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**FACILITATING THE EFFECTIVE REGULATORY PROTECTION OF INTELLECTUAL
PROPERTY RIGHTS AND STRENGTHENING THEIR ROLE IN INNOVATIVE
DEVELOPMENT**

**SYNOPSIS OF GOOD PRACTICES AND GOOD POLICIES OF INTELLECTUAL
PROPERTY COMMERCIALIZATION AND PROTECTION¹**

Note by the secretariat

Summary

This Synopsis aims to provide policy support on good practices and good policies in selected issues of intellectual property commercialization, protection and enforcement based on country experiences in the UNECE region. It addresses the rationale for policy intervention in the area of IP and discusses the following specific policy areas: policies to create an enabling environment for the transfer of technology from research institutions to the business sector; policies to support entrepreneurs and small and medium-sized enterprises in managing IP; policies to improve IP auditing, valuation, and accounting; and policies promoting better IP protection and enforcement, including the cooperation and coordination among the various government entities and with the private sector, the training of public officials involved in IP protection and enforcement, and the role of awareness campaigns targeting various stakeholders.

¹ This document was submitted late in order to incorporate in the text comments by members of the UNECE Team of Specialists on Intellectual Property received up to Tuesday, 9 October 2007.

CONTENTS

	<i>Paragraphs</i>	<i>Pages</i>
INTRODUCTION.....	1-5	3
I. THE RATIONALE FOR POLICY INTERVENTION	6-12	4
II. GOOD PRACTICES AND POLICIES	13-17	5
III. CREATING AN ENABLING ENVIRONMENT FOR THE TRANSFER OF TECHNOLOGY FROM RESEARCH INSTITUTIONS TO THE BUSINESS SECTOR.....	18-32	6
IV. INTELLECTUAL PROPERTY STRATEGIES FOR ENTREPRENEURS AND SMALL AND MEDIUM-SIZED ENTERPRISES	33-44	8
V. INTELLECTUAL PROPERTY AUDITS, ACCOUNTING AND VALUATION.....	45-56	10
VI. INTELLECTUAL PROPERTY RIGHTS ENFORCEMENT	57-68	11
VII. MAIN POLICY CONCLUSIONS.....	69-90	14

INTRODUCTION

1. The Programme of Work of the UNECE Committee for Economic Cooperation and Integration (CECI) in the focus area “Facilitating the effective regulatory protection of intellectual property rights and strengthening their role in innovative development” mandates the Team of Specialists on Intellectual Property (TOS-IP) to prepare the following documents in 2007:

- (a) Comparative report on “The commercialization of IP assets, on transforming research and development outputs into intangible assets and on the establishment of well-functioning markets for such products”; and
- (b) “Synopsis of good practices and good policies of intellectual property commercialization and protection”.

2. In consultations following its first meeting held in Geneva on 23-24 November 2006, TOS-IP agreed on a set of priority topics to be covered in these documents. These are:

- (a) the role of intellectual property (IP) in the transfer of technology from public research organizations to the business sector;
- (b) the management of intellectual property in small and medium-sized enterprises (SMEs);
- (c) the auditing, valuation of and accounting for intellectual property; and
- (d) the enforcement of intellectual property rights (IPRs).

3. The Comparative Report is being compiled on the basis of policy documents and other materials submitted to the UNECE by members of the Team, as well as other publicly available documents and materials.

4. This Synopsis of Good Practices and Policies largely draws on the findings of the Comparative Report and the outcome of an international conference held in Geneva on 25-26 July 2007. Its aim is to provide policy-relevant conclusions on good practices in selected issues of intellectual property commercialization, protection and enforcement in the UNECE region.

5. The UNECE region includes countries at very different levels of economic development. In accordance with the CECI mandate, this Synopsis focuses mostly on the catching-up economies in the UNECE region.² Nevertheless, it also aims to contribute to a general process of transnational learning on good practices and policies for promoting the commercialization and protection of intellectual property and the enforcement of intellectual property rights across the whole UNECE region.

² Throughout this Synopsis, the term “catching-up economies” is used to define the group of ten new Member States of the European Union (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia), the countries of South-east Europe (Albania, Bosnia and Herzegovina, Croatia, Montenegro, Serbia and The former Yugoslav Republic of Macedonia) as well as the countries of Eastern Europe, Caucasus, and Central Asia (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan).

