

Green Tide

# The World Bank and the “Next Green Revolution”

Devastating IMF/World Bank sponsored environmental projects in the name of progress

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Later this month (April 22-25), global justice activists will gather in Washington, DC for what has become the annual protest against the spring meetings of the World Bank and International Monetary Fund. This year’s events will mark the 60<sup>th</sup> anniversary of the founding of the World Bank and IMF at the notorious conference in Bretton Woods, New Hampshire, where the policies that would shape post-World War II economic realities began to be mapped out.

With presidential politics dominating mainstream media coverage, those whose sights are focused beyond the election are looking for new ways to unite a wide scope of social and ecological concerns and reach beyond single-issue politics. The World Bank/IMF protests are one example. Another is the wide-ranging event being created by activists in San Francisco for early June. Under the banner of “Reclaim the Commons,” people will be protesting the annual convention of the Biotechnology Industry Organization and also the meeting of the G8 heads of state that will be occurring almost simultaneously on an island off the coast of Georgia.

People in San Francisco have been meeting since February to create an event that not only highlights the horrors of biotechnology and the inequities of global capitalism, but also highlights work happening in neighborhoods throughout the Bay Area to create living examples of community empowerment and ecological alternatives. Simultaneously, under the theme of “Beyond Voting,” people on both coasts are looking ahead to the summer protests around the major party conventions in Boston and New York—and the potential for large demonstrations on the day after Election Day in November—as places to further illustrate alternative, community-centered visions.

With the Bush administration continuing to pursue WTO action against the European Union for trying to protect people and the environment from the threat of genetically engineered agriculture, it has become clearer than ever that biotechnology is not just a food safety concern, but also one very intimately tied to broader issues of global economic justice.

## **–“Sustainable Development”**

The World Bank has underwritten some of the most environmentally devastating projects ever undertaken in the name of progress and “development.” The Bank has supported deforestation, hydroelectric projects, and oil drilling in the Amazon rainforest; huge dams and oil and gas pipeline construction in Africa; and massive water diversion schemes such as India’s notorious Narmada Valley dam complex.

In the past decade, Bank officials have adopted the language of “sustainable development” and withdrawn funds from a few of the most notorious projects in their portfolio. But few advocates for the environment or the rights of indigenous peoples have any illusions that the institution’s priorities ever substantively shifted along with its rhetoric.

The idea of “sustainable development” emerged from policy discussions at the United Nations throughout the 1980s and was popularized in the lead-up to the UN’s high-profile environment and development summit in Rio de Janeiro in 1992. Merging the language of long-term sustainability from the environmental movement with the “development” discourse of neo-colonialism, sustainable development became a rationale for advocating the continued expansion of capitalist market economies in the global South, while paying lip service to the needs of the environment and the poor.

The notion of environmental sustainability as an alternative to limitless economic growth was transformed into a rhetorical justification for economic growth in defiance of environmental and social limits. Almost imperceptibly, the discussion shifted from how to stem environmental destruction to finding new ways to sustain economic growth. Since the mid-1990s, virtually every activity of the Bank, however controversial, has been justified as aiding both “poverty reduction” and “sustainable development.”

In the agricultural sector, the Bank’s strategy has helped displace people engaged in subsistence and local market-oriented production, in favor of commercial production for global markets. In virtually every corner of the so-called “developing world,” the Bank has underwritten policies that divert once independent farmers toward the chemical-intensive production of cash crops. Bank officials say their goal is to “broaden farmers’ rights and opportunities, and to help them create livelihoods of their own choice,” beyond the “single option” of subsistence.

For marginalized farmers throughout the world, this has brought an increasing dependence on unstable world crop prices, rising indebtedness for costly equipment and chemical inputs, and, often, the forced removal of people from traditional lands that have sustained their communities for countless generations. Rather than helping alleviate poverty, this kind of “development,” in the words of Japanese economist and political analyst Ichiyo Muto, “has so far only transformed undeveloped poverty into developed poverty, traditional poverty into modernized poverty designed to function smoothly in the world economic system.”

The Bank’s policy of shifting developing countries toward cash crop production began in the 1950s, with an initial focus on specialty crops such as cocoa, rubber, and palm oil. With the development of the so-called “high yielding varieties” of wheat and rice in the 1960s, Bank lending was often limited to governments that promoted the use of the new seeds and accepted their dependence on mechanization and costly chemical inputs. Seeds were often given away and enterprising farmers were offered attractive loan packages subsidized by the Bank. These policies came to define the so-called “Green Revolution” of the 1960s and 1970s.

