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Financing a Sustainable Information Society

Financing the Information Society in the South

A Global Public Goods Perspective

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This paper looks at the question of financing the provision of information and communication technologies (ICTs) in the South, in the context of the WSIS, advocating the adoption of a “global public goods” (GPGs) perspective on the issue. First, the authors provide an overview of what a GPGs approach means in conceptual terms, looking both at general definitions of GPGs and the applicability of this concept in relation to ICTs. They then review the debate about existing or alternative innovative financing mechanisms that might be used for GPGs provision, linking the proposed strategies to the ICTs sector. Finally, the authors put forward a concrete proposal for a financing mechanism, which could be appropriate for expanding access to and use of ICTs in the South.

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هذه الوثيقة تهدف الى النظر فى مسألة تمويل توفير تكنولوجيا المعلومات والاتصالات فى الجنوب، وذلك فى إطار القمة العالمية لمجتمع المعلومات، وتطالب بثنى منهج " المنافع العامة العالمية" للتعامل مع هذا الموضوع. أولاً، يقدم المؤلفان عرضاً لما يعنيه منهج " المنافع العامة العالمية" من حيث المفاهيم، بالنظر سواء الى التعريفات العامة لـ " المنافع العامة العالمية"، او تطبيقات المفهوم فى تكنولوجيا المعلومات والاتصالات. يتم بعد ذلك عرض للنقاش الجاري حول موضوع محدد هو ما هي آليات التمويل القائمة أو البديلة الجديدة والتي يمكن إستخدامها من أجل توفير المنافع العامة العالمية، مع ربط الإستراتيجيات المقترحة، كلما أمكن ذلك، مع قطاع تكنولوجيا المعلومات والاتصالات. وفي النهاية، يقدم المؤلفان مقترحاً محدداً فيما يمكن إعتبره آلية تمويل ملائمة للتوسع فى توفير النفاذ على تكنولوجيا المعلومات والاتصالات فى الجنوب.

Este documento explora el tema del financiamiento para la provisión de tecnologías de información y comunicación (TIC) en el Sur, en el contexto de la CMSI, argumentando a favor de la adopción de una perspectiva basada en el concepto de "bienes públicos globales" (BPG). En primer término, los autores analizan el significado de este concepto, sus definiciones generales y su aplicación al caso específico de las TIC. A continuación, examinan mecanismos de financiamiento - existentes o alternativos - que podrían utilizarse para la provisión de los BPG, vinculando las estrategias propuestas al sector de las TIC. Finalmente, proponen un mecanismo de financiamiento que podría resultar adecuado para la expansión del acceso a las TIC en el Sur.

Ce document explore la question du financement des technologies de l'information et de la communication (TIC) dans le Sud, dans le contexte du SMSI, en proposant l'adoption d'une perspective fondée sur la notion de "biens publics mondiaux" (BPM). Tout d'abord, les auteurs analysent la notion des BPM, ses définitions générales et son application au cas spécifique des TIC. Ils examinent les mécanismes de financement - existants ou alternatifs - qui pourraient être employés pour la fourniture des BPM, et établissent des rapports entre les stratégies proposées et le secteur des TIC. Pour finir, ils proposent un mécanisme de financement spécifique pour l'expansion de l'accès aux TIC dans le Sud.

Introduction

The issue of financing information and communication technologies (ICTs) for development in countries in the South was one of the two pending issues in the second phase of the ongoing World Summit on the Information Society (WSIS). The question of how to bridge the so-called digital divide between the North and the South is addressed here from the same perspective as that adopted in the WSIS discussions, focusing on the promotion of universal access through the expansion of ICT infrastructure and the challenge of finding ways to finance the latter. This does not mean that we regard these as the only issues to be taken into consideration when tackling the digital divide.

For instance, beyond the emphasis placed on how to get hold of resources, there is a need for discussion of how these resources should be invested to ensure that they are used to benefit those most in need and in order to achieve far-reaching structural changes in countries in the South. In this respect we believe that there is a need for in-depth studies of local technological requirements, that consider not only the implantation of new technologies, but also support for community-level communications based on “traditional” media, and strengthening of social structures and processes of capacity-building and citizenship construction.

Second, while expanded infrastructure may ensure physical access to the global communications network there are other non-physical barriers to access that also contribute to the digital divide. The right to access and use information is one that may be blocked only too easily, for example, by pricing, patents¹ or censorship policies.² On another level, high-tech equipment may be necessary but it is useless unless people have the literacy, education, computer-training and capacity-building required first to operate the equipment, and then to make full use of the knowledge or information they access. Similarly, developing

1 Such as the WTO-sponsored Trade Related Intellectual Property Rights (TRIPs) or the World Intellectual Property Organisation's (WIPO) Patent Law Treaty.

2 See Stiglitz (1999) and the UN Committee for Development Policy's report on the fifth session of the Economic and Social Council (UNCDP 2003).

countries' high level of foreign indebtedness inhibits their capacity to contribute to the generation of knowledge, for example, through national investment in research.

Furthermore, the proposals that emerged in the WSIS process not only did not question the North-producer/South-consumer model, but did not contemplate factors that have a decisive impact on development in the South, such as current systems of protection of intellectual property rights, the global trading system that relegates the interests of countries in the South, or the impact of debt service payments, all of which could provide the starting point for thinking about real alternatives for financing. On the other hand, it is necessary that mechanisms be put in place to ensure that the resources raised are effectively transferred. While we believe that new strategies for financing for development in the South need to be developed, we also believe that at the same time commitments already made must be effectively complied with, in the understanding that countries with better overall levels of human development will create more favourable environments for the implementation of specific policies to strengthen "information and knowledge societies".

We believe that these other dimensions to the question of how to finance ICTs for development in countries in the South - which were notably absent from the WSIS debates - are equally relevant, and should be incorporated into the Summit agenda. However, it is beyond the scope of this paper to address them in further depth here.

In this paper we explore the potential for addressing the issue of financing ICT expansion from a global public goods (GPG) perspective. First we provide an overview of what such an approach implies in conceptual terms, looking both at general definitions of GPGs and the applicability of the concept to ICTs. We then go on to review the debate that has been taking place around the specific issue of which existing or alternative innovative financing mechanisms might be used for GPG provision, linking the proposed strategies whenever possible to the ICT sector. Finally, in our conclusions we review the main elements of the argument in favour of regarding universal ICT access as a

GPG and offer a concrete proposal with respect to what we consider to be the most appropriate financing mechanism for funding expanded ICT access in the South.

The issue of financing in WSIS

The background

At its 1998 Plenipotentiary Conference in Minneapolis, the International Telecommunication Union (ITU)³ passed a resolution⁴ to explore the possibility of holding a high-level meeting to discuss global issues relating to the information society. In December 2001 the United Nations (UN) General Assembly resolved that the meeting would take the form of a world Summit at the level of heads of State and government, and assigned to the ITU the leading managerial role in the executive secretariat of the Summit and its preparatory process.⁵ The WSIS was scheduled to take place in two phases: the first in Geneva, in December 2003, and the second in Tunisia, in November 2005.

