GMO SCARED: POSTSCRIPTS ON THE PHILIPPINES' FIRST MAJOR LEGAL BATTLE ON GMOS*

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ABSTRACT

This Article discusses concerns arising from how the Supreme Court ruled in a case that sought to stop the field trials of a genetically modified crop. The author critiques how the Supreme Court forayed into the realm of policy-making and the regulation of genetically modified organisms (GMOs) using its own brand of the precautionary principle in a regulatory context that lacked specific legislation on GMOs. It then tackles pronouncements of the Supreme Court that appear to question the safeness of GMOs in general when only the field trials of a particular crop were assailed. Areas of improvement in the Philippines' regulation of GMOs are then identified, with the author offering some general recommendations.

INTRODUCTION

Since the advent in the 1970s of recombinant DNA[1] technology—the fountainhead of the methods now collectively called modern biotechnology—that allowed for the modification of genetic material and the viability, in at least some organisms, of the genetically modified line, the debate on the threats posed by such genetically modified organisms ("GMOs") has raged. In recent decades, both proponents and opponents of the technology have been compiling evidence to support their respective positions on the basic question of whether GMOs pose a threat to human health and the environment.

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[1] "DNA" is the abbreviation of deoxyribonucleic acid, the broad designation for the molecules that are the building blocks of every living organism's genetic material; *see, generally,* MARIA LEE, EU REGULATION OF GMO'S 11-15 (Han Somsen ed., 2008).

Whatever may be motivating those opposing GMOs, it appears that what animates the bigger movement against GMOs is fear, that is—fear of the unknown effects of mankind's tinkering with nature to the significant extent and with the effectiveness offered by biotechnology. The rise of large-scale endeavors built upon GMOs, without the emergence of any of the grave dangers that their opponents were fearful about, has not silenced the debate.

This Article offers some postscripts on a relatively recent iteration of the on-going debate about the use of GMOs. The setting is the Philippines, a developing country in the Southeast Asian region where agriculture and related industries provide income for a large part of the population. The story involves the rulings of the Philippine Supreme Court in a case that significantly affected the use and regulation of GMOs in the Philippines—the case of *International Service for the Acquisition of Agri-Biotech Applications, Inc. v. Greenpeace Southeast Asia (Philippines)*.[2]

The author seeks to contribute to the discourse on the regulation of GMOs by focusing on three issues or problem areas that were underscored by the developments in *ISAAA*. Specific aspects of the case will be discussed alongside the problem areas to be tackled. At this point, however, a brief summary of the case and the regulatory context from which it emerged should suffice to launch the ensuing discussion.

I. THE REGULATION OF GMOS IN THE PHILIPPINES AND THE CASE OF *ISAAA V. GREENPEACE*

It must be stated at the outset that the Philippines, up until the writing of this Article, does not have specific legislation on GMOs. Despite this fact but invoking other statutes,[3] the Secretary of Agriculture issued Administrative Order No. 8.[4] The central feature of DAO No. 08-2002

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[2] Hereinafter "*ISAAA*", G.R. 209271, 776 SCRA 434, Dec. 8, 2015. (This is a consolidation of four separate actions, and the consolidated case is referenced by the docket numbers G.R. Nos. 209271, 209276, 209301, and 209430. The case was decided by the Supreme Court *en banc* although three of the justices did not vote on the decision for various reasons.)

[3] *See* Rep. Act No. 7394 (1992). Consumer Act of the Philippines; Rep. Act No. 8435 (1997). Agriculture and Fisheries Modernization Act of 1997.

[4] Dep't of Agriculture (DA) Adm. Order No. 8 (2002). Rules and Regulations for the Importation and Release into the Environment of Plants and Plant Products Derived from the Use of Modern Biotechnology. Hereinafter "DAO No. 08-2002".

was the required risk assessment before a specific GMO may be imported or released into the environment.[5] The section on risk assessment in DAO No. 08-2002 incorporated the precautionary principle for risk assessment found in Annex III of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity.[6]

DAO No. 08-2002 was issued during the early years of the administration of then-President Gloria Macapagal-Arroyo. Subsequently, on March 17, 2006, she issued an executive order that adopted the National Biosafety Framework ("NBF").[7] The executive order decreed that the NBF shall apply to the development, adoption and implementation of all biosafety policies, measures and guidelines, and in making biosafety decisions concerning the research, development, handling and use, trans-boundary movement, release into the environment and management of GMOs and their products.[8] The NBF, by its own provisions, was to be "implemented in the context of the overall policy of the Philippines on modern biotechnology, to wit: [t]he State shall promote 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."[9] The executive order adopting the NBF expressly clarified that DAO No. 08-2002 would remain in force.[10]

ISAAA originated from a petition for writ of *kalikasan* filed by Greenpeace Southeast Asia (Philippines) and other parties directly with the Supreme Court under the Rules of Procedure for Environmental Cases.[11] The petitioners sought to stop field trials of a genetically modified eggplant

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[5] § 3.

[6] *Compare* DAO No. 08-2002, § 3(A)(2) *with* Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Annex III, ¶ 4, Jan. 29, 2000, 2226 U.N.T.S. 208. Hereinafter "Cartegena Protocol on Biosafety". ("Lack of scientific knowledge or scientific consensus should not necessarily be interpreted as indicating a particular level of risk, an absence of risk, or an acceptable risk.")

[7] Exec. Order No. 514 (2006), § 1. Establishing the National Biosafety Framework, Prescribing Guidelines for its Implementation, Strengthening the National Committee on Biosafety of the Philippines, and for Other Purposes.

