles.** No regulated article shall be released into the environment for field trial unless a Biosafety Permit for Field Trial has been secured in accordance with this Circular. Only regulated articles that satisfactorily passed the process on contained use or confined supervised and officially endorsed by DOST-BC may be subject of application for a Biosafety Permit for Field Trial.

Section 11. **Procedural Requirements for Securing a Biosafety Permit for Field Trial.**

A. Application for Field Trial. – **Any applicant who desires to conduct field trial of a regulated article shall submit the following to the BPI Director:**

....

2. Supporting Documents. – The application shall be accompanied by the following documents:

....

e. **Endorsement by the IBC after the conduct of a risk assessment;**

....³⁸⁴

Evident from the foregoing provisions is that: *first*, the proponent should constitute an IBC **not only upon the grant of, but at the time of the application for a BSP**; *second*, the law mandates that the IBC shall be composed of five (5) members, one of whom is a local elective

³⁸⁴ Emphasis and underscoring supplied.

official from the area where the trial shall be conducted; and *third*, one of the supporting documents for securing a BSP for field trial is the endorsement from the IBC after the conduct of risk assessment.

During the hot-tubbing, Dr. Reinke explained that the IBC of Isabela was properly constituted when the application for the field trial of Golden Rice was filed, in that it included a local elective official as a community representative member. However, Dr. Reinke stated that the term of said official expired sometime after that.³⁸⁵

Contrary to Dr. Reinke's statement, a perusal of the records shows that no local elected official was part of the IBC of Isabela at the time PRRI applied for the issuance of a BSP for the Field Trial of Golden Rice. In the *Application for Biosafety Permit for Field Trial*³⁸⁶ of Golden Rice notarized on 27 February 2017, the following were the members of the IBC of Isabela who endorsed said application:

MEMBER	DESIGNATION	ADDRESS
HELEN R. PASICOLAN	IBC Chairperson	PRRI, San Mateo Station, Isabela
MARNELLIE L. PINI	Member	PRRI, San Mateo Station, Isabela
EMILIANO P. CAMBA	Member	Municipal Agricultural Officer, San Mateo, Isabela
BEATRIZ T. ACOB	Member	Federation President, RIC, San Mateo, Isabela
BENJAMIN ELMER P. LUCAS	Member	Municipal Agricultural and Fisheries Council, San Mateo, Isabela

None of the members sat in the IBC as a local elective official. In fact, in the *Memorandum* dated 15 September 2021³⁸⁷ submitted by BPI in the DA Appeal, it admitted that the IBC of Isabela included a local elective official only when it was reconstituted in 2019. Thus:

³⁸⁵ TSN, December 11, 2023 (Afternoon Session), pp. 6-7.

³⁸⁶ *Rollo*, vol. 13, pp. 7139-7141.

³⁸⁷ *Rollo*, vol. 1, pp. 409-417.

....

Below is the point-by-point response to the arguments raised by appellants:

Appellant's Issues and Concerns	BPI's response
IBC did not include a local elective official from the province of Isabela as community representative	The composition of Institutional Biosafety Committee (IBC) for field trial in Isabela has been reconstituted in 2019 and approved by the DA-Biosafety Committee (DA-BC) (Annex A). <u>In this reconstituted IBC, a local elected official has been added to comply with the provisions of Article III, Sec. 6 of [JDC No. 1-2016].</u> Attached (Annex B) is the list of IBC members reconstituted in 2019 with their respective Personal Data Sheet. ³⁸⁸

PRRI argued in the same manner in its *Verified Return*. It reiterated that there was no local elective official when they applied for the BSP for Field Trial in 2017. Thus:

....

90. To repeat, **while the IBC did not have a local elective official from Isabela as a representative when the application was made back in 2017,** the IBC was nonetheless reconstituted in 2019, almost simultaneously with the commencement of the field trial. Upon its reconstitution, a local elective official from Isabela was already included in the IBC. In other words, with the addition of a local elective official, the IBC was deemed to have been duly constituted in accordance with the provisions of JDC 1-2016.

....³⁸⁹

As correctly pointed out by petitioners, the reconstitution of the IBC of Isabela was requested by PRRI only on **28 May 2019**, and approved on **29 July 2019**, which is after the BSP for Field Trial of Golden Rice had been issued on **20 May 2019**.³⁹⁰

³⁸⁸ *Id.* at 409. Emphasis and underscoring supplied.

³⁸⁹ *Rollo*, vol. 4, p. 1575.

³⁹⁰ *Supra* note 1, at 34.