For developed nations the Summit offered an opportunity to promote expansion of their telecommunications companies in countries in the South. The way had been paved by the signing in 1996 of the World Trade Organization's (WTO) Telecommunications Agreement⁶ promoting the liberalization of communications markets at the expense of the national companies (which were frequently state monopolies) that had regulated the sector until then. The agreement assured competitive conditions for foreign investment in national markets, and held the promise for developing

3 Fifteenth Plenipotentiary Conference of the International Telecommunication Union (ITU), Minneapolis, USA, October 1998, www.itu.int/newsarchive/press/PP98/. The ITU, headquartered in Geneva, Switzerland, is an international organization within the United Nations System where governments and the private sector coordinate global telecom networks and services. For more information, visit www.itu.int

4 ITU Resolution 73 (Minneapolis 1998): www.itu.int/council/wsis/R73.html

5 UNGA Resolution A/RES/56/183: www.itu.int/newsarchive/press_releases/2002/UNGA_res_56_183.html

6 www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_e.htm

countries of increased access to communications, a drop in charges for international calls and more efficient national telecommunications systems. Previously, global communications resources had been managed by the ITU according to an international accounting rate system⁷ and it was aware of the fears expressed by developing countries that liberalization and the opening up of their communications sectors to foreign investment might not benefit areas lacking services. However, the ITU found itself sidelined in the new international telecommunications framework promoted by the WTO and backed by the G7, OECD governments and the international financial institutions (IFIs), in which access prices to communications services are regulated by market forces. Organizing WSIS therefore represented an opportunity for the ITU to regain its central role within the cohort of multilateral bodies. The ITU, which at one time had promoted a vision of international communications that took into account the interests of the least developed countries,⁸ arrived in 1998 at the proposal for the Summit with its agenda updated in line with the new dominant paradigms and in the midst of the growth phase of the “communications bubble” that was to burst in 2000.

The year 2003 found the WSIS process taking place against a backdrop of political changes in multilateral negotiation processes, marked by a new central role for countries from the South and a high level of involvement by organized civil society. Tensions between alliances of countries in the South and the North led to the collapse of the WTO ministerial meeting in Cancun in September 2003,⁹ coinciding with the third WSIS

7 See “Accounting Rate System”, ITU: www.itu.int/osg/spu/intset/. A statement issued by the Civil Society Working Group on Access, Infrastructure on WSIS Action Plan section D (funding mechanisms), calls for “a rehabilitation of the international ‘accounting rate system’ to its former state and functioning” (before 1998). It states that “the settlement on tariffs for international calls should be considered as an effective mean of raising financial resources for developing countries” and that “the shift from the former tariffing rules to the actual ones has led to an annual loss in African operators revenue by nearly 2 billion dollars a year.”

8 See, for example, the “Maitland Report”, Independent Commission for World Wide Telecommunications Development, ITU, December 1984.

9 Fifth WTO Conference, Cancun (September 2003): www.choike.org/nuevo_eng/informes/1236.html

preparatory meeting and one of the most difficult moments in the inter-governmental negotiations during the WSIS first phase. Furthermore, the Summit was led by an organization attempting to recover its leading role through an agenda based on the expansion of telecommunications following the laws of the market, at a time when international communications are in the hands of a few transnational companies and following a period of economic contraction and drop in foreign investment, in particular in the telecommunications sector, where interest dropped sharply at the end of the 1990s.¹⁰ Justifiably, then, expectations around what could be achieved at the Summit were not high.

The issue of financing

The expressed aim of the UN General Assembly in organizing WSIS was to provide an effective means of providing support to the ITU in achieving the goals set at the Millennium Summit¹¹ by developing a global framework to address the challenges posed by the information society. One of the clearest challenges in this respect was the new expression of historic structural inequalities between rich and poor countries that was given the name of the “digital divide”.¹²

In the preparatory process it soon became clear that developed country governments (the United States and European Union in particular) would do everything in their power to avoid broadening out the WSIS agenda to include issues that have a decisive impact on the creation and growth of this divide, such as the conditionalities imposed on countries in the South by the IFIs or the policies promoted by developed countries within such bodies as the WTO and the World Intellectual Property Organization (WIPO) with respect to international trade or intellectual property rights. For the most powerful

10 In the case of developing countries, investments during the period prior to the bursting of the telecom bubble were concentrated in densely populated centres and in the mobile phone sector.

11 UN Millennium Declaration (September 2000): www.un.org/millennium/summit.htm

12 The gap between those who can effectively use new information and communication tools and those who cannot. See “Digital Divide Network”: www.digitaldividenetwork.org/

governments discussion on the digital divide in WSIS should be limited to analyzing the problem of lack of access to digital technology affecting the majority of the world's population¹³ and to exploring how to resolve it through the development of economically profitable communications infrastructure.

The Digital Solidarity Fund

In this context, during the second and third meetings of the Preparatory Committee (PrepCom), the Senegalese delegation argued for the need for a transfer of resources from the North for the development of Information and Communications Technologies (ICTs) in the South, with the aim of bridging the digital divide. This transfer would be based on the notion of “digital solidarity” and channelled through a “Digital Solidarity Foundation”. The foundation’s mission would be to manage a “Digital Solidarity Fund” (DSF) that would be fed by voluntary donations made, basically, in the North.

Reactions to the DSF proposal

While developing countries generally supported the Senegalese proposal, the governments of developed nations - in particular the United States (US), the European Union (EU) and Japan - strongly opposed the initiative, which - together with other factors such as modifications to the current Internet governance schema - caused friction in the discussions during the preparatory process to the point that it was feared that the first phase of the Summit would be a complete failure and that the Geneva meeting in December would be reached without any prior agreement on the Declaration of Principles and the Plan of Action. As a result, new rounds of negotiations had to be added to the agenda in addition to those originally scheduled. Declarations by the

13 Nineteen per cent of the world population accounts for 91% of Internet access. For detailed statistical information on access see UN Economic Commission for Europe’s “Monitoring the Information Society: Data, Measurement and Methods”: www.unecce.org/stats/documents/2003.12.wsis.htm and ITU’s “Digital Access Index”: www.itu.int/ITU-D/ict/dai/index.html

president of Senegal during the preparatory process even evinced the possibility that, were references to digital solidarity not included in the WSIS official documents, Southern countries would walk out, leading to the collapse of the negotiations as had happened shortly before, at the fifth WTO ministerial meeting in Cancun.