[8] § 2.1 and Annex A, ¶ 3.3.12.

[9] Annex A, ¶ 2.1.

[10] § 8.

[11] Adm. Matter No. 09-6-8-SC (2010).

referred to as "*Bt talong*."[12] The field trials were approved under DAO No. 08-2002.[13]

Before the case could be finally decided, however, the challenged field trials were concluded, prompting its proponents to move for the dismissal of the case due to mootness. The Court refused to do so and, in a Decision promulgated on December 8, 2015 ("2015 Decision"), it ruled in favor of the opponents of the *Bt talong* field trials. The dispositions of the Supreme Court in the said 2015 Decision included the permanent injunction of the challenged field trials that had already been concluded, the declaration of DAO No. 08-2002 as null and void, and a temporary ban on all GMO use until a new administrative rule that addressed the defects perceived by the Court in DAO No. 08-2002 was issued.[14]

While the ruling in the 2015 Decision was founded in part upon the perceived failure of DAO No. 08-2002 to implement the NBF, and the failure to require environmental impact statements ("EIS") for the field testing of GMOs,[15] the dominant rationale appears to be the Supreme Court's application of its own version of the precautionary principle that it had incorporated in its Rules of Procedure for Environmental Cases.[16]

The 2015 Decision resulted in a temporary halt in GMO use and trade of all kinds for a number of months until the condition imposed by the Supreme Court for the resumption of GMO permitting was satisfied, that is—the issuance of a new administrative rule that would address the defects of the previous rule. While the GMO proponents in the case sought reconsideration of the 2015 Decision, concerned executive agencies lost no time in promulgating a new rule for the regulation of GMOs that addressed the concerns of the Supreme Court. The new set of rules was released as Joint Department Circular No. 1.[17]

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[12] *ISAAA*, 776 SCRA at 461-462.

[13] *Id.*

[14] *Id.* at 666.

[15] *Id.* at 593-607.

[16] *Id.* at 633-637.

[17] Dep't of Science and Technology-Dep't of Agriculture-Dep't of Environment and Natural Resources-Dep't of Health-Dep't of the Interior and Local Government Joint Dep't Circ. No. 1 (2016). 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. Hereinafter "JDC No. 01-2016".

The new rule, which was criticized by GMO opponents soon after its issuance, contributed to the subsequent turnaround of the Supreme Court in a Resolution dated July 26, 2016[18] ("2016 Resolution") that set aside its 2015 Decision. The reason given for the reversal was the earlier rejected ground of mootness. The same reasons that failed to convince the Supreme Court on the mootness of the case in the 2015 Decision were accepted this time around in the 2016 Resolution.[19]

Thus ended what appears to be just the first chapter in the legal challenges that GMO use may face in the Philippines.

One effect of these developments is the imposition of more prerequisites for GMO use under the new administrative rule. The process of securing permits, previously administered by one agency, now involves the five agencies that jointly issued JDC No. 01-2016, namely: Department of Science and Technology, Department of Agriculture (DA), Department of Environment and Natural Resources, Department of Health, and Department of the Interior and Local Government.

With the caveat that some of the inadequacies of DAO No. 08-2002 perceived by the Supreme Court are disputed by some sectors, set forth below is the said Court's summation of the changes introduced by JDC No. 01-2016:

> As earlier adverted to, with the issuance of JDC 01-2016, a new regulatory framework in the conduct of field testing now applies.
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> 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.

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[18] *ISAAA*, 798 SCRA at 250.

[19] *Compare id. with ISAAA*, 776 SCRA at 271-276.

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 modem 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.[20]

With the eventual dismissal of *ISAAA* on the ground of mootness, is further discussion of the foregoing developments likewise moot and academic? Not quite.

In its 2016 Resolution, the Court stated that "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."[21] Considering the circumstances that led to the above-described case and the resumption of GMO use in the country, it is reasonable to suppose that there would be such an actual and justiciable case that would once again place GMOs under stricter scrutiny. This prospect makes it worthwhile to consider the issues or problems that the foregoing developments brought to light.

Among the more significant issues that must be addressed is foreshadowed by the Court itself when it said that a verdict on the safeness of GMOs must await a proper case brought "before the court." Should the courts, as opposed to other government actors, make such a judgment on the safeness of GMOs?

Pondering about this further, the above query suggests two distinct and equally important questions. One is whether courts should have a role in laying down major policy and structural approaches to the regulation of GMOs. Another is whether courts should, in actual cases involving specific GMO uses, make verdicts or findings on the safeness of that particular use.

This Article will address the first variation of the question in the next section. The other variation will be addressed as this Article nears its conclusion. In between the consideration of these two issues, the Article will tackle the difficulties that the Supreme Court's precautionary principle portends.

II. THE PITFALLS OF EXECUTIVE AND JUDICIAL LEGISLATION

[20] *ISAAA*, 798 SCRA at 281-286. (A tabulation of the differences between the principal provisions of DAO No. 08-2002 and JDC No. 01-2016 is also found in the same resolution).

[21] *Id.* at 275.

Foremost among the issues brought to light by the first GMO litigation that the Supreme Court fully deliberated upon is the unpredictability or instability of the Philippines' current system for the regulation of GMOs in the absence of a legislatively crafted policy and framework.

In a civil law jurisdiction such as the Philippines, the absence of a legislated policy on GMOs is an aberration of sorts considering that the country has legislation on most things that attract specific regulatory attention, including for example, toxic substances,[22] and food fortification.[23] In the absence of a legislated GMO policy, the Executive Department and the Judiciary have been filling the void.

