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**Streamlining Africa's Responses to the Impact of
Review and Implementation of the TRIPs Agreement**

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Streamlining Africa's Responses to the Impact of Review and Implementation of the Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement

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FOREWORD

There are few issues in the world today that have received as much scholarly and popular analysis as the debate on the health and development implications of the WTO Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPs). Granted, the notoriety of the WTO and the impact of its regulations on multilateral trade policy, and development and health challenges in the developing world, particularly stemming from virulent diseases such as AIDS, tuberculosis and malaria, have served to increase awareness, and to polarize the debate at every turn, due to specific regional concerns and challenges.

This paper seeks to contribute to this debate, by highlighting some of the key issues from a uniquely African perspective. It is hoped that this paper will contribute to informing African policy makers about the full implications of implementing the TRIPs Agreement and its impacts on their respective economies. It outlines and analyses the existing African Group proposals concerning the implementation and review of TRIPs and suggests measures that African countries could take in the pursuit of their sustainable development objectives.

The paper argues that the TRIPs Agreement is based on the western concept of individual ownership of rights that customarily fails to provide coverage for traditional knowledge in a manner satisfactory to its holders. It calls for appropriate amendments to recognize and protect the rights of traditional knowledge-holding communities and recognizes the need to protect them from misappropriation. It has been demonstrated that some of this knowledge has the potential for profitable commercial exploitation. Ideally, such a proposal should go beyond what the Convention on Biological Diversity offers, since the latter merely recognizes such rights but provides no specific protection measures.

The paper suggests that African countries consider with caution proposals to remove Article 27.3 (b) from the TRIPs Agreement, and rather see that the freedom to exclude plants as well as plant varieties from patentability is retained together with the currently recognized freedom of African countries to establish *sui generis* systems that suit their national interests. It urges other WTO members to accept that for African countries to take advantage of compulsory licensing, special measures are necessary to encourage foreign direct investment and technology transfer targeted at the development of pharmaceutical manufacturing capacity.

Since the time we set out to cover this very controversial subject, important developments have taken place. As far as the Doha agenda is concerned, a separate declaration sets two specific tasks. The TRIPs Council has to find a solution to the problems countries may face in making use of compulsory licensing if they have too little or no pharmaceutical manufacturing capacity, reporting to the General Council on this by the end of 2002. *The Doha Declaration on TRIPs and Public Health* also extends the deadline for least-developed countries to apply provisions on pharmaceutical patents until 1 January 2016. The debate on geographical indications continues, especially as to whether the so called 'outstanding implementation issues' are up for negotiation.

Clearly, the important public policy concerns that have to be addressed in the on-going debate need input from a broad cross-section of players. Public participation needs to be continually nurtured and sustained. We have worked with the author toward this objective with stakeholders in dialogues in Africa and Geneva and as discussions proceed, we at ICTSD will look forward to the opportunity to further contribute to it by continuing to bring to the table both sustainable development perspectives and the weaker and/or excluded actors.

Ricardo Melendez-Ortiz
Executive Director

INTRODUCTION

This Policy Brief discusses the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), focusing on key issues of interest and concern to Africa.

In broad terms, the brief seeks to:

- (a) inform African policymakers about the full implications of implementing the TRIPS Agreement and its impacts upon their respective economies and societies;
- (b) outline and analyse the existing African proposals concerning the implementation and review of the Agreement; and
- (c) suggest TRIPS-related measures which African States may take in pursuit of their sustainable development objectives.

The ten specific issues of interest and concern are as follows: (1) food security; (2) enhancing Africa's export potential; (3) access to drugs; (4) innovation; (5) technology transfer (6) foreign direct investment (FDI); (7) employment; (8) biodiversity, biotechnology and traditional knowledge; (9) education; and (10) enforcement and administrative costs.

The brief takes into account the results of the Fourth Ministerial Conference of the WTO at Doha, Qatar, 9-14 November 2001¹, as well as the relevant sections of the "New African Initiative" (NAI) endorsed by the Africans Heads of State and Government at the 38th OAU Summit in Lusaka, Zambia, 7-9 July 2001, which launched the African Union.² It also presents the OAU Model Legislation on the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources.

¹ See, e.g., Ministerial Declaration WTO Doc. WT/MIN(01)/DEC/W/1, 14 November 2001, in particular paras. 12, 13, 19-19 and 37-43; Implementation-related issues and concerns, WTO Doc. WT/MIN(01)/W/10, 14 November 2001, in particular paras. 2.1-2.4, 5.1-5.4, and 11.1-11.2; and the separate Declaration on the TRIPS Agreement and Public Health, WTO Doc. WT/MIN(01)/DEC/2, 14 November 2001.

² See The New African Initiative (NAI) as endorsed at Lusaka, www.mapstrategy.com later renamed the New Partnership for Africa's Development (NEPAD) at Abuja, Nigeria, 23 October 2001.

AFRICA AND POLICYMAKING ON SELECTED ISSUES RELATING TO TRIPS IMPLEMENTATION

1: FOOD SECURITY

To assess the effects of intellectual property right (IPR) protection on the agricultural sector, rural livelihoods and food security, including the breeding of crop varieties, we need to examine Article 27.3 (b) of TRIPS, which allows WTO Member States to exclude from patenting:

(b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof. The provisions of this sub-paragraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

In the context of the review process (referred to in the last sentence), many African countries, which are generally opposed to the patenting of life forms, are seeking a substantive review of the provisions of the subparagraph with a view to its possible revision. There are a number of reasons for taking such a position. Chief among them is their concern that the requirement to “provide for the protection of plant varieties either by patents or by an effective *sui generis* system or a combination thereof” threatens the rights of African local farmers and in doing so also jeopardises food security.

Specifically, the African negotiators at the WTO Council for TRIPS are responding to the persisting controversy as to the meaning of “an effective *sui generis* system”. TRIPS does not define these terms. However, it seems clear that WTO members can determine the nature of the *sui generis* system they wish to adopt.⁴ Thus, African countries do not have to implement established property regimes such as patents, but can establish and promote their own alternatives that are ethically, socially and environmentally appropriate and responsive to the needs and conditions of indigenous and local people of Africa.⁵

Moreover, African negotiators and governments consider there to be certain defects with respect to plant variety protection based on the UPOV Convention.⁶ This Convention is a

⁴ Note, in this connection the following definitions: “The term *sui generis* ... may offer a wider range of policy choices because it could presumably include any arrangement for plant varieties that offers recognition to innovators – with or without monetary benefit or monopoly control”, see, the Crucible Group report of 1994, People, Plants and Patents, as cited in J. Mugabe, Intellectual Property Protection and Traditional Knowledge 21 BIOPOLICY INTERNATIONAL, 14 (ACTS Press, 1999).

⁵ For further development of this argument, see, Id., at 15.

⁶ UPOV is the commonly used acronym for the International Union for the Protection of New Varieties of Plants, an intergovernmental organisation with headquarters in Geneva. The acronym UPOV is derived from the French name of the organisation, which is “Union Internationale pour la Protection des Obtentions Végétales”. UPOV was established by the International Convention for the Protection of New Varieties of Plants (the “UPOV Convention”), which was signed in Paris in 1961. The Convention entered into force in 1968. It was revised in Geneva in 1972, 1978 and 1991 (henceforth “1972 Act”, “1978 Act” and 1991 Act”, respectively). Currently, the 1991 Act is in effect.

common *sui generis* alternative to patents, and while it is not actually mentioned in the TRIPS Agreement, some developed countries consider it to be the alternative to patents for plant varieties. Because of their concerns, most African countries have been reluctant to embrace the Convention.⁷ The rejection of the UPOV system by most African countries is based primarily on the following consideration. The majority of African farmers practice subsistence farming. They cultivate local food crops which are not widely traded, and the varieties used are local seeds which are saved from year to year and exchanged amongst farmers in the community. Unlike commercial varieties, the crops they grow tend to be genetically diverse. For farmers, such diversity is advantageous because the existence of varied characteristics ensures relatively stable yields even during periods of climatic or agronomic stress.⁸ On the other hand, the UPOV rules only allow protection for new varieties that are genetically uniform and stable, and it is only these kinds of variety that the commercial sector promotes. In this context, one must bear in mind that seeds are the most important agricultural input. This is because they establish the upper limit for both output and the productivity of all other inputs into agriculture.

