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The Optimization of Knowledge Resources through Tailor-Made Intellectual Property and Contract Law in Indonesia

*Hayyan ul Haq**

This article tries to elaborate legal protection for the optimisation of production and dissemination of sources and products of knowledge such as information, knowledge, biodiversity, genetic resources, traditional knowledge and folklore. This protection was aimed to create wider public access towards sources and products of essential knowledge particularly in the field of food, agriculture, health and education in order to ensure the living sustainability. The main issue in this article is to review the existence of exclusive rights and freedom of the contract and to elaborate the regime model of intellectual property rights and contract that is suitable to the Indonesia's interests.

Keywords: *Exclusive Right, Common Right, Freedom of Contract, Knowledge resource (INT and BGRTKF), Pancasila, Fundamental Right, Sustainability.*

1. Introduction

Complexity and uncertainty in optimising (access and distribution) information, knowledge and technology (hereinafter INT) indicate the tragedy of anti common that may threat the sustainability of human life. In this context, INT is defined as any message that can explain any phenomenon, and help humans to reduce uncertainty, as well as to solve problem. Therefore, it should be noted that the

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term INT refer to all kinds of information (codified or uncoded or artefact embodiment or skill embodiment), not only information protected under copyright law, and includes what Ginsburg describes as informational works.¹ Then, regarding the tragedy of anticommons, Heller defines the anticommons as multiple owners who are endowed with the right to exclude others from a scarce resource, and no one has an effective privilege of use. When there are too many owners holding rights of exclusion, the resource is prone to underuse - a *tragedy of the anticommons*.²

Various facts and data provide evidence of the serious threats of an unbalanced policy in managing and regulating INT that bring about the disparities in optimising intellectual products. Data on this disparity indicate that most intellectual property products and their derivatives and other global resources are controlled by a few gigantic corporations in developed countries. Drahos and Braithwaite maintain that the expansion of intellectual property systems has enabled a relatively small number of corporate players

¹ See: Shannon's information theory, at: http://en.wikipedia.org/wiki/Information_theory; See also: Hugenholtz, P. Bernt, *Autersrecht op Informatie*, Kluwer, Deventer, 1989, w. summary in English, at 179; Peter Drahos, 'The Regulation of Public Goods', in Keith Maskus and Jerome H. Reichman, eds., *International Public Goods and Transfer of Technology under a Globalised Intellectual property*, Cambridge University Press, 2005, at 54; Jane C. Ginsburg, *Creation and Commercial Value: Copyright Protection of Works Information*, 90 COLUMBIA LAW REVIEW, at 1870.

² For further elaboration on "tragedy of anti common", See: Michael A. Heller, 'The Tragedy of the Anti Commons: Property in the Transition From Marx to Markets', 111 HARV. L. REV. 3 (1998). See also: David, Paul A., 2000, 'A Tragedy of the Public Knowledge 'Commons': Global Science, Intellectual Property, and the Digital Technology Boomerang', Stanford Institute for Economic Policy Research, Stanford University, SIEPR Discussion Paper No.00-02; Onsrud, H.J., 1998, 'The Tragedy of the Information Commons' in Policy Issues Modern Cartography (*Elsevier Science*) 1998, at 141-158. More generally, one can understand anticommons property as the mirror image of commons property. See: Garret Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1968; See also: Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* 182-84 (1990) (discussing applications of the tragedy of the commons and showing sustainable informal management of commons resources).

to amass huge intellectual property portfolios.³ In recent years, we have witnessed exploitation research, development, and a commercial interest in the biotechnology field. Since 1992, the number of biotech patents granted has increased substantially, and the industry has more than tripled in size. New biotech drugs and vaccine approvals rose from two in 1982 to thirty-five in 2002. In addition, some data show several causes of resource piracy as well as misappropriation in the exploitation of intellectual products. Misappropriation is used to illustrate a condition whereby corporations or researchers (inventor or creators) exploit public goods, such as information, knowledge and technology, traditional knowledge, cultural property, folklore, which are in the public domain. They exploit them without the benefit being fairly shared. Several instances of misappropriation have occurred in patent cases, such as *Turmeric Patent*, *Ayahuasca Patent*, the *Neem Tree Patent*, *Guaymi Patent*, *Aborigin Design (Milpururru)*.⁴ Developed countries have earned a profit of up to \$ US 500-800 billion from genetic resource piracy. Of that amount, only \$ US 4 billion have been returned to the countries of origin of these resources.⁵ The amounts are used to support conservation programs, not for peoples' welfare. This fact shows the deep concern concerning the optimisation of genetic resources through the exploitation of IT under an IP regime.

³ See: Drahos, P. and Braithwaite, J., 2003, *Information Feudalism: Who Owns The Knowledge Economy?*, The New Press, New York, at 5.

⁴ See: David, R. Downes, "How Intellectual Property Could be a Tool to Protect Traditional Knowledge," *Columbia Journal of International Law* 25 (2000), at 278 - 280; Shayana Kadidal, "Subject Matter Imperialism? Biodiversity, Foreign Prior Art and the Neem Patent Controversy", 37 *IDEA JOURNAL OF LAW AND TECHNOLOGY* 2, at 371-378; Darrel A. Posey and Graham Dutfield, *Beyond Intellectual Property: Toward Traditional Resource Rights for Indigenous Peoples and Local Communities*, International Development Research Centre, 1996, at 26; Anil K. Gupta, "The Role of Intellectual Property Rights in the Sharing of Benefits Arising from the Use of Biological Resources and Traditional Knowledge," in www.wipo.int/tk/en/unep, retrieved, 18 March 2005.

⁵ See: Yuni Ekawati, "Dari COP-7 CBD: Membagi Keuntungan Pemanfaatan Hayati dan Hutan Lindung" (From COP 7 CBD, Distributing Profits from the Optimisation of Biological Diversity and Rainforests), *KOMPAS*, 25 February 2004, p.10.

These facts reflect the domination of gigantic corporations that exploit exclusive rights under intellectual property regime (IP regime) to surpass and threat public interest. From time-to time, the issues concerning the optimisation and utilization of intellectual products become crucial problems, and now they become one of the hottest issues in the public debates, particularly in developing countries. Some WIPO's discussion, which propose the Geneva Declaration or the Development Agenda⁶ show the crucial degree of those issues.

Admittedly, principally, the exclusive right is aimed at protecting the interest of individual (creator or inventor) who actualize his existence and potential. To a certain extent, the exclusive right given to authors or inventor may stimulate the production and dissemination of creativity and productivity (literary, artistic, science and technology works) under free market conditions, as well as promotes certain cultural policies.⁷ However, in practice, the ideal goal and rationales have been manipulated by a few gigantic corporates. They use and exploit the exclusive rights as main instrument to accumulate the interest of power holder towards capitalism. For example, relating to technology transfer, even though, it is strongly campaigned as a principal means of relieving world poverty⁸, there is no reliable and credible evidence that show a significant correlation between technology transfer under the patent regime and the collective mastery of a nation to access

⁶ See: Sanders, A.K., 2005, "The Development Agenda for Intellectual property: Rational Humane Policy or "Modern-day Communism", Inaugural Lecture, Delivered on the Occasion of the Acceptance of the Chair of European and International Intellectual Property Law, Universiteit Maastricht, at 5.

⁷ See: Grosheide, F.W., 2001, "Crossing Borders: Convergence in the Fields of IPRs, in Ninth Annual Conference on International Intellectual Property Law and Policy, Fordham University School of Law, at 3.

⁸ Jeremy, D., 1991, *International Technology Transfer: Europe, Japan and the USA, 1700 – 1914*, Edward Elgar, at 1-2; Sherwood, R., 1990, *Intellectual Property and Economic Development*, Westview Press, at 28-37.

information, knowledge and technology (INT) effectively⁹ in order to improve the quality of people's live.

Public interest worldwide has been aroused by the health crisis in the developing countries due to the exorbitant prices of drug treatments. HIV/AIDS medicines are a high-profile example. There are 42 million people living with HIV/AIDS world-wide. (WHO, 2002). Cecilia identified that there are more than 14 million deaths each year, because of poverty and lacking access to health services. Basically, affordable medicines could help them. Efficient and affordable medicines could cut down the death toll if people had access to such drugs. The Economist pointed out a conflict between the South African government and multinational corporations arose over the government's plan to loosen IPRs' restrictions in order to reduce the price for AIDS medication needed for 5 million infected people in the country. Clearly, this unfordability correlates to interests of companies to control price of patented medicines and to block competition from other firms and other products. Prices of patented medicines are very much linked to the monopolies enjoyed by pharmaceutical companies, protected and maintained by patent rights.¹⁰

On the other side, other information, knowledge and technology resources, such as biodiversity, genetic resource, traditional knowledge and folklore (BGRTKF) are claimed by certain indigenous peoples. Both parties, corporation and indigenous peoples, try to defend and advocate their interests, in terms of economic or profit oriented. The failure to find an appropriate solution will hamper the knowledge grows that are necessary for maintaining sustainability for human life. This fact requires not only social responsibility of corporate, but also indigenous peoples and their activists (NGOs) to eradicate any block of knowledge grows

⁹ Correa, C.M., in Keith Maskus and Jerome H. Reichman, eds., 2005, *International Public Goods and Transfer of Technology under a Globalised Intellectual property*, Cambridge University Press, at.228.

¹⁰ See: WHO, "AIDS Updated, 2002", <http://www.who.int/hiv/pub/epidemiology/epi2002/en/>; See also: Oh, Cecilia, 2001, *The health crisis in developing countries in* <http://www.twinside.org.sg/title/twr131a.htm>. Retrieved: 12 Februari 2005.

in order to fulfil fundamental rights through disseminating essential INT. Ideally, industrialised and developing countries should improve cooperation in narrowing the deep gap in utilizing INT. Unfortunately, the disparity is increasingly deeper. It is indicated by domination of industrialised countries to control more than 90 per cent of global research and development. Now the gap is stronger formatted by various international rules and bilateral agreement (TRIPs Agreement, FTAA, TRIPs Plus, etc) which potential to restrict the dissemination of INT.¹¹ This gap accumulates to the eagerness of developing countries, including indigenous people that actualise and defend their interest and rights to biodiversity, genetic resource, traditional knowledge and folklore. They protect and exploit them through contract mechanism with other research centres of pharmaceutical industries and art and cultural industries. This can be seen from various collaborations between indigenous peoples and corporations to exploit what they claim as their common property right. This situation may block public access to INT and BGRTKF as knowledge resource for supporting and maintaining our sustainable collective life.

At a time when millions of people are deprived of basic rights to health, food and education, and inequality is increasing, this question challenge to the role of law –intellectual property law- in bridging the gap. One of efforts that can be used to bridge the gap is how to create a tailor made inventor and creator doctrine that may accommodate the economic interest, indigenous peoples' interest (common right) and public interest. In this case, the exclusive right (of inventor, creator, corporation and indigenous people) should be dedicated to create the greatest benefit of the greatest number. For that reason, this work will reexamine the existence and the implication of exclusive rights in developing countries, particularly in Indonesia. Then, it will elaborate an ideal

¹¹ See: Meir Perez Pugatch, 2004, *The International Political Economy of Intellectual Property Rights*, Edward Elgar; Granstrand, *The Economics and Management of Intellectual Property: Towards Intellectual Capitalism*, 1999; Keith Maskus and Jerome H. Reichman, eds., *International Public Goods and Transfer of Technology under a Globalised Intellectual property*, Cambridge University Press, 2005.

regulatory model¹² in the optimization of INT and BGRTKF as knowledge resource. The formulation of regulatory model to ensure the flows of INT and BGRTKF for maintaining public interest, i.e. human rights and human dignity is one of the most the challenging program for countries, especially developing countries. The regulatory framework may include a national law, subsidiary regulations, administrative measures and implementation/enforcement mechanisms. The legal framework must guarantee the generation and flow of information and knowledge on biosafety that can be part of the public domain to ensure public participation and ever-deepening understanding and implementation of biosafety. Therefore, a comprehensive biosafety policy, for instance will need to be accompanied by and integrated with policies in other related fields such as agriculture, science and technology, industrial development, health, biodiversity and environmental protection. For developing countries with limited resources and/or alternative knowledge and practices in farming and health systems, this approach can be both cost-effective and ensures the further strengthening of national capacities and sovereignty over food, nutrition and health.

2. Mapping Problems in the Optimization of Knowledge Resource: An Indonesian Case

The strong pressure to harmonize the implementation of the inventor and creator doctrine, under TRPs Agreement, around of the world raises more complex questions,¹³ particularly in developing countries, i.e. Indonesia. This complexity is caused by the fact that each country has unique, specific and domestic problems, inter alia: relating to socio-cultural, religious,

¹² See: Third Word Networks, 2007, "Policy and Regulation", (<http://www.biosafety-info.net/section.php?sid=10&PHPSESSID=232f897f132e1ac6ec1ca39722dcd290>), retrieved at 27 December 2006.