The US, one of the main opponents of the creation of the Fund, has argued that financing should be sought through existing mechanisms, not by creating new ones. US policy for the development of communications in Africa advocates the liberalization of African markets, which should be opened up to US private sector investment. This policy finds its practical application in the “Digital Freedom Initiative” (DFI).¹⁴ This proposal represents the further development of the “Leland Initiative” (LI), launched by the US Agency for International Development (USAID) in 1996 as part of the USAID Africa Global Information Infrastructure Project. The LI claimed as its overall objective “to extend full Internet connectivity to 20 or more African countries in order to promote sustainable development”.¹⁵ Despite this laudable expressed aim, the information provided on the LI web site shows that promotion of US state and private-sector interests remained the primary goal of this initiative, determining both whether Internet connectivity was deemed “desirable and feasible” for any given country and whether Internet access was expanded nation-wide, including secondary cities and rural villages. While both the LI and DFI use the rhetoric of ICT for development it is clear that their ultimate goal remains the creation of “enabling environments” for the expansion of US corporate interests in Africa. This role adopted by the US as champion of private sector interests was made explicit in a press release on the WSIS outcomes issued by the US delegation, which stated that it was “pleased that commercial and economic interests from around the world will continue to have a center seat at the table in the development of the Internet”.¹⁶

14 Digital Freedom Initiative: www.dfi.gov/

15 Leland Initiative: www.usaid.gov/regions/afri/leland/

16 US Press release on the outcome of WSIS (December 2003): www.us-mission.ch/press2003/1210USWSIS.html

The position adopted by governments of the developed world was backed up by the private sector, one of the three stakeholders - together with governments and civil society - participating in the WSIS preparatory process. While companies like Cisco, Microsoft and Hewlett-Packard maintained a low profile in the process as individual actors, preferring to participate collectively under the umbrella of the Coordinating Committee of Business Interlocutors (CCBI), they did take advantage of the platform provided by WSIS to announce that they were injecting hundreds of millions of dollars into communications for the South through partnerships with governments or international organizations like the ITU or UNDP. In fact, the majority of these resources consists of transfer of equipment and software programmes for education centres in the South, a strategy designed to create loyal new markets.

For their part, civil society organizations participating in the Summit, concerned at the lack of progress during the preparatory process on essential issues related to the information society, made several statements indicating that market-based development solutions often fail to address more deep-rooted and persistent inequalities in and between countries of the North and South and that democratic and sustainable development of the information society can therefore not be left solely to market forces and the propagation of technology.

WSIS first phase outcomes

In December 2003, following complex negotiations, a Declaration of Principles and Plan of Action were approved in Geneva, as official WSIS outcome documents. The final text of the Declaration of Principles did not establish the fund as proposed by Senegal. Instead, it recognized “the will expressed on the one hand by some to create an international voluntary ‘Digital Solidarity Fund’, and by others to undertake studies concerning existing mechanisms and the efficiency and feasibility of such a fund.”

Since no consensus could be reached on the creation of the DSF, the governments agreed to include a “Digital Solidarity Agenda” in the Plan of Action (section D, paragraph 27). In short, what this agenda

proposes is the proper implementation of existing financing mechanisms, such as those agreed on in the Monterrey Consensus, which have not been effectively applied by developed countries, and an evaluation study of them to be completed by December 2004. This review was to be conducted “by a Task Force under the auspices of the Secretary-General of the United Nations and submitted for consideration to the second phase of this Summit”.

Shortly before the conference closed, the cities of Geneva and Lyon and the Government of Senegal announced contributions totalling about one million euros, representing the first three payments towards the DSF, thus rescuing the initiative from a sense of total failure. Many local and national governments then expressed their willingness to contribute to the DSF. The United Cities and Local Governments¹⁷ has made a call for their constituents to participate.

WSIS second phase

The Task Force on Financial Mechanisms (TFFM)¹⁸ was set up by the United Nations Development Programme (UNDP) on behalf of the UN Secretary General. The TFFM main goal was to complete its review by December 2004, in order to submit it to the WSIS community for discussion at the PrepCom-2 of the second phase. Both the process and the outcomes of the TFFM raised serious concerns, particularly from civil society organizations, as the process of convening the TFFM suffered from lack of clarity and transparency and the report did not succeed in finding a way out for the entangled governmental negotiations. APC - the only civil society organization participating in the TFFM - in a letter addressed to former UNDP Administrator Mark Malloch Brown expressed that the TFFM findings and conclusions would not contribute to resolve the impasse on financing issues between governments that led to the establishment of the TFFM.¹⁹ The

17 United Cities and Local Governments: www.cities-localgovernments.org/uclg/

18 Task Force on Financial Mechanisms (TFFM): www.itu.int/wsisis/tffm/

19 www.choike.org/documentos/TFFM_Open_letter_from_APC.pdf

negotiations on financing ICTs in the second phase of the WSIS process were therefore resumed more or less from the same point at which they had been left at the end of the first phase and, consequently, by the end of the PrepCom-3 of the second phase - the last meeting originally scheduled in the WSIS process - there were still paragraphs on finance that remained in brackets in the draft documents.

Some general agreements were, nevertheless, reached at PrepCom-2 in February 2005, including a sudden “welcome” to the DSF established in Geneva “as an innovative financial mechanism of a voluntary nature” that would “complement existing mechanisms for funding the Information Society, which should continue to be fully utilized to fund the growth of the new ICT infrastructure and services”. Continuing lobbying actions from civil society organizations also achieved the inclusion of some timid language into the official documents, that state that “market forces alone cannot guarantee the full participation of developing countries in the global market for ICT-enabled services” and recognizes the crucial role of public finance in providing ICT access and services to rural areas and disadvantaged populations.

The official WSIS outcomes, then, express good intentions, acknowledge an existing fund - and, maybe, open a new space of policy dialogue - but in no way provide concrete mechanisms to address the disparities in access to information and communication in developed and developing countries.

The global public goods approach

The rejection by several Northern governments to promote the creation of new and innovative financial mechanisms for ICT for development on the grounds that existing financing for development mechanisms should be used to bridge the digital divide - presumably along the lines of the US DFI project - poses the question of whether there are feasible alternative approaches to ensuring provision of universal ICT access. This implies not only looking at which existing funding sources could be tapped or alternative financing mechanisms developed, but also raises

the issue of how the goal of universal ICT access should be conceptualised and how it fits in with or differs from traditional development goals. One conceptual approach that has gained ground in terms of its applicability to the issue of expanded ICT access is the “global public goods” (GPG) framework. In the sections that follow we look at how GPGs may be applied to global connectivity, global communications networks and the Internet.

Defining global public goods

The concept of GPGs came to the fore in 1999 with the publication of the UNDP book *Global Public Goods - International Cooperation in the 21st Century* (Kaul et al 1999). Since then the concept has gained prominence in the context of international efforts to achieve sustainable development, while at the same time subsequent studies and discussions - both theoretical and practical policy applications - have both refined and complicated the original definition. While its basic conceptual elements are generally agreed upon, some commentators have criticized the “fuzziness” of the concept, especially in its application in policy-making (Sagasti and Bezanson 2001), and there continue to be differences in both emphasis and scope regarding how the concept should be defined.²⁰ However, the appeal of the notion is unlikely to abate in the context of an increasingly globalized world. As Kaul et al point out, globalization and GPGs are inextricably linked: discontent with globalisation often arises because GPGs are not provided or are mal-provided due to a series of shortcomings or “gaps” in current global policy-making structures and practices. The extent and form of provision of GPGs therefore determines whether globalization is an opportunity or a threat.

