

## Proposed Biotechnology Regulation Legislation and the Future of Genetically Modified Organisms in India

The Indian government made headlines in 2009 during the well-publicized Bt brinjal controversy, during which the central government eventually declared a complete moratorium on the commercial sale of a type of transgenic eggplant species mere months after its initial authorization.<sup>1</sup> Now, India is making one more attempt to prepare for the onset of genetically modified (GM) foods.

The Biotechnology Regulatory Authority of India (BRAI) Bill, which is expected to be brought before the Parliament this year, is widely seen as pro-GM foods legislation.<sup>2</sup> If the BRAI Bill is enacted in its present form, a National Biotechnology Regulatory Authority (NBRA) will be established under the aegis of the Ministry of Science and Technology (MST) and will take over all matters pertaining to gene technology and its application to agriculture, food products, and drugs.

This legislation may put to rest the persistent ambiguity regarding which ministry or authority is responsible for regulating GM foods. Currently, there are three different ministries in India that have staked a claim on GM foods: the Ministry of Health and Family Welfare (MoHFW); the Ministry of Environment and Forests (MoEF); and the MST. The BRAI Bill envisages a complete overhaul in the regulation of all GM organisms and derived products, including foods, seeds, plants, and drugs. The NBRA would be vested with absolute authority to regulate GM organisms and transgenic material, effectively stripping the MoEF, the MoHFW, and the Food Safety and Standards Authority of their existing roles in regulating gene technology and its products.

### Genetically Modified Foods: The Current Scenario

The fate of GM foods in India is shrouded in mystery. Two states, Madhya Pradesh and Bihar, have already

ruled out the possibility of GM food distribution and sale within their borders.<sup>3</sup> Other states are, as of yet, silent on the matter, and several central ministries seem to be in a dilemma regarding how to regulate GM products.

Currently, the MoEF, through the Genetic Engineering Appraisal Committee (GEAC), regulates GM cells and organisms, including foods. The MoEF formulated the Rules for Manufacture, Use, Import, Export, and Storage of Hazardous Microorganisms, Genetically Engineered Organisms or Cells of 1989<sup>4</sup> (Microorganism Rules) with the goal of protecting the environment and public health in connection with the application of gene technology and microorganisms. According to the Microorganism Rules, the GEAC is empowered to grant approval for various activities involving the application of gene technology, including authorization for the import, export, manufacture, or sale of genetically engineered organisms and the release of genetically engineered organisms and hazardous microorganisms.

In August 2007, the MoEF issued a notification excluding<sup>5</sup> all foodstuffs or ingredients, additives, and processing aids derived from living modified organisms<sup>6</sup> from the ambit of the Microorganism Rules. At that time, the Food Safety and Standards Authority had not even come into being. Soon thereafter, however, the central government, spurred by an intervention by the Supreme Court,<sup>7</sup> decided to keep the notification in abeyance until September 2008 or until the MoHFW further examined the issues surrounding the regulation of GM foods.

Since then, the MoEF has been extending the time period of the notification, which, to date, is on hold. As a

3 See Mahim Pratap Singh, *After Bihar, M.P. Says No to GM Crops*, THE HINDU (Apr. 28, 2011), <http://www.thehindu.com/news/national/article1773790.ece>.

4 Under the authority of the Environment Protection Act, 1986, available at <http://www.moef.nic.in/legis/hsm.htm>.

5 By virtue of a notification dated August 23, 2007, S.O. 1519 (E).

6 Products for which the end product is not a living modified organism.

7 Writ Petition (Civil) No. 606/2007.

1 See *Bt Brinjal and Questions on Policy and Practice*, ELR INDIA UPDATE, Apr.-June 2010, at 5-8.

2 See <http://www.prsindia.org/billtrack/the-biotech-regulatory-authority-bill-2011-1905/>.

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### ELR India Update Staff

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Mr. K.V. Singh, Partner

Kochhar & Co., Advocates & Legal Consultants

[kv.singh@kochhar.com](mailto:kv.singh@kochhar.com)

Mobile: +91-9811334420

Ms. Shephali Mehra Birdi, Senior Associate

Kochhar & Co., Advocates & Legal Consultants

[shephali.mehra@kochhar.com](mailto:shephali.mehra@kochhar.com)