In short, adoption of the UPOV system and widespread use of IPR-protected varieties could cause genetic erosion through its bias towards the needs of industrial agriculture and restrict the freedom of farmers to exchange seeds informally. It is also possible that the UPOV system could inhibit the sharing of scientific information and actually reduce the rate of progress in plant breeding that benefits poor farmers.⁹

African policymakers should be aware that many local farming communities have developed sophisticated traditional knowledge-based resource management practices that conserve and sustainably utilise biological diversity and ensure food security for themselves and the wider society. In view of the vital importance of maintaining these practices, they might then argue that the knowledge systems upon which these practices are based should be recognised regionally and internationally. They could also point out, in this connection, that the TRIPS Agreement is based on the western concept of individual ownership of rights that unjustly treats traditional knowledge (TK) as a free input,¹⁰ and should thus be appropriately amended to recognise and protect the rights of TK-holding communities. Such an amendment should go beyond what the Convention on Biological Diversity (CBD) offers, since the latter merely recognises such rights but provides no specific protection measures. Such amendments should take their cue from Principle 22 of the Rio Declaration and Chapter 26 of Agenda 21, both of which came out of the 1992 United Nations Conference on Environment and Development.

⁷ A current list (December 7, 2001) of fifty States Party to the UPOV Conventions shows that only two African States have joined: South Africa (November 6, 1977) and Kenya (May 13, 1999), both on the basis of the 1978 Act.

⁸ See, G. Tansey, Trade, Intellectual Property, Food and Biodiversity. Commissioned by Quaker Peace & Service, London in Association with Quaker United Nations Office, Geneva with Financial Assistance from Department for International Development (DFID), UK.

⁹ See e.g., GRAIN, "TRIPS versus biodiversity: Options for the 1999 review of Article 27.3 (b) in the context of CBD" (May 1999); discussion by Rural Advancement Foundation International (RAFI), a paper presented during an international Conference on Intellectual Property Rights and Biodiversity, at Nairobi, Kenya, 6 – 7 February 1999 (unpublished, on file with the present author).

¹⁰ See, sources cited in A. Adede, The Political Economy of the TRIPS Agreement: Origins and History of Negotiations, 24 BIOPOLICY INTERNATIONAL, 18 & note 45 (ACTS Press, 2001).

Paragraph 26.3 (a) of Agenda 21 requires governments to establish a process to empower indigenous communities through measures such as:

- (i) recognition of their values, traditional knowledge and resource management practices with a view to promoting environmentally sound and sustainable development;
- (ii) enhancement of capacity-building for indigenous communities based on the adaptation and exchange of traditional experience, knowledge and resource-management practices, to ensure their sustainable development; and
- (iii) establishment, where appropriate, of arrangements to strengthen the active participation of indigenous peoples and their communities in the national formulation of policies, laws and programmes relating to resource management and other development processes that may affect them. It is noteworthy that the OAU has developed Model Legislation that reflects these priorities while also responding to African concerns about the inadequacies of UPOV (see Box 1).

Box 1

The African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources³

In March 1998, the Scientific, Technical and Research Commission of the Organization of African Unity (OAU/STRC) task force on community rights and access to biological resources met to develop a Draft Model Legislation on Community Rights and Access to Biological Resources as a basis for national legislation and an Africa-wide convention. The draft model legislation was further developed and expanded by experts from East and Southern African countries meeting in June 1999 in Lusaka, Zambia.

The result of these consultations was a much more substantial document entitled the African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources.

The Model Legislation's main aim is to ensure the conservation, evaluation and sustainable use of biological resources, including agricultural genetic resources, and knowledge and technologies in order to maintain and improve their diversity as a means of sustaining life support systems. More specifically, it seeks to implement CBD Articles 8(j), 15(1) and 15(2), the FAO International Undertaking (now Treaty) on Plant Genetic Resources, and the TRIPS requirement that plant varieties be protected under an IPR system in an appropriate way for the African continent.

In light of the foregoing, African negotiators should even consider questioning the suitability of both the TRIPS and the UPOV regimes with respect to food security by presenting

³ See version published and distributed by the Scientific, Technical & Research Commission of the Organization of African Unity (Prof. J. A. Ekpere, Project Coordinator, November 2000). This box consists of text from the following publication: A. Seiler and G. Dutfield, Regulating Access and Benefit Sharing: Basic issues, legal instruments, policy proposals, study commissioned by the Federal Republic of Germany in preparation for the 1st meeting of the Ad Hoc Working Group on Access and Benefit Sharing in Bonn, October 2001.

empirical evidence to support the claim that IPR protection of new plant varieties is prejudicial to the interests of African farmers and farming communities.¹

On the specific question of food security, it would be justifiable for African policymakers and negotiators at the WTO TRIPS Council to:

- (a) Pursue their current position on the need to undertake a substantive review of the provisions of Article 27.3 (b), and to ensure that the “effectiveness” of the *sui generis* systems is not defined in a way that would preclude African countries from developing systems reflecting their own economic needs and customary farming practices such as saving, sharing, selling, and planting seeds without having to compensate plant breeders;
- (b) Take advantage of the “*sui generis* system” option by devising and promoting non-patent plant variety protection systems that are suited to the needs and interests of the local and indigenous farming communities. Such systems could, for example, provide for the protection of plant varieties developed by local communities and national agricultural research centres in consistency with the CBD and the FAO International Treaty on Plant Genetic Resources;
- (c) Resist proposals to remove Article 27.3 (b) from the TRIPS Agreement, and retain the freedom to exclude plants as well as plant varieties from patentability, while maintaining the freedom of African countries to establish *sui generis* systems that suit their national interests;
- (d) Continue supporting the amendments they proposed in July 1999 to make the TRIPS Agreement provide for: (i) the protection of the innovations of indigenous and local farming communities in developing countries, consistent with the Convention on Biological Diversity and the International Treaty on Plant Genetic Resources; (ii) the continuation of the traditional farming practices including the right to save, exchange and save seeds, and sell their harvest; and (iii) the prevention of anti-competitive practices which will threaten food sovereignty of people in developing countries.
- (e) Pursue the positions they have already taken on the six issues presented on their behalf to the TRIPS Council meeting of June 2001, namely:
 - (i) the link between the provisions of article 27.3 (b) and development;¹¹
 - (ii) technical issues relating to patent protection under Article 27. 3 (b);¹²
 - (iii) technical issues relating to *sui generis* protection of plane varieties;¹³

¹ For further discussion on this point, *see* generally, P. Cullet, “Plant variety protection in Africa: Towards compliance with the TRIPS Agreement”, JOURNAL OF AFRICAN LAW.

¹¹ On this issue the African States assert, *inter alia*, that they are yet to enjoy the benefits from globalisation as well as those relating to their joining the multilateral trading systems, the revolution in the biotechnology field, and the mutuality of benefits under the TRIPS Agreement.

¹² On this issue, African states underscore the fact that the distinction made in the article between plants, animals, essentially biological processes for the production of plants or animals, which are excluded from patenting; and micro-organisms, non biological and microbiological processes, which are patentable is artificial and violates the basic principles of intellectual property law.

- (iv) ethical issues relating to the patentability of life forms;¹⁴
- (v) the relationship of the TRIPS Agreement to the conservation and sustainable use of genetic material;¹⁵ and
- (vi) the relationship of the TRIPS Agreement to the concepts of traditional knowledge and farmers' rights.¹⁶

¹³ The African negotiators have taken the position explained in paragraphs 7-9 above of the present study.

¹⁴ African states maintain their position that patenting of life forms (human, animal or plant life) raises serious ethical, religious, and cultural questions and therefore reject their patentability. Moreover, they point out that commodification and marketing of life structures violates the cultural practices of most societies.

¹⁵ African States have emphasised the fact that the rich biological diversity of the continent benefits the whole world and that it, therefore, warrants conservation and sustainable use. Consequently, they maintain that their development partners should support the condition of access to genetic resources, based on the sharing of benefits on mutually agreed terms and prior informed consent, as envisaged under the Convention on Biological Diversity (CBD).

¹⁶ On this, the African States have expressed the view set out in paragraph 12 above of this study.

2: ENHANCING AFRICA'S EXPORT POTENTIAL

The potential exists for African countries to increase their exports of products based on TK and/or derived from the continent's biodiversity-richness. It is worth considering whether the TRIPs Agreement could be used to promote sales of these goods in Africa and elsewhere.

