

## Sustaining Our Global Public Goods

*“the concept of global goods is a powerful one. It helps us think through the special responsibilities of the international community... global public goods provide a central rationale for international collective action”* Joseph Stiglitz [19]

### 1. Introduction

Global Public Goods (GPGs) cut across many aspects of our lives. Many GPGs have historically existed outside of human interference, such as the oceans and seas, the atmosphere, and ozone layer. Whilst other GPGs have emerged as different aspects of globalisation have advanced. The opening of national borders has increased the volume of cross-border influences, both positive and negative. As a result, it has become increasingly important to name and frame the growing phenomenon of GPGs.

The concept of GPGs is relatively new and an agreed precise definition of GPGs has been lacking. However growing pressures have drawn international attention to the fact that public policy-making has been largely reactive in response to the challenges they pose. GPGs cover global issues that range across the whole spectrum of the sustainable development agenda, from the global environment, international financial stability and market efficiency, to health, knowledge, peace and security and humanitarian rights. This paper seeks to outline some of the latest policy ideas, framing the international debate about some of these key global issues by examining them through the “lens” of Global Public Goods.

### 2. Concepts and problems

#### 2.1 A traditional view of public goods

The traditional definition of public goods is two-fold. First, they are *non-excludable* i.e. a public good produces benefits which are impossible to prevent everyone from enjoying. Second, they are *non-rival* i.e. the consumption of the good by one person does not detract from another’s consumption. For example, clean air can be freely enjoyed by all and one person’s consumption has no impact on another. Traditionally, GPGs existed in those areas *outside* national boundaries, so called “foreign affairs”, such as outer space and the oceans and seas. But in these, more globalised, times we are increasingly dealing with and recognising shared and transboundary GPGs, e.g. climate, financial stability, human rights. Thus we should understand that GPGs are unlimited by national boundaries, but cross over into sub-regional, regional and global spheres.

Many GPGs are more recognisable in their opposite form, that of Global Public “Bads” (GPBs). GPBs are also non-excludable and non-rival, and their reduction or removal rather than provision is the desirable. Examples of GPBs include, the spread of communicable diseases, transnational drug smuggling, international warfare and human rights abuses (Figure 1).

#### 2.2 Policy failure

We are currently witnessing a wide failure, in policy terms, of the sustainable management of GPGs. Global trends indicate we are over-producing global “bads” whilst under-producing or mis-utilising global “goods”.

In health, we are faced by the devastating consequences of belated action after a 20 year escalation of the HIV/AIDS crisis. Other communicable diseases have in part spread alongside the growth in transportation and travel. These problems are also resulting in secondary impacts. GPGs can influence development and poverty eradication aims. For example in terms of the GPG of eradicating a global disease such as Malaria, we find that malarial countries display an average 0.4% per capita rate of income growth, as compared to their non-malarial counterparts, which indicate 2.3% growth [10]. Some 2 billion people lack access to low-cost but essential medicines [22].

In the environment, international action on climate change has been slow, despite over 30 years of growing evidence of the negative impact that our activities have upon the atmosphere [9]. Estimates of biodiversity loss in the new century are reaching historic levels and are projected to reach as high as a 50% loss in current levels of global diversity [16]. An IUCN survey of 240,000 plant species found one in eight species at risk, and overall rates of extinction is thought to be around 30,000 species a year [13]. These environmental problems also have knock on effects. For example 50% of chronic respiratory illnesses are now thought to be associated with air pollution [22].

In the rapidly integrating financial and economic markets, financial crises and market inefficiencies have meant that all, and especially the poorest, countries face growing economic instability both within and between their borders. Approximately 1.2 billion people across the globe live on less than \$1 a day [21], the highest proportion coming from Sub-Saharan Africa. Furthermore, the debt burden born by developing countries and transitional economies has continued to grow [9].

Looking at access to knowledge and information, we find a number of barriers and problems. For example, the World Intellectual Property Organisation (WIPO)'s Patent Cooperation Treaty accepts single applications for patent rights which are then valid in many countries and the disclosure of the patented innovation can run to anything up to 140,000 pages long – creating unnecessary and extensive barriers to the sharing of knowledge. Similarly the WTO TRIPS agreement places prohibitive barriers on countries to utilise intellectual property that may offer essential information for the provision another key GPG, such as the provision of essential medication or new environmentally sound technology. Finance for increasing and enhancing knowledge has been imbalanced. In 1998 global spending on health research was approx. \$70 billion, but just \$300 million was dedicated to vaccines for HIV and \$100 million to Malaria, largely due to a bias toward R& D for industrialised country illnesses. Access to complimentary technology for gaining access to knowledge is also unevenly diffused, with some 79% of the world's Internet users coming from OECD countries [22].

Human insecurity is also on the increase. Over the last decade serious conflicts and civil unrest have plagued many countries in Africa, Central Asia, Eastern and West Europe, the Middle East and West Asia, with untold loss of life, displacement of people and environmental damage. It is estimated that by diverting just 10% of Sub-Saharan Africa military spending would produce \$5.5 billion, with potential benefits to other GPGs through re-investment into key areas, e.g. health and access to information [22].