¹³ See: Michael W. Smith, 'Bringing Developing Countries' Intellectual Property Laws to TRIPs Standards: Hurdles and Pitfalls Facing Vietnam's Efforts to Normalize An Intellectual Property Regime', *CASE W. RES.J. INT'LL*, Vol.31:211, 1999, at 223-228; Christopher Heath, 'Intellectual Property Rights in Asia: An Overview', *International Review of Industrial Property and Copyrights Law (IIC)*, Vol.28, 1997, at 3.

geographical, demographical, political, legal and economic aspects. It is undeniable that social structure, which is an important element to support the legal system –copyright and patent system-, is different from country to country, i.e. the different social structure and interest between developed countries and developing countries. In order to map the anatomy of problems, this work classified them into three layers of the problem: (i) symptoms; (ii) core problem; and (iii) root cause.

Firstly, symptoms are considered as undesired effects, which appear at the surface. In this context, they can be seen as impacts that have emerged from the implementation of the IP regime (the inventor and creator doctrine) that embodies the exclusive rights principle and freedom of contract without an ideal legal framework. Some problems such as the incapability of people in many developing countries to access essential resources, such as food, medicine, and basic education for sustaining their collective life, inequality in distributing the benefits of intellectual products, accumulations of growth yields to a few gigantic corporations, misappropriation, over-exploitation, extinguished biodiversities, climate change, and so forth are examples of this symptom. It can be seen as the threat of the common and anti-common tragedy.¹⁴

Scheme. 1. Mapping Problems

¹⁴ See. Note 2

Secondly, the core problem refers to the substance and structure of the law, particularly in patent and contract law. The substance relates to the norms covering regulations, international conventions or agreements (TRIPS), jurisprudence, and policies at a practical level, which may create a gap or disparity and a difficulty in accessing IT and Natural Resources. Those norms (patents and contracts) have provided maximum opportunities for a few gigantic corporations to exploit information, technology, genetic resources, tradinional knowledge, and folklore, while the structure of the law relates to institutions which implement its substance, such as the WTO, and governmental or non-governmental institutions, including corporations. At the substantial level, the crux of the tension lies in the different characteristics of the existing norms between developed and developing countries. On the one hand, patent and contract law (Western tradition) are likely to contain individualist, materialist, and exclusivist characteritics, which have developed over the years and they reflect Western and developed countries' interests. On the other hand, most of the developing world tends to involve characteristics of communalism, spiritualism and inclusivism.¹⁵

Anup Shah, in 'The WTO and Free Trade', notes a number of problems concerning TRIPs relating to the weaknesses of its internal regulation¹⁶ to protect the public interest in the field of health drugs and medicines, food, and the distribution of information and technology. The most fundamental issue is that TRIPs has transformed the Northern patent regime into a global regime, where biotechnological inventions are concerned.¹⁷ Clearly, this agreement is an open opportunity for bioindustry to

¹⁵ See further: Brierly, JEC, Section II in *Major Legal Systems in the World Today*, Steven and Sons, London, 1978, at 24.

¹⁶ For the weaknesses of the TRIPs internal regulation, See: <http://www.twinside.org.sg/title/twr120a.htm>. Retrieved:15 March 2005

¹⁷ See: Jerzy Koopman, 'Biotechnology, Patent Law and Piracy: Mirroring the Interests in Resources of Life and Culture', in Rao Narsimha, *Law of Patents: Concepts and Cases*, ICFAI University Press, at 78-79. See also: [www.wjcl.org/75/Art 75-7](http://www.wjcl.org/75/Art%2075-7).

control biological resources and to commercialise the products deriving there from through patent law, using traditional knowledge of indigenous communities and genetic material from the provider countries. In this case, we can see the two legal foundations (landmarks) in the US concerning biotechnology: (i) The Supreme Court's decision in *Diamond v Chakrabarty* in 1980 and (ii) Congress' enactment of the Bayh Dole Act in the same year. In *Chakrabarty*, the Supreme Court held that a genetically engineered bacterium was patentable under Art. 101 of the Patent Act. This decision expanded patentable subject-matter to include "anything under the sun that is made by man" regardless of its status as living or non-living matter, and it effectively opened the door to patenting discoveries in the field of biotechnology. Certainly, this doctrine sparked the tension in implementing the patent regime, particularly between developed and developing countries. This is caused by different levels in mastering information, knowledge and technology and different values in validating the patented subject-matters.

Moreover, the expansion of the scope of exclusive right accumulate to the developed countries' (the United States, the European Union and Japan) manoeuvres, by using freedom of contract doctrine, establish and strengthen a free trade area (FTA). In this case, the US has taken the current bilateral route (of FTAs) to shorten the long drawn-out process of multilateral, post-TRIPs negotiations and to overcome the resistance of other countries to US interests. This FTA aims to bind and control other countries, particularly developing countries, so that they are compelled to implement the TRIPs-plus provisions. The TRIPs-plus provisions in the US-initiated FTAs consist of: (i) expanding the scope of protection available to drugs manufactures: (a) extending the patent term (by compensating the time lost in processing patent applications for or the registration of a drug); (b) compelling national drug regulatory authorities to assume the tasks of patent enforcement agents: the FTA imposes a new obligation on such authorities to prevent the registration (for "marketing approval") of generic versions of patented drugs, in other words to undertake the work of patent offices surreptitiously; (c) further restricting compulsory licenses by prohibiting the transfer of test data and related know how; (d)

protecting test data for 5-10 years; (e) restricting of generic production until the patent expires or the patentee grants consent; (ii) limitations on parallel importation; (iii) the protection of program-carrying satellite signals; (iv) the removal of exceptions from the patentability of life forms; (v) incorporating of the contents of obligations arising from the 1996 WIPO Treaties.

The impact of the peculiar ambition of the FTA can be seen on the US-Singapore Free Trade Agreement negotiated in early 2003. Several provisions that illustrate this problem are: (i) the limits on the use of 'compulsory licensing', an important mechanism for governments to obtain affordable drugs and medicines; (ii) delays or impediments to the introduction of generic competition; (iii) extends the term of patent protection to compensate for delays in regulatory approval; (iv) restricting the parallel importation of medicines placed on a foreign market at a lower price than in the home market.¹⁸

Then, at the structural level, these problems have been rooted in the strong influence of the freedom of contract and the insertion of "hard law"¹⁹ as the core characteristic of the TRIPS Agreement and its implementation, which tends to serve and protect the interest of capitalism²⁰ in developed countries. The TRIPS Agreement, introduced in 1995 after intense corporate lobbying, lies at the heart of this controversy. This is because, on the one hand, this international treaty determines rights over intellectual property (IP), which includes patents, copyright and trademarks, trade secrets, geographical indications, and industrial designs, and integrated circuits. On the other hand, this treaty ignores and even does not

¹⁸ Oxfam, 2006, "TRIPS-Plus" Provisions, http://www.oxfam-america.org/whatwedo/issues_we_work_on/trade/news_publications/trips/art5391.html, retrieved at: 26 September 2006.

¹⁹ The TRIPS agreement utilizes "hard law" in protecting intellectual property rights by higher standards and greater emphasis on law enforcement. See: TRIPS Agreement, article 1, sections 1 - 8. See also: Drahos, Peter, 1997, 'Thinking Strategically about Intellectual Property Rights', TELECOMMUNICATIONS POLICY, VOL.21, NO.3, at 201.

²⁰ See: Eric Habian, 'Intellectual Property Rights for The Rich or The Poor?', at: <http://www.wu-wien.ac.at/usr/h99a/h9950236/iprs/introduction.htm>

recognise collective rights in genetic resources, traditional knowledge and folklore products. This can be seen in technological knowledge, which is clustered in developed countries. Mostly, it lies in the hands of multinational companies (MNCs), which dominate research and development (R&D) and natural resource exploitation activities worldwide. Concerning the technological knowledge, even though *The Economist* notes the US pharmaceutical industry lost \$500 million a year in India due to the country's bad IPR protection, in 1998, the United States received royalty payments of \$36 billion. In view of this, stronger patent protection is mainly in the interest of the industrialised countries. In 1990, only 4% of the world's R&D expenditure came from developing countries, which makes it clear who will benefit most from strengthened IPR regimes.²¹ Regarding natural resources exploitation, several gigantic corporations in Indonesia, for example Freeport McMoran, New Mont and Exxon Mobil that control and exploit most natural resources (oil and gold mining) in Indonesia have attracted criticism. Their critics emphasise the need for renegotiating contracts in order to maintain the balance, not only in terms of sharing benefit, but also in terms of environmental issues to guarantee unity and sustainability.²²

²¹ See: Correa, C. (2000): *Intellectual Property Rights, the WTO and Developing Countries: The TRIPS Agreement and Policy Options*. London: Zed Books, at 5 See also: Archibugi, D. and Pietrobelli, C., 'The Globalisation of Technology and its Implications for Developing Countries: Windows of Opportunity or Further Burden?', at: http://www.cid.harvard.edu/cidbiotech/events/archibugi_pietrobelli_280202.pdf.

²² See: Hayyan ul Haq, Minyak dan Kemakmuran Rakyat (*Oil and the Greatest Benefit for People*), KOMPAS, 8 March, 2006, <http://www.kompas.co.id/kompas-cetak/0603/08/opini/2494219.htm>; Hayyan ul Haq, Mengadili Kontrak Blok Cepu (*Re-examining the Contract of Blok Cepu*), 14 March 2006, http://www.republika.co.id/koran_detail.asp?id=23942&kat_id=16; Hayyan ul Haq, Mencari Solusi untuk Freeport, (Creating Solution for Freeport), 22 March 2006, <http://kontak.club.fr/Sekitar%20masalah%20Freeport%20di%20Papua.htm>; Thomas Bustomi, Konflik Freeport: Sebuah Ketidak Adilan, (Freeport Conflict: An Unjustice), *PIKIRAN RAKYAT*, 21 March 2006; "Freeport: Kesalahan Kontrak Karya Harus Ditanggung Bersama" (Freeport: Mistakes in Work Contracts should entail Collective Responsibility), <http://kontak.club.fr/Sekitar%20masalah%20Freeport%20di%20Papua.htm>

The impact of unequal information, knowledge and technology distribution including the failure of technology transfer from developed to developing countries is largely felt in developing countries, particularly in the field of public health and sanitation, food, malnutrition, and education.²³ Moreover, bureaucratic capitalists (collaboration between institutions in legal structure with corporations) have used the doctrine of freedom of contract to exploit natural resources. Barber and Jhonson et.al. describe the "bureaucratic capitalists" as political and bureaucratic power holders within the central, provincial and local bureaucracy and military apparatus who formed partnerships with private business interests creating networks of social power and interest, supporting illegal logging, and other lucrative activities at odds with State policies protecting biodiversity.²⁴

This is because the Indonesian contract law system is not supported by other comprehensive complementary legislation and implementing regulations. Based on the Indonesian Civil Code (Burgerlijk Wetboek) art.1320, the validity of a contract should be based on: (i) the free will of the parties; (ii) legal capacity to conclude a contract; (iii) a definitive object or matter; (iv) a legally valid cause. Other requirements for the validity of contracts are regulated under Art. 1321: A contract should not entail: (i) coercion; (ii) fraud; (iii) negligence. Consequently, the validity of contracts in Indonesia is only based on legal formalistic requirements. As long as the contracting parties can fulfil the requirements, they can do anything based on the agreed stipulated clauses in a contract. This contract regime has failed to control and to anticipate or to manage the risk inherent in contracts, particularly post-contractual situations or longitudinal (long term) contracts. This gave rise to various loopholes, which are used by many parties (corporations) to manipulate contract law so as to exploit natural resources. Freedom of contract had been used by many parties as a major instrument to exploit Indonesian natural

²³ See: 'WTO Deal Paves Way for More Important Negotiations', September 11, 2003, at: <http://freedomttrade.org/page.php>

²⁴ See: Barber, C. V., N. C. Johnson, et al. (1994). *Breaking the Logjam: Obstacles to Forest Policy Reform in Indonesia and the United States*, World Resources Institute, at 70-73.

resources (public right/interest) to a maximum. This manipulation resulted in habitat loss, degradation, and fragmentation, over-exploitation, and secondary extinction.