Mobile: +91-9958891038

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2000 L Street NW, Suite 620, Washington, DC 20036

202.939.3800, [law@eli.org](mailto:law@eli.org), [www.eli.org](http://www.eli.org)

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result, GM foods continue to be within the purview of the GEAC. This does not mean that the GEAC is the preferred authority to regulate such foods. After the Bt brinjal controversy in India, the GEAC received a lot of criticism for recommending its release, including some from the then-Minister of Environment and Forests.<sup>8</sup> Apparently, the GEAC's decision was based on the recommendations of the Review Committee on Genetic Manipulation, a government committee, and two Expert Committees (EC-I and EC-II) established by the GEAC between 2006 and 2009. Serious questions were raised on the efficacy and integrity of the GEAC as well as on the manner in which the GEAC approved the commercialization of Bt brinjal. This episode led to the diminution of the GEAC's role, as evidenced by the decision by the then-Minister of Environment and Forests to rename the GEAC the Genetic Engineering *Appraisal* Committee.

In the meantime, the central government passed the Food Safety and Standards Act (FSSA) of 2006, which, among other things, enables the Food Safety and Standards Authority to regulate genetically engineered or modified food, or food containing such ingredients.<sup>9</sup> The FSSA, however, does not intend to vest overarching power with the Authority to regulate GM foods. Under the FSSA, the central government must identify those food products, including "genetically modified articles of food," whose manufacture, sale, distribution, or import can be restricted or prohibited. Thus, only those GM foods that are notified by the government under the FSSA will be regulated by the Authority. It is possible that the government may notify all types of GM foods. Conversely, the government may choose not to bring any GM foods under the purview of the FSSA, thereby completely absolving the Authority of any power to regulate GM foods.

### Concerns About the BRAI Bill

If the BRAI Bill is approved, existing pieces of legislation, such as the Microorganism Rules, the FSSA, and others, will likely be amended to exclude references to GM organisms and transgenic material. It would also give the NBRA the sole authority to handle matters pertaining to the regulation of genetic material and products thereof, whether in research, manufacture, import, or environmental release. Thus, the BRAI Bill, if enacted,

will have an overriding effect on all other laws, including environmental and food safety regulations.

State laws on this subject, if any, will also be repealed upon the enactment of the BRAI Bill. Some states view the BRAI Bill as overriding their legislative authority over agriculture and public health—areas the state governments have exclusive authority to legislate.<sup>10</sup> Although the Constitution empowers the Parliament to frame laws on topics normally within exclusive state control if such moves are required for the implementation of internationally agreed-upon standards, it is likely that the states will view the ramifications of the BRAI Bill as an attempt by the central government to overreach.

The BRAI Bill also has been vehemently criticized for bypassing the authority of other ministries and departments. As currently drafted, the Bill would vest unbridled powers with the NBRA and reduce the role of other ministries and government bodies, such as the MoEF, the MoHFW, and the Food Safety and Standards Authority, to that of mere advisory bodies. The Bill does provide for a large inter-ministerial governing board with more than 15 members from different ministries and departments, including the MoEF, the MoHFW, the Ministry of Commerce and Industry, the Ministry of Food Processing Industries, and the Ministry of Agriculture. But the primary function of this board will be to ensure coordination among various ministries, departments, councils, and authorities on the discharge of duties by the NBRA, as well as regulatory and policy issues. Evidently, achieving coordination among different members of the board on daily matters would be a challenge. Thus, reaching a unanimous decision on regulatory policies and standards is likely to be enormously difficult.

The BRAI Bill also provides for a Biotechnology Advisory Council, composed of industrial and environmental scientists, a legal expert, an economist, a health specialist, and representatives from farmer organizations, among others. But this council will only have an advisory role. The five-member NBRA (of which two are part-time members) will make all important decisions on the research, transport, import, manufacture, and use of organisms and products created through modern biotechnology. The NBRA will consist of experts from the fields of biological sciences, health, and biotechnology. It will not include government officials. The chairperson and full-time members of the NBRA will be appointed by the central government—specifically, the MST—on the

8 Ministry of Environment & Forests, Decision on Commercialisation of Bt-Brinjal (Feb. 9, 2010), [http://moef.nic.in/downloads/public-information/minister\\_REPORT.pdf](http://moef.nic.in/downloads/public-information/minister_REPORT.pdf) Similar.