### 2.3 Causes of failure

Many of these failures are the result of a lack of collective political will or positive policy choice i.e. we have failed to develop and implement policies to ensure the adequate provision of GPGs. But if the provision of GPGs results in mutual benefits for all, why has this happened?

#### Lack of collective action

Failure to act is linked to problems in public behaviour such as what's known as the "prisoner's dilemma" and "free riding". The prisoner's dilemma scenario in the global commons is that its in everyone's interest to act collectively to provide GPGs and reduce GPBs however it remains unclear *how* should this process of collective action should occur and *who* should coordinate the process of GPG provision. Without sharing information, to first identify the GPGs and GPBs, and then cooperate with others over resources – both financial and complimentary processes required to contribute GPG provision— the possibility of an efficient allocation and distribution of benefits is reduced. The result of a failure to act collectively is likely to be detrimental to all parties, but typically it will impact most greatly upon those who are least able to cope [13].

The related problem of free riding occurs when, even if collectively sufficient parties are able to produce a GPG, others, previously uninvolved, are also seen to benefit from it (because of its non-excludability). Thus there is a lack of incentive for anyone to act positively, but rather to wait in hope for others to take the initiative. It is therefore necessary to seek ways to provide incentives to the beneficiaries to contribute to the cost of GPG provision.

#### Private or public provision?

The vehicles or mechanisms used to provide a GPG are not necessarily public goods themselves. For example, control of communicable disease and the research and knowledge related to that disease are what is known as "pure" GPGs. However, the vaccines that offer the means of eradicating a disease are in fact private goods. None-the-less, such goods are complimentary to the production of the GPG. The problem lies with the fact that although vaccines are "excludable" they are also "non-rival"

i.e. private provision will always result in a socially sub-optimal level in the quantity of vaccines produced to eradicate the disease, resulting in the inefficient provision of the GPG. It is therefore necessary, because of the non-rival nature of vaccines, for the public sector to intervene to increase the level of provision. Peace and environmental sustainability also fit into the category of pure GPGs and they are inherently GPGs. But, in general, many complimentary goods carry “mixed” public/private properties. It is therefore necessary for the public policy maker to identify the characteristics of those complimentary goods or services that provide GPG, i.e. their excludability and rivalrous nature, in order to reveal whether the policy maker needs to intervene in a public way.

Transboundary issues, e.g. water management, are typically club-type goods i.e. provision of transboundary water management depends on the riparian countries to cooperate. However, such goods are often complementary to the provision of other national-global public goods. In the case of transboundary waters, it can lead to greater national water security, regional conflict mitigation and protection of ecosystems. Therefore further work is necessary to identify, invest in and monitor important complementary areas for GPG provision [15].

#### Publicness of utility

The fact that, in principle, every member of the public can derive benefit from the provision of a GPG does not necessarily imply that all people derive the same value or respond to a GPG in the same way. The “publicness” or public nature of the GPG can mean that people must consume a good and cannot avoid it. However, it is often the case that some will derive more utility from public goods than others. For instance eradication of malaria may provide more utility to someone in Uganda than to someone in Iceland but the benefit of eliminated risk of infection is still provided equally to all [12]. This difference does not alter what is a public good. It does, however, imply that increased provision of a GPG may well increase the welfare of the poor by a greater amount than it increases the welfare of the rich and in this sense, provision of public goods can contribute to alleviating poverty.

The “publicness” or public nature of GPGs can mean that people must consume a good and cannot avoid doing so, however this may not be the optimal strategy. For example, industrialised countries seeking to maintain financial stability may invest in tighter financial supervision and regulation of currencies and investors, and take action to encourage other countries to do so. However, developing countries, can be overburdened by such global activities and feel that greater utility would come from dealing with more immediate domestic priorities e.g. health, food security, indebtedness. The same can be said for environmental sustainability. Industrialised countries, which contribute significantly to global warming, may have the resources and means to act upon it, developing countries, whilst respecting the environment, may gain more utility from acting upon more pressing GPGs or domestic issues.

For these, and other reasons, it is important to openly ascertain whether a GPG is not only public in form but also that it bears optimal distribution (equitable and fair) of global public utility. If actions to provide a GPG are not reaching those who would actually gain most utility from the GPG then additional action, e.g. donor support, will be necessary to ensure that it is more targeted towards those groups [9].

#### Stakeholder provision

Traditionally, it has been seen as the role of the state to offer and manage the provision of national and global public goods. But in reality a range of stakeholders are and should be involved, on a range of levels. Such varied groups can play a direct role in identifying, providing and allocating the benefits from GPGs. For example issues of gender equality, environmental sustainability, human rights, harmonisation of trading rules and legal frameworks have all been by-and large drawn into the international arena as a result of affiliations of advocacy groups or commercial associations, and not necessarily in line with the wishes of the state [18]. Furthermore, different groups and institutions (public and private) can take an active part in terms of delivery of GPGs, e.g. R&D in global diseases, health programmes, public and consumer provision of information. Thus the framing and provision of GPGs is a complex process, involving multiple actors and stakeholders [1,15,17].

