cations from more than 40 countries, searchable in the organization's database by a variety of fields, including their licensing status.

Ending with some closing general remarks about PIPRA, we ought to highlight its role model function as an high-profile organization, that is active in the domain of agricultural biotechnology, which has the major aim to implement a practical framework to create "commons" of previously fragmented public sector IP portfolios, ultimately in order to address goals of greater commercialisation, as well as reservation of rights to ensure that the humanitarian cause can be achieved. These high-profile objectives echoed throughout the international technology transfer community, so that PIPRA is now widely perceived as a model IP collective mechanism that may eventually be emulated in other technology sectors in general, and for life sciences in particular.[634]

Nevertheless, to a more scrutinizing, result-oriented assessment, going beneath the "popularity" gained on account of the humanitarian goal proclaimed by such organization, which has certainly assumed noteworthy dimensions, practical and traceable evidence as to new technologies that have been actually brought to developing countries, showing a positive impact on their economies, could not be gathered.[635] In fact, although in this respect the direct inquiry addressed to the representatives of the organization has been evaded, mostly on account of the merely "enabling" role function of PIPRA into facilitating networking initiatives aimed at making public sector's technologies more accessible for the benefit of developing countries, it shall be undisputed that the establishment of successful practices in this area, as well as instances of positively applied technologies, resulting from PIPRA's networking endeavours, would certainly confirm the effectiveness and usefulness of such initiative in the first place, which unfortunately this contribution cannot fully corroborate.

## III. Royalty Collection Clearinghouse

The third model to be taken into consideration is the royalty collection clearinghouse,[636] the most advanced one in terms of services provided, namely comprising

634 Along the same line and for a wider policy perspective on PIPRA's initiative and alike, see i.a.: Wright B., "Agricultural Innovation after the Diffusion of IP Protection", "Institutional Initiatives to Encourage Biotechnology Innovations", In: Kesan J., "Agricultural Biotechnology and Intellectual Property: Seeds of Change", CABI Publishing Series, 2007, p. 12 *et seq*.

635 This evaluation follows a personal attempt to gather tangible, practical evidence by specifically addressing the representatives of the organization in order to provide for reliable references supporting the institutional goals proclaimed, i.e. helping public sector technologies to have an impact on developing countries' economy. Regrettably, the feedback received has been evasive and therefore non-satisfactory in this respect.

636 Van Overwalle G., *et al.*, "A Clearinghouse for Diagnostic Testing: the Solution to Ensure Access to and the Use of Patented Genetic Inventions?", Bulletin of the World Trade Organization, 2006, vol. 84, issue 5, p. 352 *et seq*.

some fundamental features of the technology exchange prototype, i.e. partnering technology holders with prospective licensees and eventually initiating the respective negotiations, while combining them with the additional, peculiar prerogative of cashing royalty fees from users on behalf of IP holders.[637]

Similarly to what happens in a patent pool, according to the comprehensive scheme characterizing such type of clearinghouse, the collected royalties will then be re-allocated by the managing entity to the individual patent holders pursuant to a pre-set proportional formula. However, while in a pool the aggregated patents are directly inter-connected with each other, ideally forming a unitary package of complementary technologies, in a clearinghouse the administering entity typically represents the only "point of attachment" for the different right holders, who do not engage in any reciprocal right or obligation.

Classic examples of royalty collection clearinghouses typically refer to the copyright rather than the patent domain, as is indeed the case for many national representative agencies. Copyright collecting societies aim to represent right holders' interests before prospective licensees, usually as part of a statutory scheme, by handling the outsourced function of right management. The underlying idea is that individual management and eventual enforcement is not always appropriate or effective, given the number and arisen complexity of uses involved, therefore right owners typically transfer rights to conclude non-exclusive licenses to collecting societies; collect and then re-distribute respective royalties; pursue enforcement; enter into reciprocal arrangements with other collecting societies and act as lobbying interest groups. Just to quote some representative examples of copyright collecting societies, we may recall the ASCAP (American Society of Composers, Authors and Publishers),[638] the JASRAC (Japanese Society for Rights of Authors, Composers and Publishers)[639] and other country-based agencies, which are normally national members of the CISAC (International Confederation of Societies of Authors and Composers).[640]

Taking into account the thriving experience matured by collecting societies in copyright management, it has been advocated that the model should also be exported into other IP sectors,[641] by supporting the establishment of royalty collection clearinghouses in the field of patents and genetic inventions.[642] Unfortunately, at present

637 Merges R., "Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations", California Law Review, 1996, vol. 84, p. 1293 *et seq.*

