



Biodiversity, ownership, and indigenous knowledge: Exploring legal frameworks for community, farmers, and intellectual property rights in Africa[☆]

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Abstract

Drafted between 1996 and 2000, the African Union's Model Legislation for the Protection of Indigenous Knowledge, attempts to redress the contradictory obligations of the international instruments affecting biodiversity, namely the Trade Related Intellectual Property Rights Agreement and the Convention on Biological Diversity, by establishing a new philosophical justification for farmers', breeders', and community rights. By approaching the question of property rights and farmers' rights from the perspective of the community, the African Model Law is able to establish a legal framework for access to biodiversity, benefit sharing, and intellectual property that satisfies the needs and requirements of African states by balancing the monopoly rights of breeders against the rights of indigenous communities.

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Whatever the historical period, whatever the mode of production, plants and their products have been the necessary components of the material base on which the complex structures of human societies have been raised.—Jack Kloppenburg, *First the Seed* (1988).

1. Introduction

Human beings depend on the natural world for their survival. For more than 10,000 years, plants have provided not just food for subsistence, but most of the

raw materials to produce the goods which maintain and improve human life. While the twin processes of industrialization and urbanization have obfuscated our traditional dependence on natural production processes for survival—popularizing the belief in humanity’s mastery over its natural surroundings—modern society continues to rely extensively on the products of nature. In some fields, recent developments highlight this dependence more clearly than ever before. Perhaps nowhere is this tendency more dramatic than in biotechnology, where recent advances have sparked a renewal of interest in the local biodiversity and indigenous knowledge of the Third World.

Advances in biotechnology build both on the technical achievements of Northern scientists *and* the genetic diversity of Southern communities. The breeding of new seed lines in agriculture and the development of new pharmaceuticals in health care have traditionally depended on the availability of genetically diverse populations. The emergence of modern biotechnological methods, which allow the transfer of genetic material across species barriers, has only increased the potential value of biodiversity. Approximately one-quarter of all currently available prescription drugs are derived from plants, and more than half are developed from natural compounds. Yet less than one percent of all plants have been tested for medicinal properties (Bryant, 2002, np). Many scientists believe that cures for a wide-range of conditions could be found in the genetic diversity of tropical and semi-tropical plants. Research on the rosy periwinkle (*Catharanthus roseus*) plant, for example, once native to Madagascar but no longer found in situ because of deforestation, led to the development of extremely effective treatments for childhood leukemia and Hodgkin’s disease.¹ Scientists hope that similar “miracle drugs” may yet be found in the unexplored biodiversity of the Global South.

¹ Vinblastine, developed from Madagascar’s rosy periwinkle plant by Eli Lilly to treat Hodgkin’s disease, boasts a 90 percent success rate. Vincristine, also developed by Eli Lilly from the same plant, is 60 percent effective in the treatment of some types of leukaemia. Collectively, the two drugs have generated annual sales of approximately US\$200 million (of which an estimated 88 percent is profit) since their introduction in the 1960s. Critics point out that none of the revenues has been shared with Madagascar (Farnsworth, 1988, p. 95; Stone, 1992; RAFI, 1999, 2000).

As genetic resources have assumed increasing scientific and (especially) commercial value, debates over access to and ownership of biodiversity have intensified. Indeed, as the raw materials necessary to realize the promises of the “biotech revolution”, control over genetic resources is increasingly contested. Traditional knowledge, historically dismissed as ‘uninformed’ or ‘unscientific’, has simultaneously attracted increased attention, as academic and corporate researchers increasingly rely on the knowledge of local communities about the genetic diversity under their stewardship.

The new interest in plant and animal genomes (and the tensions generated by the increased attention) is reflected in the key international instruments governing the debate: the FAO’s International Undertaking (IU) on Plant Genetic Resources, the Trade-Related Intellectual Property Rights (TRIPs) Agreement and the Convention on Biological Diversity (CBD). In the context of international governance, the concepts of farmers’ rights and community rights have been particularly contested, as the Third World attempts to develop alternative intellectual property regimes that balance the private rights of the innovator with the public rights of the community. Regional approaches have proven particularly popular, and countries in Latin America, Africa, South East Asia, and the South Pacific have collectively attempted to draft legislation to deal with the emerging issues and debates surrounding biodiversity and biotechnology.² The African Model Law³ is perhaps the most ambitious of these efforts. It seeks to develop a comprehensive regional framework governing all aspects of biodiversity management,

² With the adoption of Decision 391 in 1996, the Andean Community (Bolivia, Columbia, Ecuador, Peru, and Venezuela) was the first regional organization to adopt legislation governing access and benefit sharing. Since then, the Association of Southeast Asian Nations (ASEAN), the South Pacific Regional Environmental Program (SPREP), and the Organization of African Unity (OAU) have undertaken similar efforts (Diaz, 2000).

³ The formal title of the Model Legislation is the OAU Model Law for the Recognition and Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources. In this paper I use the terms “Model Legislation” and “Model Law” interchangeably to refer to the document.

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