### 3. Policy Options

GPGs exist, that is certain, but what is less clear is how they should be most effectively provided. Which leaves the two key questions:

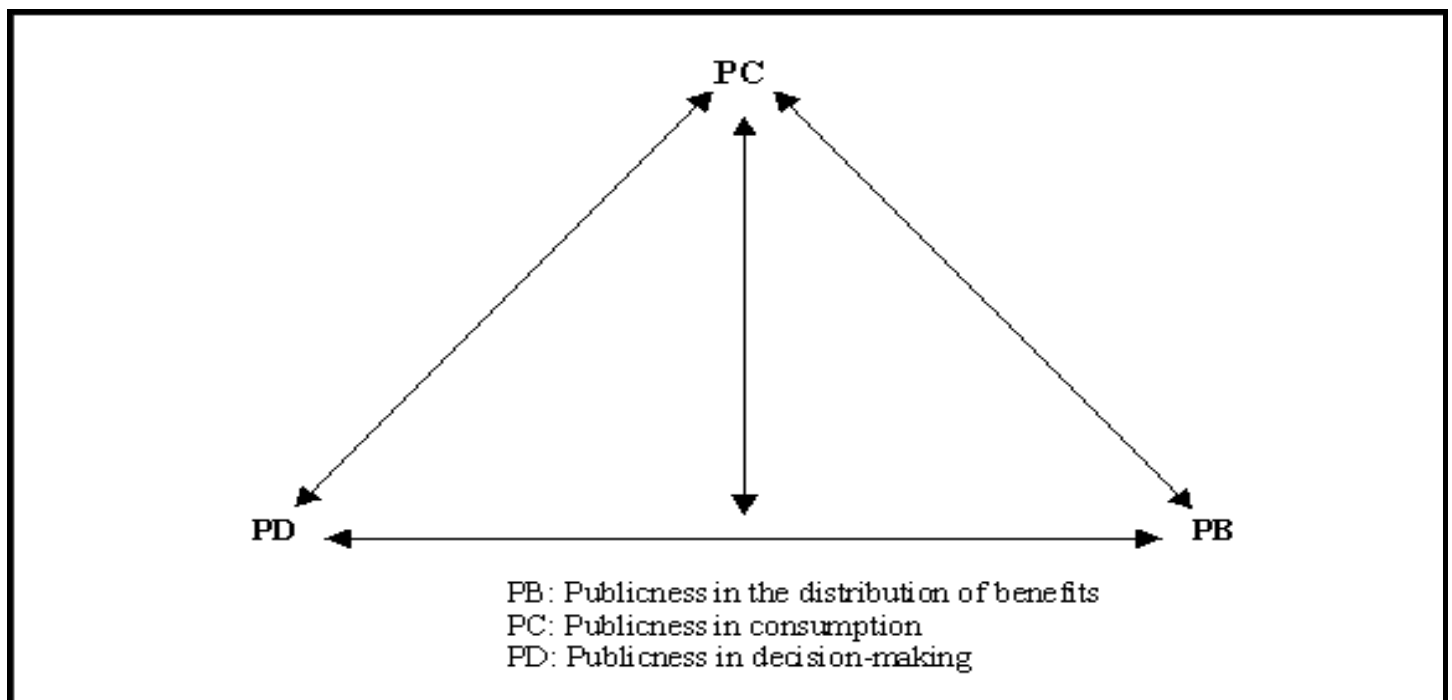
- What form of coordinated action is needed to provide GPGs ?

- How to raise sufficient finance and resources to ensure long term and sustained provision of GPGs ?

### 3.1 Coordinating GPG provision

Whilst GPGs face the same challenge of ownership as private goods, the distinction is that ownership of GPGs is not defined by property rights (or excludability) but is defined by communities and/or countries who have a stake in the good. Moving to a new interpretation of GPGs embraces three distinct elements. The first element is that of moving from a concept of non-exclusion to inclusiveness or “*publicness of consumption*”. The second, is building in the optimal distribution of benefits, in terms of the utility gained from a GPG or the “*publicness in the distribution of benefits*”. And the third, is the element of public choice in selecting the mechanisms for GPG provision or “*publicness of decision-making*” (Figure 2). In addition to these three areas is the vital role of knowledge about how to provide a GPG as well as the financial resources required to mobilise provision, each of which are outlined below [9].