While these new crops brought significant short-term increases in agricultural productivity, their use

lowered water tables and severely threatened crop diversity. The dwarf characteristics of these non-indigenous crop varieties deprived farmers of important agricultural byproducts, including sufficient straw to feed livestock. The virtually endless need for new equipment and inputs buried farm families in unsustainable long-term indebtedness.

World Bank lending for agricultural projects declined from 30 percent of the Bank's portfolio in the 1980s to only 10 percent during the 1990s, but still amounts to nearly \$3 billion per year, the largest source of agricultural development funds in the world. Close to half of the Bank's portfolio is in structural adjustment loans tied to specific changes mandated for the host country's economic policy; these are essentially identical in scope to the Structural Adjustment Programs (SAPs) imposed by the Bank's sister institution, the International Monetary Fund (IMF). Structural adjustment compels countries to reorient their economies toward the repayment of international debts, including IMF and World Bank loans, usually at the expense of public services, environmental protection, and local production for local needs.

In the case of agricultural lending, the Bank mandates debtor nations to shift agricultural production toward cash crops for export, liberalize agricultural trade, and remove public subsidies for staple food production, while replacing fixed prices for staple goods with market-determined ones. Producers are shifted from subsistence food crops toward fruits, vegetables, and flowers grown for export. Under SAPs, credit is offered to individual producers and denied to traditional communal activities, destabilizing rural societies and encouraging unprecedented concentrations of individual land ownership. Loans are often tied to specific production methods, including the increased use of hazardous pesticides and other costly inputs.

## **The Bank and Biotechnology**

The Bank's current support for biotechnology in agriculture has two aspects. The first includes technical assistance and "capacity building" for governments, aimed at facilitating the introduction of new biotechnologies and establishing biotech-friendly regulatory regimes. The second is direct support for biotech research. The Bank's capacity building agenda has five main areas of activity:

- Evaluating the potential of biotechnology to address local problems, especially through the use of cost/benefit and risk analysis
- Promoting partnerships between corporations, private funding sources, and public agencies
- Designing and implementing regulatory systems
- "Educating" farmers and consumers
- Promoting international cooperation in regulatory policy, financing, and technology transfer

The Bank also offers technical training, policy and management advice, analysis of countries' regulatory systems, and consultations with representatives from various social sectors to discuss proposed policies and their likely impacts. The underlying assumption is often that biotechnology is the wave of the future and that rational public policy can only serve to facilitate its development.

The Bank has provided some \$2.3 billion in direct loans for research, of which \$50 million is for biotechnology. This includes some less controversial techniques, such as tissue culture and the use of DNA markers to assist plant breeders, but also genome mapping and transgenics. Less controversial pursuits are often viewed as "stepping stones" to more "advanced" applications, such as the development of new genetically modified crops. Over 80 percent of research funding is committed to six key countries: India, Kenya, Brazil, Indonesia, Peru, and Ethiopia. Some \$20 million—40 percent of the total—is for projects in India, where the Bank supports development of insecticide-producing Bt rice, as well as genetically engineered (GE) varieties of cotton, pigeon peas,

chickpeas, and various horticultural crops.

Also in India, the Bank has provided assistance for a controversial project in which genes from high protein amaranth seeds have been spliced into the DNA of potatoes to increase the potatoes' protein content. This project was announced with great fanfare in 2003. While the protein content of the potatoes reportedly increased by nearly half, they contained a small fraction of the amount found in whole amaranth or even wheat and rice. The peas, lentils, and other legumes that are an important part of traditional Indian diets—but have been marginalized in cash crop-oriented agricultural development projects—provide even more protein. As with the \$100 million effort to develop a GE “golden” rice containing increased beta carotene (a Vitamin A precursor), biotechnologists are promising a high-tech “cure” to hunger, while ignoring far more realistic and readily available solutions.

In Kenya, the Bank has provided support for a project largely financed by the U.S. Agency for International Development (USAID), along with Monsanto and a number of other private donors. The stated aim is to offer GE varieties of sweet potatoes, a staple crop in rural areas that rarely attracts the interest of corporate researchers. After 11 years of research, which created a very high public profile for the Monsanto and USAID sponsored Kenyan researcher Dr. Florence Wambugu, only one local sweet potato variety has been genetically modified, imparting resistance to a virus that farmers routinely fend off by far less invasive means. Under field conditions, the potato failed to demonstrate any significant virus resistance. Indeed, more than 20 years of Bank agricultural projects in Kenya have failed to meaningfully assist poor farmers, according to the Bank's own analysts. In most other countries, Bank-funded biotechnology research is largely directed toward technological capacity building, genetic analysis, and research support for the regulatory sector.