638 For the official website of ASCAP, see: http://www.ascap.com

639 For the official website of JASRAC, see: http://www.jasrac.or.jp/ejhp/index.htm

640 For the official website of CISAC, see: http://www.cisac.org

641 For a broader debate on the topic, see: Reichman J., "Legal Hybrids Between the Patent and the Copyright Paradigms", Columbia Law Review, 1994, p. 2432 *et seq.*

642 Organization for Economic Cooperation and Development (OECD), "Genetic Inventions, Intellectual Property Rights and Licensing Practices - Evidence and Policies", "Private and Public Approaches to Access", 2002, p. 72 *et seq.*, also available at: http://www.oecd.org/dataoecd/42/21/2491084.pdf;
Graff G. *et al.*, "Towards an Intellectual Property Clearinghouse for Agricultural Biotechnol-

no working example of the model actually exists, although a praiseworthy attempt to realize such institutional framework has been conduced through the design of the Global Bio-Collecting Society (GBS).[643] In fact, the undertaken project to realize a royalty collection clearinghouse in life sciences did not materialize in the end because no consensus could be achieved among the right holders involved and the needed political support was missing.

The Global Bio-Collecting Society was conceived as an international enforcement agency to coordinate operative work at a national level, functioning as a fair and equitable exchange model for indigenous knowledge between knowledge holders (i.e. indigenous group) and knowledge users (i.e. life science industry) in the commerce of biodiversity.[644] Specifically, it was supposed to be a sort of private collective management institution monitoring the use of traditional knowledge and, consequently, issuing licenses to users and redistributing the collected fees to the respective indigenous groups, as legitimate right holders, in proportion to the extent to which their knowledge is commercially exploited by others. In this regard, it has been rightly observed that even if, for instance, a biologist once described a community's use of the medical effects of a plant in an academic journal without asking permission, this does neither mean that the community has abandoned its property rights over that knowledge, which therefore cannot be treated as "public domain", nor its responsibility to ensure that that knowledge is used in a culturally appropriate manner.[645]

The project of a Biocollecting Society to manage and coordinate efforts at a global level was advanced by Prof. Drahos, of the Australian National University, who first suggested that a property rights-based institution should be established in order to reduce transaction costs, while improving the international enforcement over traditional knowledge and biodiversity related rights,[646] thus generating trust in the market between the holders and prospective commercial users, i.e. licensees.

As we mentioned, the Global Biocollecting Society has been shaped on the model of the collecting societies commonly operating in the copyright domain.[647] However, while the latter are mostly active at the national level, the former shall have been an

ogy", Agricultural Biodiversity and Biotechnology in Economic Development, May 2006, vol. 27, p. 387 *et seq.*

643 Drahos P., "Indigenous Knowledge, Intellectual Property and Biopiracy: Is a Global Bio-Collecting Society the Answer?", European Intellectual Property Review, 2000, vol. 6, p. 245 *et seq.*

644 Van Overwalle G. *et al*, *supra*, fn. 636, p. 352 *et seq.*

645 Dutfield G., "Protecting Traditional Knowledge: Approaches and Proposals", Feb. 2003, vol. 7, issue 1, p. 13 *et seq.*

646 For the protection of biodiversity, see also: Straus J., "Biodiversity and Intellectual Property", in: Hill K.M., Takenaka T. and Takeuchi K. (Eds.), Rethinking International Intellectual Property -Biodiversity & Developing Countries, Extraterritorial Enforcement, the Grace Period and other Issues, CASRIP Publication Series No. 6, Seattle, 2001, p. 141 *et seq.*

647 Reichman J., *supra*, fn. 641, p. 2432 *et seq.*

international institution.[648] From a legal perspective, its peculiar mandate would be the implementation of the Convention on Biological Diversity',[649] particularly in relation to the protection of traditional knowledge itself. The Convention at issue was in fact adopted at the World Summit in Rio de Janeiro in 1992 and entered into force one year later. For the first time in international law, it recognized that the conservation of biological diversity is "a common concern of humankind", as well as an integral part of the development process. Its three main goals are the conservation of biological diversity (or biodiversity); the sustainable use of its components; and, finally, the fair and equitable sharing of benefits arising from genetic resources.[650]