9 The full text is available at <http://www.fssai.gov.in/portals/0/pdf/food-act.pdf>.

10 "Agriculture including agricultural research" and "public health" fall within the state legislative list, which means that the state governments have exclusive authority to legislate on these subjects. INDIA CONST., art. 246.

recommendations of a selection committee, which will consist of higher officials of the ministries dealing with health, agriculture, biotechnology, and the environment.

The BRAI Bill excludes certain “confidential commercial information” from the purview of the Right to Information (RTI) Act of 2005,<sup>11</sup> a move that has been vehemently criticized by various nongovernmental organizations. However, contrary to public perception, the BRAI Bill does not intend to keep all decisions or proceedings of the NBRA out of the purview of the RTI Act. It only protects information having significant commercial value or financial or commercial information of a person or organization engaged in biotechnology or gene sciences, as necessary.

The most biting criticism of the BRAI Bill is that it proposes the MST, the ministry responsible for promoting modern biotechnology, to be the regulator of biotechnology products, leaving no operative powers with the other authorities in this area. The Department of Biotechnology, under the MST, has a mandate for the promotion of GM crops. This department funds several GM crop development projects. Although there is no rule of law prohibiting the authority or department responsible for the promotion of any subject from regulating the same and its derived products,<sup>12</sup> many perceive that the NBRA would be driven mainly by the needs of science and technology rather than public health and safety concerns. No civil society participation or consultation has been stipulated in the BRAI Bill.

### The Way Ahead

In India, modern biotechnology, especially its application to food, health, and agriculture, is seen with skepticism and uncertainty by many. Accordingly, the BRAI Bill has been met with severe public resistance and criticism. The shifting positions within the government as to who would regulate GM foods also adds to the public mistrust of modern biotechnology.

Although the enactment of the BRAI Bill does not mean the automatic introduction of GM foods, the MST seems to be more inclined to approve the commercialization of GM products than any other ministry. The MST’s inherent predilection toward gene technology, coupled with the exclusion of other ministries in formal decisionmaking on policy matters, may work in favor of GM foods. This preference, however, is not necessarily determinative. Whether GM foods are introduced into the Indian market will ultimately be a political decision and there is no obvious reason to suspect that GM foods will be recommended by the NBRA without adequate research, studies, and standards.

India is probably not yet ready for the application of gene technology in food products, both politically and in terms of infrastructure and regulatory enforcement. Anything that impacts the health and safety of the public at large cannot be left to trial-and-error methodologies. The government must make an assessment of the existing scientific and technological knowledge in this area, along with an assessment of available physical infrastructure, and chart out a strategy for the development of gene technology and its extension to the areas of food and agriculture. The implementing bodies should also be carefully chosen to ensure that all relevant concerns regarding biotechnology, the environment, and public health are addressed.

11 The Right to Information Act of 2005 empowers the general public to seek information from the government.

12 The Ministry of New and Renewable Energy Sources, which is responsible for the promotion of new and renewable energy sources, also regulates such energy sources, including framing appropriate policy instruments.

## The Need of the Hour: Food Security

In India, the “right to food” is seen as an essential component of the “right to life” guaranteed to all citizens under the Constitution of India.<sup>1</sup> The Supreme Court, on several occasions, has explicitly stated that the right to life should be interpreted as a right to “live with human dignity,” which includes the right to food and other basic necessities.<sup>2</sup>

Despite this constitutional mandate, India fares poorly on food security. In the 2010 Global Hunger Index compiled by the International Food Policy Research Institute, India ranked 67th, below neighboring countries such as China and Pakistan.<sup>3</sup> In 2005, about 42% of India’s population was living below the new international poverty line—that is, they were living on less than \$1.25 per day.<sup>4</sup> The worst sufferers of malnutrition and hunger in India have been children and women, including pregnant and lactating women.<sup>5</sup> Although estimates show a receding trend in poverty and hunger,<sup>6</sup> the statistical decline cannot conceal the dismal reality on the ground. For a welfare state like India, progress toward social developmental goals cannot be assessed in terms of GDP; it is better reflected by data such as hunger indices.