Figure 2. Triangle of Publicness



Source: [4]

### Inclusivity of consumption

Pure GPGs are non-discriminatory and available for all. Where their provision is discriminatory, due to differences in ability and capacity to provide access to GPGs, it should be in the interest of collective action or inclusiveness to assist those that are discriminated against, especially poor or marginalized communities, to gain access to a specific good. Inclusivity is derived from three main origins:

- A deliberate public policy decision to place the good in the public domain
- The non-excludability of the GPG benefits
- The inadvertent existence of a GPG in the public domain

This third area of “unassisted” publicness is more common in terms of public bads. Non-recognition of a public good can lead to under provision of the GPG or over supply of GPGs. For example, it took a long time for emissions of CFCs to be perceived as having a negative impact upon the GPG supplied by the ozone layer (i.e. reducing the risk of cancer). The Montreal Protocol is the international mechanism implemented at the national level through public policy and legislation, that aims to reduce and even eliminate the external cost of CFC production. But, as the recent negotiations around the climate change mechanism – the Kyoto Protocol – indicates, formal acknowledgement of GPGs and the need for global collective action beyond national interests can be a lengthy, even heated, process.

### Optimal distribution of benefits

The perceived utility or benefits gained from any one GPG will depend on many factors, such as culture, country, timing, issues and populations involved. An effective process of collective action should, in part ensure the inclusive distribution of benefits but also inclusivity in the production of GPGs. Therefore sustainability impact assessments of GPGs (disaggregated by population, region, gender, etc) should be applied to various GPGs, as well as for the assessment of the possible delivery mechanisms or policy options available e.g. whether to use public-private and public-public partnerships as a means to provide GPGs [2, 7]. Such analyses should take place, prior to and during, and after action is undertaken. This will help to inform the different stakeholder groups of what benefits to expect from a GPG and by what means they would receive them, as well as assist the optimal and equitable allocation of possible benefits.

### Participation in decision-making

To ensure that all countries and regions receive required benefits from GPGs, in a manner that is both optimal and inclusive, it is essential that alternative policy responses are explored. Policy options which prioritise and aim to supply particular GPGs, should not only be systematically defined but also openly discussed and jointly selected. Just as allocation of private goods depends on a well functioning and efficient market, the optimal provision of GPGs demands a well functioning and open consultative process of political bargaining for GPG decision-making. Indeed the existence of democratic and transparent policy-making fora are complementary to the GPG of good governance in itself. Broad Multi-Stakeholder Participation (MSP) helps to reveal preferences and consequences of alternative delivery mechanisms and, in a globalised context, is essential to avoid the problems of under-provision and inaction. However, MSPs are complex processes that need careful design, and must be based on agreed ground rules (such as transparency, accountability, equity, flexibility, ownership, effectiveness), to ensure decision-making for GPGs functions effectively [5].

### Knowledge

Knowledge or information, itself a GPG, is an important tool to enhance local to global GPG provision. Utilising local knowledge can help to reveal regional/global problems that are associated to the (lack of) recognition and provision of GPGs [2]. Global Public Policy Networks can also assist this process by enhancing the formulation of new ideas for delivery, by sharing experience, and through collaboration in programmes. For example, research and development networks, such as the Global Development Network, CGIAR, Global Water Partnership, World Commission on Dams, Global Reporting Initiative, have all contributed to building intellectual knowledge and breaking through informational barriers on GPGs.

In critical areas of knowledge there needs to be conscious policy decisions and implementation to ensure that there is sufficient capacity to make information and knowledge available to all. Education is an example of a local and national public good in that it enhances national capacity, but it is also complimentary to the production of the GPG of knowledge. It builds national capacity to produce global knowledge. Thus a public-policy decision to undertake national investment in education will also support the generation of global knowledge.

Another example is in medicine. Discoveries, such as a new vaccine for malaria, are essentially excludable – i.e. vaccines are (initially) the private knowledge of the individual or research team that discovered it. It is not efficient however for such “monopoly” producers to exclude the public from this knowledge since it is also non-rivalrous i.e. the marginal cost of sharing knowledge is approximately zero. The production of the private good (the vaccine) is complementary to (and necessary for) the provision of a GPG (eradication of disease). This means that upholding Intellectual Property Rights over enabling access to an essential GPGs can no longer be a policy option, and as we have seen here it is not even efficient to do so. It is therefore necessary to regulate and/or incentivise the production of the good which is complementary to providing the GPG (i.e. the production and distribution of a vaccine for eradicating a disease) in order to ensure that it can be used to the benefit of everyone. This is an example of *static provision* of GPGs, ensuring that GPGs are made available where they already exist. Furthermore, incentives can be used to encourage R&D in global diseases, e.g. purchase guarantees for future vaccines that are developed for key diseases. This is known as *dynamic provision* i.e. ensuring a continuous process of revealing new means for assisting GPGs provision [10].

### 3.2 Financial resources

It is useful to distinguish three broad areas of costs involved in providing GPGs [12]:

- Research: examining the fundamentals (e.g. sustainability impacts alternative policy mechanisms) of the provision of a GPG;
- Co-ordination: setting priorities and reviewing progress, mobilizing resources, allocation of funding and monitoring the level of contributions;
- Implementation: organizing new and existing institutions (staff and infrastructure), legislation and regulatory mechanisms and policy framework.

The financing of GPGs requires an appropriate allocation of resources either by increasing resources (ex: vaccine purchasing fund) or by decreasing and/or reallocating resources (ex: elimination of perverse subsidies). The appropriate financing instruments to provide a GPG depend on the nature of the good and of its means of production (also known as its production function).