I. THE RATIONALE FOR POLICY INTERVENTION

6. Intellectual property is a key concern in the quest for growth, development and competitiveness. Advancement in knowledge broadly conceived is a key driver of economic prosperity in the twenty-first century. The ongoing revolution in information and communication technologies (ICT) has dramatically reduced the costs of creating, processing and transmitting knowledge, both nationally and across borders. The pace of innovation has accelerated significantly. These twin developments, of closer international economic integration and more rapid innovation, create new challenges for IP regimes and policymaking.

7. To be competitive in the globalized economy, the UNECE Member States have to maintain, adapt and create institutional and legal frameworks conducive to the creation of knowledge and its commercialization. Intellectual property rights have a key role to play in this regard.

8. At the same time, both the innovation process itself, and the production activities of firms are globalizing rapidly. This raises challenges in terms of managing, protecting and enforcing intellectual property rights across borders.

9. The catching-up economies face additional challenges to integrate into the increasingly global production networks and to find their own niche in the increasingly global value chains. To be successful, they need to assign high priority to developing their own innovative capacities, as well as their ability to absorb and adapt technological innovations from abroad, and to move up the value chain over time. Again, IP regimes have a key role to play in this regard.

10. Well-designed intellectual property rights systems give temporary exclusive rights to inventors and thereby increase their chances to recover the often substantial upfront investments they need to make to generate innovations and to bring them to market. Intellectual property rights systems should also make it possible for innovators to sell, license or give away the rights to their innovations to others, who may be better placed to exploit them. In other words, intellectual property rights are a key prerequisite for intellectual assets to emerge in markets. Well-designed intellectual property rights systems also encourage innovators to disclose their knowledge so that future innovators can build on it, thereby helping to accelerate the rate of innovation.

11. However, a balance has to be struck between the need to give temporary exclusive rights to innovators so that they can recover their investments, and the need to make new knowledge available for use by future innovators and competitors.

12. The catching-up economies are in the process of developing and adapting their IP regimes with a view to meeting these challenges. They are undertaking commitments in the framework of the treaties administered by the World Intellectual Property Organization (WIPO), accession negotiations to the World Trade Organization (WTO), and/or Partnership Agreements with the European Union. At the same time, these treaties and agreements still leave significant scope for policymaking at the national level.

II. GOOD PRACTICES AND POLICIES

13. A well-designed and well-performing intellectual property regime is not an end in itself, but a tool to improve the innovative capacity and competitiveness of the economy. Policymakers should therefore ensure that practices and policies targeting improvements in the intellectual property regime are consistent with and integrated into a larger effort to improve the policy, legal and regulatory framework promoting innovation and competitiveness.³

14. The effectiveness of the practices and policies proposed in the present document depends in part on progress made in the design and governance of national innovation systems, the creation of suitable framework conditions for the financing of innovation, and the promotion of innovative entrepreneurs and SMEs. While these issues are beyond the scope of the present document, they are being addressed within the other thematic areas of the CECI Programme of Work.⁴

15. Given that the effectiveness of IP policies depends on the broader policy, regulatory and legal environment, the good practices and policies outlined below should only be considered as options that have worked well in certain contexts. When considering these options in formulating specific IP policies, policymakers need to base their decisions on a thorough analysis of the relevant conditions prevailing in their respective national economies.

16. Interdependencies also exist across various IP policies. For instance, policies aimed at improving IP management capabilities at research organizations or small enterprises are unlikely to have a big impact unless the legal protection of IP is sufficiently strong and enforcement of IPRs is effective. Policies aimed at strengthening legal protection of IP and enforcement of IPRs are unlikely to enhance economy-wide innovative capacity and competitiveness if potential innovators lack the awareness, skills or resources to access the legal IP system or to manage their IP judiciously. Policy should therefore address simultaneously weaknesses in the IP regime along the entire spectrum from the management of IP in research organizations, enterprises and financial firms to the legal and institutional system for IP protection, to IPR enforcement.

17. A broad-based approach to IP policy, aiming simultaneously at strengthening the protection and enforcement of existing IPRs and at improving the conditions for the development and commercialization of new intellectual assets can also help in mobilizing political support from a broad cross-section of stakeholders.