Taking the three elements of the concept in reverse order, we can highlight some of the agreed notions that comprise the concept of GPGs.²¹

20 See Binger (2003) for a review of the different definitions in use so far.

21 This draws on Binger (2003), Ferroni (2002), Kaul et al (1999), Kaul et al (2002), Kaul et al (2003), Morrissey et al (2002), Reisen, Soto and Weithöner (2003), Sagasti and Bezanson (2001) and Stiglitz (1999).

First, the term **goods** does not refer to merchandise or services, but the benefits to society that derive from the provision of certain utilities or the satisfaction of wants, such as the eradication of disease or the reduction of pollution; thus the elimination of a public “bad” is itself a public good.

Second, a good is **public** if in principle every member of the public can derive benefit from provision of the good (likewise, public “bads” generate shared costs). Although the goods themselves do not have to be provided by governments or public bodies, they should have the potential to be enjoyed by all, regardless of whether the end user has paid for them or not. Further precision of the public nature of a good is provided by an evaluation of how it is consumed. If a good can be consumed by many people (or countries) without becoming depleted, it is *non-rival* in consumption. Likewise, if no one (or country) can be prevented from benefiting from the good, it is *non-excludable*. These characteristics differentiate these public goods from private goods, whose use by one consumer effectively prevents another from accessing them. Those goods that meet both criteria are called “pure” public goods; however, such public goods are rare, and in reality, most GPGs are significantly, but not entirely, non-rival and non-excludable. One of the problems that arises in relation to the provision of pure public goods - in particular - is what is known as the “free-rider” syndrome. A free rider is someone who enjoys the benefits of a good without contributing to its cost; precisely because pure public goods are non-excludable there is little incentive to pay for them, since everyone benefits whether they paid or not. A final point to make in relation to the publicness of public goods is that the potential availability of benefit to everyone does not necessarily imply that everyone derives the same measure of benefit. As Morrissey et al (2002) point out, the utility derived by individuals “will depend both on their preferences and on their capacity to consume”.

Finally, a public good is **global** if its benefits are inherently global in range, which does not mean that in practice everyone on the planet benefits. In fact not all GPGs are truly global in their reach but they

are, at least, regional and/or international in that their benefits extend across several countries. To further qualify as global, public goods should provide benefits that “are quasi-universal in terms of [...] people (accruing to several, preferably all, population groups) and generations (extending to both current and future generations, or at least future generations)” (Kaul 1999). In other words, public goods exist at all levels and the spatial reach (or spill-over range) of the benefits determines whether the good can be regarded as a local, national, regional, or global public good.

Externalities

The concept of *externality* is closely connected to, although separate from, the notion of GPGs. Externalities are the unintended positive or negative effects arising from any action, which are not borne directly by the person(s), organization or country responsible for the action. Public bads in particular are very often the result of such negative externalities, and likewise, the motivation for providing public goods stems from the desire to generate or enhance positive externalities and correct negative ones. With globalization, negative and positive externalities are increasingly borne or reaped by people in other countries. So, GPGs are essentially about “cross-border externalities”, which occur when action or omission by one country has consequences for others.

With the question of financing GPGs, there has been much discussion around the strategy of “internalising externalities”, which Binger (2003) explains as follows: “If the cost associated with a negative externality is effectively attributed to the responsible agent the externality is regarded as *internalized*. Positive externalities are *internalized* when the value added by an actor’s initiatives is confined to that actor.” The logic behind the GPG approach dictates that governments must assume full responsibility for the cross-border effects that their own actions or those of their citizens generate, and develop national policies designed “to reduce or avoid altogether negative cross-border spillovers and preferably to go beyond that to generate positive externalities in the interest of all” (Kaul et al 1999).

Classifying global public goods

In short, a GPG is “a benefit providing utility that is in principle available to everybody throughout the globe”. As Binger (2003) notes, different approaches have been adopted in attempts to identify and classify key GPGs. Some authors simply classify GPGs thematically into those relating to the environment (the global commons), health (communicable disease eradication), knowledge generation and dissemination, governance (international financial stability, a free and open trade system), and peace and security (including global peace and protection from crime and narcotics) (Speight 2002; Reisen et al 2003). Others (Gardiner and Le Goulven 2001) classify GPGs sectorally as environmental, social (including health, peace and security), economic (including trade and financial stability regimes) or institutional (knowledge and governance). Yet other commentators opt to typify GPGs in more abstract terms. For Ferroni (2002), for instance, “international public goods include the knowledge, standards and rules required to address [transnational challenges and threats to stability], the institutions that monitor and enforce the rules, and the benefits that arise and are shared indiscriminately among countries.” For their part, Morrissey et al identify three types of interrelated benefits that tend to give rise to pure public goods - risk reduction, direct provision of utility, and enhancing capacity - of which the first two are commonly global in reach since in principle everyone benefits, while the third is more likely to be spatially limited to national or local levels.

Another distinction that has been made is between “final” or “core” GPGs and “intermediate” or “complementary” GPGs.²² The former are the final benefits that people consume, while the latter are benefits that feed into or facilitate access to the former. Thus Ferroni distinguishes between “core” activities to produce public goods - “noncountry-specific investments in knowledge, dialogue, basic research into

22 ODS 2002 and Ferroni (2002) refers to “final” and “intermediate” GPGs, while other studies, including GDF (2001), Morrissey et al (2002), Sagasti and Bezanson (2001) use the alternative terminology.

technologies meant to be in the public domain..., negotiation of agreement on shared standards and policy regimes [and] intercountry mechanisms for managing adverse cross-border externalities or creating beneficial ones” - and “complementary” activities which aim to “prepare countries to consume the crossborder public goods that the core activities make available”.

A GPGs approach to ICTs

In his Millennium Report, the UN Secretary-General made reference to the GPG attributes of information and information networks: “Finally, the core product in this sector - information - has unique attributes, not shared by others. The steel used to construct a building, or the boots worn by the workers constructing it, cannot be consumed by anyone else. Information is different. Not only is it available for multiple uses and users, it becomes more valuable the more it is used. The same is true of the networks that link up different sources of information. We in the policy-making world need to understand better how the economics of information differs from the economics of inherently scarce physical goods - and use it to advance our policy goals.”²³ The reference to information “networks” as also meeting the criteria of non-rival consumption and non-excludability signals the possible adoption of a GPG conception of the information society.

Although knowledge and information - final products - are generally classified as GPGs, all the different elements contributing to their production and dissemination, while seen to have attributes of GPGs, are not so widely accepted as GPGs per se, or at least as core GPGs, but rather are seen by some as complementary. What interests us here in particular are those elements contributing to knowledge production and dissemination that relate to the “information society”. Several studies have explored the public good dimension of connectivity, global telecommunications, new information technologies and the Internet (Sy 1999; Spar 1999; ODS 2002; Guermazi 2003).

