

Setting Global Health Research Priorities

***Précis of a Discussion Paper Prepared for the Canadian Institutes of Health Research
Institute of Population and Public Health***

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***Acknowledgement: This paper is a précis of a longer paper, Labonte, R. and Spiegel, J. (2001)
Setting Global Health Priorities for Funding Canadian Researchers: A Discussion Paper
Prepared for the Institute on Population and Public Health
<http://www.spheru.ca> <http://www.liucentre.ubc.ca>***

INTRODUCTION

1. Globalization describes a process by which nations, businesses and people are becoming more connected and interdependent across the globe – across dimensions such as economics, communications, culture and travel. Contemporary globalization is characterized by increasing liberalization in the cross-border flow of finance capital, and trade in goods and services. What distinguishes this globalizing era from previous ones is the scale of such movement (particularly finance capital), the establishment of binding rules (primarily through the World Trade Organization), the size of transnational companies involved and the apparent commitment of most countries to continue the project of global economic integration through increased market liberalization.
2. There are many potential health gains associated with globalization. These include the diffusion of new knowledge and technology that can aid in disease surveillance, treatment and prevention. More fundamentally, increased trade and foreign investment through liberalization can improve economic growth and can be used to sustain investment in necessary public goods. Such growth, particularly in poorer countries, may reduce poverty which, in turn, leads to better health.
3. There are many potential health hazards associated with globalization. These include the more rapid spread of infectious diseases, some of which are increasingly resistant to treatment; and the increased adoption of unhealthy “Western” lifestyles by larger numbers of people. More fundamentally, liberalization does not always or inevitably lead to increased trade or foreign investment. Nor does such trade or investment always or inevitably lead to economic growth, poverty reduction or better health. In fact, evidence suggests that the creation of greater disparity in income distribution and associated marginalizing of sub-populations can itself produce negative population health effects. Much depends upon pre-existing social, economic and environmental conditions within countries; and upon specific national programs and policies that enhance the capacities of citizens (such as health, education and social welfare programs). Finally, economic growth relies upon finite and rapidly diminishing natural resources, and produces toxic emissions with both direct and indirect human health effects.
4. Health researchers recognize the need to better understand the ways in which contemporary globalization can lead to better health for all, especially for the poor. This requires expanding the global health research agenda beyond a disease-specific focus to one that also examines the social, environmental and economic contexts that partly determine the incidence and persistence of many diseases. These contexts are themselves being increasingly shaped by international financial institutions (the World Bank and the International Monetary Fund) and global trade rules (the World Trade Organization). These contexts are also creating health effects that are increasingly global in scale.
5. This précis, based upon a larger study¹, is intended to spark discussion among health officials and health research funders who may be involved in preparations for the G8 meetings in Kananaskis, Canada (June, 2002). It describes the two-way relationship between health and economic development; the “burden of disease” approach to targeting health research and intervention funding in developing countries; and what is known (and what needs to be known) of a number of broader “inherently global health issues.” It discusses how research might address both disease-

¹ Labonte R. and Spiegel, J. *Setting Global Health Priorities for Funding Canadian Researchers*. A discussion paper prepared for the Institute on Population and Public Health, Canadian Institutes of Health Research. September 2001. www.spheru.sask.ca, and www.globalhealth.liu.bc.ca

specific and inherently global health issues at the same time, and articulates principles for how such research might be conducted equitably between North and South partners. It concludes by identifying some implications for G8 and other wealthier nations with respect to health research and other forms of development assistance.

HEALTH AND ECONOMIC DEVELOPMENT

6. Ill health and poverty are closely linked. Ill people often become poorer, especially in less and least developed countries where the costs of medical treatment often drive families into deep poverty. In China, where the health care system has become increasingly privatized, almost 45% of rural people living in poverty in 1998 fell into poverty due to medical spending.² More systemically, poor people have higher rates of illness and premature mortality in virtually every country.
7. There is increasing evidence that ill health places a significant burden on economic development and growth. Improved health may have contributed as much as one third of the East Asian “economic miracle”³. Malaria, in turn, is estimated to be slowing African economic growth by up to 1.3% per year⁴, while HIV/AIDS is substantially slowing income growth in Africa and could account for an annual loss of 2.6% GDP in many Sub-Saharan African countries⁵. The Commission on Macroeconomics and Health cites statistical estimates suggesting that a 10% improvement in life-expectancy-at-birth is associated with a 0.3% to 0.4% percentage rise in annual economic growth, with enormous cumulative effects over time.