Thirdly, the root cause of the symptoms can be found in the philosophical and conceptual domain, which validates the exclusive right principle and the freedom of contract, particularly in the recent market contexts. The philosophical and conceptual domain refers to regulations or legislation related to patents and contracts. It includes philosophy, concepts, perceptions, definitions, principles, the norms which exist and develop in society, and which are embodied in patent and contract regulations. The concept of an exclusive right in the doctrine of the inventor –the patent regime– and the freedom of contract is central to every effort to safeguard the products of the mind²⁵ and free will or interest. Even though the exclusive right principle and contract play a significant role in accelerating industry and trade development towards economic progress,²⁶ it also contains potential threats that may widen the gap between developed and developing countries in optimising INT and BGRTKF.

At national scale, the forced uniformity for the purposes of harmonisation, combined with the strong influence of the freedom of contract, had brought about several implications for the Indonesian legal system, covering substance, structure, and culture, either internally or externally in a horizontal and vertical pattern. The substantial problem is related to legal issues concerning intellectual property regime,²⁷ while the structural problem refers to the different political and economic interests of parties in exploiting information, knowledge, technology and biodiversity, genetic resource and traditional knowledge (INT and BGRTKF).

²⁵ See: Ejan Mackaay, "An Economic View of Information Law", in Willem F. Korthals Altes, et.al. (Ed), *Information Law towards the 21st Century*, Information Law Series, Kluwer, 1992, at 47.

²⁶ See: Robert M. Sherwood, 1990, *Intellectual Property and Economic Development*, Westview Special Studies in Science, Technology and Public Policy, Westview Press, at 28-37.

²⁷ See: *Sheldon and Mak*, 2000:8; See also: *Diamond v Chakrabarty* 447 U.S. 303 (1980).

Then, the cultural problem relates to the capabilities of the social structure to adapt and develop the transferred INT and BGRTKF. To visualise this problem, we can take an example in patent regime. The source of substantial problem lies in the different policy, provisions and precedents in the patent regimes of WIPO member countries. For example, the US has introduced discriminatory provisions related to the registration system. The other substantial problems relate to: (i) patentability – subject-matters and requirements; (ii) misconceptions in recognizing prior art and prior use in foreign countries; (iii) the scope of patent protection; (iv) different methods and capabilities in patent enforcement. In addition, different appreciations of the concepts of morality and public order are likely to be serious obstacles in establishing patentable subject matter and this may prove to be an impediment to the transfer of technology. The structural and cultural problem is caused by the gap in social, political, technological and economic interest between developed and developing countries.²⁸ Since the 1970s, in various international forums, developing countries have expressed their preoccupation with access to foreign technologies as a means of enhancing their technological capabilities²⁹ and narrowing the deep North-South gap in development levels. Unfortunately, their efforts fail to create an ideal model for the transfer of technology, which is able to alleviate any obstacle to optimizing intellectual property rights. This failure is caused by diametrical interests between the owner (developed countries) and user (developing countries) of technology. The substantial, structural and cultural problems have become increasingly complex when FTAA try to introduce some stricter rules (see the aforementioned description) that may impact on the capability of people to access and optimize INT. In this case, more people will be excluded from accessing INT, particularly in the essential fields of food, health, and education. For that reason, the government should undertake an initiative (an active role) in protecting fundamental rights.

²⁸ *Tuney, 1998: 337*

²⁹ *Patel, et al, 2000*

In detail, this implication can be seen: (i) at the dogmatic or legislation layer; and (ii) at the practical layer, particularly concerning political, social, and economic –information, knowledge and technological –implications.

Scheme 2.

At the dogmatic layer, the implication is reflected by the incoherency of the Indonesian legislation in the field of patents, copyrights and contracts. The implication of the exclusive principle can be seen from the Indonesian development of patent and copyright legislation. For example, to comply with TRIPS, Indonesia has revised its patent laws on several occasions.³⁰ Apparently, those revisions are intended to fulfil the interests of developed countries that have been embodied in the minimum standard norms of the TRIPS.³¹ These laws were ratified without a prior study of their impact and without proper public consultation. The objective was only to comply with WTO rules and to avoid

³⁰ See: *Infra* Notes 39.

³¹ See: Henry Soelistyobudi, 1997, "Alasan-alasan Perubahan dalam Perundang-undangan di Bidang Hak Milik Intelektual di Indonesia", (Change for Reasons in Indonesian Intellectual Property Legislation), SEKKAB RI, Jakarta.

pressures and threats from Indonesia's trading partners. The patent law was enacted without considering its long-term impact. Indonesian patent law is projected as having adverse impacts on biodiversity and traditional knowledge as well as community innovation. Jhamtani and Setiawan have identified that, up to November 2000, some 20-30 patent applications have been filed for transgenic plants and the DNA of plants, mostly by private companies. Many patents on Indonesian innovation have been granted abroad. According to the Ministry of Trade, a number of traditional innovations have been patented outside Indonesia, such as batik design in the Netherlands, rattan furniture design from Cirebon in the US.³² The revision process had sidelined differences of opinion and conflicts of interest between various sectors in the community, while both the government and the members of the House of Representatives did not try to bridge those differences.³³ Jhamtani and Setiawan reported the NGO efforts to become involved in the revision process, either by asking for a hearing in the House or by attending meetings held by the government. NGOs were concerned with two aspects of Indonesian Patent Law: (i) the impact on biodiversity and traditional knowledge; and (ii) the impact on public health. They asked the government to hold public consultations on the ratification of Article 27.3(b), parallel imports and compulsory licensing. But neither the government nor the members of the House had proper consultations and their main goal was simply to enact the laws as soon as possible. The ratification process did not involve those communities which might suffer from the implementation of the patent law, namely farmers, traditional healers and traditional handcrafters,³⁴ and indigenous people. The majority of the substantial parts of the patent law, which influence the sustainability of people, have been transplanted from Model Laws without considering the main characteristics and the needs of Indonesians. Those substantial problems are likely to be serious obstacles to guaranteeing the fulfillment of fundamental rights

³² See: Hira Jhamtani and Bonie Setiawan, 2002, 'Doha Agenda: The Death of Development in Indonesia?', at: <http://www.infid.be/pdf>. Retrieved at 6 January 2006. Those cases indicate symptoms of the tragedy of the anticommons.

³³ Jhamtani, H. and Setiawan, B., 2002.

³⁴ Jhamtani, H. and Setiawan, B., 2002.

(such as food, health, information, and education), particularly in Indonesia. For example, regarding the scope of patent protection, any inventor can protect any invention under the sun. These different norms allow American inventors and industries to expand their invention in the field of information, knowledge, and technology, including research tools that may hamper other people and institutions in developing, even in fulfilling their fundamental rights such as the right to: food, medicine, health, information, and education. In this case, many scholars have voiced their concerns about the potential obstacles of patents to research, biotechnology, and biomedicine that may limit public access to technologies in contributing further biological research and other scientific basic research development.³⁵

The implication of the freedom of contract can be seen in the Indonesian contract law system which has been embodied in Indonesian Private Law (*Indonesian Burgerlijk Wetboek*). The principle of the freedom of contract in Indonesia allowed unlimited opportunity for everyone to actualise and exploit their will or interest, as long as they fulfil the minimum requirements of the validity of the contract under Indonesian private law.³⁶ Unfortunately, this norm is not complemented by implementing regulations that provide legal certainty in protecting the public interest or social function. Most significant concepts such as fairness, good faith (Indonesian Civil Code, Art. 1338 (3)) that can be used to protect the public interest and social function have been interpreted by the courts. These “catch-all” articles are frequently used to protect the destroyer or the criminal in environmental law cases.³⁷

³⁵ See: Eisenberg, 1993; Heller and Eisenberg 1998: 698-701.

³⁶ See: Ridwan Khairandy, *Iktikad Baik dalam Kebebasan Berkontrak* (Good Faith in the Freedom of Contract), Law School, Universitas Indonesia, 2003.

³⁷ See: Mafia litigation in handling Probosutejo case concerning the Replanting Forest. See: Hayyan ul Haq, “Mafia Peradilan vs. Law Society”, (Mafia Litigation vs Law Society), *KOMPAS*, 19 October 2005. This case indicated that the Indonesian litigation system is not free or independent from any intervention, either economic or political intervention. In addition, the weak legal structure in investigating forest destruction in Papua by Freeport McMoran. According to Siti Maemunah, Coordinator of Advocation Networking of the

Then, at the practical layer, since the beginning of the 1980s the Indonesian government has embarked upon intensive and extensive legal reforms, particularly in the field of intellectual property laws. In this sense, the government has introduced stricter patent rules to create a conducive atmosphere for improving the creativity and productivity of people³⁸ and to attract foreign direct investment in Indonesia.³⁹ Unfortunately, there is no hard evidence for this policy. Correa and Maskus have found that there is no significant correlation between stricter rules of intellectual property (patents) and increased investment.⁴⁰ Even this policy has given rise to dilemmas and a more complex problem in its implementation when faced with the demands of most people to have more equitable access in optimising information, science, and technology for sustaining their lives. Clearly, this phenomenon reminds us of the danger of Reichmann's protectionist appetites which stated that there is 'powerful industrial combinations that have successfully

Mining Circle, Indonesia, Freeport destroyed more than 86.000 hectares of forest (Interview with Radio Netherland Seksi Indonesia, February 2006) or equivalent to 200 km² of forest in Papua. *See also: Tempo Interaktif*, 6 January 2006. On this point, the complex problem challenges Indonesian government to manage our environment within the framework of unity and sustainability.

³⁸ Promoting invention, innovation and productivity is one genuine interest in the protection of intellectual property, -patent-. *See: The series of patent legislation, such as: Indonesian Patent Act (IPA) No.6/1989 (Staatsblaad RI 1989 No. 39); IPA No. 13/1997 on the Amendment of IPA No. 6/1989 (Staatsblaad RI 1997 No. 30); IPA No. 14/2001 (Staatsblaad RI 2001 No 109). See also: Antons, Christoph, "The Development of Intellectual Property Law in Indonesia: From Colonial to National Law" (1991) 22 *International Review of Industrial Property and Copyright Law* at 374; Antons, C., "Intellectual Property Law in ASEAN Countries: A Survey" (1991) 13 *European Intellectual Property Review*, at 84*

³⁹ *See: Lepp, Alan W, "Intellectual Property Rights Regimes in Southeast Asia" (1990) 6 Journal of Southeast Asia Business at 31; See: "UU Paten Bisa Memberi Jaminan Para Investor" (The Patent Act can Provide Security to Investors) KOMPAS (19 June 1989); See also: "Ditinjau dari Segi Inovasi, UU Hak Paten Belum Perlu" (From the Innovation Side, the Patent Act is not Necessary) KOMPAS (23 June 1989), at 6.*

⁴⁰ *See: Corea, 'Bilateral Investment Agreements: Agents of New Global Standards for the Protection of Intellectual property Rights? (2004), GRAIN), at 3, at: www.grain.org. See also: Maskus, 'The Role of Intellectual Property Rights in Encouraging Foreign Direct Investment and Technology Transfer', at 54.*

captured the legislative and administrative exponents of trade and intellectual property policies...and where the interest of both consumers and small or medium-sized innovators are held hostage to the political influence of oligopolistic combinations that use intellectual property rights to expand market power'.⁴¹ In addition to the consideration of Indonesian Patent Acts, several key persons who were involved in drafting a series of patent acts admitted that the Indonesian intellectual property legislation has been introduced to attract foreign investors. It was not aimed at encouraging innovation, but rather was needed to attract foreign investors who wanted protection for their works. Bambang Kesowo, from the State Secretariat, argued that the enactment of the Indonesian *Patent Act* was not concerned with technological development or the protection of existing patents, but rather the politics of law. The *Patent Act* was not necessarily important for Indonesian economic development because a good patent system did not guarantee the effective, optimal, and substantive transfer of technology.

As a result, Indonesian patent law became more difficult to enforce. Ignorance concerning patent law is widespread within the country and the protection of patents is both practically and legally weak. Some research has shown that the implementation of the absolute exclusivity principle of patent law in Indonesia may have a detrimental effect on Indonesia's technological and economic development, as the law increases the local cost of important technological products and further inhibits local technological development⁴². Before the patent campaign in Indonesia, many innovations which are within the public domain, such as woven tie cloth, herbal medicine, *tempe* making, various kinds of

⁴¹ See: Jerome H. Reichman, *Compliance with the TRIPS Agreement: Introduction to a Scholarly Debate*, 29 VAND. J. TRANSN'L L. 363 (1996) at 17, 25.