To recall, the NBF was established through an executive order issued by then-President Macapagal-Arroyo. DAO No. 08-2002 was an issuance of the DA, which is one of several departments in the executive family controlled by the President. Both the NBF and DAO No. 08-2002 were issued during the administration of the same President. To be fair, however, the non-statutory regulation of GMOs began in 1990 during the administration of then-President Corazon C. Aquino, who created the National Committee on Biosafety of the Philippines ("NCBP").[24] The NCBP plays an important role in the regulatory framework of DAO No. 08-2002 and the NBF.

The Supreme Court, in its 2015 Decision, declared DAO No. 08-2002 null and void for, among others, not being compliant with the NBF, as if the latter was a statute that was superior to DAO No. 08-2002, and to which the latter must conform with. It did not occur to the Supreme Court to construe DAO No. 08-2002 as the issuance of the President herself, as it had been issued by a member of her cabinet and her alter ego, the Secretary of Agriculture. In fact, the executive order laying down the NBF expressly provided that DAO No. 08-2002 was not repealed or modified by the NBF but was to remain in force alongside the NBF, which was even noted by the Court in its 2015 Decision.[25]

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[22] *See* Rep. Act No. 6969 (1990). Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990.

[23] *See* Rep. Act No. 8976 (2000). Philippine Food Fortification Act of 2000.

[24] Exec. Order No. 430 (1990). Constituting the National Committee on Biosafety of the Philippines (NCBP) and for Other Purposes.

[25] *ISAAA*, 776 SCRA at 627.

Instead, the Court struck down DAO No. 08-2002. Moreover, it declared that until the government could come up with a new administrative order "promulgated in accordance with law," "any application for contained use, field testing, propagation and commercialization, and importation of genetically modified organisms is TEMPORARILY ENJOINED."[26] The interim absence of regulation, which would ordinarily mean that there was no legal obstacle to an activity, thus became an opening for a nationwide ban from an unusual source—the Court.

It was already mentioned that when the new administrative rule, JDC No. 01-2016, came out, the Supreme Court made a "reversal," dismissing the original petition against the subject GMO field trials because of mootness, a ground that it had earlier explicitly rejected. It would seem all is well, and GMOs would have to wait another day in court.

The fact of the matter, however, is that not all had been well for those "doing" biotechnology after the promulgation of the 2015 Decision and before JDC No. 01-2016 was released. Importers of products such as genetically modified soybeans and animal feeds with GMO components expressed concern about the replenishment of their inventory during the duration of the GMO ban. In a forum where this author spoke about *ISAAA*, a college student in the audience mentioned in the course of asking a question that the completion of her degree was delayed for a year because her dissertation involving laboratory use of GMOs could not proceed due to the Supreme Court's ban. Moreover, it remains to be seen whether all would indeed be well after the modifications introduced by JDC No. 01-2016, which may still be challenged by staunch opponents of GMOs.

Another thing that the closing of *ISAAA* on the ground of mootness cannot hide is that the regulatory framework for GMOs in the Philippines has in fact been the expression of the will of the executive department and, recently, the Supreme Court, without the Legislature having said anything on the matter thus far. As the re-drafting of the regulations on GMO described above has demonstrated, this leads to a very unstable and unpredictable situation wherein the rules of the game may change at any time such is deemed wise by either the President—who is replaced every six years[27]—or the Supreme Court, whose membership

[26] *Id.* at 666.

[27] CONST. art. VII, § 4.

changes each time a justice retires at the age of seventy.[28]

Alas, there are reasons why law-making is separated from law interpretation and law enforcement.[29] Abuse of concentrated power, or more accurately the prevention of such abuse, first comes to mind.[30] An extensive discussion of separation of powers, however, is not necessary because the main point here is that to avoid the instability and unpredictability of the current GMO regulatory system in the Philippines, Congress has to legislate on GMOs to set the regulatory policies and framework and preclude outright executive or judicial legislation.

To be sure, while the regulation of GMOs in other jurisdictions has not always been preceded by specific legislation, such regulation nonetheless fell within the framework of existing laws regulating products or items and their uses under which the broad range of products that utilize GMOs may be classified, and the adoption of such laws have largely been an executive or administrative exercise without judicial interference.[31] To some extent, this was the situation in the Philippines insofar as DAO No. 08-2002 invoked other statutes as premises for the regulatory mechanisms it established for GMOs. The same, however, cannot be said of the biosafety framework in the NBF.

The Supreme Court's intervention in GMO regulation through *ISAAA* transformed the dynamic into a more unstable and unpredictable one. The Supreme Court had in fact acknowledged the need for legislation on GMOs. This "lawless" situation is encapsulated in this penultimate paragraph of the 2015 Decision:

> Finally, while the drafters of the NBF saw the need for a law to specifically address the concern for biosafety arising from the use of modern biotechnology, which is deemed necessary to provide more permanent rules, institutions, and funding to adequately deal with this challenge, the matter is

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[28] Art. VIII, § 11.

[29] *See* U.S. v. Ang Tang Ho, G.R. No. 17122, 43 Phil. 1, Feb. 27, 1922. (The Philippine constitutions and form of government have largely been patterned after the U.S. Philippine Supreme Court decisions involving constitutional issues often consider U.S. Supreme Court decisions interpreting the U.S. Constitution persuasive but not binding.)

[30] *Id.*

[31] *See, generally,* Executive Office of the President, Memorandum on Modernizing the Regulatory System for Biotechnology Products, WHITE HOUSE WEBSITE, *available at* https://www.whitehouse.gov/sites/default/files/microsites/ostp/modernizing_the_reg_system_for_biotech_products_memo_final.pdf.

within the exclusive prerogative of the legislative branch.[32]

What is unfortunate is that the absence of a legislatively declared policy did not prevent the Court from advocating for its preferred policies.