### **The “Next Green Revolution”**

The World Bank's interest in biotechnology emerged in the 1980s, just as corporations such as Monsanto were beginning to shift their research priorities toward developing new transgenic crops. It began funding agricultural projects with distinct biotechnology components in 1982 and commissioned a study in 1988 to “assess the contribution that biotechnology might make to agricultural productivity, and to identify the socioeconomic, policy and management issues that might impede its successful application.” The study culminated in an international seminar in Canberra, Australia, in 1989, as well as a report published in 1991.

In many ways, this report defined the Bank's biotechnology agenda for the next decade and beyond. The focus then, as now, was on facilitating the adoption of biotech methods in the so-called “developing world,” with an emphasis on tissue culture and advanced diagnostics, but also on genetic engineering and gene mapping. The report predicted that biotechnology would bring “modest but continued increases in productivity of the major crops,” and help small farmers survive in an economic climate that favors the concentration of farmland ownership.

Not only has genetic engineering failed to produce long-promised yield improvements, the Bank's lending policies continue to further concentrate land ownership. Nonetheless, the Bank seeks to minimize the social and economic costs of adopting biotech methods, aid in the development of Intellectual Property Rights (IPRs; i.e., patents and licensing) regimes for seeds and plants, offer expertise in risk assessment and biosafety procedures, promote and support research on non-commercial staple food crops, help integrate biotechnology into existing national research programs, and promote public-private partnerships to advance biotechnology.

The implementation of these strategies came into sharper focus following the publication of a 1997

report and a subsequent series of international meetings, which crystallized the earlier discussions into the development of a focused biotechnology strategy. The latter report offered a far more measured and realistic assessment of the state of biotechnology research, balancing this with a broad overview of the known environmental consequences of GE crops. It proposed a substantially broader agenda, aimed at developing scientific and regulatory expertise to assess and identify potential problems, as well as research on new crop varieties through the existing Bank-supported agricultural research centers in various countries. Numerous consultations and international seminars that followed the report's publication proposed an even broader pro-biotech focus, including the protection of IPRs and the development of public-private partnerships promoting biotechnology.

During the same period, the Bank was increasing its collaboration with the agrochemical industry, even while promoting concepts such as sustainability and Integrated Pest Management (IPM). The Pesticide Action Network (PAN) reviewed Bank documents describing over 100 agricultural projects approved between 1997 and 2000, and found a persistent focus on intensifying production and increasing farmers' access to agrochemicals, despite a 1998 policy emphasizing IPM-based alternatives.

PAN also uncovered an ongoing Staff Exchange Program, through which the Bank had entered into business partnerships with nearly all the leading pesticide companies, including biotech giants Aventis, Novartis, and Dow. "For public monies to support the placement of World Bank staff at these companies," argued Marcia Ishii-Eiteman, coordinator of PAN North America's World Bank Accountability Project, "constitutes a gross violation of the Bank's pest management policy and its business partnership guidelines. It is also antithetical to the Bank's commitment to sustainable development and a misuse of public funds."

The Staff Exchange Program involves 189 corporations, governments, universities, and international agencies, including leading transnational companies involved in agribusiness, pharmaceuticals, petroleum, mining, timber, and banking. The Bank trades staff members with various partner institutions for periods of up to two years, with a provision for adding additional years, and assignments are targeted toward mutual institutional needs. Exchanges with agribusiness/biotech companies were most active during the late 1990s and the beginning of this century.

For example, an Aventis (now Bayer CropScience) marketing analyst spent nearly four years helping the International Bank for Reconstruction and Development, the largest and most visible Bank division, to develop its position on agricultural biotechnology, as well as strategies for leveraging financing from the private sector through the Bank's International Finance Corporation. A Dow sales officer worked on projects in Africa and Mexico, and served on teams studying agricultural inputs and biotechnology. Novartis' (now Syngenta's) head of public affairs spent a year working on outreach and communications strategies for the Bank's rural development unit. Meanwhile, Bank officials stationed at Novartis and Rhone Poulenc Agro (now part of Bayer) in the late 1990s worked on biotechnology regulatory issues and rural development partnerships. Through these exchanges, the Bank adjusted its biotechnology strategies to better satisfy the leading biotech seed developers, and corporations gained access to influence public policies in the global South.