*In short, health status seems to explain an important part of the difference in economic growth rates [between developed and least developed countries] even after controlling for standard macroeconomic variables.*⁶

This is significant in light of the very slow progress being made by many developed and least developing countries in meeting their Millennium Development Goals, particularly with respect to maternal and under 5 mortality rate improvements.⁷ Fully 62% of developing country populations live in nations that are lagging far behind or slipping in meeting infant and child mortality goals.⁸

8. Health status generally rises with economic growth, which is the basis of much of the pro-globalization, pro-liberalization argument.⁹ Economic growth may be important to health

² World Health Organization, 2001. Commission on Macroeconomics and Health, p.121; http://www3.who.int/whosis/cmh/cmh_report/e/report.cfm Accessed January 18th, 2002.

³ Bloom and Williamson, 1998. “Demographic Transitions and Economic Miracles in Emerging Asia”, *World Bank Economic Review* 12(3): 419-455.

⁴ Gallup and Sachs, 2000. “The Economic Burden of Malaria,” Center for International Development, Harvard University, CID Working Paper No. 52, July.

⁵ Bonnel R, 2000. “Economic Analysis of HIV/AIDS”, Background Paper for the Africa Development Forum 2000, World Bank/UNAIDS, September.

⁶ WHO, 2001 p.24.

⁷ WHO, 2001; Social Watch Report 2001, No.5. Montevideo: Instituto del Tercer Mundo.

⁸ UNDP, 2001 in WHO, 2001 *op cit* p.29

⁹ Dollar D, 2001. “Is globalization good for your health?” *Bulletin of the World Health Organization*, 79(9):827- 833.

improvements, but in itself is insufficient. First, there are plateau effects, with the rate of health improvement slowing against the rate of economic growth once per capita income approaches US \$5,000 - \$10,000.¹⁰ Second, there are examples of high growth/high health countries (South Korea, Taiwan) and high growth/low health countries (Brazil), as well as high health/low growth countries (Sri Lanka, the Indian State of Kerala, Cuba). As has been observed, “*A country need not be rich to be healthy, and countries can become wealthier, without parallel gains in health.*”¹¹ Third, rising incomes globally between the 1950s and 1990s contributed less to life expectancy gains than did improved access to health services and health technologies.¹² Fourth, the excessive burden of disease in poorer countries prevents the very economic growth presumed to solve the disease problem.¹³

9. Improved health is important for economic growth and development, but in itself is insufficient. Whether economic growth improves health, or health improves economic growth, depends on the social, political and economic environments in which both occur. Nobel economist, Amartya Sen, noted in his address to the 1999 World Health Assembly that much depends on how the income generated by economic growth is used, “in particular, whether it is used to expand public services adequately and to reduce the burden of poverty.”¹⁴ Moreover, even if or when economic growth improves health in the short-term, there are longer-term environmental and social costs (externalities) to such growth that can reduce health.

10. Evidence of the effects of globalization on health is equivocal and requires critical examination. A recently released “scorecard” on the past 20 years of globalization compares numerous indicators for the “pre-globalization” period (1960-1980) and the rapidly globalizing period (1980-2000).¹⁵ During the more recent, rapidly globalizing period, GDP growth declined in all countries, but was most pronounced for the poorest 20% of nations. The rate of improvement in life expectancy declined for all but the wealthiest 20% of nations, indicating increasing global disparity. Infant and child mortality improvements slowed, particularly for the poorest 40% of nations. The rate of growth of public spending on education (as a share of GDP) also slowed for all countries, and the rate of growth for school enrolment, literacy rates and other educational attainment measures slowed for most of the poorest 40% of nations, with the sharpest drop in the poorest 20%.¹⁶ The authors caution that this does not prove a link between globalization, or liberalization, and a slowdown in development progress. As most researchers now accept, only detailed, multi-level national studies will begin to tease apart causal patterns or relationships.¹⁷

¹⁰ Wilkinson R, 1986. “Income and Mortality”, in Wilkinson, R. (ed.) *Class and Health: Research and Longitudinal Data*, London: Tavistock.