For example, traditional peoples and communities in Africa have discovered, developed and preserved many types of product that contribute to their health and food security. These include medicinal plants, health-giving herbal mixtures or formulations, and agricultural and forest products. In addition, African peoples and communities have given to the world a richness of cultural works and expressions. The anthropological literature shows that such knowledge and cultural manifestations are surrounded by concepts of ownership and proprietary rights, which are generally recognised only within the specific traditional communities. Unfortunately, the TRIPs Agreement completely ignores them and the African countries now want them to be recognised and protected at the international level.

Indeed, such TK and products are increasingly being used as important inputs into modern industries such as pharmaceuticals, botanical medicines, cosmetics and toiletries, and biological pesticides. All the more reason, then, for TK and natural products to be protected whether they are sold as products themselves or are used as important inputs in modern industries. In addition, they should be commercialised in a sustainable manner. African Heads of State and Government have recognised this by including in the New African Initiative a recommended strategy promoting "[t]he diversification of production and exports [from Africa] especially in competitive advantage, and bearing in mind the need to move towards higher value-added production."¹⁷

It is significant to note that there is empirical evidence that trade in African medicinal plants is increasing. This is illustrated, for example, by the extent of commercial activity taking place in the Durban market in South Africa (see Box 2), and sales of such plants as Devil's Claw in Namibia,¹⁹ and *Prunus africana*, *Catharanthus roseus*, and *Centella asiatica* in Madagascar.²⁰ There is also significant trading activity in a variety of naturally-derived healthcare products such as beverages like fruit juices and herbal teas, lipid oil used predominantly in the cosmetic industry, and nutritional supplements such as food flavouring ingredients.²¹

¹⁷ See Doc. *supra* note 3, para. 54.6.

¹⁹ "Namibia produces 600 tonnes per year of cut, dried Devils Claw. Rural producers are paid R 12 per kg (i.e. R 7.2 million). Some 15,000 people are directly involved in trade, the majority of whom come from the poorest sectors of society. The secondary trade in Devils Claw generates some USD 7-10 million in Namibia." *Id.*

²⁰ "Madagascar exports over 50 medicinal plant species on a regular basis. This includes: 1,000 tonnes/annum of *Prunus africana* (US\$ 2/kg raw); 600 tonnes/annum of *Catharanthus roseus* (US\$ 1/kg raw); and 50 tonnes/annum of *Centella asiatica* (US\$ 6/kg raw)" *Id.*

²¹ "Examples of recent trade initiatives relating to some of these product include: Baobab: baobab oil, at present only produced in significant quantities in Tanzania, retails for as much as US\$200 per kg globally. Other oils already produced or under development include marula, manketti nut, muchecheni (*Ziziphus mucronata*) and parinari oils. Khaki-bush (*Tagetes minuta*), a weedy plant common in South Africa and Zimbabwe, has become a major source of essential oil for global trade. South African Rooibos, Honeybush and Buchu teas have developed a sizeable regional and international market, spawning several opportunities for other new herbal teas. Locally-produced Masawu (*Ziziphus mauritiana*) jam is just starting to make inroads into the Zimbabwean market.

Box 2**The medicinal plant trade in Durban, South Africa¹⁸**

Annually, 1,500 tonnes of medicinal plant material traded per year in Durban, valued at approximately R 21 million. In the Province of Kwazulu Natal, approximately 4300 tonnes of medicinal plant material are traded per year, valued at some R 61 million. Interestingly, the value of this trade approximates to around 35% of value of the annual maize harvest in the Province. In South Africa as a nation, some 195,000 tonnes are traded on the informal market per year, valued at R 270 million (USD 35 million). The secondary users associated with this trade (i.e. traditional healers) in turn generate some R 2 billion (USD 280 million) from the resale of these plant materials. The SADC regional market consumes over 50,000 tonnes of medicinal plant material a year, and its 450,000 dispensing healers are generating a minimum of USD 700 million from the trade. Research has shown that the informal trade in medicinal plant materials in South Africa is dominated by producers in the poorest sections of community (i.e. with monthly incomes (R 500:USD 70).

Box 3**Hoodia – Africa's first blockbuster drug?²**

A British botanical pharmaceutical botanical company called Phytopharm is developing a plant-based anti-obesity drug by agreement with its discoverer, the South African Council for Scientific and Industrial Research (CSIR). The CSIR is hoping that the result will be Africa's first blockbuster drug generating millions of dollars a year in sales for the benefit of CSIR, Phytopharm and Pfizer, which has an exclusive license to sell the drug. The drug consists primarily of extracts from a South African wild cactus called hoodia that is used by the Xhmani bushmen people to stave off hunger and thirst.

CSIR and Phytopharm were criticised for failing to guarantee benefits for the Xhmani people. However, the Xhmani and CSIR have just agreed a deal to share the royalties that Phytopharm will pay if the drug is commercialised. It should be noted, though, that it will take several more years for the drug to reach the market, and that there is no guarantee it ever will.

According to Richard Dixey, the Chief Executive of Phytopharm: "There are 250,000 plants in Africa that are not found elsewhere, and no pharmaceutical has yet been made from an African plant. That gives you an idea of the potential in that region alone."

Marula-flavoured ice-cream, and baobab-flavoured health drinks are currently under development in the region, and are expected to be received favourably by the market." Id.

¹⁸ G. Le Breton, Trade in Biological Resources in Southern Africa, a paper presented at a multi-stakeholders dialogue on Trade, Intellectual Property Rights and Biodiversity in Eastern & Southern Africa, at Aberdares Country Club, Nyeri, 30th-31st July 2001. (Unpublished, on file with the present author).

² Written by Graham Dutfield. See F. Kapner, "Finding an answer to the west's problem", Financial Times, 4 January 2001, p. 18.

With respect to the use of African biological resources in the development of pharmaceuticals, mention should be made of research on a plant based anti-obesity drug (see Box 3).²² In addition, an African NGO called Bioresources Development and Conservation Programme, which has research centres in Cameroon, Ghana, Guinea and Kenya, is seeking to enhance the capacity of African countries to use their indigenous resources in developing drugs for the treatment of malaria, leishmaniasis, trypanosomiasis, and other tropical diseases largely neglected by the pharmaceutical industry. Such activities bring to the fore the issue of bioprospecting and the problem of biopiracy in Africa, which must be dealt with under appropriate policy and legal measures.

Apart from commercialisation of African biological products in the areas just discussed, there are also traditional handicrafts, such as ornamental wood and stone carvings that are sold primarily to tourists. Additionally, some African artists have perfected the science of using basic local material specially treated to produce handicrafts that cleverly camouflage the identity of the material while capturing a traditional event or experience.²³ Such items should be distinguished from traditional intangible cultural expressions that are associated with a specific object or belief, whose existence cannot be understood or explained except through the rendition of the traditional folklore.²⁴ Such manifestations of culture are not considered traditional knowledge as such, but are classified as “expressions of folklore,”²⁵ which however deserve protection through copyright or related IPRs such as performers' rights. It is useful to point out here the following recent statement by African leaders on these matters:

Culture is an integral part of development efforts on the continent. Consequently, it is essential to protect and effectively utilise indigenous knowledge that represents a major dimension of the continent's culture, and to use this knowledge in a shared manner for the benefit of humankind. The African initiative will give special attention to the protection and nurturing of indigenous knowledge, which refers to tradition-based literacy, artistic and scientific works, performances, inventions, scientific discoveries, designs, marks, names and symbols, undisclosed information and all other tradition-based innovations and creations resulting from intellectual activity in the

²² We refer to the case of a herbalist Kijezi in Western Uganda who was persuaded to reveal his knowledge of the treatment of jaundice at a time when conventional medicine was failing; a herbal medicine from another Uganda plant which was traditionally used for relaxing the birth canal during delivery and which led to the extraction of the ingredients of Oxytocin subsequently used in the West. See Uganda to enact law against Bio-piracy, THE EAST AFRICAN, 26 November – 2 December 2001, P. 8.

²³ Mention may be made of the innovative artwork of a rural community-based Kenyan artist, K. Abonyo Nyangaya, whose presentation in a one-piece carving movingly captures a Kisera event (betrothal ceremony) of one of the tribes in Kenya. The piece in question, and others by Mr. Nyangaya, are all in a private collection of L'Etwal International, at T.H. Granhome, Nairobi.