The proposed National Food Security Act of 2011 (hereinafter Food Security Bill) provides a ray of hope for poor, underprivileged, and socially disadvantaged populations. The proposed bill legally entitles a large section of the people to procure basic food grains at much cheaper rates through the government’s public distribution system.

### The Reality of Food Security in India

There are significant gaps between the constitutional mandate, the government policy, and its practice regarding food security in India. There are serious concerns not only in terms of food availability but also in food access and its utilization. The experience of the last two decades shows that growth rates of production and yield have declined for crops during the period between 1996 and 2008 as compared to the period between 1986 and 1997.<sup>7</sup> Poor food access is a result of food inflation as well as a badly designed and executed public distribution system.

### The Food Security Bill

The Food Security Bill has the laudable objective of providing “food and nutritional security ... by ensuring access to [an] adequate quantity of quality food at affordable prices, for people to live a life with dignity.” It promises: (1) food and nutritional security; (2) adequate food availability; (3) food access; (4) food quality; (5) affordable pricing; and (6) a sustained supply.

The Food Security Bill aims to cover up to 75% of rural people and up to 50% of urban people. The bill will especially cover “priority households,” which will be identified based on guidelines to be issued by the central government. Each member of a priority household will be provided seven kilograms of coarse grains, wheat, and rice per month at the rate of one, two, and three rupees per kilogram, respectively. This is much lower than the rate at which food grains are currently supplied to the poor through ration shops. Under the present public distribution system, 35 kilograms of wheat and rice per month are supplied to 65.2 million families below the poverty line at 4.15 and 5.65 rupees per kilogram, respectively.<sup>8</sup>

The Food Security Bill contains special provisions to ensure nutritional support to pregnant women, lactating mothers, and children. Nutritional standards have been prescribed for such women and children, both in terms of cooked meals and take-home rations. The bill also recognizes certain “special groups,” including destitute people, homeless and needy people, and migrant families, and lays down a framework by which meals at affordable prices would be made available to these groups.

1 INDIA CONST., art. 12.

2 “[The right to life enshrined in Article 21 means something more than animal instinct and includes the right to live with human dignity, it would include all these aspects which would make life meaningful, complete and living.” *Maneka Gandhi v. Union of India*, A.I.R. 1978 S.C. 597 (India). “The right to life is guaranteed in any civilized society. That would take within its sweep the right to food . . .” *Shantistar Builders v. Narayan Khimalal Totame*, (1990) 1 S.C.C. 520 (India).

3 *India Ranks Below China, Pak in Global Hunger Index*, NDTV.com (Oct. 11, 2011), <http://www.ndtv.com/article/india/india-ranks-below-china-pak-in-global-hunger-index-58981>.

4 The World Bank, *New Global Poverty Estimates-What It Means for India*, <http://www.worldbank.org.in/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/INDIAEXTN/0,,contentMDK:21880725~pagePK:141137~piPK:141127~theSitePK:295584,00.html>.

5 See, e.g., Ira Mellman, *Hunger in Focus: India’s Hungry Women and Children Remain a Major Problem*, VOA News (Oct. 12, 2010), <http://www.voanews.com/english/news/asia/Despite-Economic-Growth-Hunger-Remains-a-Major-Problem-for-India---104825039.html>.

6 The percentage of populations living below the poverty line decreased from 60% in 1981 to 42% in 2005. However, the number of poor people living under \$1.25 a day has increased from 421 million in 1981 to 456 million in 2005. This indicates that there are a large number of people living just above this line and their numbers are not falling. The World Bank, *supra* note 4.

7 S. Mahendra Dev & Alakh N. Sharma, *Food Security in India: Performance, Challenges and Policies*, Oxfam India Working Papers Series OIWPS – VII (Sept. 2010), available at [http://www.oxfamindia.org/sites/www.oxfamindia.org/files/working\\_paper\\_7.pdf](http://www.oxfamindia.org/sites/www.oxfamindia.org/files/working_paper_7.pdf).