Looking at different sources of finance, we find that Official Development Assistance (ODA) remains largely anchored in country level programmes (of developing countries) and is less targeted toward global priorities. GPG financing remains a very small component of the total donor funding. Even major international donors like the World Bank, who recognise the importance of GPGs, devote relatively few resources to this type of good [21]. Furthermore, ODA has been overburdened by overly rigid conditionality, and is facing declining levels. The global average of ODA is 0.2% GNP - a long way off from the 0.7% target that industrialised governments have committed to on numerous occasions (Rio, Beijing, Copenhagen, Cairo, Millennium Summits) [2]. Most recently, the UN Financing for Development process called for a minimum response from donor governments and institutions of doubling of current ODA levels [6]. Proposals for enhancing ODA include, adjusting IDA lending programmes to support a degree of GPG provision at the national level; the use of market signalling to create private sector incentives e.g. the recent \$1 billion invested by WB into research on communicable diseases; grant based finance to be utilised strategically for critical GPGs e.g. technology transfer of environmental sound technology. However, GPGs are for the benefit of all countries and people, thus it seems reasonable to argue that finances should not only be derived from ODA. Therefore, a variety of sources should be utilised to help deliver GPGs through national, regional and global action [9]. But if it is accepted that the international community should focus the majority of *existing* ODA to assist developing and heavily indebted middle-income countries in their domestic endeavours, how then do we finance GPGs at a more global level?

Other sources of finance include private philanthropy – such as from industry, charities and foundations. This should be further encouraged but, again, such funds can be unreliable as they are more likely to act in a supplementary manner and do not aim to offer sustained or globally sufficient levels of financial support. There appear to be significant barriers of entry for private sector provision of regional and global public goods, not least because of lack of clear legal and regulatory frameworks but there is still considerable potential for wider involvement of the private sector e.g. regional and global data development.

Since GPGs have benefits for people in their national and local development, there is a clear case to shift some of the money that is currently being spent reacting to GPBs (i.e. coping with financial crises, environmental disasters, health crises and so on) in order to re-emphasise building the provision of the corresponding GPGs. Thus it is feasible to consider allocation of additional resources from national budgets towards international cooperation. Aid budgets are not sufficient or perhaps even relevant to pay for averting climate change or for cleaning up after financial crises. Thus funds could be more effectively and appropriately provided by the sector ministries that have a direct interest with GPG concerned. This “ring-fencing” of budgets and taxation is not unheard of in certain sectors e.g. a proportion of national health budgets in a number of countries already contributes to the World Health Organisation (WHO), which supports disease eradication. Indeed further health contributions could be invested into research for key communicable diseases. This sector-specific budget approach would help to ensure regular governmental contributions to specific GPGs. It would require governments to establish clear criteria for apportioning of contributions from aid donations, as well as national sector budgets toward funding specific GPGs [10]. Effective management of national finances for the provision of GPG should also include removal of those financial incentives that create GPBs e.g. the removal of perverse subsidies that are targeted to environmentally detrimental areas, such as subsidies for fossil fuels [14]. As a result considerable financial resources could be freed for reinvestment into alternative national priorities that enable the provision of GPG.

As developing countries are constrained by their ability to pay, there is a case for richer countries to make a disproportionate contribution to the costs of provision, through targeted financial assistance. Disparity between the ability to contribute to the cost of provision between industrial and developing economies can exacerbate the sense of “free riding” that some governments may feel. These and other factors have compounded the general lack of under-investment in key GPGs [2]. Therefore it will be increasingly necessary to generate more funds for the provision and collective management of GPGs from new and additional sources of finance. Seeking such funds is likely to pose some real challenges to the global community. Proposals

include greater financial support for global financial stability through the introduction of an international tax on currency transactions – also known as the Tobin Tax. Estimates of the global revenues generated from even a 0.01% tax on currency exchange ranges from \$50 billion to \$300 billion annually. Such funds could be reinvested to support financial stabilisation, as well as contribute to other GPGs [6]. Another example is the introduction of a charge on international flights for their associated greenhouse gas emissions. The resultant funds could again be ring-fenced, to be reinvested in climate enhancing areas e.g. research and development of new energy efficient clean fuels [7].

### 3.3 Issue specific approach

The policy options and complementary goods that exist to aid the provision of GPGs should not be implemented by a “one-size-fits-all” approach. Policies - national, regional and international- should be tailored to meet the specific conditions of each GPG and address potential implications on each level of implementation (local-global). Figure 3. outlines some more specific policy options for a few key GPGs. The linkages between different GPGs, where one GPG can have positive or negative impacts on others, should not be forgotten. For example, the provision of the GPG of good governance (such as through establishing effective regional and international management/ coordination institutions), can help promote more peaceful conditions at regional and global levels. Therefore thorough review and open discussion of the potential inter-linkages between GPGs needs to take place prior to, during and after implementation of any policy that relates to a specific GPG.