²⁴ One may for example, refer to Chinhoyi Cave, in Zimbabwe which is a famous tourist attraction; the Nandi Rock, in Kenya associated with the story of Lwanda Magere, a great Luo warrior; and Simbi Nyaima (a large rounded pond of about four hundred metres in diameter, one hundred metres in depth, with an everlasting liquid substance -- drought resistant -- with a distinctive smell) near Kendu Bay of Lake Victoria, also in Kenya. Apart from folklore associated with the objects such as those just mentioned, there are also those associated with beliefs. In this connection, it should be noted that the Maasai people of Kenya and Tanzania have preserved their cultural practices and expressions in their attire.

²⁵ Note in this connection the 1982 Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and other Prejudicial Actions, adopted by a Committee of Governmental Experts convened by UNESCO and WIPO jointly.

industrial, scientific, literary or artistic fields. The term also includes genetic resources and associated medicinal knowledge.

The African initiative leaders will take urgent steps to ensure that indigenous knowledge in Africa is protected through appropriate legislation. They will also promote its protection at the international level, by working closely with the World Intellectual Property Organisation (WIPO).²⁶

In light of the foregoing analysis, African policymakers and negotiators at the TRIPS Council may wish to maintain their position of:

- (a) Pursuing the protection of their biological products through an appropriate amendment of the TRIPS Agreement to recognise traditional knowledge. Such amendments should provide legal foundation for the protection of TK along with the related biological resources through a proper interplay between the use of patents and copyright law in a manner supportive of Africa's interests;
- (b) Continuing to request an examination on the relationship between the TRIPS Agreement and the Convention of Biological Diversity, a task the Doha Ministerial Conference specifically assigned to the Council for TRIPS (see below);²⁷
- (c) Promoting trade in their genetic resources while guarding against biopiracy, ensuring at the same time that they do not become a location for multinational companies determined to keep their technologies to themselves. For example, while the production and export of cut flowers in Kenya is a good business for the country, the IPR and technology transfer-related aspects of the trade give cause for concern;²⁸ and

²⁶ See, The New Africa Initiative incorporating the Millennium Partnership for the African Recovery Programme (MAP) and Omega Plan, at www.mapstrategy.com para. 53.8.

²⁷ "We instruct the Council of TRIPS, in pursuing its work programme including under the review of Article 27.3(b), the review of the implementation of the TRIPS Agreement under Article 71.1 and the work foreseen pursuant to paragraph 12 of this Declaration, to examine, *inter alia*, the relationship between the TRIPS Agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments raised by Members pursuant to Article 71.1. In undertaking this work, the TRIPS Council shall be guided by the objectives and principles set out in Articles 7 and 8 of the TRIPS Agreement and shall take fully into account the development dimension." WTO MINISTERIAL DECLARATION, Doc. WT/MIN(01)/DEC/W/1, 14 November 2001, para. 19.

²⁸ An instructive example has been described as follows: "The experience in Kenya - the leader in Africa in terms of production and export of cut flowers - with respect to cut flowers and ornamentals shed interesting insights into questions of intellectual property rights, access to foreign breeding material and the dynamics associated with the presence of MNCs. The entire industry is export driven, with 98% of the over 40 types of flowers being exported to mainly European countries. Horticulture (of which, 35% is cut flowers) earns Kenya much needed foreign currency and registers third after tea and coffee. The industry is largely dominated by a group of 22 large companies - though 80 small-scale producers provide a small amount of the market. Unfortunately, much of the profits leak out via the foreign-owned MNCs who dominate the cut flower industry. Consequently, much needed infra-structural improvement has not taken place. MNC interest in producing cut flowers in Kenya can be linked to climatic conditions. Ironically, the country only joined UPOV in 1999; yet, foreign companies have imported a large number of varieties. In fact, there is very limited local breeding and Kenya is primarily used by the MNCs as a location for cheaply multiplying the varieties for export into Europe.

- (d) Seeking appropriate amendments of the TRIPS Agreement to expand the scope of the section dealing with geographical indications, which is currently used by the western countries to protect their products while they effectively deny such protection to the developing countries and in some cases use this type of IPR to actually block the export of certain goods to Europe. It is noteworthy that the establishment of a multilateral system of notification and regulation of geographical indications was included in the work programme of the Council for TRIPS.²⁹

Consequently, a public sector breeding programme has been launched, in collaboration with domestic seed companies, to locally develop new varieties," *see*, Van Roozendaal, (1994).

²⁹ "With a view to completing the work started in the Council for Trade-Related Aspects of Intellectual Property Rights (Council for TRIPS) on the implementation of Article 23.4, we agree to negotiate the establishment of a multilateral system of notification and registration of geographical indications for wines and spirits by the Fifth Session of the Ministerial Conference. We note that issues related to the extension of the protection of geographical indications provided for in Article 23 to products other than wines and spirits will be addressed in the Council for TRIPS pursuant to paragraph 12 of this Declaration." *Id.*, para. 18. African countries may wish to consider protecting certain products such as coffees, teas and pyrethrum as geographical indications, alongside wines and spirits which already enjoy such protection under TRIPS.

3: ACCESS TO DRUGS

On the basis of the much discussed “breakthrough” achieved on this issue at the Fourth Session of the WTO Ministerial Conference in Doha,³⁰ the area of disagreement between developing and developed countries has arguably narrowed appreciably. Before Doha, the question of access to affordable HIV/AIDS drugs by African governments was the subject of an international campaign, triggered around 1997 by the now well-known South African Medicines and Related Substances Control Amendment Act. Campaigners advanced several viewpoints. The first was linked to language from a declaration adopted by the 1994 Marrakech Ministerial Conference of the GATT. The declaration permitted least-developed country WTO members to interpret and implement TRIPS “in a flexible and supportive manner”. Bearing in mind the devastating HIV/AIDS pandemic, campaigners argued that its application should be extended to apply to African countries in general. Second, the HIV/AIDS pandemic itself should be regarded as having, *ipso facto*, created for each African country, a “national emergency” in the public health sector, and “circumstances of extreme urgency”, within the meaning of Article 31 of the TRIPS Agreement. This would permit African governments to enact appropriate national legislation enabling their people to have access to affordable generic drugs for HIV/AIDS through “compulsory licensing” or “parallel importing”. The Agreement would thus be interpreted and applied in a “flexible and supportive manner”, while remaining a viable legal vehicle for protecting the interests of patent owners.³¹

The Doha Declaration finally recognised explicitly the gravity of the public health crises affecting many developing and least-developed countries, especially those crises resulting from HIV/AIDS, tuberculosis, malaria and other pandemics. Under the Declaration, the Ministers also agreed that the TRIPS Agreement “should be interpreted and applied in a manner supportive of WTO Members’ right to protect public health and, in particular, to ensure access to medicines for all”. Moreover, the Doha Declaration explicitly affirms that HIV/AIDS, tuberculosis, malaria and other epidemics “can represent a national emergency or other circumstances of extreme urgency, as may be determined by a Member State of the WTO, thus triggering “the right to grant compulsory licensing and the freedom to determine the grounds upon which such licences are granted”, to enable the State concerned to have access to generic versions and therefore affordable essential drugs.

It must be emphasised that compulsory licensing is the only procedure explicitly accepted at Doha for enabling generic versions of patented drugs to be provided to patients. Parallel importation is already permitted by TRIPS, but this only applies to drugs that have been purchased legally (i.e. in conformity with the patent laws of the country of initial purchase). By restricting itself to compulsory licensing, the Doha Declaration has arguably excluded most African countries from its benefits, since they do not have local capacity to make use of

³⁰ See WORLD TRADE ORGANIZATION, Doha, 9-14 November 2001, Ministerial Declaration, WTO Doc. MIN(01)/DEC/W/1, paras. 17-19, and a separate Declaration on the TRIPS Agreement and Public Health.