8 See *Food Security Bill Cleared: Subsidy Up by Rs 27,663 Crore*, TIMES OF INDIA (Dec. 18, 2011), [http://articles.timesofindia.indiatimes.com/2011-12-18/india/30530636\\_1\\_food-subsidy-bill-legal-entitlement-priority-households](http://articles.timesofindia.indiatimes.com/2011-12-18/india/30530636_1_food-subsidy-bill-legal-entitlement-priority-households).

The entire food security program under the bill will be funded by the central government, which would be responsible for allocating the required quantity of food grains to the state governments from a central pool through the public distribution system. In case the central government is unable to provide the requisite quantities of food grains to the state governments, necessary funding is proposed to be given to such states. And if the state government fails to provide the prescribed quantities of food grains to entitled people and families entitled, recipients will receive a “food security allowance” from the central government.

### Issues in Implementation

The Food Security Bill reflects a paradigm shift in the policy on food security, from the existing “welfare approach” to “legal entitlements.” The bill will vest in its beneficiaries a legal right to procure certain quantities of food grains at highly subsidized prices. However, this will cost an additional subsidy of approximately 277 billion rupees to the central government.<sup>9</sup> Creating the necessary infrastructure to facilitate the implementation of the bill will increase the government’s bill even more. This is likely the reason why economists are opposing the bill, seeing it as a huge financial burden on the government, one that might eventually lead to cutting subsidies in other sectors or an increase in taxes.

The Food Security Bill is seen by some as a political gimmick designed by the ruling government to appease the masses.<sup>10</sup> Some have also questioned the timing of the bill’s introduction into the Lok Sabha, the lower house of Parliament, in the shadow of upcoming elections in some Indian states.<sup>11</sup>

When measured against its wide-ranging objectives, the Food Security Bill falls short on aspects relating to food availability and food quality, which are central to food security. The bill focuses extensively on ensuring access to food to the poor and marginalized—but the question of how the government will ensure an adequate supply of necessary food grains has not been adequately addressed. Meeting the huge demand for food grains necessitates comprehensive supply-side reforms, research and development, and investment.

As it stands now, the government has merely presented noble objectives, without operative structures and mechanisms. Even in terms of access, there is a complete reliance on the existing public distribution system, which is already plagued with wastages, leakages, inefficiency, and corruption. As far as food quality is concerned, the government’s experience with existing schemes and programs, such as the midday meal scheme, has been far from satisfactory.

At this juncture, the government must focus on food availability and quality issues and address important concerns about the economic viability of the bill.

9 This is in addition to the existing 670 billion rupee food subsidy.

10 The Bill was part of the ruling government’s election manifesto for the 2009 general elections.

11 *Discussion on Food Security Bill: Govt Walks Cautiously*, RediffNews.com (Dec. 14, 2011), <http://www.rediff.com/news/report/discussion-on-food-security-bill-govt-walks-cautiously/20111214.htm>; *National Food Security Bill Introduced in Parliament*, JAGRAN POST (Dec. 22, 2011), <http://post.jagran.com/national-food-security-bill-introduced-in-parliament-1324525111>.

## Significant 2011 Developments in India's Environmental Schemes

### The Coastal Regulation Zone Notification of 2011

After 20 years and 25 amendments to the Coastal Regulation Zone (CRZ) Notification of 1991, the Ministry of Environment & Forests (MoEF) issued the revised CRZ Notification of 2011.<sup>1</sup> The CRZ Notification of 2011 aims to reconcile three important objectives: the preservation of coastal ecology; the protection of the livelihoods of traditional fishing communities; and the promotion of economic activities unique to coastal regions. Around the same time, the MoEF also issued the Island Protection Zone (IPZ) Notification of 2011, which declared the Union Territories of Lakshadweep and the Andaman and Nicobar Islands and their coastal stretches as IPZs.

Although the CRZ Notification of 2011 follows the same basic framework as the 1991 law, there are changes in CRZ demarcation, classification, and management. The new regulations widen the definition of CRZ to include water areas up to 12 nautical miles into the ocean and the entire water area of tidal water bodies, such as creeks, rivers, and estuaries. It also includes the land area from the high tide line (HTL) to 500 meters on the landward side for oceans. For tidal water bodies connected to the sea, the CRZ includes the land area between the HTL to either 100 meters or the width of the water body, whichever is less, on the landward side.