⁴² Hayyan ul Haq, 2000, 'Patent Legal System: A Comparative Study in Australia and Indonesia', research paper, Law School, University of Technology Sydney; See also: Afifah Kusumadara, 2000, *Analysis of the Failure of the Implementation of Intellectual Property Laws in Indonesia*, Sydney Law School, at ii-iii.; Agus Sardjono, 2004, *Pengetahuan Tradisional: Studi Mengenai Perlindungan Hak Kekayaan intelektual atas Obat-obatan, (Traditional Knowledge: A Study on Intellectual Property Protection for Medicines)*, Program Pascasarjana Fakultas Hukum, Universitas Indonesia.

biodiversities, and other traditional medicines were shared by the public. Now, the patent laws stimulate and force people to privatise public innovations in private property,⁴³ while the implications of freedom of contract in the field of biodiversity, genetic resource can be seen in various over-exploitation cases that damage huge forest areas and in the extinguishing of biodiversities and genetic resource.⁴⁴

3. Exclusive Rights and Freedom of Contract Reexamined

The above description shows some weaknesses of exclusive rights and freedom of contract. Several preliminary studies show unequal access to global resources roots to the exploitation of the exclusive right, which is combined with the freedom of contract. From time to time, the disparity between the industrialized and developing countries is marked by scientific and technological development. Over 90 percent of scientists and researchers work in industrialized countries. Over 90 percent of their activities are concentrated on research for the 'rich' world and on converting their findings into protected technical processes.⁴⁵ It is caused by the accumulation of power holders' interests concerning property. The result in these circumstances is that the exclusive right and spirit of freedom of contract may surpass public interest and social function. Some

⁴³ For example, some traditional works and folklore of the Sasak community in Lombok that have been identified and an attempt is being made to protect them through identifying and registering the cultural property with the Directorate General for Intellectual Property (in progress). See: Hayyan ul Haq, 2004, *Questioning the Existence of the Indonesian Copyright Regime in Protecting Cultural Property*, *Molengrafica Series*, Vol.15, Intersentia, Oxford, Antwerp.

⁴⁴ See: Biodiversities and genetic resource are main resources for nurturing traditional knowledge and folklore. Those resources are substantial resource for developing information, knowledge and technology.

⁴⁵ For the disparity phenomenon, See: Club of Rome (1976); Takirambudde, ATN, 1980, *Technology Transfer and International Law*, Praeger, at 5; OECD (1970); OECD (1984); UNDP (1999); Meir Perez Pugatch, 2004, *The International Political Economy of Intellectual Property Rights*, Edward Elgar; Granstrand, *The Economics and Management of Intellectual Property: Towards Intellectual Capitalism*, 1999; Keith Maskus and Jerome H. Reichman, eds., *International Public Goods and Transfer of Technology under a Globalised Intellectual property*, Cambridge University Press, 2005.

authors have signified that the exclusive right and freedom of contract may contain a dangerous inner logic⁴⁶, which illustrates the tension between basic reasons that validate the existence of exclusive rights and the impact of rights exploitation. Drahos notes that exclusivity creates self-interest. In a market context, intellectual property rights create distinctive kinds of opportunities. Then, rational self-interested actors take those opportunities. By doing so, they defeat the social interest that provided the justification for having the rights in the first place.⁴⁷ This is caused by the weakness of the legal system in providing ideal protection and maintaining a balanced relationship between the individu or group and collective interest. Consequently, the spirit of capitalism allows and even strengthens individual or group aggressiveness to surpass the public interest.

Not surprisingly, the disparity in accessing information, knowledge, technology, biodiversities, genetic resource, traditional knowledge and folklore (INT and BGRTKF) becomes more widespread, where power-holder groups control the distribution of INT and BGRTKF to the rest. The above description demonstrates the structural difficulties in appropriately utilizing intellectual property law and natural resources to fulfil and protect peoples' interests in optimising INT and BGRTKF towards united sustainable development. This is because the liberal Eurocentric discourse on the concept of intellectual property emphasises individual rights to private property. It is inseparable from the history of Western Law Families which since the Renaissance, Romano-Germanic and Common Law times has developed philosophical teachings which have given prominence to individualistic, liberalist and individual rights. Apparently, those characteristics are alien in most developing worlds. The spirit of privatization also has further implications for the attitudes of peoples (in the developing world, i.e. Indonesia) towards the commercial exploitation of information, knowledge, and

⁴⁶ See: Peter Drahos, 1996, *A Philosophy of Intellectual Property*, Dartmouth, at 119.

⁴⁷ See: Peter Drahos, 1996, *A Philosophy of Intellectual Property*, Dartmouth, at 119. Referring the above argument, the essence of freedom of contract can also be appreciated from Drahos's argument.

technology, because in the view of Indonesians, property rights are used to maintain and develop group identity, unity and sustainability rather than individual economic pursuits. Now, patent laws stimulate and force people to privatise public innovations in the form of private property.⁴⁸

Through incentive theory, the exclusive right is empowered and entrenched by a few gigantic corporations. It was these corporations which much more enjoyed and employed the exclusive right to strengthen the accumulation of profits towards intellectual capitalism.⁴⁹ This inconsistency was caused by what Drahos called the "danger of the inner logic" of the exclusive right.⁵⁰ The lack of an ideal legal framework to guarantee the just optimization of exclusive rights results in the power holder, i.e. capitalism, exploiting the exclusive right to the maximum.⁵¹ Clearly, the shift in the meaning and the ultimate goal of the doctrines is caused by manipulation and forces of self-interest, or corporate interest (capitalism). Undoubtedly, intellectual property

⁴⁸ See: David, *Existe-ill un droit occidental* in McLanges, Hessel E. Yntema (20th Century Comparative and Conflicts Law, 1961) in Brierly, J.E.C., Section II in *Major Legal Systems in the World Today*, Steven and Sons, London, at 24. For Indonesian characteristics, See: J.F. Holleman, ed. *Van Vollenhoven on Indonesia Adat Law*, Translated by J.F. Holleman, Rachel Kalis, and Kenneth Maddock (The Hague: M. Nijhoff, 1981); See also: Moh, Koesnoe, *Peranan Hukum Adat di dalam Pembangunan Nasional, Prae-Advies Seminar Awig-awig*, Denpasar Bali, 1969; Sunaryati Hartono, 1989, *Kapita Selekta Perbandingan Hukum*, Cipta Aditya Karya, Bandung, at 34 - 46; See also: Hayyan ul Haq, 2004.

⁴⁹ See: Granstrand, Ove, *The Economics and Management of Intellectual property: Towards Intellectual Capitalism*, Edward Elgar, Cheltenham, UK, Northampton, MA, USA, 1999.

⁵⁰ See: Drahos, 1996, at 119.

⁵¹ It is interesting to note Lemley's analysis of economic theory which demonstrates that too much protection is just as bad as not enough protection, and this is therefore the reason why intellectual property law must search for a balance, not free riders. He also utilizes the misused notion of intellectual property as a form of tangible property. See: Mark A. Lemley, 'Property, Intellectual Property, and Free Riding', *John M. Olin Program in Law and Economics, Working Paper No. 291, August 2004*, Social Science Research Network Electronic Paper Collection: <http://ssrn.com/abstract=582602>. Retrieved: 18 December 2005

(patent and copyright) rights are rights, which are created for and exist within market contexts.⁵² Now, under the patent and copyright regime and freedom of contract doctrine, the spirit of the maximalization of exclusive rights and free will brings about disparity and the inappropriate optimisation of INT and BGRTKF.

For example, in Indonesia, the exclusive right is constructed at the very heart of the IP law,⁵³ to stimulate creativity and productivity of people and improving foreign direct investment.⁵⁴ Unfortunately, this ambition can not be proved. Furthermore, due to the aggressivity of IP holders, the scope of IP law has been expanded into sensitive areas, so that it gives rise to various controversial issues.⁵⁵ All the above controversial issues are caused by the ambivalence of the patent and copyright law in protecting INT and BGRTKF. The problem emanates from criteria for the patentability of inventions and the nature of biodiversity, the procedure for patenting the invention and biodiversity (utilisation and protection) and so forth. The differences only provide opportunities for parties (corporations) to exploit the biodiversities. Consequently, this ambivalence opens up opportunity for a few gigantic corporations to control and exploit the intellectual products and natural resources. Shiva further analysed that the patent regime, in the context of 'free trade' and 'trade liberalisation', amounts to instruments of piracy at three levels: (i) resource

⁵² See: Mark A. Lemley, 'Property, Intellectual Property, and Free Riding', *Ibid*.

⁵³ For example, the Indonesian Patent Act states that a patent is an exclusive right granted by the state to an inventor to implement his or her inventions or to authorise another person to implement this invention for a particular period of time. See: Indonesian Patent Act, Article 1 (1); See also: Art. 16.

⁵⁴ See: Consideration of Indonesian intellectual property legislation series, such as Indonesian Patent Act, Indonesian Copyright Act, and so forth.

⁵⁵ For example, in patent issues, the controversial issues refers to the existence and implementation of patent in biotechnology, biopiracy; access to genetic resources; sharing benefit; traditional knowledge; licence and technology transfer; the environment, biodiversity and sustainable development; open source (public goods); and public health. Whereas, in copyright issues it may cover cultural property, folklore, freedom of expression and so forth.

piracy⁵⁶; (ii) intellectual and cultural piracy⁵⁷; (iii) economic piracy⁵⁸. Another example, Japanese corporations have patented several Indonesian traditional formulas, genetic resources and biological diversities⁵⁹ without sharing the benefits.⁶⁰ While, the implications resulting from the freedom of contract can be seen from the tragedy of the commons in Indonesia.⁶¹ In addition, the efforts to 'harmonise' the patent regime as an instrument to exploit biodiversity and traditional knowledge are likely to met serious

⁵⁶ Resource piracy is where the biological and natural resources of communities and the country are freely taken, without recognition or permission, and are used to build up global economies. For example, the transfer of basmati varieties of rice from India to build up the rice economy of the US; the free flow of neem seeds from the farms, fields and commons to corporations like W. R. Grace for export. See: Vandana Shiva, "Intellectual Property Rights", In <http://www.psrast.org/vashipr.htm>

⁵⁷ Intellectual and cultural piracy is where the cultural and intellectual heritage of communities and the country is freely taken without recognition or permission and is used for claiming IPRs such as patents, and trademarks even though the primary innovation and creativity has not taken place through corporate investment. For instance, the use by US corporations of the trade name 'basmati' for their aromatic rice, or Pepsi's use of the trade name 'Bikaneri Bhujia'. *Ibid*

⁵⁸ Economic piracy is where the domestic and international markets are usurped through the use of trade names and IPRs, thereby destroying local economies and national economies where the original innovation took place and hence wiping out the livelihoods and economic survival of millions. For example, US rice traders usurping European markets; Grace usurping the US market from small-scale Indian producers of neem based biopesticides. *Ibid*

⁵⁹ In relation to these cases, Japanese Corporations have patented at least 37 kinds of Indonesian plants and traditional knowledge which are registered by the European Patent Office. See: European Patent Office, at: <http://eatespacenet.com>. In addition, making the process of making batik and some theraphical methods from rottan have been patented in foreign countries. See also: Agus Sardjono, 2004, at 43.

⁶⁰ Vogel, J. 'The Succesful Use of Economic Instruments to Foster Sustainable Use of Biodiversity: Six Case Studies from Latin America and the Caribbean', *Biopolicy Journal* (2) 1997, at 5-7. Vogel analyses among other things the relation between the lack of scarcity of genetic resources and the economic valuation thereof in benefit sharing agreements. See also: Jerzy Koopman, 'Biotechnology, Patent Law and Piracy: Mirroring the Interests in Resources of Life and Culture', in Rao Narsimha, *Law of Patents: Concepts and Cases*, ICAFI University Press, at 73-96. See also: [www.wjcl.org/75/Art 75-7](http://www.wjcl.org/75/Art%2075-7).

⁶¹ See: Note 2.

obstacles in its implementation, in the light of the fact that Indonesia is one of the legal pluralism countries. Indonesia is categorised as a country with a mixed law system. It recognises various legal systems, such as the Civil Law System, the Syariah Law System, and the Customary Law System. Regarding Customary Law, there are various existing adat laws. Van Vollenhoven divided the Indonesian Adat Law System into 19 regions of adat laws. Every Adat law system has unique characteristics, which differ from the other Adat law system. They have internal regulation to guide their people in appreciating and managing the common (Adat) owner or public goods. This requires serious attention by the government to derive a shared meaning of the public goods which is based on unity and sustainability.

Under the doctrine of freedom of contract, Indonesian biodiversities and genetic resources are in brittle situation, due to the spirit to maximise the free will or interest. This freedom of contract will accelerate the process of the tragedy of the commons. Based on the Indonesian Civil Code, Art. 1320, the validity of a contract should be based on: (i) the free will of the parties; (ii) the legal capacity to conclude a contract; (iii) a definitive object or matter; (iv) a legally valid cause. Other requirements for the validity of contracts are regulated under Art. 1321: A contract should not entail (i) coercion; (ii) fraud; (iii) negligence. The validity of contracts in Indonesia is only based on legal formalistic requirements. As long as the contracting parties can fulfil these requirements, they can do anything based on the agreed stipulated clauses in a contract. This rule is strengthened by Article 1338 of the Indonesian Civil Code, which categorises the contract as *lex specialis*, which states that: "For the contracting parties, all valid contracts are to be regarded (as having the same force) as legislation".⁶² This article provides powerful rights and possibilities to the contracting parties in executing the contract. This contract regime has failed to control and to anticipate or to manage the risk inherent in the contract, particularly concerning post-contractual situations or longitudinal (long-term) contracts.