Figure 3. Policy options for key GPGs

<p><i>Health</i></p> <p><b>Finance:</b> Control of malaria, TB, and HIV/Aids in Africa alone is estimated to cost a minimum of US \$ 7-10 billion per annum. Donor governments already contribute to the World Health Organisation from their national health budgets. This national health contribution should be extended to include investment in R&amp;D for key global diseases. In the longer term, developing and transitional countries could also contribute a proportion of their national health budgets. Static and dynamic provision of medicinal knowledge would be encouraged through purchase guarantees and protection of traditional knowledge, as well as through tax incentives to pharmaceutical companies to undertake research on global diseases.</p> <p><b>Knowledge:</b> The establishment of Global Health Research Council would provide independent R &amp; D advice to the WHO and other bodies to identify and prioritise key global health issues in the present and future.</p> <p><b>Management:</b> Each disease can be seen as a separate GPB, therefore a disease “manager” or “task master” may be necessary to deal with a specific disease according to its specific characteristics. Due to the wide socio-economic linkages to communicable diseases – the manager should adopt a multi-pronged approach across sectors and policy tools i.e. finance, education, industry, trade, knowledge and management.</p> <p><b>Participation:</b> The contribution of stakeholders and governments at national and local levels is vital to ensure a better interface between global and local medical policy and programmes.</p> <p><b>Indicators<sup>1</sup>:</b> Infants, under 5s and maternal mortality rates; HIV, TB, and Malarial prevalence rates; proportion of population with access to affordable essential drugs on a sustainable basis.</p> <p><i>Financial Security and market efficiency</i></p> <p><b>Finance:</b> Short term stability measures e.g. international bankruptcy court, contingency credit lines and currency transactions tax, as well as long term measures e.g. Debt relief and cancellation, enhanced ODA (in terms of quality e.g. untied from government procurement and quantity e.g. increased contribution toward 0.7% GNP), greater investment in domestic finance and the local level e.g. community finance and micro-credit. Internalisation of costs derived from GPBs.</p> <p><b>Knowledge:</b> International accounting and reporting standards, financial capacity building and technology transfer for developing and transitional countries from international bodies, e.g. WB/IMF/WTO, to support countries in meeting reporting standards and flexible guidance (through reduced conditionality on national macroeconomic policies).</p> <p><b>Management:</b> Policy should be anchored in national policy goals and conditions, reflecting the diversity of economic conditions between country actors. Developing countries could benefit from a strengthening of regional economic links (in both trade and investment policy). Regulation of corrupt practices could be enhanced e.g. international convention against public corruption. An introduction of a Convention of Principles for Transnational Corporations – based on OECD guidelines, ILO principles and other key agreements, could assist greater accountability in and regulation of TNCs towards meeting GPGs, as well as other goals. Strengthened national legal frameworks, independent judiciary would further stabilise economies. Stimulation of innovative finance is necessary to reach the local level e.g. small to medium industry and marginalized groups through micro-credit and community financing. Industrialised countries should work to remove their international trade barriers and support special and differentiated treatment of developing and transitional economies e.g. Lomé convention.</p>
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*Financial Security and market efficiency (Figure 3. Cont.)*

**Participation:** IMF, WB, WTO, regional economic bodies and industrialised countries should seek to remove asymmetries in their decision-making structures. For example, developing countries need to be given a fair stake in policy-making formulation through capacity building, independent technical support for macroeconomic policy formulation and implementation. Broader representation in key decision-making bodies such as the G8/G20 could be considered. Other stakeholders should also be engaged more effectively. The private sector should be encouraged to apply and share their experience of implementing principles of sustainable corporate practice; NGOs could be further supported in their activities which encourage financial transparency and accountability.

**Indicators<sup>1</sup>:** % GNP for ODA (% ODA targeted at key sectors e.g. social services, environment), Net FDI inflows, net indebtedness, proportion of population under \$1 a day; poverty gap ratio (incidence x depth of poverty), volatility of portfolio investments, ratio of long-term to short term capital flows.

*Environment*

**Finance:** Greater and more consistent annual contributions are vitally needed to support the provision of Environmental GPGs. Also some Multi-lateral Environment Agreements e.g. Montreal Protocol, Kyoto Protocol have specific financial facilities which need greater global recognition and support. These instruments might also be better managed under one umbrella, through the Global Environment Facility (UNDP, UNEP, WB). Funding for different global environment needs should be along sectoral lines e.g. trade and industry government departments (through public/private sector charging/taxation) paying for relative national cost of industrial pollution to climate. Also governments could develop industrial tax incentives to stimulate investment in renewable/clean energy supply. Environment departments paying a contribution for ensuring environment protection e.g. sites of special scientific interest to protect biodiversity. The establishment of a Global Technology Fund that would make clean technology, e.g. reduced carbon emissions, available to all. Differentiated pricing mechanisms could be introduced according to ability to pay e.g. for water provision.