Before leaving this discussion, one possible counter-argument must be addressed. It may be that when Congress does legislate on GMOs, what such a statute would look like and how it would actually be implemented may end up being identical or very similar to JDC No. 01-2016. After all, this rule was crafted by five different departments that had respective mandates bearing upon GMO use, and these departments would likely have a hand in crafting the eventual legislation. In response, what must be reiterated is the instability and unpredictability of the current situation brought about by the absence of legislation.

Legislation introduces an element of certainty, at least in the basic framework and premises of the regulatory regime for GMOs. With a statute in place, Congress alone can redefine the existing policies, and this takes a predictable, albeit slower, process. If the other departments of government attempt to change or tweak this policy somehow, then Congress could at least react and choose to negate such moves through curative legislation, and it would have extant, previously legislated parameters to work from.

More importantly perhaps, it should still matter that doing the "right thing" be done the "right way." The silence of Congress on a subject would usually mean the rejection of any manner of control or regulation of that subject, or that the regulation currently being done under existing law is acceptable to Congress. The Congress' silence on the matter of GMO regulation, however, has obviously not been given the same effect. As well meaning as the current efforts to regulate GMOs in the Philippines may be, the fact remains that the such efforts run afoul of the fundamental principles upon which the Philippine government was built.

III. JUDICIAL-STYLE PRECAUTIONARY PRINCIPLE

The Supreme Court, in its 2015 Decision, applied a version of the

[32] *ISAAA*, 776 SCRA at 666. (It may be of some interest that one of the reliefs sought by Greenpeace in its petition was for the Supreme Court to "recommend to Congress curative legislation.")

"precautionary principle" that it had crafted and incorporated in its Rules of Procedure on Environmental Cases.[33] The said precautionary principle and how it was applied in the said decision deserves attention because they represent an aggressive form of the precautionary principle that is entirely of the Supreme Court's own making.

Although included in the part on "Evidence" in the Rules of Procedure on Environmental Cases, it will be seen that the Court's version of the precautionary principle is not a mere evidentiary rule. It is a policy declaration and a rule mandating action. The way the said principle was used in the 2015 Decision foreshadows potential difficulties in the form of clashes between administrative findings on and the Court's assessment of risks of environmental harm.

The Supreme Court's precautionary principle is expressed in Rule 20 of the Rules of Procedure on Environmental Cases, as follows:

> 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.
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> The constitutional right of the people to a balanced and healthful ecology shall be given the benefit of the doubt.
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> SEC. 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 referred to in Section 1 quoted above is defined in Section 4, Rule 1 of the same Rules of Procedure on Environmental Cases, as follows:

> (f) *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.

[33] Adm. Matter No. 09-6-8-SC (2010).

In its 2015 Decision, the Supreme Court found an occasion to apply its precautionary principle:

> Under this Rule, the precautionary principle finds direct application in the evaluation of evidence in cases before the courts. 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, with the goal of preserving and protecting the environment. This may be further evinced from the second paragraph where bias is created in favor of the constitutional right of the people to a balanced and healthful ecology. In effect, the precautionary principle shifts the burden of evidence of harm away from those likely to suffer harm and onto those desiring to change the status quo. An application of the precautionary principle to the rules on evidence will enable courts to tackle future environmental problems before ironclad scientific consensus emerges.
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> For purposes of evidence, the precautionary principle should be treated as a principle of last resort, where application of the regular Rules of Evidence would cause in an inequitable result for the environmental plaintiff - (a) settings in which the risks of harm are uncertain; (b) settings in which harm might be irreversible and what is lost is irreplaceable; and (c) settings in which the harm that might result would be serious. 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. Parenthetically, judicial adjudication is one of the strongest fora in which the precautionary principle may find applicability.
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> Assessing the evidence on record, as well as the current state of GMO research worldwide, the Court finds all the three conditions present in this case - uncertainty, the possibility of irreversible harm and the possibility of serious harm.
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> Eggplants (talong) are a staple vegetable in the country and grown by small-scale farmers, majority of whom are poor and marginalized. While the goal of increasing crop yields to raise farm incomes is laudable, independent scientific studies revealed uncertainties due to unfulfilled economic benefits from Bt crops and plants, adverse effects on the environment

> associated with use of GE technology in agriculture, and serious health hazards from consumption of GM foods. For a biodiversity-rich country like the Philippines, the natural and unforeseen consequences of contamination and genetic pollution would be disastrous and irreversible.
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> Alongside the aforesaid uncertainties, the non-implementation of the NBF in the crucial stages of risk assessment and public consultation, including the determination of the applicability of the EIS requirements to GMO field testing, are compelling reasons for the application of the precautionary principle. There exists a preponderance of evidence that the release of GMOs into the environment threatens to damage our ecosystems and not just the field trial sites, and eventually the health of our people once the Bt eggplants are consumed as food. Adopting the precautionary approach, the Court rules that the principles of the NBF need to be operationalized first by the coordinated actions of the concerned departments and agencies before allowing the release into the environment of genetically modified eggplant. The more prudent course is to immediately enjoin the Bt talong field trials and approval for its propagation or commercialization until the said government offices shall have performed their respective mandates to implement the NBF. [34]

This Article had just described the Supreme Court's precautionary principle as an aggressive form of the principle. To appreciate this claim, the Court's version has to be placed alongside the first incarnation of the formula in which the principle is commonly expressed—Principle 15 of the Rio Declaration on Environment and Development:[35]

Rio Declaration on Environment and Development Principle 15	Rules of Procedure on Environmental Cases Section 4, Rule 1 and Section 1, Rule 20
In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are	*Precautionary principle* states that when human activities may lead to threats of serious and irreversible damage to the environment that is scientifically plausible but

[34] *ISAAA*, 776 SCRA at 607-608.