³ The World Intellectual Property Organization has developed a National IP Audit Tool which provides a systematic approach for policy makers to assess the strengths and weaknesses of their IP regimes in the context of the overall innovation policy framework.

⁴ See documents ECE/CECI/2007/3, ECE/CECI/2007/6, and ECE/CECI/2007/7.

III. CREATING AN ENABLING ENVIRONMENT FOR THE TRANSFER OF TECHNOLOGY FROM RESEARCH INSTITUTIONS TO THE BUSINESS SECTOR

18. A key IP policy focus is to better utilize the knowledge generated by public research. This calls for improvements in the effectiveness of technology transfer from universities and other research organizations to the business sector for the successful commercialization of university-generated research results. Better management of IP by both research organizations and industries can be part of the solution.

19. As only part of the knowledge generated in most public research organizations (PROs) is patentable and hence could be exploited through licensing, policy should avoid an excessively narrow focus on IP protection and management. A broader approach to knowledge transfer (including tacit knowledge, skills and know-how in addition to patentable technologies) is often preferable. This point is of particular relevance in many catching-up economies, where research organizations have a legacy of focusing predominantly on generating technologies to the detriment of knowledge absorption, adaptation and diffusion capabilities.

20. The focus of IP policies in the context of technology transfer should not be narrowed only to patents. Some universities have considerable commercial success from knowledge transfer, for example through distance or e-learning activities, which require protection through copyright.

21. Successful innovation in a modern economy is a complex process involving cooperation and feedback between academic research, industrial research and development, as well as marketing and customer relations. Ideally, PROs and firms should forge long-term relationships, where both sides draw benefits that do not depend on the success of any individual research and development project. Such benefits include firms using PROs as recruiting grounds for talented staff, and PRO researchers using collaboration with industry as a source for new ideas for scientific research. Governments can empower and support PROs in partnering with industry by giving PROs sufficient autonomy and resources to be able to recruit experienced technology transfer staff on a competitive basis, by encouraging the pooling of technology transfer resources across universities, and by promoting academic career appraisal criteria that take into account successful technology or knowledge transfer activities, such as patenting and collaboration with industry.

22. A good practice identified in country experiences is governing knowledge transfer by two principles: maximizing the beneficial use of knowledge generated by research organizations (through excellence in scientific research, protection and use of IP, and cooperation with industry), and responsible use (sustaining the scientific research capability of PROs, making sure the use of the knowledge benefits society). IP management is a tool to be used in the pursuit of these principles, not an end in itself.

23. By contrast, policies pushing towards IP protection of PROs research, primarily as a source of revenue that would enable them to cut public funding for PROs, cannot be considered good practice. Experience shows that few research results generated at PROs are immediately ready for commercial exploitation. Most require substantial further development and investment by the private sector, and licensing revenues and royalties, if any, only materialize after long time lags. IP revenues can be highly volatile, depending not only on research breakthroughs but also on the

state of the business cycle. PROs therefore need a stable source of public base-line funding. From the point of view of public welfare, technology transfer programmes are investments, the returns to which should accrue to the economy and society at large, and policy should reflect this aspect.

24. Country experience indicates that PROs usually face several challenges regarding the use of IP in technology transfer to industry, such as perceived conflicts with academic culture and the mission of PROs to do basic research; poor IP management;⁵ and conflicts over IP ownership and the distribution of revenues. These challenges are often compounded in the case of cross-border collaboration. Government policy can play a critical role in meeting these challenges.

25. Professional and industry associations can also play a very useful role in addressing these challenges. For instance, in some countries, associations of technology transfer professionals and industry associations are working together to create model contracts and codes of conduct covering the ownership, management and exploitation of IP in PRO-industry cooperations.⁶ These model contracts and codes of conduct reflect good practice and can be used as starting points for negotiations between PROs and companies on a voluntary basis. Governments can support and encourage the use of these model contracts and codes of conduct, for instance, by giving preference in their public research funding to PROs that document good IP management as evidenced by their compliance with good practice.