23 UN Secretary-General’s Millennium Report: www.un.org/millennium/sg/report/

The UNDP Office of Development Studies' publication *Profiling the Provision Status of Global Public Goods* (2002) starts by looking at the question of global connectivity - "the state of people being connected to each other for communication as well as knowledge and information-sharing purposes" across national borders. Global connectivity, it argues, can be defined as a GPG since no one can enjoy connectivity alone, but requires the existence of others to whom she or he can connect, and therefore "connectivity is theoretically, by definition, and practically, by policy choice, a non-rival and non-exclusive condition".

The authors further argue that the global communications network and the Internet, which are the principal building blocks of global connectivity, "have themselves important dimensions of global publicness". The global communications network is largely non-rival and services that use the network - like Internet - are neither depletable nor excludable: "Both the global communications network and the Internet exhibit network externalities - their value to any single user increases as they are expanded and as more users join. The higher the number of telephone users, the greater the number of interconnections that become possible. On the Internet, each new user may be a potential supplier or consumer of goods and services, and can expand the global market for electronic commerce..." As Spar points out, "theoretically any number of users can simultaneously interact in cyberspace. By ratcheting up the necessary physical infrastructure - adding servers, increasing telephone lines, building additional satellite capacity - new users can simply piggyback on to the existing system: it is almost infinitely expandable."

While Morrissey et al acknowledge the public good dimensions of the global communications network and the Internet, they argue the case for seeing them as complementary to the core GPG of knowledge: "in principle, knowledge is available to all equally. Although some may be constrained in their ability to access or use the knowledge, implying the need for complementary public goods, knowledge itself is nevertheless an international public good. Education enhances national capacity, and

therefore is a national public good. It also enhances the capacity to produce global knowledge, and is therefore an activity complementary to providing the international public good. [...] Internet sites and global networks are complementary activities that contribute to disseminating knowledge; provision of education and access to information are complementary activities that facilitate the use of knowledge.”

Another public goods attribute of cyberspace identified by Spar is its capacity to generate positive externalities, including the provision of low-cost, high-quality services, such as long-distance medical treatment or tele-education, or purely commercial benefits: “With access to the Net, small producers in remote locations can gain exposure in, and thus access to, wider markets. Rather than having to link themselves to intermediaries and retail distributors, producers can advertise their wares directly on the Net, attracting the kind of consumers most likely to purchase a particular product.” Likewise, one could also argue that the global public nature of the Internet is attested to by the negative cross-border externalities it generates - spamming, computer viruses, dissemination of pornography or materials inciting racial intolerance or violence - which may be seen as global public bads.

The expansion of communications networks clearly creates national public goods, by generating important benefits relating to health, education, productivity and democratic participation, and thus contributing significantly to overall development goals. However, ensuring network development does more than just benefit the countries receiving the new communications infrastructure. What is not always recognised is the fact that what some label a “complementary activity” - that is, network development in developing countries facilitates their access to the GPGs of connectivity or knowledge and information - can also generate positive cross-border externalities. On the one hand, as Guermazi argues, “given the information-based nature of the modern economy, the globalization of the telecommunications industry, and the interdependent global environment, the value of the global network grows as more national networks and users are interlinked”, and therefore “funding for the universal service component of such a

network should not be conceived simply as funding for those who are gaining access *in* developing countries but also as funding for those who are gaining access *to* developing countries” (emphasis added). On the other hand, expanded ICT access not only creates the conditions for these countries’ consumption of the GPGs of knowledge and information, but also increases their capacity and potential to contribute to the production of such GPGs. This issue becomes particularly relevant when we consider the question of who is to bear the costs of GPG provision and what form their financing is to take.

Clearly, this conceptualisation of global connectivity and its main building blocks requires further refinement and precision, just as its implications for practical policy application need to be further explored. However, the brief review of the literature above shows that convincing arguments are being marshalled in support of adopting this approach to the challenge of how to bridge the digital divide.

Providing global public goods: financing mechanisms

The question remains, then, of how such a GPG could or should be financed. This question not only refers to whether existing funding sources could be tapped, or alternative or innovative mechanisms should be explored, but contains a second dimension relating to its implications for existing policy-making processes and structures and whether there is a need to develop new institutional arrangements to co-ordinate the chosen fundraising strategies and to manage and disburse the funds raised.

Just as analysts fail to agree on the scope and applicability of the concept of GPGs, so debate continues on the question of which financing mechanisms are most appropriate and effective for ensuring universal provision of GPGs.

Foreign direct investment

The most traditional way for a country to access external financial resources is by seeking to attract foreign direct investment (FDI). As long as there is an appropriate political framework for that investment, FDI is without doubt an important engine for development, job creation and technology transfer. However, the laws of the market do not guarantee equitable development. Over the last decade, for example, 75% of FDI was concentrated in just 10 middle-income countries and a select few economic sectors (the automobile industry, and the chemical, engineering, energy and pharmaceutical sectors). This has further marginalized developing countries and strongly restricted their capacity to participate in the global economy. The scope of provision through FDI will always be limited by the profit principle, and in the case of ensuring universal access to ICT infrastructure it is only too clear that expansion of communications networks to isolated rural areas or the most marginalised and poorest communities holds little prospect of profitable returns for investors.

If, then, the GPG approach implies that these goods should have the potential to be enjoyed by all, regardless of whether the end user has paid for them or not, this means that their provision cannot be left up to the play of market forces. Indeed, traditionally, most national public goods were provided by public authorities. However, domestic provision of GPGs in developing countries is obviously problematic, otherwise the need to attract FDI would not exist. A wide range of factors limit the financial resources of developing countries, including “limited tax and capital bases, underdeveloped taxation systems, capital markets, and the diversion of substantial resources to servicing foreign debt” (Panayotou 1994). With respect to ICT expansion in particular, it may not be regarded as a development priority by poor countries that have limited funds to address much more urgent problems, such as critical poverty levels, conflict resolution, or communicable disease epidemics.

So, if neither the market nor the state have the capacity to ensure provision of GPGs in developing countries, what other existing sources of financing could be brought into play?

Official development assistance

One of the reasons that the notion of GPGs was received with such enthusiasm is that it was seen as a potential motor to revive political commitment to official development assistance (ODA). The question of how to revitalize ODA has been present on the agenda of the international community since the Five Year Review of the World Summit for Social Development (Reisen 2003) and was a central issue at the high-level UN Forum on Financing for Development in Monterrey, Mexico, in March 2002. The persistent failure of rich countries to meet the long-standing target of 0.7% of their gross national income (the highest level reached was 0.35%, dropping to a low of 0.22 in 2001) has fuelled debate concerning the problems with the system, including the question of aid conditionality or donor earmarking against recipient country “ownership” and freedom to set its own development priorities; accountability and transparency in spending, and the problem of corruption; and the link between ODA and other development objectives such as the defence of human rights and governments’ eligibility for aid.