In the 1991 notification, CRZ areas were classified as CRZ-I (ecologically sensitive), CRZ-II (built-up area), CRZ-III (rural area), or CRZ-IV (water area, islands). The 2011 notification revised the CRZ-IV category—it now includes water area up to territorial waters as well as tide-influenced water bodies. The provisions pertaining to the regulation of Lakshadweep and the Andaman and Nicobar Islands were dropped and, in view of specific geographical issues, ecological sensitivities, and the needs of fishermen, a separate set of regulations for these areas—the IPZ Notification—was issued.

There are two important changes in CRZ regulation. Special Economic Zones (SEZ) projects will no longer be allowed in CRZ areas. Previously, SEZ projects were allowed in CRZ-II and CRZ-III areas. Provisions restricting the expansion of housing for rural communities in CRZ-III areas also have been dropped. The MoEF has introduced the concept of a “hazard line,” which MoEF will demarcate, along with the Survey of India, by taking into account tides, waves, sea-level rises, and shoreline changes. All land between the sea and the hazard line is considered unsafe or unfit for any development. The hazard line indicates the

extent of potential damage that may be caused along the shore by cyclones, earthquakes, tides, sea-level rise, and shoreline changes. The concept owes its introduction to the realization of natural disasters, such as tsunamis and floods, that may take place in coastal areas.

### The Electronic Waste (Management & Handling) Rules of 2011

Although the E-Waste Rules were passed in 2011, their actual impact on industry may not be seen until they come into effect in May 2012.<sup>2</sup> Experts are currently speculating on how well the information technology and electronics industries, as well as recycling and dismantling units, will respond to the rules and streamline their activities in response. The biggest challenge will involve the collection, or the take-back, of end-of-life electronics and information technology products for recycling and dismantling. The industry is required to establish collection centers and take-back facilities at its own cost. To support the industry, the central government is also considering setting up collection facilities on a public-private partnership basis.

All recycling and dismantling units will be required to obtain registration with the State Pollution Control Boards (SPCBs) and manage their activities in an environmentally sound manner. By registering, these units, which are rapidly growing in number in metropolitan areas, will be brought under the purview of the SPCBs. Unapproved units or units that are refused registration for lack of adequate infrastructure will have to close.

Provisions relating to the restriction of hazardous substances will come into force within two years of the commencement of the rules—by May 2014. The manufacture and import of electronic products that contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, or polybrominated diphenyl ethers will be prohibited.

The biggest challenge for the central government, especially the SPCBs, is the enforcement of the rules. The SPCBs need to be educated and trained on aspects relating to the management and handling of e-waste—jobs that are highly technical in nature—even before they take on the task of regulating recycling units and industries. Educating customers regarding the dangers created by e-waste is necessary to ensure that they, too, participate in e-waste management and fulfill their obligations under the rules. India's e-waste management is on the brink of an overhaul, provided that the rules are implemented and enforced in the right spirit.

1 Notification dated January 6, 2011 vide S.O.19(E).

2 For a detailed assessment of the E-Waste Rules, see *India Readies Itself for Clearing Electronic Junk*, ELR INDIA UPDATE, July-Sept. 2011, at 1, 3-6.

## The Durban Conference: Necessary Steps on the Road Ahead for India

All eyes were on India at the 17th Conference of Parties (COP 17) in Durban, South Africa, when the parties to the Kyoto Protocol met to decide the future of the agreement and ways to combat climate change. Many developing countries, including India, were, until then, vouching for voluntary emissions reductions, citing their economies' need for further development and industrialization. However, India's position changed at Durban, where it supported a legally binding agreement.

At COP 17, many nations agreed to be party to a treaty with legal force to address global warming. The terms of the future treaty are to be defined by 2015 and will become effective in 2020. COP 17 is seen as a major achievement, as the parties include developing countries, as well as the United States, which had earlier refused to sign the Kyoto Protocol.