26. There is also significant scope for exchanges of experience and lessons learned in this regard among UNECE Member States. Several national and sub-regional professional technology transfer organizations are offering training and advice in this regard. Policymakers in catching-up economies might consider facilitating the participation of technology transfer professionals in such training by providing funding for such activities and by including the qualification of technology transfer professionals among the criteria to assess the quality of PRO IP management when allocating research funding.

27. Policymakers can also enhance the quality of IP management in PROs by promoting the recognition and accreditation of professional technology transfer courses.

28. Another avenue to foster knowledge transfer in the long-term is by strengthening the relationship between PROs and industry. Policy can contribute to this through appropriate regulations enabling business executives to teach at universities, and enabling academics to serve

⁵ At the level of the PRO, effective IP management raises several issues, such as: how to secure adequate funding for IP management and Technology Transfer Offices (TTOs) given that the returns, if any, will materialize only in the long-term (10 – 25 years)? How to provide the right incentives for PRO staff to exploit IP and how to keep these incentives consistent with other avenues for technology transfer? How to avoid or resolve potential conflicts of interest, for example, between using funds for basic versus applied research, open access to knowledge versus exclusion to generate revenue, staff benefiting individually from decisions they take on behalf of the PRO?

⁶ Some examples are the Association of University Technology Managers (AUTM) in the United States, the Association of University Research and Industry Links (AURIL) in the United Kingdom, the European Association of Research and Technology Organizations (EARTO) in Brussels, the Réseau C.U.R.I.E. in France, or the Techtrans Network in Denmark.

as non-executive directors in companies. More generally, policy could envisage schemes that facilitate the mobility of people between academic and business careers and across national borders.

29. As to who should own the IP generated in PROs, the consensus seems to be that as a point of departure, PROs should have the right of first refusal on claiming IPRs to the results of their research. In countries where this is not the case, governments may consider passing legislation to this effect. However, they should allow PROs the flexibility to negotiate alternative ownership arrangements where appropriate (for example, when the industrial partner has made significant contributions to the research).

30. With the granting default IP ownership rights, policy should at the same time assign to PROs the responsibility to actively work towards the commercialization of the IP, while considering retaining a public right to request a non-exclusive license.

31. As to the sharing of revenues from the commercialization of IP generated in PROs between the PRO, the researchers involved, and the industry partners, there is no universal rule. But good practices suggest that both sides be realistic about the value of the IP, recognizing, on the one hand, the costs of doing the research that generates the IP and, on the other hand, the costs of turning that IP into a successful product.

32. Since innovation is increasingly global, it cannot be managed effectively within strictly national boundaries. Overcoming the difficulties of technology transfer and PRO-industry cooperation, which are compounded when they take place across countries (due to variations in IP systems and related legal regulations), calls for increased international cooperation in this regard. There are initiatives and efforts, for example, at the level of the European Union, to push for more harmonization through voluntary codes and other forms of soft regulation, both as far as IPR systems and as far as how PROs do business with industry. Governments of catching-up economies need to pay attention to areas where their own local regulations might be a hindrance to cross-border collaboration among PROs or between PROs and business, and may wish to consider working towards harmonizing those regulations.

IV. INTELLECTUAL PROPERTY STRATEGIES FOR ENTREPRENEURS AND SMALL AND MEDIUM-SIZED ENTERPRISES

33. SMEs account for the vast majority of all jobs and a large share of total business activity in the UNECE region. However, SMEs tend not to exploit the formal IP system to its full potential, a trend which is visible across the whole UNECE region.

34. In part, this reflects the fact that not all SMEs are highly innovative, and even if they are, they also have alternative means available to protect their IP, such as secrecy, publication, lead time advantages, product complexity, customer relations management, and open source.

35. Hence the goal should not necessarily be to push all SMEs into using the formal IP system more actively, but rather to make SMEs more aware of the potential use of the IP system and the importance of having an in-house IP strategy in place that responds to their specific needs.

36. However, country experiences in the UNECE region indicate that SMEs as a group do underutilize the formal IP system for a variety of reasons, including:

- (a) lack of awareness of the IP system;
- (b) excessive costs in obtaining IPRs;
- (c) excessive complexity – both in obtaining IPRs and in availing themselves of the civil and administrative remedies;
- (d) lack of expertise; and
- (e) lack of human and financial resources for enforcement, including the high costs related to litigation.