¹¹ Lipson D, 2001. The role of health in enhancing productive capacities in LDCs. Prepared for the Third UN Conference on Least Developed Countries, World Health Organization, April 2001, p.2

¹² World Health Organization, 1999. *World Health Report*.

¹³ WHO, 2001

¹⁴ Sen A, 1999. “Health in Development”, Keynote Address to the 52nd World Health Assembly, May 1999.

¹⁵ Weisbrot I, Baker D, Kraev E, and Chen J. 2001. *The Scorecard on Globalization 1980 - 2000: Twenty Years of Diminished Progress*, Centre for Economic and Policy Research, http://www.cepr.net/globalization/scorecard_on_globalization.htm Accessed November 12, 2001.

¹⁶ The decline in the rate of growth in education spending by poorer countries will also affect their capacities to utilize new technologies (see discussion of “the digital divide” above), even if these technologies become more diffused within them. This decline in growth rate is steeper in poorer, than richer, nations which will only further this divide.

¹⁷ Haddad S and Mohindra K, 2001. *Macroeconomic Adjustment Policies, Health Sector Reform, and Access, Utilisation and Quality of Health Care: Studying the Macro-Micro Links*. University of Montreal/International Development Research .

11. The challenge for global health research, then, is increasing efforts to reduce the burden of disease in poorer countries, while simultaneously examining how economic globalization (including economic growth) affects health and health-determining conditions within and between nations.

THE BURDEN OF DISEASE APPROACH

12. There has been growing recognition that a profound imbalance persists globally in how the capacity to address global health challenges is being strengthened, with less than 10% of worldwide health research being devoted to diseases or conditions that account for 90% of the global disease burden.¹⁸ It is noteworthy that the Commission on Macroeconomics and Health observed that the actual gap is likely greater than the now widely recognized “10-90 gap” concept implies.¹⁹
13. Profiles of the burden of disease within developed and less developed countries contrast sharply. For example, while communicable, maternal, perinatal and nutrition-related disease (Group I) accounts for 63.6% of Disability-Adjusted Life Years (DALYs) lost annually in the poorest 20% of the world’s population, the comparable figure is only 10.9% in the countries of the richest 20%.²⁰ This disparity itself reinforces the imbalance in how research priorities are set globally.
14. The capacity to address the burden of disease in least developed countries has been slipping while the disease burden has intensified. Between 1990 and 1998, per capita expenditures on health in African LDCs (least developed countries) actually fell, from \$11 to \$8, even as it increased in other developing countries from \$100 to \$180. As a result of the failure to provide vaccination, children in poor countries still suffer 1.6 million deaths every year due to measles, tetanus, and pertussis, even though these diseases have been substantially eliminated in the high-income countries.²¹ While around half of all developing nations are able to provide essential medicine access to over 80% of its population, only 6 of 47 LDCs are able to do so.²² Furthermore, the HIV/AIDS epidemic has had a profound effect on advances that were being achieved in areas such as child health, causing a reversal in the trend toward a decrease in < 5 mortality in countries of sub-Saharan Africa.
15. The Commission on Macroeconomics and Health provided an ambitious set of recommendations to increase investment in the capacity to improve health in the LDCs. In addition to targeted research funding based upon the “burden of disease,” the Commission recommends annual global funding of \$1.5 billion on disease epidemiology, health economics, health systems and health policies as they affect people in poorer nations. The Commission further identifies the national health research funding bodies of developed countries (such as G8 or OECD nations) as models for its proposed Global Health Research Fund. This broadened approach to global health research is timely and important, yet it need not be at the exclusion of such research being directly funded by the health research granting agencies of the G8 as well.
16. The Commission on Macroeconomics and Health does not specify what precise problems should be studied, but does identify education, agricultural development, food security and

¹⁸ GFHR, 2000. The 10/90 Report on Health Research 2000; Global Forum for Health Research Geneva, Switzerland. <http://www.globalforumhealth.ch/report.htm> Accessed November 15, 2001.