We are aware that in her *Judicial Affidavit*,³⁹¹ Geronima explained that the Golden Rice application for field trial was signed by two (2) community members: (i) Beatriz T. Acob (**Beatriz**), who is the President of the Rural Improvement Club (**RIC**) Federation and at that time, was an elected *Barangay Kagawad* with a term from 01 February 2015 to 30 June 2018;³⁹² and (ii) Benjamin Elmer P. Lucas, who was a member of the Municipal Agricultural and Fisheries Council.

We note, however, that Beatriz was indicated in the *Application* as a member of the IBC not in her capacity as *Barangay Kagawad*, but as RIC Federation President. In the *Attendance Sheet* dated 05 July 2018,³⁹³ Beatriz indicated “RIC FED.” as her affiliation. Thus, without concrete proof, it cannot be assumed that she acted as a local official who would “represent the interest of the [community] where the activities are to be conducted,” as mandated by JDC No. 1-2016. Her inclusion in the IBC not as a local elective official is also consistent with PRRI’s admission that no local elective official was part of the IBC when the application for the field trial of Golden Rice was filed.

As for Benjamin, his membership at the Municipal Agricultural and Fishery Council³⁹⁴ did not immediately make him a local elective official, absent a specific designation indicated in the IBC endorsement.

Verily, mere substantial compliance with JDC No. 01-2016 will not suffice considering the repercussions involved in this case. We cannot afford to be lenient, especially in matters involving potentially harmful risks and uncertainties where both the people and the environment as whole, would be affected.

³⁹¹ *Rollo*, vol. 14, pp. 7248-7268.

³⁹² *Rollo*, vol. 12, pp. 6481-6485.

³⁹³ *Id.* at 6421.

³⁹⁴ Under the Agricultural and Fishery Councils Manual of Operations, said Council is composed of chairpersons/presidents or representatives of municipal-wide agricultural and fishery organizations and other concerned institutions/CSOs, Municipal FARMC Chairperson, representatives from the Barangay, individuals and government sector representatives.

In any case, Article III, Section 6 of JDC No. 1-2016 expressly states that the company or institution **applying for and granted permits** shall constitute an IBC prior to contained use, confined use, or field trial. Thus, the IBC must have been constituted at the time of application and grant of the BSP. Such intent was made clear when, in JDC No. 1-2021, the wording of the provision was amended to require only the constitution of the IBC at the time of application for BSP. Thus:

....

Section 8. **Institutional Biosafety Committee (IBC)**. The company or institution **applying for** permits for contained use or field trial of a regulated article shall constitute an IBC. The membership of the IBC shall be approved by the DOST-BC for contained use or by the DA-BC for field trial.

....³⁹⁵

Therefore, the reconstitution of the IBC of Isabela in 2019 to include a local elective official is non-compliant with JDC No. 1-2016. It is of no moment that a local elective official was part of the IBC at the time of the actual conduct of the field trial. This does not cure the defect of not having a local elective official at the time of application and grant of the BSP for the Field Trial. Further, as correctly pointed out by petitioners, "*...the legal requirement of a local elected official in the composition of the IBC [is] part of the supposed risk and impacts assessment. This requirement is not an empty or meaningless one. It is an opportunity for public participation and accountability, the public official being a representative of his constituency.*"

With the improper composition of the IBC, the issuance of the BSP for Field Trial was invalid and is thus subject to revocation. As testified by Geronima:

³⁹⁵ Emphasis and underscoring supplied.

....

ATTY. RAYEL:

Q If the IBC did not comply with the regulations but the process proceeded anyway?

A In the first place, the activity will not proceed unless the IBC had been constituted. **In the event that the trial started and there's [no] compliance, then the provision in the biosafety permit that it can be revoked for failure to comply with the conditions stipulated in the biosafety permit.**

....³⁹⁶

Given the improper issuance of the BSP for the Field Trial, it thus follows that the BSP for Commercial Propagation of Golden Rice, which has as its prerequisite the satisfactory and valid conduct of the field trial, should not have been issued.

Hence, the expiration of the BSP for the Field Trial of Golden Rice is not a reason to allow its improper issuance to go unnoticed. By reason thereof, the revocation of the BSP for the Commercial Propagation of Golden Rice is now in order.

Reliefs.

Prescinding therefrom, We find it proper to render judgment in accordance with the applicable provisions of the RPEC. Under Rule 7, Section 15 thereof, the following reliefs may be granted by this Court under the writ of *kalikasan*:

Section 15. Judgment. - Within sixty (60) days from the time the petition is submitted for decision, the court shall render judgment granting or denying the privilege of the writ of *kalikasan*.

The reliefs that may be granted under the writ are the following:

³⁹⁶ TSN, November 20, 2023 (Afternoon Session), pp. 45-46. Emphasis supplied.