37. To address the heterogeneity of SMEs, policy-driven IP management support requires first identifying those SMEs that need it most. To this end, policymakers could consider assigning the delivery of IP support to SMEs to subnational (regional) agencies that are more familiar with the characteristics and needs of potential client SMEs.

38. Past experience in the catching-up economies reveals additional problems that call for the attention of policymakers, including:

- (a) lack of stable demand for domestic innovative products;
- (b) difficulties in entering global markets;
- (c) declining innovative capacity of many SMEs, partly related to a lack of finance for innovation such as venture capital;
- (d) lack of clarity as to who owns IP (for example, in cases of IP resulting from government-funded research); and
- (e) poor IPR enforcement due to a lack of resources in the legal system.

39. Policymakers have a variety of options in addressing the problems that SMEs are facing when dealing with IP issues, such as:

- (a) awareness raising and training programmes;
- (b) tax breaks or subsidies or reduced fees for IP protection;
- (c) offering consulting and advisory services or IP audits free of charge or at subsidized rates;
- (d) match-making services (potential licensors and licensees); and
- (e) model contracts for licensing.

40. Support at the national level can be offered by dedicated SME support institutions, such as enterprise development agencies, productivity councils, but also through national IP offices. The sharing of good practices and guides based on the experiences of such institutions should be encouraged.

41. Good practices and guides on IP specifically targeting entrepreneurs are also developed by international organizations, such as WIPO and the European Patent Office (EPO). In this regard, it is considered good policy to disseminate good practices and guides prepared by reputable international organizations to SMEs, either directly by the national IP offices and/or the relevant government entities responsible for SME development, or via national SME support institutions.

42. A first step in the policy design is the thorough assessment of the situation in the specific country to identify the most pressing needs and obstacles faced by SMEs.

43. Experience also shows that it can be a challenge to get SMEs to participate in training on IP management. One attractive solution might be to offer training that covers IP in addition to other issues that may be of immediate relevance to SMEs.

44. More generally, IP support to SMEs will not be effective unless the overall business environment is favourable for SMEs. Therefore, a coherent policy approach implies integrating IP support for SMEs into the wider SMEs support policies. Synergies between IP support programmes and wider SME support programmes could be achieved, for instance through cooperation and coordination between the relevant IP offices and SMEs support institutions, and the development of joint programmes.

V. INTELLECTUAL PROPERTY AUDITS, ACCOUNTING AND VALUATION

45. IP auditing, accounting and valuation are of increasing importance for innovative businesses, public research organizations, venture capitalists and other providers of financing for innovative enterprises. They are the basis for successful IP management, ready access by innovative firms to external finance on affordable terms, and well functioning markets for IP.

46. IP auditing is a systematic appraisal of the stock of IPRs possessed by a company or a PRO, including how strongly IPRs are protected, and how important they are to the business. IP auditing is the starting point for the development of any IP management strategy.

47. Putting a value on IP assets becomes indispensable when considering the sale, purchase or licensing of IP assets, mergers and acquisitions of firms with significant IP assets, joint venture arrangements and strategic alliances, litigation over IPR infringement, and for the purposes of financial reporting and disclosure.

48. It is increasingly important that firms report on their IP in a transparent and informative way and that they communicate their IP exploitation strategies effectively. The reason is that accounting standards currently allow for only a limited recognition of intellectual assets in financial statements. Given that intellectual assets are becoming increasingly important for value creation, this means that financial statements alone are less informative today than in the past for assessing the performance and prospects of innovative companies.

49. However, IP auditing, accounting and valuation are new, complex and rapidly evolving areas. Therefore, there is currently little factual basis for recommending good practices to policymakers and standard setters.

50. One problem is that there is no single best methodology for the valuation of IP. Whether to use static or dynamic models, whether to rely on income-based, cost-based or transaction-based methods depends crucially on the purpose for which the valuation is undertaken.

51. Whichever method is chosen, IP valuation will inevitably involve a large element of subjectivity due to the need to:

- (a) assess the quality and strength of intellectual property rights and the capability of the company's management to protect and enforce them;
- (b) assess market prospects of existing and future IP-based products (which among other things will depend on the quality of the management team of the company owning the IP);
- (c) estimate future royalty streams;
- (d) estimate future development costs to bring IP-based products to market;
- (e) assess the risks surrounding all these estimates; and
- (f) identify comparable IP assets that were recently sold and whose prices a company can use as benchmarks in valuing its own IP.