[35] Hereinafter "Rio Declaration", 31 ILM 874 (1992).

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.	uncertain, actions shall be taken to avoid or diminish that threat. * * * 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. The constitutional right of the people to a balanced and healthful ecology shall be given the benefit of the doubt.

Perhaps more fairly described as not being a decisional rule at all, the precautionary principle in the Rio Declaration has nonetheless been criticized for being incoherent and potentially paralyzing as a decisional tool.[36] Such criticisms would, in all likelihood, not be hurled against the Court's version of the precautionary principle.

The said version expressly directs the taking of action to avoid or diminish the threat of serious and irreversible damage to the environment, even if uncertain, for as long as such damage is "scientifically plausible." Although the language of this version already stacks the odds against proponents of activities with controversial environmental effects, the Court's rule further provides that "(t)he constitutional right of the people to a balanced and healthful ecology shall be given the benefit of the doubt."[37] As the Court explained in its 2015 Decision, its precautionary principle "shifts the burden of evidence of harm away from those likely to suffer harm and onto those desiring to change the status quo," and creates

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[36] Robert V. Percival, *Who's Afraid of the Precautionary Principle?*, 23 PACE ENVTL. L. REV. 21, 27-28 (2006). *See also, generally,* SRI WARTINI & ABDUL HASEEB ANSARI, INTERNATIONAL TRADE IN GENETICALLY MODIFIED ORGANISMS: WITH REFERENCE TO APPLICATION OF THE PRECAUTIONARY PRINCIPLE 6-72 (2014).

[37] *See* CONST. art. II, § 16. "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature."

a "bias [...] in favor of the constitutional right of the people to a balanced and healthful ecology."[38]

"[I]nequity to present or future generations" can lead to the application of the precautionary principle formulated by the Supreme Court. Also, as the Court explained in its 2015 Decision, any one of the following circumstances may justify application of the principle: "(a) settings in which the risks of harm are uncertain; (b) settings in which harm might be irreversible and what is lost is irreplaceable; and (c) settings in which the harm that might result would be serious."[39]

Thus, there is much leeway for Philippine courts to apply the precautionary principle, and applying the principle means taking action to avoid or diminish that threat. Although classified as an evidentiary rule, the action that a court may take in applying the Supreme Court's precautionary principle is not limited to making a finding in favor of the possible victim on a factual issue where the scientific plausibility and uncertainty of the threatened environmental harm is implicated. It was already seen in the 2015 Decision that such action may even consist of the invalidation of an administrative rule, and the prohibition of the activity that is considered a threat, possibly causing serious and irreversible damage to the environment.

In speaking of states possibly taking "cost-effective measures to prevent environmental harm," Principle 15 of the Rio Declaration seemingly contemplates measures adopted by the proper policy-making government actors, whether in the legislative or in the executive. Principle 15 assumes a wide discretion on the taking of measures as well as the kind of measures that may be taken. Moreover, cost-effectiveness as a criterion implies policy-making discretion. It is quite a stretch to construe "cost-effective measures" as including judicial decisions because courts do not typically exercise discretion in adopting measures, and neither do they employ methods that take into account cost-effectiveness in arriving at their decisions, which are supposed to apply existing law.

The practice of states has been for lawmakers to adopt and elaborate on the precautionary principle in particular regulatory regimes. For example, in the European Union, where consumer aversion to GMOs is widely publicized, the precautionary principle is expressly incorporated as

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[38] *ISAAA*, 776 SCRA at 606.

[39] *Id.*

a general principle in the General Food Law Regulation, the Food and Feed Regulation,[40] and Community law, in general.[41] In Article 7(1) of the Food Law Regulation, the precautionary principle is made operative in this wise:

> In specific circumstances where, following an assessment of available information, the possibility of harmful effects on health is identified but scientific uncertainty persists, provisional risk management measures necessary to ensure the high level of health protection chosen in the Community may be adopted, pending further scientific information for a more comprehensive risk assessment.[42]

The formulation in the Food Law Regulation of the criteria for taking provisional risk management measures—"the possibility of harmful effects on health is identified but scientific uncertainty persists"—discernibly has more substance than the precautionary principle found in the Cartagena Protocol. This shows a policy decision being made as to how to formulate the precautionary principle in a particular regulatory regime. The point that must be emphasized here is not on whether this policy decision was wise, but rather that the proper governmental authority made the policy decision.

In the Philippines, the precautionary principle was in fact incorporated in the procedures set out in the NBF. The Supreme Court was aware of this as it quoted that part of the NBF that precisely stated this:

> 2.6 Using Precaution.—In accordance with Principle 15 of the Rio Declaration of 1992 and the relevant provisions of the Cartagena Protocol on Biosafety, in particular Articles 1, 10

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[40] Council Regulation 1829/2003/EC of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed, 2003 O.J. L 268/1, ¶ 9 of whereas clauses (requiring the authorization procedures for genetically modified food and feed to make use of the framework for risk assessment set up by the General Food Law Regulation).

[41] Marine Friant-Perrot, *The European Union Regulatory Regime for Genetically Modified Organisms and its Integration into Community Food Law and Policy, in* THE REGULATION OF GENETICALLY MODIFIED ORGANISMS: COMPARATIVE APPROACHES 79, 97 (Luc Bodiguel & Michael Cardwell eds., 2010).