The clear links between GPGs and development goals may further support the idea that that funds should come from what is currently the main source of financing for development. However, not only is ODA itself beset by problems, but in some ways GPGs challenge the very characteristics of traditional ODA. Global policies and programmes can complement national development efforts in three principal ways: through “beneficial cross-border spill-overs, reduced harmful spill-overs, and improved national outcomes” (Ferroni 2002). On the one hand, the provision of GPGs supports and stimulates the development process; on the other, development itself is a prerequisite for nations to take full advantage of the benefits of GPGs, and therefore insufficient development may imply lack of capacity to benefit from GPGs. Moreover, development generates a resource base which enhances a country’s capacity to contribute - both financially and with expertise - to the provision of GPGs. As Binger (2003) argues, viewing the world from a

GPGs perspective has brought greater awareness of the interdependence between developed and developing countries in that it “highlights both the *unidirectional* and *multi-directional* nature of spill-over”, which clearly has implications for global cooperation and development, and challenges the traditional one-way relationship between affluent donor nations and poor recipient countries.

While some analysts (see, for example, Lamb 2002) argue that GPGs should be funded by creating more space within existing ODA or by drawing out the GPG dimension of the Millennium Development Goals (MDGs), others highlight the risks involved in diverting ODA to fund GPGs. As the EU has recognised: “A key concern is that additional funding for GPGs should not be to the detriment of the poorest countries and of funding for the core objective of poverty eradication. As GPGs benefit both developing and developed countries, one of the consequences of increased policy attention to providing and financing GPGs could be that the real level of official development aid (ODA) reaching the poor would be even lower than the current official figures if the resources for GPGs were to come from ODA.”²⁴

If donor countries are tempted to focus ODA on pure GPGs that, while public in consumption, may not be valued equally, or be given the same priority status, by all countries, the use of aid to fund these goods could result in the reallocation of resources from low-income to middle-income countries or from certain low-income countries to others, and in a context of declining aid flows, such diversion could have serious consequences. These concerns are addressed in Reisen et al’s study (2003) analysing ODA financing of global and regional public goods by OECD donors. The study shows that over a five year period (1997-2001) 30% of ODA was allocated to global (15%) or regional (15%) public goods and the authors find some evidence of crowding out, although this is insignificant in the case of aid to the poorest countries,

24 European Commission, ‘EU focus on global public goods’, “The EU at the WSSD, 2002”: europa.eu.int/comm/environment/wssd/publicgoods.pdf

but significant (with an offset coefficient of 25%) in the case of traditional aid. The authors conclude that “these results favour the separation of traditional ODA and spending on the provision of international public goods, to both maximise ‘ownership’ of ODA partner countries and the provision of international public goods”. A similar conclusion was reached by the high-level panel on financing for development established by the UN Secretary-General in 2000 and chaired by former Mexican president Ernesto Zedillo. The Zedillo report cautions that the identification of new needs - such as those relating to the provision of global public goods - seldom generates additional funding, and stresses that “it is imperative to separate finance for development and humanitarian assistance from finance for global public goods”.²⁵

Likewise, Andersson (2002) argues that “since the provision of global public goods is beneficial to all countries, developed as well as developing, new funds should be raised to contribute to the provision of global public goods” and urges the international community to find innovative ways and means to ensure that provision, including through the involvement of the private sector. Kaul et al (2002) also recommend that the financing of GPGs should not come out of ODA. They highlight a range of problems relating to the use of aid resources for global public goods purposes: “the overlap between aid and global public goods financing often occurs without country-specific analyses or fully participatory international policy dialogues. Thus we do not know to what extent a country’s national development priorities are indeed identical with aid-driven global public goods priorities. We do not know whether and to what extent a growing concentration of aid on global public goods entails neglect of critical national public goods in recipient countries. Moreover, developing countries may not have had an adequate say in shaping the global public goods to which they are expected to contribute or link up to through the use of aid.” The authors conclude that rather than using ODA, which primarily involves country allocations of assistance,

25 High-Level Panel on Financing for Development - Recommendations & Technical Report, United Nations, A/55/1000, 26 June 2001, www.idlo.int/texts/IDLI/mis5712.pdf

new financing should be sought involving national and international-level allocations to particular global public goods, incorporating “a clearly articulated dimension of international cooperation into the existing public finance framework”.

Debt swaps, private-public partnerships and voluntary donations

Some analysts have sought to address some of the problems signalled above with ODA, domestic funding and FDI for financing GPGs by exploring other newer funding mechanisms.

For example, some authors argue that given the burden of debt service for developing countries, it is unfeasible to think of financing for development mechanisms that do not take into account the outflow of resources from the South to the North, and suggest different forms of debt relief as a more effective way to finance GPGs. The Plan of Action approved in the first phase of WSIS makes the following reference to this issue: “For those developing countries facing unsustainable debt burdens, we welcome initiatives that have been undertaken to reduce outstanding indebtedness and invite further national and international measures in that regard, including, as appropriate, debt cancellation and other arrangements. Particular attention should be given to enhancing the Heavily Indebted Poor Countries initiative. These initiatives would release more resources that may be used for financing ICT for development projects.” While the effectiveness of the HIPC initiative is at best questionable and it has come under strong criticism from civil society, there are other debt-relief related mechanisms that merit further exploration.

One such mechanism is the use of debt swaps, which are “legal and financial instruments that transform developing country debt with official or commercial creditors into direct budget allocations” for development objectives (Sagasti and Bezanson 2001). Debt swaps have taken a variety of forms, some more general - debt for development or debt for equity - and others more specific - such as debt for environmental protection or debt for education, health or nutrition. Several authors have supported exploring debt swaps further as a potential

mechanism for financing GPG provision. However, the tying of debt relief to particular areas of development on the part of creditors has the same negative implications for developing countries' freedom to set their own development priorities as earmarking aid. And, as mentioned above, were countries in the South to receive debt relief, in most cases it is unlikely that ICT development would be regarded as a priority area for channelling the freed-up funds.

Another trend that has gained ground in recent years is the creation of private-public partnerships (PPP) to promote investment in areas with some commercial prospects and that in parallel allow financing of activities to promote development of public goods. These partnerships bring together private companies with national and/or international public institutions, such as the World Bank, the UNDP and international NGOs. For example, the Medicines for Malaria Venture is an initiative designed to produce new medicines against malaria, in which the World Health Organization and the World Bank participate alongside private foundations like the Rockefeller Foundation and pharmaceutical companies represented by the International Federation of Pharmaceutical Manufacturers Associations and the Association of the British Pharmaceutical Industry. Some authors have argued that ICTs represent a propitious area for the development of similar partnerships, and indeed, Senegal's DSF proposal includes a strong PPP component, in that funds would be administered by a foundation comprising a coalition of governments, international organizations, the private sector and civil society. However, Southern civil society organizations and networks have raised objections to this type of venture, pointing out that PPPs are often no more than veiled forms of privatization and, while it may be supposed that there is considerable potential for generating funds through voluntary engagement of the private sector in developmental issues,²⁶ it represents an unpredictable source of revenue, since it depends entirely on individual voluntarist actions.