**Knowledge:** Activities to enhance environmental knowledge include: Networks e.g. Global Water Partnership, World Commission on Dams; information databases e.g. UNEP/World Conservation Monitoring Centre; reporting and monitoring of trends e.g. Global Environmental Outlook; early warning systems e.g. Global International Waters Assessment. Many of these are already in place but also require significantly greater information and assessment at regional and local levels e.g. LASALA – Local Authorities Self Assessment of Local Agenda 21, MELISSA – Managing the Environment Locally in Sub-Saharan Africa.

**Management:** Further ratification and implementation of key conventions e.g. biodiversity and climate change and their associated Protocols e.g. biosafety. A strengthened UNEP or new global environment body to assist multi-sectoral and multi-level integration is necessary to manage global environmental goods. It must work with a variety of groups right down to the local level.

**Participation:** There is considerable potential for greater outreach and involvement of networks (see above) as well as for participation across scales and stakeholder groups. Universal ratification and implementation, via national legislation, of the UNECE Aarhus Convention (including financial and technical support from donor countries) could be a part of this.

**Indicators<sup>1</sup>:** % land area protected to maintain biodiversity, GDP per unit of energy use (to gauge energy efficiency).

*Human Security and Peace*

**Finance:** Activities could include: enhancing ODA (quality and quantity), reorientation of defence expenditures towards long-term security provision and peace building. Application of regulatory tools, e.g. The International Convention on the Suppression of the Financing of Terrorism provides a legal method of prosecuting those responsible for raising funds for terrorist activities.

**Knowledge:** Reporting and decision-making bodies such as the Human Development Report (UNDP), UN Security Council, and regional institutions could step up awareness raising of critical issues and areas which require critical international assistance.

**Management:** Static provision could take place through the strengthening and enhancement of existing international institutions e.g. UN Security Council, Human Rights Commission, UNHCR – refugee council, International Court of Justice, as well as the further ratification and implementation of key agreements e.g. Convention on the Elimination of Discrimination Against Women, and Convention of the Rights of the Child, as well as bringing human rights principles into national law. Taking more dynamic approach, there could be universal agreement for the establishment of the International Criminal Court. Activities which reduce poverty and enhance education would also be complimentary to building peace and security.

**Participation:** Steps could include the broader membership of the UN Security Council. Inclusion of key advocacy and field-based organisations could be encouraged to improve emergency and long term responses to human insecurity e.g. human rights campaigners, humanitarian groups, food, medical and development charities.

**Indicators<sup>1</sup>:** Proportion of people with secure land tenure; proportion below minimum level of dietary consumption; democratic elections.

*Information and Knowledge*

**Finance:** Enhanced ODA, greater public and private investment, as well as multi-lateral aid in knowledge and information provision and management are required e.g. Net Aid. Innovative financial sources include debt-for-technology swaps, funding incentives for research and development. The business sector could also make greater contributions to research into non-commercial products.

*Information and Knowledge (Figure 3. Cont.)*

**Finance:** Enhanced ODA, greater public and private investment, as well as multi-lateral aid e.g. Net Aid, in knowledge and information provision and management are required. Innovative financial sources include debt-for-technology swaps, funding incentives for research and development. The business sector could also make greater contributions to research into non-commercial products.

**Knowledge:** Free access to basic and essential software, training, and long distance learning programmes e.g. WB – Global Distance Learning Networks, Dot Force network, can help to draw in the “information poor”, and encourage further technology transfer. Also agreements, such as the TRIPS Agreement, contain recognition of the need to promote technology transfers, these commitments for tech transfer now need to be realised.

**Management:** Intellectual property regimes in TRIPS could allow for developing countries (and more widely) to introduce safeguards that secure access to technologies of overriding global importance e.g. environmental technology or access to crucial medical information. Greater efforts could be made to stimulate low cost computers and wireless technology, fuel cells and photovoltaics for low cost energy supply.

**Participation:** Engaging the info-poor and marginalized groups, such as indigenous and community based networks, small to medium and informal businesses, could greatly enhance the quality and quantity of information resource bases, build local knowledge and enhance the usefulness of information.

**Indicators<sup>1</sup>:** Telephone lines per 1,000 people; personal computers per 1,000 people, no. of patents for essential medicines.

Note 1. Indicators listed here are examples for monitoring progress in provision of GPG Sources: [2 9, 12, 20, 21 , 22, 23]

Moreover, as mentioned earlier, the linkages between different GPGs must not be forgotten. Some GPGs have positive or negative impacts on others. For example, the provision of the GPG of good governance, such as through establishing effective regional and international management / coordination institutions, can help promote more peaceful conditions at regional and global levels. Therefore thorough review and open discussion, of the potential inter-linkages between GPGs, needs to take place prior to, during and after implementation of any policy that relates to a specific GPG.