[42] Council Regulation 178/2002/EC of the European Parliament and of the Council of 28 January 2002, laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, 2002 O.J. L 031/1.

> (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.[43]

The foregoing adoption of the precautionary principle in the NBF is consistent with the practice noted earlier wherein lawmakers or policy makers adopt and elaborate on the precautionary principle in particular regulatory regimes. Furthermore, as noted in the 2015 Decision:

> The NBF contains general principles and minimum guidelines that the concerned agencies are expected to follow and which their respective rules and regulations must conform with. In cases of conflict in applying the principles, the principle of protecting public interest and welfare shall always prevail, and no provision of the NBF shall be construed as to limit the legal authority and mandate of heads of departments and agencies to consider the national interest and public welfare in making biosafety decisions.[44]

The last quoted sentence shows that under the NBF, policy makers are the ones to make biosafety decisions consistent with the precautionary principle.

The foregoing discussion indicates that the adoption by the Supreme Court of a precautionary principle to be applied to environmental cases is somewhat of an aberration in that it was neither adopted nor meant to be implemented by the policy-making departments, but by the Judiciary. The foregoing observations also suggest the possibility of a conflict between the precautionary principle as applied by the legislative or the executive, on one hand, and the judiciary's precautionary principle on the other, when a case brings the former in collision with the latter.

To illustrate, when Congress incorporates a precautionary principle in a statute and defines it in a less aggressive way, and this is then applied by an agency in a specific case that results in the issuance of permits for a river bridge project that may possibly cause serious depletions in the population of an endemic species of fish known to inhabit the waters of said river, will the Court follow the legislated precautionary principle instead of its own version?

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[43] Exec. Order No. 514 (2006), § 2.6.

[44] *ISAAA*, 776 SCRA at 589-590.

If the 2015 Decision is any indication, the answer to this question is in the negative. Although the Supreme Court recognized that the precautionary principle as found in the Rio Declaration and the Cartagena Protocol on Biosafety was built into the provisions of the NBF, and that the NBF should serve as a basis for the regulation of GMOs, the Court nonetheless eventually applied its own version of the principle. In the course of doing so, it even declared that "judicial adjudication is one of the strongest fora in which the precautionary principle may find applicability."[45] Having built a strong and aggressive precautionary principle as part of the fulfillment of its role in the protection of the environment, is it reasonable to expect that the Court would suppress its precautionary principle and apply something less potent?

IV. THE SCIENCE IN JUDGING

It appears that through its own version of the precautionary principle, the Supreme Court has placed itself in a position to intervene actively in environmental cases in such a way that it may directly affect policy, and the execution of environmental laws. From a separation of powers perspective, this is a highly questionable role for the Court to play, even if its efforts to protect the environment are appreciated. It may be said that the 2015 Decision would have set a dangerous precedent if the Supreme Court had not backtracked in its 2016 Resolution dismissing the case on the ground of mootness. However, such dangers of too much intervention in policy making and execution from the Supreme Court through its action-oriented precautionary principle still loom as the latter remains in the rule books.

To those familiar with the jurisprudence of the Supreme Court on the protection of the environment, its activism in this regard would not be a complete surprise, nor completely undesirable. The efforts of the Court at being active in the protection of the environment are, overall, a plus for Philippine governance.

However, the Supreme Court's actions in the GMO cases described above met serious backlash from the academe, the scientific community, as well as those in the agricultural sector, who are usually on the side of environmental conservation as well. Apparently, the subject of

[45] *Id.* at 606-607.

GMOs can have this effect. It is clear, however, from this writer's conversations with those in the above sectors that their principal complaint is not that the Supreme Court is being too "pro-environment," but that they are "doing the science" as if the science was just any piece of evidence or law that courts may appreciate and interpret.

To better appreciate this, just imagine how those who have worked on the underlying science and biotechnology of GMOs would feel when they read the 2015 Decision saying that their life's work is a danger to health and the environment and should be stopped. Unlike lawyers who have probably been desensitized by the "let's kill all the lawyers" quote from Shakespeare's *Henry VI*, the scientific community is not as familiar with such societal disapprobation.

This brings us to the last issue that this Article set out to explore. The question posed earlier was whether courts should, in actual cases involving specific GMO uses, make verdicts or findings on the safeness of that particular use.

Philippine law inevitably gives an affirmative answer to this question. Although findings of specialized administrative agencies possessing recognized expertise on a technical matter are generally not disturbed by courts, the latter may nonetheless reverse or set aside such findings when they are not supported by substantial evidence, or when the agency exceeded its jurisdiction or abused its discretion.[46] Ultimately, then, it becomes a matter of appreciation for which hard and fast rules to restrain judicial intervention would be difficult to fashion and enforce. It should be evident from the foregoing discussion that Philippine courts, including the Supreme Court, do not shy away from dealing with and having a different take on technical or specialized matters such as the science and technology behind GMOs.

In other words, while the prevailing Philippine doctrine on judicial review of administrative findings of fact evinces respect for the expertise of specialized administrative agencies, it will not be realistic to expect that courts would generally be animated by a deferential attitude towards findings of administrative agencies, especially when the case involves potential environmental harm. This is simply one of the realities of the Philippine judicial system.

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[46] *See, e.g.,* Lianga Bay Logging Co., Inc. v. Enage, G.R. No. L-30637, 236 Phil. 84, July 16, 1987.