26 For example, in 2002 private donations amounted to around 2% of the GNP of the United States, equivalent to USD 220 billion.

Multisectoral Global Funds (MGFs), such as the Global Fund for AIDS, Tuberculosis and Malaria, the Global Environment Facility and the Global Alliance for Vaccines and Immunization are a new type of funding structure that combines both of these last two strategies - public-private partnerships and voluntary donations. Although Heimans (2003) argues that MGFs hold considerable promise as focal points for generating additional public and private resources to address urgent global problems and to finance GPGs, he nonetheless casts doubts on their effectiveness in fundraising. Unlike contributions to membership-based international organizations, contributions to MGFs are usually voluntary and so governments will only contribute to those funds they find politically attractive, and their interest in specific funds may wane over time or be transferred to emerging new issues. He also points out that the argument that they will act as magnets for private sector funding has yet to be demonstrated in practice (the exception being the USD 750 million donation to the Global Alliance for Vaccines and Immunization by the Gates Foundation, far exceeding any government contribution), while some NGOs have expressed fears, firstly, that an excessive focus on the private sector could distract attention from donor governments' core responsibilities, and secondly, regarding a possible conflict of interests, since corporate actors may have an economic stake in MGF activities through procurement decisions.

Finally, there are two types of innovative alternative financing mechanisms that appear to have a strong rationale for their use in funding GPG provision, in that they represent an effective way of internalising externalities: taxes and user fees.

Taxes

A range of suggestions has been made - some dating back several decades - as to how to tackle global public bads, such as ozone depletion, pollution or financial instability, through global taxation systems. In this section we shall examine how such funding proposals for the provision of what are universally acknowledged as GPGs may provide a starting point for thinking through financing strategies for

global communications. One productive approach may be to consider whether notions like “pollution”, traditionally linked to the study of environmental problems, are extendible to communications spaces, like the Internet. The growing vision of the Internet as a platform for business, designed to “recruit consumers” by any possible means, has produced an exponential explosion in commercial web sites of little or no value to the general public, as well as a massive increase in spamming. These developments not only degrade network traffic but also generate “noise” in communications and limit users’ chances of accessing information of real value. This “pollution” is a negative factor for those initiatives that use the Internet as part of educational processes that seek to further human development or promote capacity-building for an informed and responsible citizenry. In countries with limited communications infrastructure, where access to the net is more costly and optimization of online time is vital, this becomes a significant problem. An interesting approach therefore might be to explore the possibility of extending the concept of “sustainability” to the global communications network and analyze whether the mechanisms proposed for environmental protection - increasingly based on the idea that “the polluter pays” - could be applied to the sector of electronic communications.

A range of taxes has been suggested both at local and global levels to finance GPGs, such as the Carbon Tax, Aviation Tax, Currency Transaction Tax (CTT) or Tobin Tax, World Trade Tax, International Arms Trade Tax (Binger 2003). These proposals have a dual purpose - to obtain funds to develop the “goods”, while at the same time penalising the “bads” - and likewise generate a “double dividend”.

With respect to the possibilities of applying fundraising mechanisms based on taxes in the ICT sector, one antecedent is the “Bit Tax” or “Email Tax”, first proposed in the 1999 UNDP Human Development Report.²⁷ The report estimated that a tax of one cent on every 100 e-mails sent daily (with an average size of 10 Kbytes per e-mail) would

27 United Nations Development Programme (1999). “Human Development Report 1999. Globalization with a Human Face”. hdr.undp.org/reports/global/1999/en/

have raised USD 70 billion in 1996. Taking into account the growth in e-mail traffic in recent years and their increase in size, even smaller tax rates would produce considerable revenue that could be used to finance the development of communications in the South. The proposal contained in the UNDP report was rejected outright by countries like the United States. This fact, together with the objections raised regarding the difficulties involved in its practical application, stopped the proposal from being developed any further. In the end the UNDP issued a communiqué stating that it did not officially support the proposal included in the report and the initiative ended there.²⁸

User fees

The geostationary orbit, used by communications satellites, or the electro-magnetic spectrum, used for radio and television-based communications, are limited resources that could be regarded as “heritage wealth” and there is a certain degree of consensus regarding the fact that all of humanity should have access to them. The Centre for Science and Environment (CSE) has argued that “the South needs ecological space to grow, but this space has already been colonised by the North”.²⁹ The same idea could be applied to communications spaces. Several years ago proposals first started emerging for the creation of “user fees” for finite global resources such as fishing or cultivable land, and suggestions have been made to apply similar fees to the use of resources used for communications purposes. Organizations like the ITU or UNESCO have at different moments considered the possibility that a percentage of the resources generated by international telecommunications be used to promote the development of more equitable communications systems.

28 See ‘Caslon analytics e-taxation and tariffs guide’ for more information on the “Bit Tax”, www.caslon.com.au/taxationguide2.htm

29 CSE: www.cseindia.org/

It is clear that there are many mechanisms that could potentially fund GPG provision but, as Sagasti and Bezanson (2001) point out, “the appropriateness, convenience and feasibility of using one or another of these mechanisms will depend on the specific characteristics of the public good in question and on a variety of other factors” including: the amount of funds a given mechanism can generate; the sustainability of funding; the fairness and equity of the mechanism; its flexibility and capacity to adapt; the administrative complexity it involves; and whether it is politically feasible or can mobilize political support. Several of these factors relate to the other dimension of providing GPGs mentioned above - what new or existing institutional arrangements are required to co-ordinate potential financing mechanisms and global policy-making.

Conclusions

This paper has focused on presenting the current state of affairs with respect to the issue of financing communications in countries in the South, in the context arising from WSIS. We have argued in favour of treating the challenge of universal ICT access as a GPG issue and sited the financing issue within a broader discussion on appropriate mechanisms for GPG provision, and a review of the current situation of financing for development.

Adopting a conceptual starting point that sees ICT expansion as an issue of GPG provision provides a normative framework for thinking about how this objective should be funded. Following the arguments outlined above, we do not believe that funding should come from current ODA. Nor do we regard a fund fed solely by voluntary donations - as proposed by Senegal as the basis of the DSF - to be the best option, partly because it risks deepening the model of dependence of the South on “charity” from the North, partly because it is doubtful whether a sufficient degree of sustainability of funding could be achieved. Moreover, a voluntarist solution runs the risk of generating a “free-rider” problem, since those actors most likely to benefit from expansion of

the communications network - in particular the transnational corporations that manufacture ICT soft- and hardware - could choose not to contribute and yet still stand to gain from the “800 million [new] consumers” in Africa, referred to by President Wade of Senegal. On the other hand, a fund that is too closely dependent on contributions by private companies in the North could find its hands tied with respect to its freedom of choice. While the interest expressed by companies like Cisco, Microsoft or Hewlett-Packard in developing communications in Africa can be seen in a positive light, as President Wade suggests, we would argue that this is so only insofar as that interest does not take the form of imposing technological solutions that transform Southern societies into captive markets.