³¹ See, in this connection, A. O. Adede, Combating the HIV/AIDS Pandemic in Africa Through Proper Implementation of Treaty-Law on Trade Related Aspects of Intellectual Property Rights, a research paper submitted to the government of Kenya, and discussed with the High Commissioners and Ambassadors of Malawi, Rwanda, Tanzania, Zambia and Zimbabwe to Kenya, August 2000, printed in 8 AFRICAN YEARBOOK OF INTERNATIONAL LAW (Forthcoming 2000).

compulsory licensing, unlike, say, India, Egypt, South Africa, Thailand, and Brazil, which have significant local drug industries. Thus, for Africa, the so-called “breakthrough” at Doha on this question is somewhat exaggerated. But there again, the Doha Declaration does prepare the ground for further actions on this matter, as follows:

We recognise that WTO Members with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement. We instruct the Council for TRIPS to find an expeditious solution to this problem and to report to the General Council before the end of 2002.³²

It should be mentioned that the most expansive and effective compulsory licensing regime would not in itself solve the problem of access to medicines. To turn the compulsory licensing provisions of TRIPS into a feasible policy option requires a viable infrastructure for delivering the therapy regimes to patients. Having access to affordable drugs is one thing. The ability to deliver the necessary services for administering such drugs is quite another.

Recognising the access to medicines problem, African policymakers and negotiators at the TRIPS Council may wish to:

- (a) Argue for the acceptance of parallel importing of needed drugs including affordable generic versions as a legitimate measure to address the public health emergency caused by the HIV/AIDS pandemic within the meaning of the TRIPS Agreement;
- (b) Urge other WTO members to accept that for African countries to take advantage of compulsory licensing, special measures are necessary to encourage foreign direct investment and technology transfer targeted at the development of pharmaceutical manufacturing capacity;
- (c) Urge other WTO members to accept the need to prepare appropriate guidelines for access to the Global Fund for HIV/AIDS, including support for global bulk drug procurement mechanisms that could further lower prices while maintaining quality control,³³ and
- (d) Introduce appropriate national legislation to enable African countries to take advantage of compulsory licensing or parallel importing, including laws against restrictive trade practices in this area (antitrust laws) that would together permit the interpretation and application of the TRIPS Agreement in a genuinely flexible and supportive manner as recognised by the Doha Declaration.

³² See, Declaration on TRIPS Agreement and Public Health, *supra* note 1.

³³ See AFRICA ACTION, posting of November 16, 2001, <http://www.africapolicy.org>.

4: INNOVATION

“Innovation”, may be described as “the process by which firms master and implement the design and production of goods and services that are new to them, irrespective of whether or not they are new to their competitors – domestic or foreign”.³⁴ Generally, the term is applied only to the industrial sphere. Thus, traditional knowledge and folklore, which are of great importance to Africa, are not considered to be innovative.

There is good reason to be sceptical that the TRIPS Agreement, as it is, will encourage innovation in Africa, either in the area of TK, or through acquisition, dissemination and adaptation of knowledge and technologies from elsewhere. According to the United Nations Development Programme:

In this new global regime two problems are creating new hurdles for progress in human development. First, consensus is emerging that intellectual property rights can go too far, hampering rather than encouraging innovation and unfairly redistributing the ownership of knowledge. Second, there are signs that the cards are stacked against fair implementation of TRIPS.³⁵

According to this view, TRIPS is disadvantageous for developing countries. Why? The TRIPS Agreement requires Member States to provide patent protection for “any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application”. The “inventive step” and “capable of industrial application” requirements are deemed to be synonymous with the terms ‘non-obvious’ and ‘useful’ respectively. Traditional knowledge fails the test for patenting on one, or on all, of these criteria. For example, on the “novelty” standard, many traditional products would fail because they have been known for some length of time and are therefore not new. But one should be careful not to generalise. Some TK is adaptive and may well be “new” to the world outside of the community from which it came. Indeed, a patent office or court could possibly accept this argument.

On the other hand, the existing patent systems have sometimes exposed indigenous and community-based innovations to private sector claims. Mention may be made of the notorious cases of falsely claimed patents such as those concerning the properties of the neem tree, the Mexican enola bean,³⁶ the Kenyan kiondo,³⁷ soapberry (an Ethiopian plant species),³⁸ the zero-caffeine coffee tree (from the island of Reunion),³⁹ brazzein (a sweet protein from

³⁴ Ernest, *et al*, in Mytelka and Tesfachew, (1998).

³⁵ See, HUMAN DEVELOPMENT REPORT 2001 (UNDP- Pub. 2001) P. 103.

³⁶ Mentioned in Id. at 104.

³⁷ A functional bag for women, made of attractively woven, multicoloured local fibres, using traditional knowledge, which a foreign company in Japan attempted to reproduce industrially and patent as recorded by the Kenya Industrial Property Office (KIPO).

³⁸ A property found in Soapberry seeds used by Ethiopian women and scientists in controlling schistosomiasis or snail fever, as reported in RAFI supra note 9.

³⁹ A coffee variety possessing unique properties used by the local community from Island of Reunion. Cited in the RAFI study supra note 9.

Gabon),⁴⁰ Ethiopian teff (an Ethiopian crop species),⁴¹ Kunde Zulu (a Kenyan crop variety),⁴² and the Apelewa variety of Quinoa (an Andean plant species).⁴³

Suggestions have been made that the innovations and creative works associated with traditional knowledge could be promoted using copyright, trade secrecy or geographical indications. For examples, Aboriginal artists in Australia have on a few occasions successfully asserted their rights in the courts by claiming copyright infringement. But these measures have their limitations.

It may thus be concluded that TRIPS needs to be amended to reflect the interests of African States. In this connection, we may refer, for example, to the South African Indigenous Knowledge Bill. The aims of the South African second draft bill, which uses interchangeably the terms “indigenous knowledge” and “traditional knowledge” are: “to provide for the promotion of indigenous knowledge: to provide for the preservation, development, fostering and extension of indigenous knowledge systems (IKS) in the Republic by planning, organising, coordinating and providing facilities for the utilisation of leisure and for non-formal education; for the development and promotion of IKS relations with other countries; and to confer certain powers upon the Minister in order to achieve those objects; and to provide for matters connected therewith.”⁴⁴ Discussions on its subsequent provisions show that the Bill still has deficiencies that should be addressed in order to promote fully its objectives. Such domestic legislation, given the negative experience of Africa with the global regime as just outlined, responds directly to the two counts against the TRIPS Agreement. Yet, the cards are stacked against its fair implementation, particularly with respect to Africa. The following statement makes a strong case in support of this view:

A regime for global intellectual property rights is not fair if it is global in enforcement but not in the tools it provides. Intellectual property law – patents, copyright, trademarks, industrial design, geographic indications – arose from the needs of inventors in the industrial revolution. But the keepers of genetic resources, traditional knowledge and folklore have different customs, institutions, needs and ways of working that are not yet adequately reflected in this framework.⁴⁵

⁴⁰ A super-sweet protein isolated from the berry of a plant found in Gabon. *Ibid.*

⁴¹ An Ethiopian herb used by Ethiopians for spicing food. Cited in Joseph-Antoni Gari, “Conservation, Use and Control of Biodiversity”, *supra* note 43.

⁴² A Kenyan cowpea used in preparing a number of dishes in various communities. For further discussions of these examples, see, e.g., TRIPS traps small farmers and threatens food security, paper presented on behalf of Rural Advancement Foundation International (RAFI), at a Conference sponsored by African Centre for Technology Studies (ACTS) and UNEP, Nairobi, 6-7 February, 1999. (Unpublished, on file with the present author); see e.g. J. Gari, Conservation, use and control of biodiversity, paper presented at the same ACTS/UNEP Conference, 6-7 February 1999. (Unpublished, on file with the present author).

⁴³ A property found in Apelewa seed variety of Quinoa used in creating new hybrid seed varieties. The said property has been used and continue to be used by Andean communities. *Ibid.*

⁴⁴ See R. Wolson, Towards TRIPS compliance: South Africa's experience and legislative reforms, a paper presented at a multi-stakeholder dialogue on Trade, Intellectual Property Rights and Biodiversity in Eastern & Southern Africa, at Aberdares Country Club, Nyeri, 30th-31st July 2001. (Unpublished, on file with present author).

⁴⁵ See, UNDP Pub. supra 35 at 105, BOX 5.7.