This does not mean, however, that nothing can be said of how the Supreme Court handled the "facts" in *ISAAA*, particularly in its 2015 Decision. The foregoing considerations apply to judicial review of findings on specialized and technical matters in specific cases. Emphasis must be placed here on "specific cases." In its 2015 Decision, the Court made findings or conclusions on GMOs in general, which is why many affected sectors, the scientific community included, were up in arms after the said Decision was released.

It will be useful at this point to go through the "fact-finding" process that the Supreme Court undertook in *ISAAA*. Before promulgating its 2015 Decision, the Court referred the case to the Court of Appeals to, among others, receive evidence on the merits of the case.[47] Such reception of evidence consisted of receiving documentary and testimonial evidence, with the reception of the latter conducted through the so-called "'hot tub' method, wherein the expert witnesses of both parties testify at the same time."[48] In this particular case, the evidence received related to the parties' respective positions on the benefits and risks of GMOs, and the damage or threat of damage to human health and the environment alleged to result from the field trials of genetically modified eggplant subject of the case.[49] The 2015 Decision even provided summaries of the testimonies of the various expert witnesses placed in the "hot tub."[50]

After assessing the evidence gathered through the proceedings described above, the Supreme Court observed:

> As shown by the foregoing, the hot tub hearing has not yielded any consensus on the points of contention between the expert witnesses, i.e., the safety of *Bt talong* to humans and the environment. Evidently, their opinions are based on contrasting

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[47] *ISAAA*, 776 SCRA at 645-646.

[48] *Id.* at 646. The Supreme Court explained the "hot tub" method further, thus: "The CA conducted 'hot tubbing,' the colloquial term for concurrent expert evidence, a method used for giving evidence in civil cases in Australia. In a 'hot tub' hearing, the judge can hear all the experts discussing the same issue at the same time to explain each of their points in a discussion with a professional colleague. The objective is to achieve greater efficiency and expedition, by reduced emphasis on cross-examination and increased emphasis on professional dialogue, and swifter identification of the critical areas of disagreement between the experts."

[49] *Id.*

[50] *Id.* at 525-534.

> findings in hundreds of scientific studies conducted from the time *Bt* technology was deployed in crop farming. These divergent views of local scientists reflect the continuing international debate on GMOs and the varying degrees of acceptance of GM technology by states especially the developed countries (USA, EU, Japan, China, Australia, etc.).[51]

In a latter part of the 2015 Decision, the Supreme Court entered into a 15-page discussion of the "continuing international debate on GMOs" by going through and summarizing the various arguments, incidents and cases invoked by both sides, with citations to an assortment of sources including journal articles and news items.[52] Without a discussion of how such sources are to be treated based on the rules on evidence, the Supreme Court relied upon these and concluded that "current scientific research indicates that the biotech industry has not sufficiently addressed the uncertainties over the safety of GM foods and crops."[53]

The build-up on the lack of scientific consensus and the uncertainties over the safety of genetically modified products provided the bases for the eventual application of the Supreme Court's precautionary principle discussed earlier. However, it should be pointed out that the essential question that the Court had to tackle in this case related only to the propriety of allowing the specifically challenged *Bt talong* field trials. The broadening of the scope of inquiry into the safety of GMOs in general deserves attention and begs the question, must all GMOs be placed in one box marked "dangerous?"

The case-by-case regulation of products that may possibly endanger human health or damage the environment is the prevailing practice, as exemplified by the regulation of chemicals across various jurisdictions. Thus, each chemical is typically subject to specific assessment and action by the regulatory agency concerned, and each new use of the same substance may possibly be the subject of further assessment and regulation.[54] A similar case-by-case approach is found in European Union regulations on the release of GMOs into the environment.[55]

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[51] *Id.* at 556-557.

[52] *Id.* at 558-582.

[53] *Id.* at 582.

[54] *See, generally,* US ENVIRONMENTAL PROTECTION AGENCY, Summary of the Toxic Substances Control Act, environmental protection agency website, *available at* https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act. (Describes broadly the regulation of chemicals in the U.S. and the said law and includes information

The typical case-by-case approach to regulation opens to question the manner by which the Supreme Court steered the inquiry in *ISAAA* to the question of the safety of GMOs *en masse*. The scope of such an inquiry seems more appropriate to a Congressional hearing or deliberation in aid or contemplation of legislation, not when the proper subject of inquiry is a particular genetically modified eggplant. Lumping this particular GMO with the rest of the GMOs, which is apparent in the pronouncements of the Supreme Court, raises concerns about the fairness of the fact-finding inquiry conducted in the case.

If this is the kind of factual review that the Supreme Court will undertake whenever a case comes before it involving GMOs, then things do not look bright for this technology in the Philippines. It should be clear from all the literature and testimony on GMOs before the Court that the reason why some GMOs have seen wide scale application and others have not is because not all GMOs are the same. More specifically, even with the assumption that there have been documented cases where unwanted consequences have somehow been linked to GMOs, not all GMOs have exhibited similar effects.

The fundamental unfairness of lumping all GMOs in one category suggests that verdicts or findings have to be made with respect to specific GMO uses in appropriate cases. The previous regulatory regime for GMOs and even the current one under JDC No. 01-2016 are all structured in such a way that an application is made for a particular GMO for a particular use.

In otherwise making a judgment on GMOs and the underlying technology as a whole, courts would be making a policy choice that no other decision-maker in government, the sciences, or industry has made or is contemplating on making. The regulatory regimes that have emerged for

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about the amendment of the statute by the Frank R. Lautenberg Chemical Safety for the 21st Century Act); REACH Implementation, *available at* http://ec.europa.eu/environment/chemicals/reach/implementation_en.htm. (Describes broadly the European Union's regulation of chemicals called REACH, Regulation (EC) No. 1907/2006.)