¹⁹ WHO, 2001. p.79

²⁰ WHO 1999 as cited in GFHR 2000

²¹ WHO 2001. p. 46

²² Lipson, 2001

environmental sanitation/protection as important health-determining conditions. Research into health consequences of policy options can play an important role in better informing “upstream” policy decisions and should form an important part of the policy agenda and the evidence base considered by policy makers, recognizing the close interrelationships between health and development.

INHERENTLY GLOBAL HEALTH ISSUES

17. *Inherently Global Health Issues* (IGHIs) are health determining phenomena that transcend national borders and political jurisdictions. The analytical pathways triggered by these global “drivers” may be more difficult to trace or, in some cases, still somewhat speculative. Their potential health effects, however, could overwhelm the best efforts of disease-based intervention. Global health research requires more attention on the assessment of IGHIs as a way to complement the more traditional focus on diseases or vulnerable groups.
18. The following IGHIs are suggested as priorities for future global health research.

Table 1: Inherently Global Health Issues

Environmental global degradation	1. Greenhouse gas emissions (climate change)
	2. Biodiversity loss
	3. Water shortage
	4. Decline in fisheries
	5. Deforestation
Social / economic	6. Increasing poverty
	7. Financial instability (capital markets)
	8. Digital divide
	9. Taxation (tax havens, transfer pricing)
Cross-cutting	10. Food (In)security
	11. Trade in health-damaging products
	12. Governance
	13. War and conflict

The first five IGHIs represent environmental global degradation. The next four describe social or economic trends. These two sets are inter-related, and at least issues 1 through 6 on the list are sensitive to population growth pressures. Each of these IGHIs has strong links to health and to the equity dimension of health, i.e. the social distribution of health status and health determining conditions. Usually considered a national concern, food insecurity (10) links global environmental issues (1 through 5) with global socio-economic issues (6 through 9). The major concern with health damaging products (11) is increased global trade in, for example, tobacco, arms and toxic waste. Governance (12), in turn, is singled out for particular discussion, not because it is absent from any of the other issues, but because there are aspects of governance, particularly increasing trade agreements’ “trade creep” into areas of previous domestic authority. War and conflict (13), remains a part of the landscape, particularly among vulnerable populations adapting to pressures in the contemporary era of globalization.

19. *Climate Change Scan and Research Questions*²³.

Carbon emissions, despite a decline in the 1990's due primarily to economic collapse of Eastern bloc economies, still exceed levels sustainable in terms of slowing climate change.²⁴ Human costs of weather-related disaster relief are now outstripping capacity of relief agencies.²⁵ Most health effects are negative and severe.

- What impact will increased trade in goods have on fossil-fuel consumption and climate change?
- What effect is this having on ground-level ozone production, respiratory illness and motor vehicle accident rates, particularly for poorer and more vulnerable populations?
- How are foreign direct investment (FDI) and official development assistance (ODA) affecting the absolute and relative carbon intensity of developed (investor/donor) countries and developing (receiving) countries?

20. *Biodiversity Loss*.

Biodiversity is a source of new health therapeutics and long-term food security. It is under threat in virtually every type of ecosystem globally. Biodiversity loss may produce improved human health in the short term, via increased food production, and economic growth and income generation in agriculture, forestry and fisheries. Human health effects may be longer term, associated with food shortages related to monocrop production, poor forestry management, depletion of fisheries and degradation of ecosystem viability.

- What impact will increased trade in goods (particularly those derived from agriculture, forestry and fisheries) have on biodiversity protection?
- Where is the point where negative health effects (immediate and estimated long-term) outweigh positive health gains associated with biodiversity loss?
- What are the distributional health effects of biodiversity loss, i.e. how are indigenous peoples who are more reliant on biodiversity for food, economy and health affected by increased economic harvesting of single food and forestry crops or species?
- What effects will use of genetically-modified organisms (GMOs) have on biodiversity protection and food security?

21. *Water Shortage*.