⁶² See: Article 1338 of the Indonesian Civil Code

Additionally, the concept of tort under the Indonesian Civil Code (Art. 1365) is still ineffective. Unfortunately, most of the responsibility concept under this article (Art. 1365) is interpreted and appreciated within the framework of the corrective justice principle. This principle tends to take corrective action after a tort action (post pactum). Ideally, the preventive and repressive actions should be taken from the process of negotiation (pre-contract stage), signing the contract, and after signing the contract (the post-contract stage). At this point, it is necessary to consider the responsibility by risk principle, and the just price doctrine, which emphasise the importance of reason and equity.⁶³

Indeed, if we examine the legal construction which validates the contract in Indonesia, we can see an opportunity to make a change by interpreting the important clauses of fairness and the good faith principle. On the basis of article 1339 of the Indonesian Civil Code, the contracting parties are not only bound to whatever has been expressly stipulated in the contract, but also to every obligation according to the nature of the contract, and the principles of fairness, custom and legislation. Moreover, all contracts have to be executed in good faith.⁶⁴ Unfortunately, the terms fairness and good faith tend to be abstract terms. They can even be interpreted as open norms. So the challenge is how to visualise and concretise the true meaning of the fairness and the good faith principles. For that reason, the exclusive rights principle in patent law and freedom of contract should be re-examined so as to create an ideal and proportional legal framework for the greatest benefit of mankind within the framework of unity and sustainability. In my opinion, in order to visualize those terms, it is necessary to combine and to tailor them with meta-values, i.e. unity and sustainability.

⁶³ Grosheide, F.W., 'Iustum Pretium Redivium?: Reflections of the Just Price Doctrine in Dutch Contract Law in the Light of Its Historic Roots and Recent International Developments' in *Viva Vos Iuris Romani*, Essays in Honour of Johannes Emil Spruit, Gieben, Amsterdam, 2002, at 361-386, See also: Ridwan Khairandy, *Iktikad Baik dalam Kebebasan Berkontrak* (Good Faith in the Freedom of Contract), Law School, Universitas Indonesia, 2003.

⁶⁴ See: Article 1338(1), Indonesian Civil Code.

4. Creating the Tailor-Made Intellectual Property and Freedom of Contract

To elaborate the ideal tailor-made inventor and creator doctrine and freedom of contract, it is necessary to find out and to determine the ideal state of social order. In this section, I will discuss the ideal state of social order from the systems principle and combine them with the Pancasila framework (the Indonesian paradigmatic view in Indonesian cases). In visualising the above idea and measuring the results, the embodiment of the ideal order will be elaborated in two levels: (i) pre-grant level and (ii) post-grant level, which are depicted as follows:

Scheme 3. Tailor-Made IPR and Contract

4.1. Pre-Grant Level: Finding the Constitutive Elements of the Ideal Order

At pre-grant level, this section will explore some constitutive elements of the ideal order by referring a number of theoretical frameworks.⁶⁵ It is important to validate an ideal legal framework

⁶⁵ The framework and indicators for analyzing the processes and outcomes of the exclusive principle in inventor and creator doctrine will adopt

in optimizing Information, knowledge, technology, biodiversity, genetic resource, traditional knowledge and folklore (INT and BGRTKF). The ideal order is required to lay down the ground rules for people to live together in harmony. For that reason, this work elaborates the systems' thinking principles and other universal values, such as unity, sustainability, fundamental right, human right, and public good, which links and matches the system of values, Pancasila as the grand norm of positive laws, in Indonesia.

4.1.1. Unity and Sustainability as Meta-Values

Under systems principle, the unity is considered as the main essential element of a social system to maintain sustainability. Unity is indicated by good or normal interaction among the components in a social system attention. It was interaction, not components that became the main focus of the systems' view. A social system will work properly if all components can interact normally. Good quality interaction among the components will stimulate the full participation of the components so as to function proportionally, which, in turn, maintains unity. This condition requires a balance. In a legal context, this balance can be interpreted as justice. Therefore, justice should be dedicated to maintaining unity and sustainability. The legal consequence is that all interaction systems either at the political, economic, social, and cultural level should be devoted to creating and strengthening the unity and sustainability of collective life. Thus, all development programmes which ignore the main mandatory element of systems become invalid.

Regarding the utilization of INT, the deep inside message of the system phenomenon, which posits unity as a constitutive element of a sustainable system,⁶⁶ can be considered as a meta-principle.

and synthesize concepts of Natural Law, Utilitarian logic, Aristotelian Corrective Justice, the Rawlsian Theory of Justice, and the Systems View. In addition, those notions will be used to elaborate and explain the Pancasila principles as the Indonesian grand norm.

⁶⁶ Unity is the identity of the system, which emerged from the existing sustainable and recursive interaction (structural coupling) among components. It is always conserved and preserved, even though other sub-structure changes

This unity is reflected in its interconnectedness.⁶⁷ The sustainability of unity in a social system will be ensured if the self-organisation principle is equipped with (or built into) some other principles such as: (i) self-correction⁶⁸ (ii) self-protection.⁶⁹ Systems will not work and function normally if the component of a social system has no regular intake or input, in the form of energy and material⁷⁰ (of a certain quality and quantity). In maintaining a balanced structural coupling with nature, in order to produce relevant intake (input) for a social system as well as to preserve the sustainability of the natural system, patterns of interaction of the two systems (social

continue. In social systems, it refers to the process of valuating institutionalisation processes for regulating and maintaining individual relationship, so that it raises the sub-structure of self-organisation, which creates unity. Naturally, one component and all components interact towards the process of congruent structural drift, so that they can live and exist together in harmony. This dimension always has invariant interaction principles that should be conserved together as the existensial identity in social life. Without unity as the identity of a system, the social system just clusters people that incidentally exist in same space and time. Implicitly, in the self-management concept, there is the development and institutionalisation of politics, which relates to the distribution of authority and responsibility in order to establish and to conserve patterns of self-organisation to guarantee unity and sustainability.

⁶⁷ The most fundamental and general feature of any human or non-human organized entity is its interconnectedness. A system is basically a set of interconnected elements. This interconnectedness is appreciated as the specific non-random way in which the components or subsystems of the entity are functionally working together, and, at the same time, are structurally organized. For both aspects are inseparable. Interconnectedness is the very crux of any sound science of systems in the most general sense. Without internal connections - and external ones with other entities - no complex entity (system) can or will exist. See: The Circularity principle or Cybernetic principle.

⁶⁸ The self-correction principle functions to anticipate or to recover a certain disfunction in components (for example in health case) or in interaction among components (values which relate to forgiveness, endurance, etc.). This is analogous to autopoietic mechanism from Maturana and Varela's works.

⁶⁹ The self-protection principle functions to protect and advocate the existence of unity (simple or composite) under threatening conditions.

⁷⁰ This intake cannot be supplied by systems themselves. In this case, the system should obtain intake through interaction with nature because this is in external domain of the operational system.

and natural systems) should be able to produce a congruent structural drift.⁷¹

Under the circularity principle, the interaction (structural coupling)⁷² between the human being and nature will produce several second-order phenomena, such as: science, knowledge, and technology, and concepts of property rights. It should be noted that the second-order products are instruments to support the sustainability of a system. As complementary instruments, their values' hierarchy are lower than unity and sustainability. Thus, the values of science, technology, art, and natural resources are just instrumental. Therefore, their legitimation cannot surpass the need to maintain unity and sustainability. Ideally, as subordinate or instrumental rights, intellectual property should serve the interest and needs that citizen identify through the language of human rights as being fundamental right.⁷³

4.1.2. Fundamental Rights and Human Rights

Fundamental rights and human rights are an ideal basis to provide a just balance between private and public interest in intellectual property based on the principle of equity and justice. They offer a

⁷¹ In this context, a relationship between the two systems (social and natural system) should not be based on a sub-ordinate (subject-object) order, but on a coordinate (subject-subject) order. The relationship between the two systems should strengthen each other (a take and give relationship) for the sake of maintaining the sustainability of the social system.

⁷² The key reference points on the subject of structural coupling are: Maturana and Varela's works (1975, pp.322-326; 1981, pp. 23-29); Maturana & Varela (1980, pp. 78-82; pp. 98-99); 1987, pp. 75-80); and Varela (1979, pp. 32-33); p. 48ff.). See also: Maturana, HR, *Autopoiesis, Structural Coupling and Cognition*, at <http://www.isss.org/maturana.htm>, Maturana, Humberto, and Francisco Varela, *The Tree of Knowledge: The Biological Roots of Human Understanding*, Boston: Shambhala / New Science Press, 1987. Revised paperback edition released in 1992; See also: *Encyclopedia on Cybernetic and Human Knowing, Structural Coupling*, available at: http://www.imprint.co.uk/thesaurus/structural_coupling.htm

⁷³ Drahos, Peter, 1998, "The Universality of IPR" paper in Panel discussion on Intellectual property Right and Human Rights", Geneva November 9, 1998 in <http://www.wipo.int/tk/en/hr/paneldiscussion/biographies/drahos.html>, at 22.

synthesis of the bases of natural law and utilitarianism and represent the values from which intellectual property developed.⁷⁴ Recently, many national constitutions (such as the Portuguese, Swedish, Slovenian, Russian, Czech Constitutions) have also adopted the spirit and substance of fundamental rights and human rights protection. All provide equally for the protection of property and personality on the one hand, and the protection of the freedom of expression, of information and of art and science, on the other.⁷⁵

At the national level, Indonesia has adopted some essential elements of fundamental rights, which are regulated in several provisions in the 1945 Constitution, such as the rights to food, housing, and a normal environment, the rights to health, the right to information, knowledge and technology (Art.28), the right to education (Art.31). Those articles are the ultimate imperative norms that impose a positive obligation on the State to undertake any active action in order to maintain and protect the fundamental rights of people. This concept may apply to the scope of the State's responsibility to amend the existing legislation or to adopt of new legislation (*X and Y v. The Netherlands* (1985)), to change administrative practices (*Gaskin and The United Kingdom* (1989)), or even to halt financial efforts (*Airey v. Ireland* (1979)) if they

⁷⁴ Drahos, Peter, 1998, "The Universality of IPR" paper in Panel discussion on Intellectual property Right and Human Rights", Geneva November 9, 1998 in <http://www.wipo.int/tk/en/hr/paneldiscussion/biographies/drahos.html> at 47. At the international level, the synthesis of the two schools of thought is built into in Art. 27 of the Universal Declaration of Human Rights (UDHR) of 1948, which states that "everyone has the rights freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits". Other international Conventions are Art. 15(1) of the International Covenant on Economic, Social and Cultural Rights (ICESR) of 19 December 1966 (G.A. res. 2200A (XXI); UN Doc. A/6316, 999 UNTS 171), and Article 10(1) of the European Convention of Human Rights (ECHR) that codifies the principle of the freedom of expression and communication. (In presenting a human rights approach to intellectual property law, see: Audrey Chapman who focuses her argument on Art. 15 (the intellectual property provision, which is equivalent to Art 27 of the UDHR) of the International Covenant on Economic, Social and Cultural Rights).

⁷⁵ Geiger, Christophe, "Constitutionalising" Intellectual Property Law? The Influence of Fundamental Rights on Intellectual Property in the European Union", IIC Vo.37, No.4, 2006, at 385

result in potential obstacles for people to fulfil their fundamental rights.⁷⁶ For that reason, fundamental rights and human rights can be constructed into universal meta norms that may limit and control the true optimisation of INT and BGRTKF.