### **Biosafety in India: A Model Project**

In 1996, the annual Conference of Parties to the UN's Convention on Biological Diversity (a product of the 1992 Rio "Earth Summit") launched negotiations toward an international protocol on the safe handling and transport of genetically modified organisms (GMOs). African nations, along with others

concerned about how future imports of GMOs might threaten the integrity of indigenous plant and animal species, forged an international consensus requiring countries seeking to export intact, viable GMOs—such as live plants, seeds, and microorganisms—to obtain the consent of the importing country. Despite numerous obstacles imposed by the major GMO-producing countries—particularly the U.S., Canada, and Argentina—a full text was developed in Cartagena, Colombia, in 1999 and approved in Montreal in January 2000. The Pacific Island nation of Palau became the 50<sup>th</sup> country to ratify the Cartagena Protocol on Biosafety in June 2003, bringing it into effect following a 90-day waiting period. As of February 2004, 87 countries had ratified the protocol.

The Biosafety Protocol requires that countries seeking to export living modified organisms (LMOs) obtain “prior informed consent” from the importing country. Where organisms are intended for introduction into the environment (e.g., seeds), detailed information on their identity, traits, and characteristics needs to be communicated, and the receiving country may invoke the Precautionary Principle in deciding whether to allow the import. In the case of organisms intended for contained use, such as in laboratories, the exporter only needs to label the LMOs and specify rules for their safe handling and use.

GMOs intended for food, feed, or processing are largely exempt, but must carry the label, “May contain living modified organisms,” as well as a certification that they are not intended for environmental release. Pharmaceutical products regulated by the World Health Organization are exempted entirely. Countries that have not ratified this protocol—including the U.S., which hasn’t signed the Biodiversity Convention and, therefore, is not eligible to do so—are expected to trade with so-called Party states in a manner that is consistent with the document’s objectives, though there are no means to enforce this.

In March 2003, the Bank approved detailed plans for a 3-year, \$3 million dollar project designed to help India fulfill its obligations under the Biosafety Protocol. The project is designed to enhance the capacity of various government agencies and research centers to implement the agreement’s provisions. In partnership with India’s Ministry of Environment and Forests, the Bank will help build “technical capacity for risk assessment, management and monitoring”; establish the required database system and clearinghouse mechanisms for GMO imports; support the development of infrastructure for research, risk assessment, and monitoring; and strengthen laws, regulatory frameworks, and “communication strategies.” Some 1,600 individuals will participate in a series of risk evaluation courses, with primary support for four existing biotech research centers in India.

The Bank’s Project Brief reviews in some detail the agencies and facilities that are currently engaged in biotechnology regulation and research in India and addresses ways to significantly expand the capacity of these institutions. The Bank assumes that, having ratified the Cartagena Protocol, India will inevitably see an “increased movement” of GMOs into and within the country. The proposal postulates an ever-growing need for researchers to identify and monitor laboratory research as well as field trials; ensure safe handling of GMOs; evaluate environmental risks and monitor and regulate commerce in engineered organisms.

An ever-expanding array of scientists and public officials will engage in the detection, tracking, and evaluation of GMOs. While some researchers may shift their priorities from the development of new GE organisms to the evaluation of their safety, this project entails a significant expansion in the capacity of Indian researchers to work with GMOs and promote their “societal acceptance.”

## **Greenwashing Corporate Agendas**

Despite these clear institutional biases at the Bank and its numerous affiliated agencies, many analysts still assert that the Bank represents an alternative to the aggressive, commercially driven promotion of biotech products that is characteristic of the leading biotech transnationals. The more overt promotion of GE and other controversial biotechnologies is left to another organization, directly supported by the biotech companies, which maintains close institutional ties to the Bank. This is the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

Long-time Bank advisor Gabrielle Persley, formerly biotechnology manager of the Bank's Agriculture and Rural Development Department, serves as the director of programs on ISAAA's board. While some Bank officials have disavowed any direct link to the ISAAA, the history of institutional ties between the two organizations is quite compelling. The ISAAA is directly supported by Monsanto, Syngenta, Bayer, Pioneer, Cargill, and other corporate biotech leaders, along with the Rockefeller, McKnight, and Hitachi Foundations, among others. Its stated goal is "to bring together institutions from national programs in the South, and from the private sector in the North, into partnerships to transfer biotechnology applications."