Water shortage is becoming one of the most important global health and environmental issues. Water shortage and quality have obvious and immediate health impacts and both, globally, are in decline. Problems are most severe in Africa and Asia, but are growing worldwide. Fully 2/3rds of the global population are projected to experience moderate to high water stress by 2025.²⁶ Over 2 billion people are projected to be living under conditions of extreme water scarcity.²⁷

- How will the trajectories of the future economic growth of poorer nations affect the safety and sustainable supply of water?
- How will water supply and pricing policies reflecting market-based costs affect water access,

²³ The next series of comments provide a brief scan of each IGHI and raises a number of important health-related research questions. They are by no means exhaustive, merely representative. There are also important questions regarding potential conflicts between trade agreements, multilateral environmental agreements and other social and cultural multilateral accords. These are discussed in the longer paper on which this Briefing Note is based.

²⁴ Worldwatch Institute, 2001. *Vital Signs 2001*. New York: W.W. Norton and Co.

²⁵ *World Disasters Report 2001*. Geneva: International Federation of Red Cross and Red Crescent Societies

²⁶ UNEP, 1999. *Global Environment Outlook 2000*. London: Earthscan.

²⁷ Worldwatch Institute, 2001.

and the burden of disease associated with “hydrological poverty” for poorer groups, particularly within poorer nations?

- How is poorer nations’ increased reliance upon tourism for foreign currency affecting water security, given the vastly disproportionate use of water by tourists?

22. *Fisheries Depletion*

Around 1 billion people, most in developing countries, depend upon fish as their primary form of protein. Industrialization of fish fleets has led to serious depletion of fish stocks. Some 60% of global fisheries are estimated to be near depletion, a factor in the slower rate of growth in fish catch over the past few years.²⁸ Introduction of commercially viable foreign or genetically modified fish risks long-term negative effects on ecosystems. Fish farming introduces antibiotics and other potentially harmful chemicals into ecosystems, with unknown long-term environmental and human health effects. Removal of trade-distorting subsidies could slow the depletion of fish stocks, but with a potential short-term cost to economic growth or food security in poorer nations.

- What are the environmentally-mediated human health effects of increased fish-farming?
- How is liberalization in fish products affecting food security for indigenous peoples, or poorer populations partly, or wholly, reliant on non-commercial fishing?
- How are the public costs of fisheries management and environmental clean-up affecting the abilities of national and sub-national governments to provide essential health services, especially for the poor?

23. *Deforestation*

North America and the European Union are currently increasing forest cover, although with less diverse mono-crop “tree farms.” Forest cover is declining rapidly in Latin America, Asia and Africa.²⁹ Trade liberalization directly influences the rate of deforestation in some countries (e.g. Indonesia),³⁰ and indirectly (through increased illegal logging) in others (e.g. Mexico).³¹ Health effects associated with logging can be positive (economic growth, increased income and employment) and negative (occupational hazards, fires associated with logging operations and resultant respiratory illnesses). Indirect health effects are multiple and largely negative, relating to climate change (loss of carbon sinks) and ecosystem degradation (soil erosion, water contamination, and food insecurity via habitat loss for flora and fauna).

- How is deforestation affecting human health in the short-term via changes in disease vectors (e.g. pooling water and malaria), burning (respiratory illness), accidents (particularly in under-regulated nations) and use of herbicides and other chemicals in re-forestation?
- To what degree are these risks offset by short-term health benefits via employment, income, increased domestic-use food production and other positive externalities?
- What are the distributional effects of economic gains associated with deforestation, i.e. who benefits most within particular nations or sub-national regions?

24. *Increasing Poverty and Income Inequalities*

Poverty is both cause and consequence of many of the other IGHIs. Global poverty over the past decade has reduced at the \$1/day level but increased at the \$2/day level, indicating redistribution

²⁸ UNEP, 1999.

²⁹ UNEP, 1999.

³⁰ Walt G. 2000. “Globalisation of international health,” *The Lancet* 351: 434-44.