- (a) Directing respondent to permanently cease and desist from committing acts or neglecting the performance of a duty in violation of environmental laws resulting in environmental destruction or damage;
- (b) Directing the respondent public official, government agency, private person or entity to protect, preserve, rehabilitate or restore the environment;
- (c) Directing the respondent public official, government agency, private person or entity to monitor strict compliance with the decision and orders of the court;
- (d) Directing the respondent public official, government agency, or private person or entity to make periodic reports on the execution of the final judgment; and
- (e) Such other reliefs which relate to the right of the people to a balanced and healthful ecology or to the protection, preservation, rehabilitation or restoration of the environment, except the award of damages to individual petitioners.

As for the rules on the privilege of the writ of continuing *mandamus*, the same are laid down in Rule 8, Sections 7 and 8, as follows:

Section 7. Judgment. - If warranted, the court shall grant the privilege of the writ of continuing mandamus requiring respondent to perform an act or series of acts until the judgment is fully satisfied and to grant such other reliefs as may be warranted resulting from the wrongful or illegal acts of the respondent. The court shall require the respondent to submit periodic reports detailing the progress and execution of the judgment, and the court may, by itself or through a commissioner or the appropriate government agency, evaluate and monitor compliance. The petitioner may submit its comments or observations on the execution of the judgment.

Section 8. Return of the writ. - The periodic reports submitted by the respondent detailing compliance with the judgment shall be contained in partial returns of the writ. Upon full satisfaction of the judgment, a final return of the writ shall be made to the court by the respondent. If the court finds that the judgment has been fully implemented, the satisfaction of judgment shall be entered in the court docket.

Inasmuch as this Court grants the privilege of the writs of *kalikasan* and continuing *mandamus* as prayed for in the instant *Petition*, the petitioners' *Urgent Reiterative Motion for the Issuance of a [TEPO]* is, perforce, rendered moot and academic.

As a final note, the constitutional right to health and maintaining environmental integrity are privileges that do not only advance the interests of a group of individuals. The benefits of protecting human health and the environment transcend geographical locations and even generations. This is the essence of Article II, Sections 15 and 16 of the 1987 Constitution.³⁹⁷ Considering the unmistakable importance of the constitutional right to a balanced and healthful ecology, especially in these times, We remind the government of its eminent duty to assiduously protect said right. Further, when there is a lack of full scientific certainty in establishing a causal link between human activity and environmental effects, cases must be resolved by applying the precautionary principle.³⁹⁸

ACCORDINGLY, judgment is hereby rendered:

1. **GRANTING** the privilege of the Writ of *Kalikasan*;
2. **ISSUING** a Writ of Continuing *Mandamus* against respondent government agencies;
3. **DIRECTING** respondent University of the Philippines – Los Baños to cease and desist from commercially propagating and conducting activities relating to Bt Eggplant under the Biosafety Permit issued therefor;
4. **REVOKING** the Biosafety Permit for Commercial Propagation of Golden Rice of respondent Philippine Rice Research Institute, and accordingly,

³⁹⁷ *Mosqueda v. Pilipino Banana Growers & Exporters Association, Inc.*, G.R. Nos. 189185 & 189305, August 16, 2016 [Per J. Bersamin, *En Banc*].

³⁹⁸ *Supra* note 349.

5. **ORDERING** respondent PRRI to cease and desist from commercially propagating and conducting activities relating to Golden Rice under the Biosafety Permit issued therefor;
6. **ENJOINING** the commercial propagation and/or conduct of activities relating to Golden Rice and Bt Eggplant, until such time that the concerned respondent government agencies submit proof of safety and compliance with all legal requirements;
7. **ORDERING** concerned respondents government agencies to perform their mandate under the applicable JDC, by submitting to this Court the concrete mechanisms adopted to monitor all activities conducted under the JDCs, and all measures taken to strengthen the risk assessment procedure set forth in JDC No. 1-2021, in accordance with the ruling in this case; and
8. **ENJOINING** any application for contained use, field testing, direct use as food or feed, or processing, commercial propagation, and importation of genetically modified organisms until compliance with (7) above is established.

IT IS SO ORDERED.

ORIGINAL SIGNED
JENNIFER JOY C. ONG
Associate Justice

WE CONCUR:

ORIGINAL SIGNED
APOLINARIO D. BRUSELAS, JR.
Associate Justice

ORIGINAL SIGNED
GERALDINE C. FIEL-MACARAIG
Associate Justice

CERTIFICATION

Pursuant to Article VIII, Section 13 of the Constitution, it is hereby certified that the conclusions in the above decision were reached in consultation before the opinion of the Court was written.

ORIGINAL SIGNED
APOLINARIO D. BRUSELAS, JR.
Associate Justice
Chairman, Fourth Division