The ISAAA boasts programs in Africa (Kenya, South Africa, Tanzania, and Uganda) and Asia (Indonesia, Malaysia, the Philippines, Thailand, and Vietnam), has initiated projects in Latin America (Argentina, Brazil, Costa Rica, and Mexico), and offers fellowships to scientists engaged in technology transfer activities. Researchers at the Barcelona-based Genetic Resources Action International (GRAIN) describe the ISAAA fellows as an emerging "advocacy elite," often maintaining a strong and lasting identification with their corporate benefactors. Recent projects include manipulation of virus resistance genes in potatoes and papayas, development of diagnostics for maize diseases, genetic engineering of cassava and sweet potatoes, cell culture techniques for the propagation of commercial tree species, and the assessment of Bt corn technologies for Asia.

In Asia, the ISAAA's history began with a 1996 meeting of its board at the International Rice Research Institute headquarters in the Philippines. Ongoing research and technology transfer projects in Asia, and around the world, follow the general pattern of Bank-funded efforts but are much more heavily tilted toward the development of new transgenic crop varieties. These include efforts to develop GE virus resistant potatoes in Mexico, tomatoes in Indonesia, and papayas in Malaysia.

As with similar Bank-supported efforts, these research priorities reflect little regard for local crop diversity or actual agronomic problems. Large sums are committed to the development of GE varieties that aim to do what local farmers can often accomplish by far less invasive means, while introducing new problems more serious than those they are purported to solve. The ISAAA also seeks to help developing countries circumvent the biotech industry's maze of IPR rules by facilitating licensing arrangements that give researchers easier access to new, proprietary technologies. While Monsanto spends \$10 million a year suing and harassing U.S. farmers to strictly obey their "technology agreements" and other IPR rules, the goal in the global South is clearly to promote the rapid acceptance of new GE crops at all costs.

The main vehicle for direct links between the World Bank and the private sector is the Bank's International Finance Corporation (IFC), with an explicit role of leveraging financing from the private sector for international development projects. In the late 1990s, the IFC developed a \$30 million Biodiversity Enterprise Fund for Latin America, which aimed to encourage "sustainable uses" of that region's biodiversity. The Fund encouraged investment in questionable activities including bioprospecting, elite forms of ecotourism, and establishing tree plantations as "carbon sinks" to

relieve the climate burden of methane production from cattle ranches.

Today, more than 15 Biodiversity Enterprise Funds exist worldwide under the umbrella of the Conservation Finance Alliance (CFA). Two World Bank officials serve on the steering committee of this organization, along with staff from the Nature Conservancy, Worldwide Fund for Nature (WWF), Conservation International, and other organizations dedicated to “free market” approaches to environmental problems.

These Funds pledge to provide needed capital to mostly small, locally based enterprises in regions of high biodiversity, while offering investors opportunities to simultaneously satisfy financial, social, and environmental goals. The CFA’s examples of “proven sustainable finance mechanisms” include user fees for tourism, payments for bioprospecting, debt-for-nature swaps (trading small portions of a country’s debt for reallocation of particular lands for conservation), conservation trust funds, and “carbon investment projects.” Many of these measures have indeed reaped financial rewards for investors—and public relations points for cooperative NGOs—at the expense of indigenous peoples and the ecosystems upon which they have traditionally relied. The CFA’s online guidebook cites some seemingly admirable projects: encouraging small farmers in Central America to grow organic cocoa, for example. But it also promises returns on investments of up to 30 percent, a goal that appears quite incompatible with the mission of supporting human-scaled, ecologically sustainable practices in rainforests and other fragile ecosystems.

As corporations and the largest NGOs collaborate in ever-more elaborate schemes to sustain the myth that extracting profits and sustaining the environment can be made compatible, it is clear that the World Bank will continue to play a key role in advancing and legitimizing this dubious agenda, at the behest of global agribusiness and other extractive industries.

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## **P.S.**

\* This article is excerpted from Brian Tokar’s new book, *Gene Traders: Biotechnology, World Trade and the Globalization of Hunger*, to be published later this month by Toward Freedom. From *Z Magazine Online*, vol. 17 n° 4, April 2004:

<http://zmagsite.zmag.org/Apr2004/tokar0404.html>