[55] Directive 2001/18/EC of the European Parliament and of the Council of Mar. 12, 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC, 2001 O.J. (L 106) 1, ¶ 18-19 of whereas clauses (stating that "[i]t is necessary to establish harmonised procedures and criteria for the case-by-case evaluation of the potential risks arising from the deliberate release of GMOs into the environment" and "[a] case-by-case environmental risk assessment should always be carried out prior to a release).

GMOs suggest that while there has been no widespread acceptance of GMOs, neither has there been any blanket rejection of them. This reflects a situation wherein the potential benefits as well as potential dangers of this technology are both acknowledged. This is sound regulation.

The 2015 Decision is still in the case books and is part of history even though technically, it cannot be considered binding precedent for anything after the said decision was eventually reversed and the case dismissed in the 2016 Resolution. While it is doubtful that the said decision would be used as authoritative precedent in a future case involving GMOs, this is no assurance that approaches and considerations similar to those adopted by the Supreme Court in the 2015 Decision would not emerge in such a future case. So while it has been said that it is possible for courts to pass judgment upon the safety of a particular GMO use in a specific case, what must be addressed moving forward is how this should be done.

It should be clear from the foregoing discussion that this Article does not recommend a repeat of the *ISAAA* paradigm. Beyond this however, and with no GMO legislation to work on, it is neither wise nor particularly useful to offer anything other than general recommendations.

V. CONCLUSION

In discussing the Supreme Court's handling of its first major GMO litigation in *ISAAA*, this Article sought to identify and discuss some of the major issues or problem areas that the developments in this case brought to light. The foregoing discussions show that there are lessons to be learned and, on the part of concerned Philippine actors, work to be done.

It should be evident by now that this work espouses the view that the current situation on GMO regulation in the Philippines should not persist if the Philippines wants to reap the benefits, both existing and potential, that GMOs offer. The "current situation" referred to is regulation without specific legislation on GMOs. This must change because one of the lessons from *ISAAA* is that executive and judicial legislation on GMO regulation is highly undesirable because of the unpredictability and instability of this approach.

The legislation to be crafted has the benefit of learning from the existing set of rules, specifically JDC No. 01-2016, which in itself is rather unprecedented in so far as it represents, in a way, the combined efforts of

five executive departments, with the Supreme Court's affirmation. While it should not have done so, the Court has essentially advised on the formulation of the regulatory regime adopted under JDC No. 01-2016 through its 2015 Decision in *ISAAA*. While there are several reasons for saying that this was an unfortunate and unwise move on the part of the Court, it cannot be denied that Congress now has substantial material to build on when it eventually sets the legislative wheels in motion on the matter of GMOs.

The second lesson to be learned here, however, counsels against merely adopting or patterning the needed legislation after JDC No. 01-2016 and *ISAAA*. The Supreme Court's version of the precautionary principle needs reigning in. The discussion showed how potent the Court's precautionary principle can be, and this is not a good thing all the time, especially so when it is applied to stifle innovation simply because of fear of the unknown. It should be realized that uncertainty should not necessarily lead to a ban. The methods and techniques of risk assessment and risk management applied in other regulatory regimes provide ways to deal with uncertainty that are not as stifling.

While it is for the Supreme Court alone to temper or modify its precautionary principle as currently worded in its Rules of Procedure for Environmental Cases, Congress can undoubtedly adopt and define a distinct and more reasonable precautionary principle in the GMO legislation that it should pass. Hopefully, the Court would construe such a precautionary principle as applicable specifically to GMOs and apply it to cases involving GMO use, its broader and more aggressive version of the precautionary principle notwithstanding. There is room here for legislative and judicial statesmanship.

The last lesson that this Article wishes to highlight is that while it is possible for courts to pass judgment upon the safety of GMOs, this must be done on a case-by-case basis. While people can and should probably be wary about some GMOs, it would be a grave mistake to make a generalization that all GMOs are not safe. The mere fact that genetically modified crops have been propagated and consumed in the Philippines and elsewhere for years now without any reported adverse effects on health and the environment should show that it is unwise to take an all-or-nothing attitude on GMOs.

This case-by-case regulation of GMOs should not also be an all-or-nothing proposition in the sense that decision-makers should not limit

their choices to permitting and banning. Risk assessment and risk management approaches allow for options in between these two extremes, such as permitting GMO use subject to safety measures or conditions. What is important, moving forward, is to strengthen the capabilities of the concerned administrative agencies to undertake such risk-based methods and communicate their findings properly. It is also crucial for courts to be able to gain the competence to understand these methods and to assume a genuinely deferential role in reviewing risk-based decisions.

On this note, one last point must be made—science will not have all the answers. Science, in fact, never had all the answers. This is one premise that justifies the use of risk-based methods in the regulation of new products such as GMOs.

In its 2015 Decision, the Supreme Court stated that scientists play a "crucial role in providing relevant information for effective regulation of GMOs," and that since "scientific advice plays a key role in GMO regulations, scientists have a responsibility to address and communicate uncertainty to policy makers and the public."[56] The foregoing observations are true, but it should be clear what is to be expected from scientists. The fact that information necessary for GMO regulation includes information on uncertainty should suggest that no absolute assurance against harm could be provided. The best that can be expected is an assurance that all that science can say about the dangers contemplated by GMOs have been said and considered, and that appropriate measures would be put in place to minimize the attendant risks and manage the possible harm should such come to pass.

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[56] *ISAAA*, 776 SCRA at 558.