52. Another conceptual problem is the difficulty of distinguishing between investments in intangible assets and current research and development (R&D) expenditures, such as the remuneration of R&D employees. These employees acquire skills and know-how in the course of the research and development process, and those skills and know-how constitute important intangible assets for the company. Similarly, the value of various IP assets depends in large measure on the IP management capabilities and business strategy of the firm, which is difficult to measure objectively. For these reasons, it has proved difficult to expand the coverage of IP in accounting standards.

53. There is some evidence from OECD economies that competition in financial markets encourages companies to improve their reporting and disclosure policies on IP, and that companies with strong corporate governance structures are better at managing, valuing and reporting their IP. Fostering capital market competition and good corporate governance, while important policies in their own right, may also be useful therefore to spur improvements in IP auditing, valuation and accounting.

54. Industry and financial sector associations are also developing voluntary codes of conducts and standards in this area. Moreover, there are firms specializing in providing IP auditing and valuation services to other firms.

55. Policymakers should monitor these developments with a view to disseminating and encouraging the adoption of good practice as it evolves. Further extensive sharing of experiences will be needed for the identification of good practices and setting the corresponding standards.

56. At present, any regulations that might be adopted should preferably be principles-based rather than prescriptive: i.e. they should set out general principles and goals to be reached without prescribing in detail what companies would have to do to comply.

VI. INTELLECTUAL PROPERTY RIGHTS PROTECTION AND ENFORCEMENT

57. Protection and enforcement of IP is key for the effective and systematic commercial exploitation of innovations. The economic considerations of rights holders are an important factor in the process of IP enforcement. However, there are also other fundamental public policy issues at stake where society, as a whole, stands to benefit from the effective enforcement of IP. This is more so considering that breaches of intellectual property rights frequently involve

products that might pose health and safety risks to consumers, examples of which include, counterfeit drugs,⁷ food, beverages, toys, and aircraft and automobile parts.

58. Countries in the UNECE region have already a number of legislative and statutory instruments in place in their legal and regulatory framework to effectively protect and enforce intellectual property rights, and most of the policy options discussed in this section are generally meant to supplement rather than replace existing mechanisms.

59. The main areas of policy intervention concern the IP regulatory and legal framework; cooperation and coordination among various government entities and with the private sector; the importance of ongoing training to public officials involved in IP protection and enforcement; and the role of awareness campaigns targeting the various stakeholders.

60. The legal and regulatory framework provides the parameters within which IPR enforcement can be pursued. There is no single 'right' model for dealing with IP enforcement, and such models vary from one jurisdiction to the other. In some jurisdictions, for example, the consumer in possession of an infringing product can be charged with a criminal offence. In some jurisdictions, the proceeds from IP-related crimes can be recovered and utilised to finance additional enforcement activities. Some jurisdictions have created specialised IP police units and IP courts to enhance the effectiveness of enforcement actions, while a number of others allow customs authorities to act *ex officio* upon suspicion that infringing goods are destined for export, transit and/or transshipment.

61. Effective enforcement needs to provide adequate deterrence by means of appropriate civil sanctions, such as compensation to the legitimate right holder, and effective criminal sanctions. Policy intervention within the legal and regulatory framework are generally considered good practices when they:

- (a) aim at a reduction in litigation costs for the use of the civil system to enforce intellectual property rights;
- (b) ensure that civil remedies and procedures, such as effective provisional measures, are in place, and that adequate compensation for right holders through appropriate methods for the calculation of damages is provided;
- (c) provide for effective criminal sanctions for commercial scale intellectual property rights infringements in order to underline that such infringements constitute serious economic crimes;
- (d) encourage courts and competent administrative authorities to make use of the criminal sanctions to the full extent of the legal provisions;
- (e) empower law enforcement agencies with the necessary legal power to effectively deal with intellectual property rights infringement issues;
- (f) establish legislative standards aimed at prohibiting the movement of infringing products that are either in transit or in the process of being transhipped;

⁷ The World Health Organization estimates that ten per cent of all pharmaceuticals available worldwide are counterfeits.