4.1.3. Knowledge Resources for Maintaining Human Dignity and Sustainability of Collective Life are Public Good

Generally, one common characteristic of certain kinds of public goods is that use by one person does not diminish the supply available to others once the good is produced. Samuelson argues that it is difficult to create incentives to produce public goods, because they may not be physically scarce⁷⁷. Seemingly, this illustration has similar message to John Rawls' concept on primary social goods.⁷⁸ This sense of primary is taken by Drahos to illustrate the essence of public goods. Principally, the production of some public goods is dependent upon the prior existence of other public goods. He took constitutions as an example of public goods that are constituted by norms. In this case, constitutions enable the authoritative production of legal norms and they help bring legitimacy and stability to government. The example of constitutions also shows that some public goods can be thought of as primary public goods, where primary means that it is rational for individuals to want more of that good rather than less. It is rational because the primary good is foundational to other goods (private and public) that individuals need in order to fulfil their specific goals and desires.⁷⁹ For that reason, creating property rights in INT and BGRTK as knowledge resource arguably might do the same thing, that is, improve incentives for producing and distributing knowledge resource, a socially desirable category of public

⁷⁶ Cherednychenko, 2006:199; See Also: Overwall, G.V. 2006, Human Rights Limitation in Patent Law, paper presented in the International Conference on Human Rights Paradox in Intellectual Property Law, Utrecht University 3-4 July 2006

⁷⁷ Pamela Samuelson, 'Information as Property: Do Ruckelshaus and Carpenter Signal A Changing Direction In Intellectual Property Law?', 38 CATHOLIC U. L. REV. (1988-1989), at 365

⁷⁸ See: John Rawls, *A Theory of Justice*, Harvard University Press, 1999.

⁷⁹ Peter Drahos, 'The Regulation of Public Goods', 2005, at 53

goods.⁸⁰ Unfortunately, under exclusive right and contractual regime, only stronger parties, usually a few gigantic corporations can control the flow of INT and BGRTKF toward intellectual capitalism.⁸¹

The failure in creating an appropriate management in this field may threat sustainability of knowledge grows, which in turns to impact life system either in cultural, social, political or economical aspect. Therefore, new creative approaches at international level is required to decide to what extent exclusive rights, general entitlement and prohibitions of INT and BGRTKF should be valid in an open culture of freedom (in economic, socio-cultural and state terms), particularly in the interests of human privacy, economic progress, social justice, social welfare, public interest and the general protection of legal objects. In this context, fundamental consideration concerning "intellectual property -information ethics" will be imperative⁸².

For the above reasons, the world needs strong commitments, not only good intention⁸³, to eliminate disparity in order to save and preserve the sustainability of global collective life. In IPR discourse, one of the most intense struggles in the campaign to

⁸⁰ Apparently, the law's general rule against enforcing private rights in information thus does not arise from some inherent incapacity of information to be property but from a policy choice against characterizing it as property.

⁸¹ See: Granstrand, Ove, *The Economics and Management of Intellectual property: Towards Intellectual Capitalism*, Edward Elgar, Cheltenham, UK, Northampton, MA, USA, 1999, at 10. See also: various works by Drahos, Shiva, Blakeney, Correa and other report from the third world networks.

⁸² See: Lederman, E. and Shapira, R., 2001, *Law, Information and Information Technology*, Kluwer International, The Hague, London, Newyork, at16

⁸³ Good intentions were not enough to alleviate poverty, malnutrition and disease. Indeed the facts that more than 10 million people each year die of preventable or curable diseases and that 800 million people survive on less than \$1 per day, are testament to the failure of good intentions – and the many billions of dollars spent in their pursuit. See: Julian Morris, (ed), 2002, *Sustainable Development: Promoting or Perpetuating Poverty?*, Profile Books, London, at3.

reform globalisation concerns the control of knowledge resources⁸⁴. In the light of the rapid increase in the number of cases related to the expansion of the exclusive right into some sensitive and debatable areas, we need a universal norm that may guarantee the sustainability of collective life. For that reason, in order to eliminate any obstacle to knowledge grows which is required to maintain human dignity and sustainability of collective life, so all knowledge resources, i.e. essential INT and BGRTKF are public good.

4.1.4. In Search of a Legal Framework: An Insight into Pancasila

It is undoubtedly that those ideal order components match the Pancasila as the grand norms of the Indonesian positive laws. Therefore, in order to find the ideal order⁸⁵ in managing information, knowledge, technology, biodiversity, genetic resource, traditional knowledge and folklore (INT and BGRTKF) in Indonesia, it can be traced through the Pancasila.⁸⁶ Hierarchically, after the Pancasila, the Indonesian positive law source is the 1945 Constitution. In its preamble, the 1945 constitution lays down the Pancasila as the embodiment of basic principles of an independent

⁸⁴ Some relevant questions should be addressed are: will knowledge, information, science and technology be monopolised by corporate interests for private profit, and shaped by the markets of rich consumers? or will it be kept within the public domain, and used to help end poverty, hunger, and disease?

⁸⁵ The Ideal state of social order (the picture or elements of social contract) should be agreed upon by all components in a society. It is important as a basic framework to drive collective society. Like Locke said, free people need to agree on some ground rules in order to live together in harmony.

⁸⁶ Pancasila, the grand norm of Indonesian positive laws, is the philosophical basis of the Indonesian State. Pancasila consists of two Sanskrit words, *Panca* meaning five, and *Sila* meaning principle. It comprises five inseparable and interrelated principles. Every Indonesian citizen should: (i) Believe in the one and only God the Almighty; (ii) strive to achieve a just and civilised humanity; (iii) maintain Indonesian unity; (iv) adhere to Democracy guided by an inner wisdom in the unanimity arising out of deliberations amongst representatives; and (v) strive to achieve social justice for the whole of the people of Indonesia. These principles are sacred values of Pancasila. It is a cultural principle, which should be respected by every Indonesian because it is the ideology of the state and the life philosophy of Indonesian society.

Indonesian state.⁸⁷ To put it succinctly, and in the order provided in the constitution, the Pancasila principles are: (i) a belief in one supreme God⁸⁸; (ii) humanitarianism⁸⁹; (iii) the unity of Indonesia⁹⁰; (iv) democracy⁹¹; and (v) social justice.⁹²

⁸⁷ Pancasila does not stem from any particular ethnic group. It was intended to define the basic values for an "Indonesian" political culture. See: Soekarno, *Pancasila*, Binatijpta, 1957; See also: Oetojo Oesman and Alfian, (ed), *Pancasila sebagai Ideologi: Dalam Berbagai Bidang Kehidupan, Bermasyarakat, Berbangsa dan Bernegara*, (*Pancasila as Ideology in Various Lives*), BP 7 Pusat, 1986; Government, *Pancasila: The State Philosophy*; The US Congress Library on Pancasila.

⁸⁸ This principle reaffirms the Indonesian people's belief that God does exist. It emphasizes that the pursuit of sacred values will lead people to a better life. This principle matches the views of natural law or moral law theorists, such as Aquinas and Locke who touched on the role of God as basic morality in validating the existing positive laws toward better life. Principally, natural law refers to moral law that provides a moral and ethical validation to protect rights, i.e. intellectual property rights. Normatively, morality must not be separated and a law which is totally divorced from morality ceases to be law. See: Curzon, L.B., 1993, *Jurisprudence*, Cavendish Publishing Ltd, London.

⁸⁹ The humanitarian principle requires that every human being should be treated according to his/her dignity as God's creatures that tend to love 'goodness'. This principle is also equal to Aquinas' theory, which emphasised the "the essence of human nature", which also tends to favour goodness. Therefore, it can be stated that goodness is a human value. According to Aquinas, goodness and happiness, as the ultimate goal of the human being, are moral foundations of positive law. See: Aquinas, T., *The Ends of Man, Summa Contra Gentiles*, 3rd book, (edited and introduction by Anton C. Pegis), New York, The Modern Library, at 609-613.

⁹⁰ This principle embodies the concept of nationalism. It envisages the need to always foster national unity and integrity. In 1928, the Indonesian youth pledged one country, one nation and one language, and afterwards Pancasila was constructed as the national ideology. The Indonesian government enshrines the symbol of "*Bhinneka Tunggal Ika*", which means Unity in Diversity. See: Oetojo Oesman and Alfian, (ed), *Pancasila sebagai Ideologi: Dalam Berbagai Bidang Kehidupan, Bermasyarakat, Berbangsa dan Bernegara*, BP 7 Pusat, 1986; See also: Government, *Pancasila: The State Philosophy*; The US Congress Library on Pancasila. Regarding those points, it is necessary to restate that the concept of unity should not be limited to the territoriality notion. The unity principle should be appreciated as the national characteristic which reflects society's awareness of the importance of unity as a basic requirement to maintain the sustainability of collective life in the framework of systems.

⁹¹ The Democracy of Pancasila calls for decision-making through deliberations, or *musyawarah*, to reach consensus, or *mufakat*. *Ibid*

For achieving the ideal state of social order, the Indonesian government introduced national development based on the Pancasila and the Undang Undang Dasar 1945 (the 1945 Constitution)⁹³. Theoretically, all laws emanate from the Pancasila and the 1945 Constitution. Thus, the logical and juridical consequence of this notion constructs Pancasila as the principal foundation of the value of truth, which legitimates other legal concepts. In this case, the Pancasila is the source of the law's goals (*rechtsidee*), which establish and structure a fundamental foundation for general legal principles in Indonesia. The five basic principles of the Pancasila are stipulated in the four main ideas of the Preamble to the 1945 Constitution.⁹⁴

The Pancasila and the Preamble to the 1945 Constitution are considered as the axiom of Indonesian legal endeavours, i.e. managing information, knowledge, technology, and natural resources, including land and biodiversities, which cover: (i) the legal objectives; (ii) the legal resource⁹⁵; (iii) social justice⁹⁶; and

⁹² This principle requires the equitable distribution of welfare for all people. This means that all the national potentials should be utilized for the goodness and happiness of the people. Social justice implies protection for the weak. Protection should prevent abusive treatment by the strong and ensure the rule of justice. *Compare*: Rawlsian Justice.

⁹³ The 1945 Constitution of the Republic of Indonesia As amended by the First Amendment of 1999, the Second Amendment of 2000, the Third Amendment of 2001 and the Fourth Amendment of 2002. The 1945 Constitution consists of 37 articles, 3 articles on transitional provisions, and 2 articles on additional provisions. Its ideology and concepts were laid by the founding fathers of Indonesia (Muhammad Yamin, Supomo, Sukarno and Hatta). The Indonesia Constitution (*Undang Undang Dasar 1945*), being the 'supreme law, enshrines the *Pancasila* ideology — or the basic state philosophy, which embraces the five basic principles'.

⁹⁴ The four main ideas are: (i) The state is based on God the Almighty according to civilised society within the framework of the Indonesian union state; (ii) The state has sovereignty based on representative society; (iii) The state manifests social justice for all Indonesians; (iv) The state provides protection for all Indonesians and territory based on unity. *See*: The Preamble to the 1945 Constitution.

⁹⁵ The second main thought is legal resource which contains the characteristic of formal logic. It is manifested in: (i) the form of the state as the

(iv) legal protection aspects.⁹⁷ The first main idea refers to the legal objectives which govern society's interests (emerging rights and duties) as determined by God.⁹⁸ In this case, law emphasises the importance of a balance being drawn between rights and duty.⁹⁹

organisation of the power of the people; and (ii) democracy is based on consensus (*musyawarah*) in the form of wisdom. The State, as the power organisation of the people, has rights and obligations to regulate vital and strategic commodities, including the utilisation of INT in order to fulfil the needs of individuals, the community and the state. Management in utilizing INT should be regulated by the state. This is because the state has authority and sovereignty to take necessary policies and actions to achieve the ultimate goal of society. Then, to achieve this goal, the government should consider democracy as a state mechanism in regulating rights and obligations.

⁹⁶ The third main idea is social justice. This concept might cover a broad sense of justice, such as distributive justice, commutative justice, corrective justice, legal justice, and collective protection of life. The balance between rights and obligations as mentioned in the first main thought is the basic requirement for achieving social justice. However, the achievement should be manifested in an orderly fashion through formal methods as mentioned in the second main thought. The embodiment of the concept into positive laws may concern Rawlsian justice. See: Thomas Morawetz, *Justice*, The International Library of Essays in Law and Legal Theory, Schools 2, Dartmouth, Sydney, 1990, at 1.

⁹⁷ The fourth main thought is the legal protection aspect. It refers to the State's authority to regulate rights concerning IT, and its protection. Providing legal protection should manifest justice as mentioned in the third main thought. Accordingly, protection for creativity and productivity must be dedicated to achieving the collective goal without damaging individual interests. On that ground, the state should protect the existence of any party, as long as the related parties -individuals and groups- recognize the other's existence. To this degree, all the above main thoughts were considered to be indicators of equity, justice, and truth. Thus, it can be a basic consideration to legitimate the state's authority in regulating the granting, functioning, and utilization of information, knowledge and technology, and human behaviour and action in using and optimizing information, knowledge and technology, either for oneself or society.

⁹⁸ Locke argues that these duties are imposed by God and are discernable by reason. For Locke, the ultimate source of law is God, not reason. Yolton said "Locke was seeking to justify a system of morality by grounding the moral law in something objective. The law of nature is a decree of God, not of man's reason. It is part of God's will". Though the Laws of nature do not originate with mankind, human reason can determine what the laws of nature are. John W. Yolton, *Locke on the Law of Nature*, 67 PHIL. REV. (1958), at 477, 483, 487-489.