In light of the foregoing, the African negotiators at the TRIPS Council may wish to bear in mind the following:

- (a) The TRIPS Agreement needs to be amended to include recognition of innovations based on traditional knowledge and folklore, which are of great importance to the continent. It should be noted in this context that the 1996 WIPO's Convention on the Performances and Phonograms defined the performance of literary or artistic work to include "expressions of folklore"; and
- (b) They should coordinate with those African policymakers implementing the New African Initiative. As indicated earlier, the Heads of State and Government have called for special attention towards the protection and nurturing of indigenous knowledge. According to them, indigenous knowledge includes: tradition-based literacy, artistic and scientific works, performances, inventions, scientific discoveries, designs, marks, names and symbols, undisclosed information and all other tradition-based innovations and creations resulting from intellectual activity in the industrial, scientific, literary or artistic fields.⁴⁶

⁴⁶ See, Doc. supra note 26 para. 53.8.

5: TECHNOLOGY TRANSFER

The TRIPS Agreement provides for transfer of technology to the developing countries and to the least-developed Members in the following terms:

Developed country Member shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base.⁴⁷

In order to facilitate the implementation of this agreement, developed country Member shall provide, on request and mutually agreed terms and conditions, technical and financial cooperation in favour of developing and least developed country Members. Such cooperation shall include assistance in the preparation of laws and regulations on the protection and enforcement of intellectual property rights as well as on the prevention of their abuse, and shall include support regarding the establishment and reinforcement of domestic offices and agencies relevant to these matters, including the training of personnel.⁴⁸

These provisions legally oblige the developed Member States to transfer technology to the developing and least-developed countries. But despite these provisions and similar stipulations in various other multilateral treaties, including some with detailed procedures and funding mechanisms,⁴⁹ such obligations have barely been implemented if at all, and developing countries have been unable to do anything about it except for constantly recording the fact.

The problem is that these technology provisions indicate no time-frame within which the obligations contained therein must be discharged. Accordingly, the industrialised countries can legitimately and legally choose to do nothing, and whenever confronted can simply confirm that they accept the obligation to transfer technology but reserve the right to decide when to do so. The result is that developing countries are left to wait indefinitely.

To remedy the situation, we suggest that African negotiators in the TRIPS Council should:

- (a) Actively pursue the possibility of establishing additional technology transfer provisions that specify the time-frame within which the transfer is expected to occur, and do so vigorously during the relevant negotiations that WTO Member States at Doha have agreed to undertake;⁵⁰
- (b) Insist on a time-frame for the conclusion of a new multilateral treaty in this area, which includes "transfer of technology" clauses;

⁴⁷ Article 66 (2) of the TRIPS Agreement.

⁴⁸ Article 67 of the TRIPS Agreement.

⁴⁹ See, e.g. Article 16 of the 1992 Convention on Biological Diversity (CBD); Article 4 paragraph 1 (c) and 3 of the 1992 United Nations Framework Convention on Climate Change (UNFCCC); and Articles 144 and 266 of the 1982 United Nations Convention on the Law of the Sea.

⁵⁰ See, in this connection, paragraph 7 of the Declaration by the Doha Ministerial Conference, Doc. *supra* note 1, and Section 11.2 of Doha document on Implementation related issues and concerns, *supra* note 1.

- (c) Coordinate their views on this matter with the following proposals relating to implementation of the New African Initiative (NAI):
- (i) the establishment of a regional mechanism for developing regional technology programmes and strategies aimed at closing the digital and biotechnology/genomics gaps with the rest of the world;
 - (ii) the mobilisation of African policymakers, scientists and the public to participate in the articulation of the regional priorities and technology needs; and
 - (iii) the recognition of the fact that technology foresight studies are becoming powerful instruments for guiding choices of scientific research priorities aimed at achieving a transition to endogenous scientific and technological development (away from over-dependency on foreign science and technology), which can be well managed and informed by a good understanding of the status of science and technology in the region, relying on African regional centres of excellence in the field of science and technology, which should be established.⁵¹

⁵¹ For detailed discussion of such proposals for the implementation of the NAI relevant to our analysis on this topic, see, REPORT OF THE 1ST ROUND TABLE ON AFRICA, SCIENCE AND TECHNOLOGY IN THE AGE OF GLOBALIZATION, organised by ACTS in collaboration with the African Technology Policy Studies (ATPS) in Nairobi, 7-8 August, 2001 (on file with the author).

6: FOREIGN DIRECT INVESTMENT (FDI)

Does the TRIPS Agreement encourage or hinder FDI in Africa? A generalised answer does not appear to be possible on the question since the empirical evidence is decidedly inconclusive.

The results of studies on the links between the existence of tighter IPR protection in developing countries and FDI flows, research and development, and technology transfers have been contradictory. For example, one study on the pharmaceutical industry in Turkey,⁵² and another on manufacturing industry in Brazil,⁵³ concluded that patent protection had no effects on the flow of FDI. But a different study claimed the opposite in the case of chemical and pharmaceutical companies, finding that their FDI decisions were influenced by the levels of IPR protection in developing countries.⁵⁴ In the light of such conflicting data, some experts consider it prudent to be cautious and feel that African governments should therefore adopt a policy based on the view that TRIPS is on balance likely to hinder FDI. In this context, it has been observed that:

There is a widespread perception that TRIPS has failed to deliver the benefits that were promised. There is a need to address this and to review key provisions. The lack of success of TRIPS in increasing technology transfer is one of its most serious imbalances, along with its negative impact on FDI in pharmaceutical industries. The demise of working patent obligations reduces an important incentive for FDI while increasing monopolies.⁵⁵

But this perception may not be entirely correct. It has also been argued that:

Intellectual protection is good for poor countries. It encourages domestic industry, boosts foreign investment and improves access to new technologies. To true believers, intellectual property protection is part of the gospel of modern economic growth, along with free trade and democracy.⁵⁶

Clearly, the truth needs to be established through empirical evidence from Africa.

⁵² A study done in Turkey in 1985 found that the banning of pharmaceutical patents had no significant effects on the level of FDI, technology transfer, or domestic innovation. Kirim, A. S. 1985 "Reconsidering patents and economic development: a case study of the Turkish pharmaceutical industry", *World Development* 13(2): 219-235.

⁵³ A study conducted in Brazil in 1995 which took the manufacturing industry as a whole also found no evidence that FDI levels in the country were greatly affected by patent protection. Kondo, E. K. 1995 "The effect of patent protection on foreign direct investment", *Journal of World Trade* 29(6): 97-122.

⁵⁴ A study based on interviews with intellectual property executives of U.S. corporations from chemical and pharmaceutical industries claimed that their FDI decisions were affected by the level of IPR protection available. Mansfield, E. 1994 *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer. IFC Discussion Paper No. 19*, Washington, DC: International Finance Corporation. This is further supported by a recent observation that: "In general, strong intellectual property protection is correlated with the attraction of foreign direct investment - - - This is particularly true for investment involving research and development - - - Failure to protect intellectual property tends to encourage foreign producers to prefer licensing over direct investment and exporting to the host State over either alternative, thereby foreclosing access to the latest technology". See K. Vandeveld, *The Political Economy of a Bilateral Investment Treaty* 92 AJIL 621, at 638, n 163 and the sources cited therein (1998).

⁵⁵ See, *Development Co-operation, TRIPS Indigenous Knowledge and Genetic Resources*, Report of a Quaker United Nations Seminar 6-7 April 2001. (Unpublished, on file with the present author).

⁵⁶ *The right to good ideas*, THE ECONOMIST, 25 at 30 (June 23rd -29th 2001) as cited in A. Adede, *supra* note 4, at 23, juxtaposing the observation with the opposite view claiming that patents are bad for poor countries.

On the question of FDI in the form of funds for research on transgenic crops, for example, an empirical study on the work of the Consultative Group for International Research (CGIAR) system makes the following recommendations that touch critically upon TRIPS issues.