- (g) explore the possibility of enacting/amending legislation to ensure that the manufacture and distribution of products posing health and safety risks are punishable as serious crimes;
- (h) establish and implement regulations for wholesalers, distributors and retailers of consumer products to ensure maximum control of the legitimate supply chains of products, such as pharmaceuticals, food, beverages, toys, aircraft and automobile parts, and other products that might pose health and safety risks;
- (i) maintain a well-equipped and competent national drug regulatory authority that will ensure control and regular inspection of all entities involved in the manufacture, trade and distribution of pharmaceuticals;
- (j) establish and implement *ex officio* authority for customs officers to act with respect to suspect infringing merchandise, without the need for a formal complaint from the right holder; and
- (k) ensure that civil, criminal and administrative remedies include destruction of the infringing merchandise.

62. Achieving the right policy mix in the IP legal and regulatory framework is a major challenge for policy makers, given the complexity of the globalized economy. Thus the rapid development in ICT technology poses serious challenges to IP legislation, especially in the area of copyright law. Although a number of instruments at the international level have been devised to address the situation,⁸ keeping up with these developments has proved to be somewhat problematic and there are no universally acknowledged good practices and policies to follow.

63. The enforcement of IP is typically entrusted to a number of government ministries, departments and agencies. Effective coordination and cooperation between these various institutions is key to strengthening IP enforcement. In a number of countries in the UNECE region, coordination and cooperation among government bodies is carried out either through designating lead agencies, or by setting up special inter-agency working groups. Both options constitute good practices, and as such, a policy option available to governments is to encourage such coordination and cooperation, and to establish measures aimed at avoiding overlap and duplication.

64. In identifying and fostering synergies between law enforcement agencies, attention should also be paid to the links and overlaps between the enforcement of intellectual property rights and the enforcement of safety and health regulations. One promising avenue of strengthening enforcement is the closer involvement of market surveillance authorities in the fight against counterfeit goods.⁹ Such a practice is already being implemented in a number of countries in the UNECE region.

65. Close cooperation with private sector rights holders in enforcing IP and in the fight against infringing products is generally considered good practice. Rights holders have the necessary

⁸ Most notably the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.

⁹ Policy options in this regard are in the process of being formulated by the UNECE Working Party on Regulatory Cooperation and Standardization Policies (WP.6).

technical expertise to distinguish infringing goods from original products, and may possess additional information on the functioning of the various distribution channels. They therefore may be very useful especially in identifying the infiltration of infringing products into legitimate distribution channels. This type of cooperation can help save vital time which is especially crucial when dealing with infringing products posing health and safety risks.

66. In many countries in the UNECE region, the key bottleneck in IPR enforcement appears to be in the application and interpretation of laws and regulations, rather than in inadequacies in the legal framework per se. To improve IPR enforcement, it is therefore important to ensure that public officers involved in IPR protection and enforcement receive adequate and continuous training. Better training reduces the risks of wrong legal interpretations in civil, criminal and administrative procedures which could undermine the credibility of the legal system. A sound policy mix should therefore provide sufficient resources and ongoing training to the judiciary, the prosecution, police, customs and IP office officials to ensure effective implementation of IP legislation.

67. It is of utmost importance for consumers, rights holders and policy makers to be aware and understand the multifaceted and dynamic role of the IP system. Besides the need to create an IP culture, rights holders and consumers need to be aware of the IP system's contribution to generate wealth and economic growth, its job-creation potential, its crucial role for the success and prosperity of the innovation industry, as well as the economy-wide effects of counterfeiting and piracy.

68. A number of countries in the UNECE region have developed far-reaching training and education programmes aimed at students, the private sector, policymakers and consumers. In some countries in the UNECE region, these programmes are supplemented by media campaigns and public exhibitions to heighten awareness. The IP offices in the countries in the UNECE region play a pivotal role in the formulation and implementation of these campaigns. The following are considered to be good practices and policy options:

- (a) awareness raising efforts at all stakeholder levels, such as policymakers, consumers, students and rights holders;
- (b) targeted campaigns could focus on the possible health and safety risks for the consumer, and the dangers of public order caused by organised crime involvement in the manufacturing and distribution of IP infringing products;
- (c) specific campaigns that address the more vulnerable groups of society;
- (d) evaluating the impact of awareness campaigns, for instance through public surveys; and
- (e) sharing the results of such awareness strategies with all stakeholders to further optimize the effectiveness of such campaigns.