From a practical perspective, the Global Biocollecting Society shall have been a repository of community knowledge voluntarily submitted by traditional groups and communities: submissions would foster a dialogue between the public involved and interested companies to gain access to relevant information, eventually resulting in fair commercial transactions allowing the lawful exploitation of genetic resources and traditional knowledge in the hands of indigenous populations. Finally, to improve the chances of successful negotiations to benefit local communities, the Global Biocollecting Society could have also provided a range of additional services, such as the market monitoring for the effective commercial uses of the traditional knowledge at issue, as well as an independent dispute settlement body to sort out eventual controversies.[651]

In general, although the Global Biocollecting Society model was constructed to encourage arrangements between indigenous groups and industries exploiting the traditional knowledge at issue and, as we have seen, never actually came to substantial application, it has been argued that the advanced concept could be re-read more broadly and implemented into the more classical IP holder and IP user, i.e. licensee, situation.[652]

The crucial question that eventually caused the collapse of the project was, in fact, mainly the one of finding the needed funds:[653] in this regard, initial reference

648 Drahos P., *supra*, fn. 643, p. 245 *et seq.*

649 Convention on Biological Diversity, June 1992, available at: http://www.biodiv.org/doc/legal/cbd-en.pdf

650 For policy-related issues, visit the Convention's official website homepage at: http://www.biodiv.org; for a broader debate on the topic, see *i.a.*: Pena-Neira S., Dieperink C. *et al.*; "Equitability Sharing Benefits from the Utilization of Natural Genetic Resources : The Brazilian Interpretation of the Convention on Biological Diversity", presented at the 6th Conference of the Parties of the CBD in The Hague, 19th of April 2002.

651 Dutfield G., *supra*, fn. 645, p. 13 *et seq.*

652 Van Overwalle G. *et al.*, "Models for Facilitating Access to Patents on Genetic Inventions", Nature Reviews - Genetics, Nature Publishing Group, February 2006, vol. 7, p. 143 *et seq.*

653 Leesti M. *et al.*, "Institutional Issues for Developing Countries in Intellectual Property Policy Making, Administration and Enforcement", Commission on Intellectual Property Rights, 2002, Study Paper 9, also available at: http://www.iprcommission.org/home.html. In this wide-ranging study of institutional issues related to IP in developing countries, it was shown that institutional organizations, such as the WIPO, the EPO and the World Bank were providing some significant development assistance, but more could be done to improve donor co-

was made to key institutions, such as the World Intellectual Property Organization (WIPO),[654] the Food and Agriculture Organization of the United Nations (FAO)[655] or the World Bank,[656] to build up a joint initiative. Besides, inspiration was drawn from said institutions, as well as from classic copyright collecting societies, to the extent that such entities are able to independently earn incomes from the services provided to the private sector, thus carving out an autonomous way for auto-financing themselves. Nevertheless, the lack of the strong political support necessary in the initial process at last determined the breakdown of the undertaking.[657]

From an overall perspective, a royalty collection clearinghouse mechanism may be more complicated to establish, in comparison to the less engaging clearinghouse models previously analysed. However, once in place, it could operate more effectively by facilitating the collection and distribution of IP royalties, which would take place within a centrally managed, comprehensive procedure. Still, the clearinghouse model under consideration would only be fruitful, from a business viewpoint, if on the one hand there is an effective need to carry on commercial transactions involving the patent rights administered by the clearinghouse, i.e. within the technological sector at issue, and, on the other hand, a significant number of patent holders or, ideally, an entire branch of industry would participate.[658]

## IV. Open Source Clearinghouse

Another approach to the "anti-commons" issue, dealing with the fundamental problem of access to overly scattered and fragmented IP rights in the hands of separated, multiple patent owners, is modelled on the "open source" paradigm, which has notoriously first gained popularity within the software industry. In fact, institutions sympathising with such alternative model generally provide "open", i.e. royalty-free, access to targeted assembled technologies, eventually also patented ones, through an "open source" license, which namely subtracts the technologies at issue from private, exclusive appropriation by building a "commons" of contributed IP rights under the terms of the agreement, typically strengthened by a "grant-back"

ordination. The specific recommendations on the point were in fact used as a reference when addressing the creation of a Global Biocollecting Society.

654 For the official website, see: http://www.wipo.int/portal/index.html.en

655 For the official website, see: http://www.fao.org

656 For the official website, see: http://www.worldbank.org

657 Drahos P., "Towards an International Framework for the Protection of Traditional Group Knowledge and Practice", UNCTAD-Commonwealth Secretariat Workshop on Elements of National Sui Generis Systems for the Preservation, Protection and Promotion of Traditional Knowledge, Geneva, February 2004

658 See in this sense: Van Overwalle G. *et al.*, *supra*, fn. 652, p. 143 *et seq.*