We recommend that: (i) governments should fully recognise that there will always be public interest/goods research requiring public investment even in the market-driven economy: it is imperative that public funding of research in this area is maintained at least at its present level in both CGIAR and national research institutions; (ii) governments, international organisations and aid agencies should acknowledge that plant genomics research is a legitimate and important object for public funding, and that the results of such research should be placed in the public domain; (iii) innovative and vigorous forms of public-private collaboration are urgently required if the benefits of GM technologies are to be brought to all the world's people; (iv) incentives are needed to encourage commercial research companies to share with the public sector more of their capacity for innovation; and (v) care should be taken so that research is not inhibited by over-protective intellectual property regimes.⁵⁷

In light of the foregoing, it is useful for African policymakers and negotiators at the TRIPS Council to consider:

- (a) The fact that FDI may indeed be available where there is an open attitude towards trade and investment, a sound infrastructure and a balanced approach to intellectual property right protection. For, where African governments have made a virtue of shutting out foreign goods and investment, inevitably they shut out ideas, too. With no foreign competition, local firms have no one to learn from and little incentive to make their own products better;⁵⁸
- (b) Standing firm on the fact that attracting FDI must not, however, lead to the loss of Africa's power to guard against biopiracy and loss of their proprietary rights over their genetic resources and traditional knowledge by routinely publishing the results of the research and thereby placing such commodities in the public domain;
- (c) Ensuring that FDI is directly and more concretely linked to transfer of technology to African countries, instead of being tied exclusively to access to genetic resources; and
- (d) Guarding against foreign companies that undertake FDI in countries with strong IPR protection just to charge excessive licence fees or to enter into joint ventures under terms which maintain their full control over the use of technology.

⁵⁷ Transgenic Plants and World Agriculture, Report prepared under the auspices of the Royal Society of London, the U.S. National Academy of Sciences, the Brazilian Academy of Sciences, the Chinese Academy of Sciences, the Indian National Science Academy, the Mexican Academy of Sciences and the Third World Academy of Sciences, 24 (2000).

⁵⁸ Getting better all the time: A study of technology and development, THE ECONOMIST, November 10th 2001, PP. 3-16, at 12.

7: EMPLOYMENT

Funded research activities conducted with local participation are a source of employment in the African countries concerned. Thus, if TRIPS implementation eliminates or curtails FDI flows, local employment opportunities that research activities would have generated will correspondingly be foregone or minimised.

Furthermore, implementing TRIPS is likely to cause the closing down of counterfeit facilities. The majority of those employed by this sector would be rendered jobless. On the other hand, the closing of such facilities in an African country may lead to opportunities for generating technical assistance under the WTO system for undertaking local production of the desired goods and services, and also for tapping into appropriate local or foreign funds, for supporting local innovators and activities that create employment.

Accordingly, the African governments should consider adopting policies which aim to provide facilities and funds for local innovators (the Jua Kali sector in Kenya, for example) and discourage them from producing counterfeit goods. This would channel their creativities to legitimate businesses that create employment opportunities also for others. In fact, a recent parliamentary debate in Kenya on the country's Copyright Bill included arguments recognising that the bill, which was aimed at clamping down on piracy and counterfeit goods, would generate employment for the legitimate local industries. The results would even lead to innovations such as those relating to the production of published works, which are accessible to the visually impaired, thus generating local business enterprises and providing employment opportunities.⁶¹

⁶¹ See, "Copyright Bill Passed", EAST AFRICAN STANDARD, November 21, 2001, at 11.

8: BIODIVERSITY, BIOTECHNOLOGY AND TRADITIONAL KNOWLEDGE

We need to go beyond restating the fact that the strategic location of Africa astride the tropics and the moderate climatic conditions have favoured the natural survival of a rich biological and genetic diversity for which the continent is well known, and which it has the right to protect and to commercialise in a sustainable manner. This is the basis of Africa's great interest in the Convention on Biological Diversity (CBD), which broke new ground by: recognising the rights of indigenous and local people in traditional knowledge and innovation; establishing the principles and procedures for access to genetic resources such as informed consent, equitable sharing in the benefits of bioprospecting results, transfer of biotechnology (albeit without time-frame), and providing for funding mechanisms to help developing countries sustainably utilise their rich biodiversity resources. The failure to incorporate such provisions in TRIPS is one of the reasons why African countries are dissatisfied with the Agreement, and why they are also keen to participate actively in the pending discussions in the TRIPS Council on the relationship between the CBD and TRIPS.⁶²

Regarding the CBD-TRIPS relationship, it may be observed that pre-Doha discussions at the TRIPS Council had already isolated three basic approaches as follows:

The first, which was defended by some developing countries during the initial WTO discussions, is to argue that the CBD and TRIPS are essentially incompatible, given that the former recognises the sovereign rights of its Contracting Parties over their own genetic resources, while the latter provides for the possibility of private rights (patents) over the same resources.

The second, which reflects the views of some developed countries, including the United States, is that there is no conflict between TRIPS and the CBD and therefore no need for harmonisation.

Finally, a third approach considers that while TRIPS and the CBD are not inherently incompatible, they are likely to conflict in the way they are implemented, which demands some modifications within Article 27.3 (b) of TRIPS to incorporate some of the elements of the CBD.

In the context of multilateral negotiations and the search for systematic solutions, the first two approaches do not seem to offer viable solutions to ensure an optimal relation between the two Agreements. In support of the third approach – which seems to be shared by an increasing number of developing and developed countries at the TRIPS Council today - it is important to note that the objectives of both the TRIPS Agreements and the CBD (expressed, respectively, in their Articles 7 and 10) contain a number of common elements: the 'fair and equitable sharing of the benefits arising out of the utilisation of genetic resources' of the CBD, for instance, is compatible with the TRIPS objectives of 'balance of rights and obligations' and 'mutual advantage of producers and users of technological knowledge'. The CBD also mentions the objective of 'transfer of technology', which is certainly consistent with TRIPS objective of 'transfer and dissemination of technology'. In this context, WTO

⁶² Ibid.

Members should therefore opt for the third approach and proactively aim at mutually supportive relations between TRIPS and CBD.⁶³

On the second issue of biotechnology, which we may discuss in tandem with the other specific issue of transfer of technology in general, it is necessary to keep in mind that the two issues relate to the basic challenge of enhancing the capacity of African countries to implement TRIPS as it is or as may amended, and to enable them to sustainably utilise their rich biological resources.

It is more than a truism that building technological capacity in Africa for development cannot rely on international action alone. It must rely also on research undertaken locally. Such activities need the financial support of government so that African scientists can set their own research agendas and adopt the freely available global technologies to suit their needs.

Certain studies have been conducted on this issue and have resulted in two sets of recommendations which we set out below for the consideration of African governments. One study is addressed to national governance exclusively as follows:

We recommend that: (i) national governments ensure that endogenous capacities are built up to facilitate the implementation of biosafety guidelines or regulations; (ii) the safe development, transfer and application of biotechnology require that nations develop and/or strengthen policies, facilities, information systems, and training in biotechnology (including risk-assessment, risk-management and biosafety procedures); (iii) nations involved in the development, use, release or production of transgenic plants should have the means to assess and manage the potential risks and the benefits; (iv) as considered in the recently agreed UN Cartagena Protocol on Biosafety, an overarching body should maintain and disseminate a public database that included all newly released varieties and their performance in different environments.⁶⁴

Another study called for global action in four areas as follows:

- ✓ Creating innovative partnerships and new incentives for research and development – motivating the private sector, government and academia to combine their strengths in research and development, both within developing countries and through international collaborations.
- ✓ Managing intellectual property rights - striking the right balance between private incentives to innovate and public interests in providing access to innovations.
- ✓ Expanding investment in technologies for development – ensuring the creation and diffusion of technologies that are urgently needed but neglected by the global market.

⁶³ See, F. Cannabrava, TRIPS and the CBD: what language for the Ministerial Declaration?, BRIDGES, Between Trade and Sustainable Development. (INTERNATIONAL CENTRE FOR TRADE AND SUSTAINABLE DEVELOPMENT (ICTSD) Pub. Year 5 No. 8, October 2001), <http://www.ictsd.org>, P. 7.

⁶⁴ See note 57 supra, at 28.

- ✓ Providing regional and global institutional support – with fair rules of the game and with strategies that build the technological capacity of developing countries.⁶⁵

Putting these recommendations into effect would help African governments to identify their own responsibilities for protecting biodiversity and accessing appropriate biotechnology. The recommendations also delineate the responsibilities of developed countries and international organisations.

In light of the foregoing, African negotiators in the TRIPS Council should:

- (a) Call for TRIPS Article 27.3 (b) to be amended to include the right of WTO Members to require, whenever appropriate, as a condition of patentability: the identification of the source of the genetic material; the related traditional knowledge used to obtain that material; and evidence of fair and equitable benefit-sharing and of prior informed consent from the government or the traditional community for the exploitation of the subject matter of the patent,⁶⁶ and
- (b) Convince their governments of the need for a sufficient cadre of technical experts trained in a range of disciplines. These experts should include legal professionals to assist them in implementing the TRIPS regimes on patents, copyright and trademarks;⁶⁷ biotechnologists to carry out government bioprospecting programmes as genetic resource collectors and sample analysers; risk analysts; and individuals trained in keeping up-to-date local data banks, thus ensuring local control over the resources concerned.