#### 4. The Way Forward

##### 4.1 Institutional and stakeholder roles

Providing for GPGs will require joint and concentrated action amongst all nations and stakeholders. The UN plays a key convening role for GPGs e.g. UNAIDs and GEF, and offers substantial expertise from its specialised bodies e.g. UNCTAD. But it requires greater collaboration and support from other international institutions, governments and stakeholders, to bring in their own expertise where they have a particular comparative advantage and focused delivery mechanisms to drive greater production of GPGs and reduce GPBs. The Secretary General has addressed many aspects relating to the provision of GPGs through the Millennium targets. They include targets for health, gender equity, poverty eradication, and environmental sustainability. The Secretary General’s new “Road Map” sets out a blueprint and timetable for reaching these goals and it offers a useful framework for governments, multi-lateral institutions and other stakeholders to develop strategies and monitor their progress supporting this process [21]. The UN ECOSOC’s Commission for Sustainable Development also offers the international space for strategic and integrated thinking and policy formulation around GPGs.

Other institutions, such as the WB, UNDP and OECD, have indicated their endorsement of the Millennium Targets. The WB has specifically identified, with the IMF, GPGs where it can offer “comparative advantage”. These include activities on health, environment, information and knowledge (developing countries), economic standards, and governance. Similarly UNDP points to its work which relates to GPGs, including democratic governance, crisis prevention and recovery, energy and environment, information and communications technology, and HIV/AIDS. These activities will need clarification, in terms of what form of mechanisms are applied, as well as the degree of openness and flexibility of approach. Formal recognition of the key GPGs that other international and regional institutions are seeking to assist, would also help the process of identifying areas of possible collaboration and collective action.

Many governments have given clear commitments to help provide some of the GPGs, as we have seen described in the “Millennium targets”. However, significant political will is required to operationalise this approach for GPGs more generally, to move from broad commitments to implementable programmes. To operationalise national provision of GPGs in a more integrated way, GPG policies could be developed within the framework of a country’s National Strategy for Sustainable Development, which governments are committed to begin to implement by 2005 [21].

The wider inclusion of different stakeholder groups will also help to ensure the identification, prioritisation and long-term delivery of GPGs. Participation should as far as possible adopt a subsidiary approach since the most tangible actions related to provision of GPGs will ultimately take place on the ground. Therefore key groups such as local authorities, community based organisations and associations, small to medium and informal business sectors, women's groups, the inter-faith communities, as well as the public more generally, all need to be more formally engaged and encouraged to take an active role at local and sub-national levels.

#### 4.2 Future debate

The UN International Conference on Financing for Development in March 2002 (Monterrey, Mexico) may offer a wide range of policy options and alternatives for boosting the provision of GPGs. It is clear that this must take place in the context of other financial, economic, social and environmental priorities. Earth Summit 2002 is committed not only to take a more integrated, multi-stakeholder view, on this approach but also to think strategically about how to begin to operationalise these ideas. Some key questions that need to be addressed include:

- Management – How will convening institutions effectively balance the multi-sectoral, multi-level activities that are required to deal with GPGs? How will they ensure that decision-making for GPGs will be fair, inclusive, participative?
- Knowledge – Which GPGs would benefit from the establishment of Global Public Policy Networks? How should such networks be structured and legitimised? How can essential information about GPGs be made more freely available and accessible?
- Participation – Which institutions will be best suited to convene and facilitate MSPs around decision-making for specific GPGs? How can principles of accountability, representation, openness, and transparency be enhanced?
- Finance – What additional, enhanced and new financial incentives can realistically be used to help provide GPGs and their supportive infrastructure?

Using a Global Public Goods approach should not be seen as a simply a means of “repackaging” global priorities. It is an approach which emphasises the vital need for international collective action and it is one which offers key principles by which the international community can more effectively provide and manage these critical global priorities.

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Figure 1. Global concerns as Global Public Goods: some examples

Class/type of Global Goods	Benefits		Nature of supply problem	Corresponding Global Bads	Costs	
	Non-excludable	Non-rival			Non-excludable	Non-rival
<b>Environment</b>						
Oceans	Yes	No	Overuse	Contamination from land-based & atmospheric pollution sources	Partly	Yes
Atmosphere (Climate)	Yes	No	Overuse	Risks of global warming	Yes	Yes
Biodiversity	Yes	Yes	Overuse	Loss/disruption of ecosystems, species, genetic diversity	Yes	Yes
<b>Social</b>						
Universal human rights	Partly	Yes	Under-use (lack of access)	Human abuse, discrimination	Partly	Yes
Health	Yes	Yes	Under supply	Communicable disease e.g. HIV, malaria, TB	Yes	Yes
Peace	Yes	Yes	Under supply	War and conflict	Partly	Yes
<b>Economic</b>						
Efficient trade	Partly	Yes	Under supply	Fragmented markets,	Yes	Yes
Financial Stability	Partly	Yes	Under supply	Financial crises, excessive volatility	Yes	Yes
<b>Institutional/ infrastructure</b>						
Internet (Physical and virtual infrastructure)	Partly	Yes	Under-use (lack of access)	Barriers to internet e.g. communication infrastructure	Partly	Yes
Knowledge	Partly	Yes	Under-use	Barriers to information e.g. lack of transparency	Partly	Yes
Good Governance e.g. rule of law, equity, justice, democracy	Partly	Yes	Under-supply	Corruption, injustice, conflict	Partly	Yes

Source: [9]