VII. MAIN POLICY CONCLUSIONS

69. Intellectual property is a key concern in the quest for growth, development and competitiveness. To be competitive in the globalized economy, the UNECE member countries have to maintain, adapt and create institutional and legal frameworks conducive to efficient investment in the creation of knowledge and its commercialization. The countries with catching-

up economies are in the process of developing and adapting their IP regimes with a view to meeting these challenges.

70. It is important to ensure that practices and policies targeting improvements in the intellectual property regime are consistent with, and integrated into a larger effort to improve the policy, legal and regulatory framework promoting innovation and competitiveness.

71. The specific IP policy options should be based on a thorough analysis of the relevant conditions prevailing in their respective national economies.

72. Policy should address simultaneously weaknesses in the IP regime along the entire spectrum from the management of IP in research organizations, enterprises and financial firms to the legal and institutional system for IP protection, to IPR enforcement.

73. In public research organizations, a broader approach to knowledge transfer (including tacit knowledge, skills and know-how in addition to patentable technologies) is often preferable to a narrow focus on IP protection and management.

74. Technology transfer programmes should be viewed as public investments to the benefit of society at large in the form of new products and more and better-paying jobs.

75. Poor IP management and a lack of appreciation for the importance of IP for successful technology transfer is a significant problem at many PROs. Governments could therefore contribute to more efficient technology transfer by promoting appropriate training of IP for technology transfer professionals and researchers and by establishing incentives for improved IP management at PROs.

76. PROs should be given the right of first refusal on claiming IPRs to the results of their research. However, they should be allowed the flexibility to negotiate alternative ownership arrangements where appropriate. With the granting default IP ownership rights, governments should impose on PROs a responsibility to actively work towards the commercialization of the IP.

77. Another avenue for facilitating IP management in technology transfer is the cooperation between governments and professional and industry associations, and policy should encourage this form of cooperation.

78. To improve the overall policy effectiveness and achieve synergies, IP support for SMEs should be integrated into the wider SMEs support policies.

79. Targeting IP management support effectively requires identifying those SMEs that need it most. Subnational (regional) agencies that are more familiar with the characteristics and needs of potential client SMEs could be instrumental in this.

80. Awareness raising campaigns and training programmes on IP for SMEs and entrepreneurs can contribute to their better understanding of the available means for protecting their IP and the benefits this might bring, and to improved IP management.

81. Well-targeted tax breaks or subsidies for using the formal IPR system can also encourage SMEs to better protect their IP.

82. The policy mix needs to recognize the increasing importance of IP auditing, accounting and valuation for innovative businesses, public research organizations, venture capitalists and other providers of financing for innovative enterprises.

83. IP auditing, accounting and valuation are new, complex and rapidly evolving areas, which present a challenge for policymakers, as there is currently little factual basis for recommending good practices.

84. Fostering capital market competition and good corporate governance - which are important policies in their own right - may also be useful to spur improvements in IP auditing, valuation and accounting.

85. Industry and financial sector associations are also developing voluntary codes of conducts and standards in this area. Policymakers should monitor these developments with a view to disseminating and encouraging the adoption of good practice as it evolves.

86. To address the main weakness in the application and interpretation of IP laws and regulations, it is important to ensure that public officers involved in IPR protection and enforcement receive adequate and continuous training.

87. Effective coordination and cooperation between the various institutions entrusted with IP enforcement is another key to strengthening IP protection.

88. In enforcing IP, and in the fight against infringing products, it is considered good practice for governments to cooperate closely with private sector rights holders who have the necessary technical expertise and information.

89. For rights holders, low-cost and fast provisional remedial measures are important, as are manageable litigation costs.

90. Fighting IPR infringements will remain a difficult challenge, as long as consumers do not perceive buying infringing goods as a serious problem. It is therefore important to mount awareness-raising campaigns to create an "IP culture" deterring consumers from buying IP-infringing goods.

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