⁶⁵ See note 35 *supra*, at 97.

⁶⁶ Note, in this connection, the Statement and Recommendations from a Workshop on Biodiversity Conservation and Intellectual Property Rights at New Delhi on 29-31 January 1999, which was organised by the Research and Information System on Non-Aligned and Developing Countries, Kalpavriksh, and IUCN, which proposed that the patent provisions of TRIPS should be amended to require patent applications to include: (i) disclosure of all places of origin in the material/knowledge used in the application; (ii) disclosure of all communities/persons of origin; (iii) proof of consent having been obtained from the community/persons of origin; (iv) proof of benefit-sharing arrangement having been entered into with the community/persons of origin...; (v) disclosure of any previous rejection of application, in the country or other jurisdictions; and (vi) prior public notice in all relevant languages in the places or communities of origin.

⁶⁷ See further comment in para. 65 of the study, *infra*.

9: EDUCATION

Education is a cross-cutting issue which brings immediately to mind the question of capacity-building in all its aspects. It is an issue which is relevant to practically each of the other issues covered in this brief.

Africa needs a general policy on education aimed at responding to the basic problem that the cost of primary education is beyond the reach of many Africans who are then trapped in a vicious circle of illiteracy, ignorance, and poverty that breeds hunger and disease. It is therefore important to emphasise the necessity for African countries to adopt the policy of free primary education, as has been repeatedly recognised by the international community.⁷⁰ This would also respond to the New African Initiative, which calls for the launching of primary schools in all villages and secondary schools in all regions, and “to work with donors and multilateral institutions to ensure that the IDG of achieving universal primary education by 2015 is achieved”.⁷² A good public education system is obviously necessary to develop scientific and technological capacity.

African public education systems depend largely on expensive foreign publications (textbooks and academic journals). Should the schools ignore the extensive copying of such texts by students and libraries, or should the educators be required to be TRIPS compliant by clamping down on any act of copyright infringement, thus denying the students easier access to educational materials they desperately need? This is the dilemma.

In this connection, we should note that the objectives of TRIPS as delineated in Article 7 do not refer to eradication of counterfeiting as such. In fact, TRIPS is aimed specifically at promoting public policies that promote technological development as determined by national governments.⁷³

African governments must pursue wealth-generating policies in order to finance free primary education and enable their institutions of higher learning to have adequate supplies of educational materials. Perhaps one way to do this is to introduce IPR-related policies for attracting investment targeted at research and development and technology transfer. Governments can also encourage such activities by promoting links between universities and industry and providing fiscal incentives for private firms to conduct research and development.⁷⁴

⁷⁰ It is to be noted, in this connection, that the objectives of providing free primary education in Africa were clearly explained and endorsed by African governments at a UNESCO-sponsored Conference at Addis Ababa in 1960. A similar call to provide free and compulsory primary education were made at the World Conference on Education in Thailand in 1990, and in Dakar, Senegal in 2000. Most importantly the obligation to “[m]ake primary education compulsory and available free to all” is contained in Article 28 (a) of the 1989 United Nations Convention on the Rights of the Child, to which most African governments are parties.

⁷² See, Doc. *supra* note, 3 para. 53.3 (first objective) and 54.3 (Education).

⁷³ Article 7 states that the protection and enforcement of intellectual property rights should: contribute to the promotion of technological innovation; and to the transfer and dissemination of technology and be: to the mutual advantage of producers and users of technological knowledge; in a manner conducive to social and economic welfare; to a balance of rights and obligations.

⁷⁴ *Unleashing human creativity: national strategies*, in Human Development Report 2001, (UNDP Pub. 2001), P. 79.

10: ENFORCEMENT AND ADMINISTRATION COSTS

There is increasing awareness that African governments must first invest heavily in setting up viable administrative and enforcement structures before they can expect to enjoy the benefits of strong IPR systems. Such benefits, it is hoped, should arise from such sources as: (a) commercialisation of their rich genetic resources; (b) increased income from trade in IPR-protected local artworks; (c) the patent examination and registration fees; and (d) the results of economic activities associated with the wider application of traditional knowledge and cultural expressions, such as for the development of medicines and for the entertainment industry.⁷⁵ It is noteworthy that parliamentarians in an African country that recently introduced a copyright bill to combat piracy insisted that the government should demonstrate that it had taken full account of the financial implications of the bill in that respect and that sufficient funds had been allocated for enforcement before they were prepared to debate the bill.

Estimating the financial burden on African countries associated with establishing and running TRIPS-compliant IPR systems requires the gathering of reliable statistics and other empirical evidence. For example, there is a need for data on costs relating to: (a) local institutional mechanisms for preventing the production and circulation of counterfeit and pirated goods; (b) establishing and running adequately-staffed patent and copyright offices; and (c) maintaining a competent cadre of legal, scientific and technological experts to administer IPR laws, including the drafting of new legislation and other relevant reform projects.

Whatever the exact costs that countries will have to bear, there is no doubt that the least-developed countries will find enforcement and administrative costs quite burdensome.

⁷⁵ It is significant to note that the drumbeats of the famous Karachuonyo Ramogi dancers and the traditional rhythms associated with the beats, admittedly inspired Maurice Oyando's creativity in weaving that traditional appreciation throughout his song, "Say yes for the children", which won the prestigious Emmy Award at the 29th International Emmy Awards in New York on Monday 19 November 2001.

CONCLUSIONS

In several areas, our discussion has called on Africa to provide empirical evidence to support some of the positions they have adopted, or which they are being urged to pursue in response to the anticipated social and economic impacts of the TRIPS Agreement. Such empirical evidence would obviously make Africa's case stronger and less prone to being dismissed as posturing or ill-informed. Africa, therefore, needs to collect and deploy data on, for example:

- (a) The magnitude of biopiracy, including cases of uncompensated use of Africa's traditional knowledge in commercialised products;
- (b) The *quid pro quo* in the area of foreign direct investment in research activities, thereby clarifying the correlation between FDI, technology transfer and access to genetic resources;
- (c) The availability of indigenous seeds (in quantitative and qualitative terms) for African farmers so as to demonstrate the possible negative effects of the acceptance of the UPOV regimes upon the local farmers' ability to save and freely exchange such seeds;
- (d) The evidence of negative impacts on the food security of the African farmers occasioned by the new farming practices such as monocultural farming as opposed to mixed farming, and plantation farming as opposed to shifting cultivation;
- (e) The difference between the prices now being offered by the Western multinational pharmaceutical companies for their patented brand-name HIV/AIDS drugs, and those of cheaper generic alternatives that may become available through compulsory licensing or parallel importation; and
- (f) The administrative and enforcement costs associated with the establishment and running of effective patent and copyright offices and to control or even eliminate pirated goods and counterfeit trade.

In sum, African negotiators at the TRIPS Council should draw upon the work of the recently-established New Partnership for Africa's Development (NEPAD) which succeeded the New African Initiative (NAI). The NAI, it may be recalled briefly, was the document endorsed by the African Heads of State and Government at the Lusaka Summit of 7-9 July 2001, upon launching the African Union (AU) as the successor to the OAU. The popularisation and implementation of the existing OAU Model Legislation, may be one of the prime activities of the NEPAD, thus establishing a direct connection between this new institution and the WTO.

This policy brief draws upon the results of the Fourth Ministerial Conference of the WTO at Doha, Qatar, the relevant sections of the “New African Initiative” (NAI), as well as the OAU Model Legislation, to highlight the relevance for the African continent of the WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

The objective of this policy brief is to (a) inform African policymakers about the full implications of implementing the TRIPS Agreement and its impacts upon their respective economies and societies; (b) outline and analyse the existing African proposals concerning the implementation and review of the Agreement; and (c) suggest TRIPS-related measures which African States may take in pursuit of their sustainable development objectives.

The focus of this study is laid upon ten main issues of interest and concern for Africa: food security; enhancing Africa’s export potential; access to drugs; innovation; technology transfer; foreign direct investment (FDI); employment; biodiversity, biotechnology and traditional knowledge; education; and enforcement and administrative costs.



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