⁹⁹ This is the basis of social justice. It means that rights cannot surpass an obligation. Likewise, an obligation cannot overwhelm a right. Every person has a right to obtain what he or she needs in fulfilling his or her need in life.

Thus, any action to help each other is necessarily an obligation to fulfil the need of sustainable collective life. This condition requires that every human being should act based on justice and civilised rules. In this case, they should maintain their own existence and each other's existence; they even have an obligation to maintain other forms of life.¹⁰⁰ The harmonious relationship between rights and obligations is a must. Therefore, it requires legal protection. Thus, clearly, there is a strong link between moral and positive law. In this context, positive law must be in accordance with morals¹⁰¹. Law should help human beings to develop their existence and potential based on their nature: conserving the dignity of human beings, maintaining justice, ensuring equality and freedom, developing public interest and welfare.¹⁰² Those terms (social justice, social function, public interest, human dignity, the greatest benefit of the greatest number) are the core constitutive elements for creating and strengthening unity and sustainability.

Every person has an obligation to provide what he or she can give to others who need it in order to maintain and nurture their survival.

¹⁰⁰ The above concept is based on a human consciousness that all human beings are God's creature. So, it does not stem from 'freedom'; like Lotz said "limitation of a human being is caused by his or her freedom". Interdependency between a human being and nature requires a balance between rights and obligations. This view is also different to Meuwissen who laid down rights, obligations, and authority as basic categories which derived from freedom. Meuwissen referred to J.B. Lotz's work on *Person und Freiheit*, Freiburg Basel, Vienna, 1979. See: D.H.M. Meuwissen (I), at 65. in Titahelu.

¹⁰¹ According to Aquinas, law may contain injustice if it contradicts the idea of public welfare. In this case, moral reason should be legal reason, because they are part of the fundamental criteria for legal validity. Natural law proponents argue that the legal norm must fulfil the moral criteria, because they believe that there is an essential link between law and morality. See: Leiter, Brian, 1999, *Objectivity in Law and Morals*, Cambridge University Press, at 6; Brink, David O., 1999, *Legal Interpretation, Objectivity and Morality* in Leiter, Brian, 1999, *Objectivity in Law and Morals*, Cambridge University Press, at 12-13.

¹⁰² Injustice in law can occur if: (i) government enforces law that contains no public welfare, but only its interest; (ii) legislators make law by going beyond their own authority; (iii) law is forced on society, even though it is based on public welfare. See: Aquinas, T., *The Ends of Man, Summa Theologica*, in Lord Lloyd of Hampstead, *Introduction to Jurisprudence*, 3th ed., Praeger Publisher, 1972, at 96-97.

Based on the above description, the general legal principles, legal theories, legal dogma and legal practice concerning the just utilisation of information, knowledge, technology and natural resources should emanate from the grand norm. In Indonesia, basic concepts of justice can be explored from the social justice concept within the framework of the Pancasila. Consequently, all laws and regulations relating to the utilisation of information, knowledge, technology and natural resources, including land and biodiversities should take into consideration the greatest benefit of people based on social justice¹⁰³ in the Pancasila and the 1945 Constitution. This reasoning is reflected in a series of Indonesian intellectual property, research, science, and technology legislative Acts which refer to the Pancasila and the 1945 Constitution.

In order to optimise information, knowledge and technology for the greatest benefit of people, it will be useful if this research also elaborates argumentations on public interest and the social functions of information, technology and natural resources.¹⁰⁴ Therefore, a discussion of legal principles,¹⁰⁵ which govern the relationship between the government's rights, public rights and individual rights in utilising information, knowledge and technology based on social justice,¹⁰⁶ becomes more important.

¹⁰³ Preamble to Law No.18/2002 concerning the National System of Research, Development and Application of Science and Technology (NASRDAST).

¹⁰⁴ In elaborating those issues, it is necessary to discuss some relevant questions: (i) how can one link the concept of social justice and argumentation on information, knowledge and technology as a social function?; (ii) how can one appreciate the government rights to grant and control information, knowledge and technology, and its utilisation for public interest based upon the social function of IT?; (iii) how can one appreciate individual and communal rights to information, knowledge and technology?, etc.

¹⁰⁵ Legal principles have certain functions: (i) as a basis of law and order, which occupies a central position in legal systems; (ii) as a basic understanding and basic values, such as a subject that dominates the essence or substance of legal relationships; a subject that gives meaning to every figure of law; a subject that lays down a basis for value decision systems.

¹⁰⁶ Social justice and other principles of the Pancasila as basic thoughts were stipulated in the preamble to the 1945 Constitution. Those principles would be a subject of discussion concerning the contents of the existing legal principles—covering general legal principles and more specific legal principles—in

Theoretically, all legal products, inter alia, legislative and executive products, individual and collective products, such as contracts in utilising information, knowledge and technology, should be in accordance with the Pancasila and the 1945 Constitution¹⁰⁷. Thus, in practice, those legal principles should provide guidance to settle various disputes emerging from conflicts of interest in controlling important and vital information, knowledge and technology.¹⁰⁸

As a welfare state, Indonesia should prepare a national development¹⁰⁹ programme to improve society's welfare. This duty is derived from two main ideas: (i) the State should facilitate

Indonesian positive law. The essence and contents of the main thought behind the preamble to the 1945 Constitution constitute the meaning of the general principles of law.

¹⁰⁷ This concept is consistent with Kelsen's *stufenbau* theory. See: Hans Kelsen, *The Pure Theory of Law*, University of California Press, Berkeley, Los Angeles, 1970, Hans Kelsen, *The General Theory of Law and State*, Harvard University Press, at 117. See also: The 1945 Constitution, article 31(5) states that: "The government shall advance science and technology with the highest respect for religious values and national unity for the advancement of civilisation and prosperity of humankind." This article shows that: (i) the State has authority and control to develop and optimise information, science and technology; (ii) All the country's intellectual products should be used and optimised for the greatest benefit of the people. In this case, even though the 1945 Constitution does not mention intellectual property explicitly, through an analogous interpretation (*argumentum per analogiam*), we can find the spirit of guidance in the article in utilising and optimising IT as intellectual property products for the prosperity of humankind. See also: Considerations of a series of Indonesian Patent legislation; and the Law of the National System for Research, Science and Technological Development (UU No. 18 Year 2002). All legislation under the Pancasila and the 1945 Constitution refer to them.

¹⁰⁸ Ejan Mackaay, "An Economic View of Information Law", in Willem F. Korthals Altes, et.al. (ed), *Information Law Towards The 21st Century*, Information Law Series, Kluwer, 1992, at 55

¹⁰⁹ Indonesia, like other countries, needs equitable INT for developing various economic activities, such as industry, trade, agriculture, education, health, food, and other basic needs of society to meet the national development programme. The national development programme aims to fulfil such needs towards a better life based upon imperative mandatory needs. The 1945 Constitution therefore stipulates "for the greatest benefit and welfare of the people". See: Art.31 (5); Art 33 (3).

and accelerate the fulfilment of citizen's rights¹¹⁰, and (ii) the State should integrate economic factors into social justice¹¹¹. In terms of law, the phrase "for the greatest benefit of the people" is the ultimate goal in utilizing information, knowledge and technology.¹¹² The ultimate goal is the people's interest, so the utilization of information, knowledge and technology should be used in an appropriate (efficient) manner.¹¹³ The character of this

¹¹⁰ The State's obligation to fulfil citizens' rights is the main duty that emerges from its position as the regulator of welfare. See: Wilhelm Aubert, "The Rule of Law and Promotional Functional Law", in Tuebner, G., (ed), *Dilemma of Law in Welfare States*, Walter de Gruyter, Berlin, New York, 1986, at 32.

¹¹¹ Jan M. Broekman, "Legal Subjectivity and the Welfare State", in Tuebner, G. *ibid*, at 79.

¹¹² There are three articles in the 1945 Constitution which mandate citizens' rights to information, science and technology as part of human rights. See: The 1945 Constitution, Art. 31 (5), and Art.28F which states that: "Every person shall have the right to communicate and to obtain information for the purpose of the development of his/her self and social environment, and shall have the right to seek, obtain, possess, store, process, and convey information by employing all available types of channels"; and Art.28C which states that: "(i) every person shall have the right to better him/herself through the fulfilment of his/her basic needs, the right to education and to benefit from science and technology, art and culture, for the purpose of improving the quality of his or her life and for the welfare of the human race." Art 33 (3) states: "land and water and the natural riches contained therein shall be controlled by the State and shall be made use of for the people". Taking this Article further, the Forestry Law (UU 11/1967) extended this claim: Article 5 states that "all forests within the territory of the Republic of Indonesia, including the natural resources they contain, are administered by the State". This makes the DFEC and its line agencies in the regions responsible for managing the huge area classified as "State forest" (*hutan negara*) — around 75% of the nation's surface area. See also: Indonesian Patent Act, Considerations and Part I. General.

¹¹³ In this context, the meaning of appropriateness, efficiency and welfare can be linked to the Rawlsian justice principle. For example, regarding wealth, Rawls proposed certain principles: social and economic inequalities should be rearranged so that they are both: (i) to the greatest benefit of the least advantaged, consistent with the just savings principle, and (ii) attached to offices and positions open to all under conditions of fair equality of opportunity. Then, regarding the efficiency principle, Rawls maintained that: (i) an inequality of opportunity must enhance the opportunities of those with the lesser opportunity; and (ii) an excessive rate of saving must on balance mitigate the burden of those bearing this hardship. See: John Rawls, *A Theory of Justice*, Harvard University Press, 1999; Gilber Merit, *Justice as Fairness: A Commentary on Rawls's New Theory of Justice*, 26 VAND. L. REV. 1973, at 665-686; Kordana, K. A. &

'appropriateness' is absolute. This concept will be significant if it is included in positive laws.¹¹⁴

4.2. Post-Grant Level: Constructing a "Co-Ordinated Structure" in the Indonesian Legal System

As a sequence of the above ideal order components, this section will elaborate and visualize the construction of the ideal order (i.e. unity and sustainability; fundamental rights and human rights,¹¹⁵ public good as universal measurements or indicators) in constructing a coordinated structure in the optimization of INT and BGRTKF to have practical implication. The construction of co-ordinated structure is aimed at integrating various different interests among legal subject (individual, legal entity, state and public/society) in optimising INT and BGRTKF through IP and contract mechanism based on the ideal order. For that reason, the process of constructing a co-ordinated structure should consider universal values and fundamental rights issues in order to guarantee the acceptability of IP and contract. This is important in order to eliminate any barriers (restrictive or illegal clauses) that may impede the ability of people/public to utilise any essential INT and BGRTKF products.

One of the main challenges in visualising the ideal order elements is how to interpret, elaborate and embody them into positive laws. It is important to provide legal certainty and to avoid inconsistency between the ultimate goal (ideal order) and the utilization of INT and BGRTKF. In practice, certain people, corporations or

Tabachnick, D. H., *Rawls & Contract Law*, and other various reviews of Rawlsian Justice.

¹¹⁴ Even if the appropriateness of using INT has been regulated in positive laws, it cannot be considered as an objective of the law. The goal of law is only devoted to creating legal certainty, public order, justice, and usefulness for society.

¹¹⁵ The fundamental rights can be used to lay down the ground rules for appreciating and understanding the different interests based on the principles of sustainability, equity and justice as well as to limit the scope of and the means for of the exploitation of knowledge resource through IP regime and contracts of transferring technology.

institutions that control INT and BGRTKF, through state grants, technology trading, or other valid methods, do not use or optimize it properly. In this context, several important provisions related to social functions, national interests, the public interest in regulating INT and BGRTKF under the IP regime become more relevant.

In Indonesia, based on Pancasila (match to the universal values), social justice is meta-value. This norm obliges the government to create social justice for all. Consequently, the government introduce the term of social function to optimise any property and treasury to create social justice in order to maintain the human dignity. Therefore, the social function is meant to restate the fact that the exclusive right has a social function.¹¹⁶ This is like Notonagoro's concept that underlies the concept of the social function on the land. He started from the point of view of the state's authority. Because the state is a personification of the people, it has the authority and power to guarantee the social function¹¹⁷, i.e. INT and BGRTKF. The authority of the state means the state's authority to regulate and maintain collective life. So, if we focus on INT and BGRTKF, it means that we develop and make efforts to regulate anything concerning INT. From the above description, apparently the State has a certain authority to emphasize the characteristics of the social function concerning the INT and BGRTKF that should be manifested, based on the public interest principle.¹¹⁸

Normally, Indonesian intellectual property legislation regulates those issues. For example, the Indonesian Patent Act contains the

¹¹⁶ It is different from the concept of ownership, the right to use property/wealth (in a rational way) as Leon Duguit mentioned. The meaning of this concept is more relevant and parallel to Radbruch's social function concept, where in the property right that has a social function, there is an element of a social obligation.