From the very beginning of the conference, India insisted on preserving “equity” in burden-sharing and common but differentiated responsibilities. The Minister of Environment and Forests, Jayanthi Natarajan, had made it clear that all negotiations on emissions reductions should necessarily be based on the principle of equity—equal per capita rights to the atmospheric space. She argued that the emissions reduction targets for developing countries could not be the same as those imposed on developed and industrialized economies, who had been “historical polluters.”<sup>1</sup> Nevertheless, the outcome at COP 17 places India in a tricky situation. The new treaty could set binding obligations for India. Whether these obligations are the same as or different from those imposed on developed countries will be decided in the coming years.

Natarajan said that the decisions made in Durban do not mean that India has to take binding commitments to reduce its emissions in absolute terms by 2020.<sup>2</sup> She also said that the parties recognized the importance of equity and that an Ad Hoc Working Group on Long-Term Cooperative Action has decided to deliberate on the equity issue.

Despite the Minister's assurances to the contrary, India did not necessarily walk out of COP 17 a winner. India may have been successful in drawing the attention

of the other parties to the principle of equity, but the continuation of voluntary targets for developing countries, as initially proposed, is going to be difficult to achieve. After the conference, all subsequent deliberations on the new treaty will include binding obligations for developing countries, and India may not be able to avoid them anymore. The emphasis on equity might only save India from stringent norms and targets similar to those that might be imposed on developed countries and, at best, only delay the imposition of binding obligations.

Given the large percentage of Indians who still live in abject poverty, the central government needs to have a clear understanding of the commitments it is prepared to take. In the last two years, the Ministry of Environment and Forests has ceded its ground merely based on international hype over recent economic growth in India, rapid developments that are not necessarily reflected in the living conditions of a majority of Indians.

It is important for developed nations to understand that legally binding emissions targets will hamper growth for developing countries—countries that, to date, have predominantly agriculture-based economies with an enormous potential and need for further development. At this stage, India needs to focus on building and strengthening systems for the protection and preservation of the natural environment in combination with the adoption of cleaner industrial processes, fuels, and energy-efficient technologies.

India has already announced a National Action Plan on Climate Change highlighting eight priority national missions: the National Mission on Enhanced Energy Efficiency; the National Mission on Sustainable Habitat; the National Mission on Sustainable Agriculture; the National Green India Mission; the National Water Mission; the National Solar Mission; the National Mission for Sustaining the Himalayan Ecosystem; and the National Mission on Strategic Knowledge for Climate Change.

Comprehensive guidelines on the National Solar Mission, the National Mission on Enhanced Energy Efficiency, the National Mission on Sustainable Habitat, and the National Green India Mission have already been put in place. India has also announced a National Manufacturing Policy,<sup>3</sup> which, while aiming to increase

1 Hardev Sanotra, *Durban Climate Meet: India Compromised More Than It Gained*, INDIA TODAY (Dec. 14, 2011), <http://indiatoday.intoday.in/story/durban-climate-meet-india-jayanthi-natarajan/1/164245.html>.

2 Ministry of Environment and Forests, Suo Moto Statement by Hon'ble Minister of State in Lok Sabha on December 16, 2011, <http://moef.nic.in/index.php>.

3 Press Note 2 (2011 Series) (Nov. 4, 2011), available at <http://www.caclub.in/2011/11/national-manufacturing-policy-press.html>.



the manufacturing sector's contribution to the national GDP, promotes sustainable growth by providing for the optimal utilization of resources and the restoration of damaged and degraded ecosystems. Incentives have been stipulated for using renewable energy, constructing green buildings, and conducting environmental and water audits. The central government has also introduced a clean energy cess<sup>4</sup> at the rate of 50 rupees (about US\$1) per metric ton of coal, lignite, and peat on both indigenously produced and imported coal. The cess collected will be used for financing research and development on energy-efficient technologies. These

policies and programs are currently at their beginning stages and their results will only be apparent over a period of time. But it is important that India be given time to put in place a system to monitor harmful emissions and end-of-pipe wastes before any legally binding targets are imposed on it.

Before any deliberations commence on the format and content of a new treaty on climate change, India must rethink its policy and strategy on emissions reductions and be ready to show the world, in tangible form and substance, how it can contribute to combating climate change without necessarily accepting any legally binding commitments.

<sup>4</sup> "Cess" is a term used in Indian English to mean "tax."



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