Given these potential difficulties with a fund based purely on voluntary donations and returning to the issue of what financing mechanism would be most appropriate given the positive cross-border externalities generated by the expansion of the communications network, we advocate the application of a tax on information and communications technology. However, in contrast to Senegal’s proposal that funds should be raised at the end-user end of the production-consumption chain, we believe that the tax should be levied at the other end - on the manufacture of the microchips used in such technology. This would obviously simplify revenue collection, as it would involve taxing a handful of transnational companies rather than billions of consumers purchasing at millions of outlets, and thus also obviate the potential problems linked to transparency and respect for national sovereignty. Finally, there is clearly a very strong rationale for using revenue raised from taxing information and communications technology to fund expansion of the communications network, and at the same time the mechanism itself guarantees that the fund is self-sustaining, since ICTs expansion would in turn generate more revenue.

Finally, it is clear that responsibility for collection and management of the resources raised through such a tax would have to be assigned to a specific institution. However, the precise structure, jurisdictional scope and location of such a body is open to debate, and both existing - such

as the Global Environment Facility - and proposed institutions - such as Senegal's Digital Solidarity Foundation or Guermazi's Global Universal Service Foundation - provide an interesting starting point on which to build. As we have already stated, while it is essential that the private sector be involved in the process, it is important to analyze how to balance private and public interests and to develop mechanisms to ensure the independence of such a fund and its freedom to make the best use of the monies raised, including the adoption of those technological options that best adapt to local realities. We believe that civil society in the South has an important contribution to make in pointing the way in this respect and should therefore play a central role in the administration of the fund, both at global and local levels. ■

REFERENCES

- Andersson, Gun-Britt (2002). "Exploring Financing Options for the Provision of Global Public Goods" in Kaul, Le Goulven and Schnupf. www.undp.org/ods/ffd-monterrey.html/andersson.pdf
- Binger, Albert (2003). "Global Public Goods and Potential Mechanisms for Financing Availability". Background paper prepared for the *Fifth Session of the Committee for Development Policy meeting*, April 7-11, 2003. www.un.org/esa/analysis/devplan/al_binger.pdf
- Ferroni, Marco (2002). "Financing Regional Public Goods" in Kaul, Le Goulven and Schnupf. www.undp.org/ods/ffd-monterrey.html/ferroni.pdf
- Gardiner, Rosalie and Katell Le Goulven (2001). "Sustaining our Global Public Goods". Economic Briefing No. 3, UNED. www.earthsummit2002.org/es/issues/GPG/gpg.pdf
- GDF (2001). "Effective Use of Development Finance for International Public Goods", Chapter 5 in *Global Development Finance*, World Bank.
- Guermazi, Boutheina (2003). "Towards Digital Inclusiveness: Can Universal Service Policy Go Global?". Draft Memo. www.ssrc.org/programs/itic/publications/knowledge_report/memos/guermazimemo.pdf
- Heimans, Jeremy (2003). "Multisectoral Global Funds as Experiments in Global Governance and the Financing of Global Priorities". Paper presented at the *UN Wider Conference "Sharing Global Prosperity"*, Helsinki, 5-7 September 2003. www.wider.unu.edu/conference/conference-2003-3/conference-2003-3-papers/Heimans-2006.pdf
- Kaul, Inge, Isabelle Grunberg and Marc A Stern (eds) (1999). *Global Public Goods - International Cooperation in the 21st Century*. Oxford/New York: Oxford University Press.
- Kaul, Inge, Katell Le Goulven and Mirjam Schnupf (eds) (2002). *Global Public Goods Financing: New Tools for New Challenges: A policy dialogue*. www.undp.org/ods/ffd-monterrey.html
- Kaul, Inge, Pedro Conceição, Katell Le Goulven, and Ronald U Mendoza (eds) (2003). "Why do Global Public Goods Matter Today?" in *Providing Global Public Goods - Managing Globalization*. Oxford/New York: OUP.
- Lamb, Geoffrey (2002). "Synergies between Aid and the Financing of Global Public Goods" in Kaul, Le Goulven and Schnupf. www.undp.org/ods/ffd-monterrey.html/lamb.pdf
- Morrissey, Oliver, Dirk Willem te Velde and Adrian Hewitt (2002). "Defining International Public Goods: Conceptual Issues" in Ferroni and Mody (eds), *International Public Goods: Incentives, Measurements and Financing*. Dordrecht: Kluwer.

- Office of Development Studies (ODS) (2002). *Profiling the Provision Status of Global Public Goods*. New York: UNDP, ODS Staff paper. www.undp.org/globalpublicgoods/globalization/pdfs/background-paper-profiles.pdf
- Panayotou, Theodore (1994). "Financing Mechanisms For Environmental Investments And Sustainable Development". UNEP, Environmental Economics Series Paper No. 15. www.unep.org/unep/products/eeu/ecoserie/ecos15/ecos152.htm
- Reisen, Helmut (2003). "New sources on development finance". Paper presented at the *UN Wider Conference "Sharing Global Prosperity"*, Helsinki, 5-7 September 2003. www.oecd.org/dataoecd/56/27/28321228.pdf
- Reisen, Helmut, Marcelo Soto and Thomas Weithöner (2003). "Financing Global and Regional Public Goods through ODA: Analysis and Evidence from the OECD Creditor Reporting System". Paper presented at the *UN Wider Conference "Sharing Global Prosperity"*, Helsinki, 5-7 September 2003. www.eldis.org/static/DOC14272.htm
- Sagasti, Francisco and Keith Bezanson (2001). "Financing and Providing Global Public Goods: Expectations and Prospects". Development Financing 2000, Study 2001:2. Ministry for Foreign Affairs, Sweden. www.gm-unccd.org/FIELD/Bilaterals/Sweden/Sweden1.pdf
- Spar, Debora L (1999). "The Public Face of Cyberspace" in Kaul, Grunberg and Stern.
- Speight, Melanie (2002). "Global Public Goods: How Much Should DFID Allocate to Global Actions and Funding?". Strategic Review of Resource Allocation Priorities Working Paper Work Stream 3. Department for International Development (DFID), UK. www.dfid.gov.uk/Pubs/files/International%20Public%20Goods.pdf
- Stiglitz, Joseph (1999), "Knowledge as a global public good" in Kaul, Grunberg and Stern. www.worldbank.org/knowledge/chiefecon/articles/undpk2/index.htm
- Sy, J Habib (1999). "Global Communications for a More Equitable World" in Kaul, Grunberg and Stern.
- WSIS Declaration of Principles. "Building the Information Society: a global challenge in the new Millennium". December 2003. www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0004!!PDF-E.pdf
- WSIS Plan of Action. December 2003. www.itu.int/dms_pub/itu-s/md/03/wsis/doc/S03-WSIS-DOC-0005!!PDF-E.pdf