¹¹⁷ Notonagoro, *Politik Hukum dan Pembangunan Agraria di Indonesia*, (*Political Law and Agrarian Development in Indonesia*), Bina Aksara, Jakarta, 1984, at 106, et.seq.

¹¹⁸ In this case, this concept may revoke the legal relationship between the owner and the property -i.e. information and technology-. The implementation of the social function is highly dependent on the authority of the state.

concept of the social function, which is used to restrict the implementation of patents. The concept of the social function in patents is derived from the concept of harmony and balance between rights and obligations. It means that the social function must ensure personal rights, but if it is faced with public or national interests, the public or national interests must first be considered without ignoring personal rights¹¹⁹. The restriction relates to the provisions concerning the implementation of patents in Indonesia, such as compulsory licences, the implementation of patents by the government, the defence and security of the state¹²⁰, and the national interest.¹²¹ Unfortunately, these provisions have not worked properly because they do not yet have an implementation regulation. Consequently, they become "catch all" articles, and leave legislators and judges to expand a wide discretion policy regarding the social function, public interests, and national interests. This leads to legal uncertainty in intellectual property.

Actually, this weakness can be dealt with utilizing the Indonesian competition law, which also provides strong protection for the public interest, the social function and the national interest.¹²²

¹¹⁹ *Ibid.* This is so, even though the Indonesian Patent Act mentions the national interest and public interest explicitly.

¹²⁰ Based on the defence and security of the State, the government may implement a patent. After consultation with the Minister of Defence, the President decides on the implementation of a patent by the government that will be implemented by a Presidential Decree. See: Art. 99 (1-2) of the Indonesian Patent Act

¹²¹ The concept of the national interest relating to the implementation of patents is based on a balance between rights and obligations. The national interest in terms of economic development is repeatedly mentioned in the preamble to the Patent Act as the motive for its introduction and it is expressed in a number of different provisions throughout the Act. The concept is also embodied in article 18 of the Indonesian Patent Act, which obliges a patent holder to implement his or her patent in Indonesia territory.

¹²² Indonesian competition law itself invokes the philosophy of the Pancasila. In the provisions of the statute as adopted, 'monopoly practices' are defined as the centralization of economic power resulting in the control of production or marketing "thus resulting in unfair business competition and potentially harmful to the interest of the public." It further states that: "Democracy in the field of the economy calls for equal opportunity for every citizen to participate in the process of production and marketing of goods, and /or

Principally, the laws are most likely to be useful in meeting their goals as long as: (i) the legal rules and frameworks for analysis are clear; (ii) the derogations from market-based rules are clear; and (iii) decision making is transparent and agency and court discretion is limited. Unfortunately, in the implementation of Indonesian competition law, the government tends to face serious challenges due to large-scale ambiguities concerning the wide range of discretion.¹²³ Therefore, the Pancasila and the 1945 Constitution provide guidance to Indonesian law and regulations on how to think and to act for the utilisation of information, science, technology, soil, water, and other internal resources should be differentiated in clear legal rules and framework analysis.

Thus, the management and implementation of patent law and other laws concerning INT¹²⁴ and BGRTKF¹²⁵ and how they should be based on the Pancasila. This concept contains several principles: (i) the principle of the State's authority; (ii) the principle of the utilisation of INT and BGRTKF for the greatest benefit of the people; and (iii) the principle of social justice as contained in the Pancasila. To simplify the concept, the first principle relates to the status of INT and BGRTKF in Indonesia, and the second and the third principles concern the utilisation and optimization of INT and BGRTKF, which are measured by two determinant indicators: (i) for the greatest benefit of the people; and (ii) social justice. Those

services, in a fair, effective and efficient business environment...". Notwithstanding Indonesia's commitments to international conventions, it asserts "there shall be no concentration of economic power in the hands of certain business enactors...". See: The Indonesian Competition Law, Para. 1, section (b) and (c). Chapter 1, Art. 1, para 2.

¹²³ Eleanor M. Fox, *Equality, Discrimination, and Competition Law: Lessons from and for South Africa and Indonesia*; 41 HARV. INT'L. L. J. (2000), at 594.

¹²⁴ The formulation of *consideran* (a) of Law No. 18 / 2002, which applies the First Principle of "God Almighty" indicates its meaning: "[a]ll natural resources in the soil, the waters and the air space of the country, under the jurisdiction of the Indonesian Republic, as the grant of God Almighty should be dedicated to fulfilling the needs of human life by using, optimising and promoting science and technology."

¹²⁵ The 1945 Indonesian Constitution, Art.33.

principles limit the state's authority to control (master) the utilization of INT and BGRTKF.

The term mastery implies the state's authority in using and optimising INT. With regard to the concept of mastery, the State, as the sovereign organization, should be considered as the organization of the people's power. Therefore, it is not relevant to assume the state's authority like ownership theory (*domein verklaring*). The state, as the organization representing sovereign people, has authority to regulate: (i) the availability, utility, and optimization of INT and BGRTKF; (ii) the determination and regulation of the legal relationship between individuals or institutions (legal subjects) and information, knowledge and technology (legal objects). An indicator that can be used to measure the limits of the legal subjects in utilising these legal objects is the term 'the greatest benefit of the people'. Therefore, the concept of the utilization and optimization of intellectual products for the greatest benefit of the people should be embodied in a concrete statement. It requires that: (i) any grant, utilization, and optimization of INT and BGRTKF; (ii) any determination and regulation of the legal relationship between individuals and INT and BGRTKF; and (iii) any regulation and legal relationship between individuals and legal action concerning INT and BGRTKF, should be dedicated to achieving the greatest degree of benefits for the people.¹²⁶

¹²⁶ The consideration of UU No.18/2002 concerning the National System of Research, Development, and Application of Science and Technology states that: "(1) God Almighty created nature and all internal resources for the welfare of human beings. Those creations should be responsibly managed and optimized through mastering, utilizing, and developing science, and technology; (2) mastering, utilizing, optimizing, and developing information, science and technology should be consistent with the ultimate goal of The 1945 Constitution: (i) protecting all Indonesians and its territory; (ii) improving public welfare; (iii) promoting the nation's intelligence; (iv) harmonizing society's life and its environment based on the Pancasila. See: UU NO.18/2002 Concerning the National System of Research, Development, and Application of Science and Technology, Considerations (a) and (b)

4.3. Integrating the Constitutive Elements of the Ideal Order in the Coordinated Structure of Contract

In this case, the determination of granting rights, *inter alia*, rights in INT and BGRTKF, falls under the state's authority. Through this authority, based on law, the government can create appropriate models for using and optimizing INT and BGRTKF towards the greatest benefit of the people. One of the most important government obligations is to integrate the constitutive elements of the ideal order (including protecting the public interest and the social function) in utilising INT and BGRTKF. To interpret and elaborate the obligation, the government should consider the main notions in the Preamble to the 1945 Constitution, which provide a fundamental foundation for determining the public interest and social function. This is because, theoretically, the terms (values of) public interest and social function are considered as general legal principles which stem from the main notions in the Preamble to 1945 Constitution.

Indeed, the concept of the social function and public interest are universal values, which match Indonesian values. For example, sustainability (*keberlanjutan*), unity (*keutuhan*), harmony (*keserasian, keselarasan*), equality and justice (*keseimbangan, keadilan*), and equity (*kepatutan*). Principally, regarding ideal values, there is no significant difference between Pancasila values (crystallized Indonesian values) and universal values that have been recognized by people all over the globe, such as public interest and social function and the greatest benefit of people within the framework of unity and sustainability. Thus, as long as the government can maintain the consistency in appreciating and implementing the Pancasila, and the main notion of the Preamble of the 1945 Constitution, the government can integrate all components of the ideal order. Those ideal values should be posited as a basic consideration to implement the national development programmes, including the exploitation of INT and BGRTKF through contract regime.¹²⁷

¹²⁷ In this case, the unity, sustainability, human right and fundamental right principles that match the Pancasila can be elaborated as constitutive elements of the coordinated structure in the contracts for the transfer of

Based on the above description, the general legal principles, legal theories, legal dogma and legal practice concerning the just utilisation of INT and BGRTKF should emanate from the grand norm. In Indonesia, basic concepts of justice can be explored from the social justice concept within the framework of the Pancasila. Consequently, all laws and regulations relating to the utilisation of INT and BGRTKF should take into consideration the greatest benefit of people based on social justice (*Preamble, Law No.18/2002*) in the Pancasila and the 1945 Constitution, Art. 33. This reasoning is reflected in a series of Indonesian intellectual property, research, science, and technology Acts which refer to the Pancasila and the 1945 Constitution (including fundamental rights). Thus, in practice, those legal principles may provide guidance for making any contract in optimising INT and BGRTKF as well as settling various disputes emerging from conflicts of interest in controlling important and vital INT and BGRTKF.

To ascertain the coherence of the existing regulations, from the grand norm to legal practices, including in the legal finding and the creation of contract is effective method to integrate the ideal values in the coordinated structure. (See. Scheme 3). This method can be used to drive and determine practical implication of the ideal values. Most importantly, this method functions to constitutionalise any policy or contract that contradict the ideal order components. Even, at practical level, this model could be a strategic policy to construct the co-ordinate structure in order to integrate various different interests among contractual parties and interested parties (society) towards the sustainability of collective life. In this case, Indonesia can learn from various jurisprudences in protecting fundamental rights.¹²⁸ Then, at policy level, the Indonesian

technology. It means that they should be appreciated as the ultimate guidance in drafting contracts for the transfer of technology based on the principle of equity and justice not only for economic purposes but also for human dignity.

¹²⁸ For example, by considering the UDHR and the ECHR, Paris Court of Appeal, 1 February 1989, (142 RIDA 301, 1989), *Paris Court of Appeals, 14th Chamber, Sec. A*, 26 February 2003, (35 IIC 342, 2004) and German Constitutional Court 7 July 1971 (1972 GRUR 481, 3 IIC 394, 1972) examined and restricted intellectual property exploitation to protect individual and

parliament may provide the Indonesian Constitutional Court with broader responsibilities and competencies in evaluating and examining any contract that has the potential to damage fundamental rights. In this case, the government may undertake any active action to scrutinize and to invalidate any contract that may contain any black clause or provision under TRIPS Plus that contradict universal values constituting the ideal order.

5. Concluding Remarks

If we fail to create appropriate global norms (universal acceptability), the problem of incoherency in legal systems (the substance, structure and culture of law) concerning the utilization of INT and BGRTKF will remain largely unresolved. Consequently, conflicts over resources (INT and BGRTKF) will continue to occur, which in turn will create the tragedy of the commons and the tragedy of an anti commons.

An absolute exclusive right in patents and free will in contracts has the potential danger to create the tragedy of the commons and the tragedy of an anti-commons, which may threaten and be detrimental to the sustainability of our collective life. Therefore, the exploitation of exclusive rights should be controlled by an ideal legal framework in order to nurture justice as the basic requirement for creating unity. Consequently, all development programmes, including the optimisation of INT and BGRTKF either at the national or international level, should be dedicated to maintaining justice for the unity and sustainability of collective life.

6. Recommendation

For resolving the dilemma between economic and public interests, either at the national or international level, it is relevant to consider the above alternative strategies to create this tailor-made inventor doctrine (patent law) and creator doctrine (copyright), particularly in Indonesia. Additionally, this tailor-made intellectual property

societies' fundamental rights, such as freedom of expression and rights to information. (Geiger, 2006:371-500).

law should be followed by reappreciating and reconstructing the meaning of the freedom of contract within a unity and sustainability framework. It can be restarted from a re-examination of the exclusive principle under the patent regime and freedom of contract by considering the social function, the public interest and the greatest benefit for humankind in the corridors of unity and sustainability of collective life.

In creating a suitable model for optimising knowledge resource, Indonesia should construct a co-ordinate structured to integrate various different interests (an exclusive right, the freedom to exploit it, the national interest, the social function, public interest, and fundamental rights). This can be realised through the “constitutionalisation” of intellectual property and contracts by considering fundamental rights under the 1945 Indonesian Constitution.

Then, in international strategies, Indonesia and other developing countries can campaign for the enforcement of fundamental rights under various international conventions, such as the UDHR, ECHR, and ICESR and initiate the establishment of a global moratorium, to manage the fruits of significant patents for guaranteeing the fulfilment of fundamental rights. Additionally, they can take a part in strengthening the global coalition of consumer INTGBRTKF as a control instrument to facilitate the creation of balance and harmony in the global IP regime and contract. Of course, the role of international and national institutions should be more progressive so as to facilitate such strategies.