³¹ Guerrero M, de Villa F, Kelly M, Reed C, and Vegter, B. 2000. *The Forestry Industry in the State of Chihuahua: Economic, Ecological and Social Impacts post-NAFTA*. Washington: NAFTA Environmental Effects Symposium.

from the very poor to the absolutely poor.³² Only a handful of East Asian countries have “grown” economically out of poverty, but many analysts argue this was due to strong protectionist domestic measures coupled by manufacturing-led exports, rather than to trade liberalization *per se*. With few exceptions, such growth also led to increases in income inequalities. Income inequalities are increasing globally, associated with excessively liberal economic policy regimes and the way in which economic reform policies have been carried out.³³ The higher the level of inequality, the less impact economic growth has on eliminating poverty. The higher the poverty levels the greater the risk to economic growth due to undesirable political and social impacts, such as crime and instability.³⁴

- What are the longer-term risks of increased health inequalities associated with longer-term income inequalities or status hierarchies?
- What is (or should be) the normative trade-off between increasing the base-line of wealth and health while also increasing the “gap” between top and bottom within and between nations?
- How is trade liberalization affecting economic growth, poverty, disparity (convergence, divergence in incomes)?
- What *a priori* conditions allow trade liberalization to promote economic growth in poverty-reducing, disparity-reducing ways?
- What specific and general compensatory public policies (ranging from re-training, to improved social safety nets, to longer phased in tariff removals) for “liberalization shocks” would best maintain health-enhancing social and environmental conditions, particularly though not exclusively associated with poverty and income distribution?
- What are the longer term implications of increasing inequalities on, for example, ethnic conflict or regional warfare, and how is this abetted or constrained by trade liberalization or other macroeconomic interventions

25. *Financial Instability*

The scale and volatility of global financial markets – the confluence of digital technology, new investment instruments and de-regulation – is widely regarded as one of the most pressing global economic issues. Massive and short-term inflows and outflows of capital seriously erode the ability of national governments to intervene in foreign exchange markets to stabilize their currencies, manage their economies and maintain fiscal autonomy. The domestic “shocks” of this volatility often increases poverty and/or income inequality.

- What are the impacts of financial instability on the abilities of governments to provide essential health, education and other health-enhancing services, particularly to the poorest population?
- What effect might “speed bumps” or transaction taxes on speculative finance on long-term FDI, and with what effects on health and economic growth/development?

26. *Digital Divide*

Communication technologies and access to the knowledge (information) economy are not equitably available to all persons or nations on an equitable basis. There is presently a 500:1 ratio

³² Ben-David D, Hordstrom H, and Winters L.A. 1999 Trade, Income, Disparity and Poverty. World Trade Organization: Special Studies 5.

³³ Cornia G.A. 2001. “Globalization and health: results and options,” *Bulletin of the World Health Organization* 79(9):834-41.

³⁴ Deaton A. 2001. Health, Inequality and Economic Development. CMH Working Paper Series WG1:3, World Health Organization: Commission on Macroeconomics and Health.

in the prevalence of Internet users between the richest and poorest population quintiles, globally.³⁵ There is a spirited debate over whether poorer nations need high technology skills more than they need such basics as food, shelter, health care, education and potable water. There are examples, such as India, where technology-driven economic growth considerably outperforms agricultural-driven economic growth, though with the usual problems of increased inequalities. But many countries, particularly in sub-Saharan Africa, face such acute health, poverty and environment problems that a development initiative based principally on reducing the digital divide seems improbably grand.

- What is the “healthiest” balance in ODA and FDI in poorer countries between investments in basic health-promoting infrastructures and development of the capacity for digital economic growth within such countries?
- What are the global and national distributional effects of ODA and FDI investments in digital economic growth in poorer countries, i.e. who benefits most?
- What are the occupational and environmental hazards associated with increased production of digital technologies, where are they occurring and who are at greatest risk of exposure?

27. *Taxation*

Countries can adopt human investment and social transfer policies to cushion peoples’ living standards against economic declines consequent to economic globalization. This requires increased tax and transfer capacities and the political willingness to use them. With capital tending to prefer low-tax situations, liberalization is creating tax competition amongst countries resulting in declines in tax revenues in rich and poor countries alike, with subsequent erosion of public services. This is not a universal phenomenon. Countries doing better are those with a social democratic political orientation of governments, high unionization rates, high existing levels of economic wealth and the internal capacity to collect and administer tax revenues.³⁶ Declining tax capacities have been most severe for transition economies and developing and least developed countries. The latter rely heavily on tariffs for tax revenues and have been unable to find other sources to make up the losses resulting from trade liberalization agreements. Transfer pricing practices and the persistence of tax havens further weaken government abilities to fund essential health-enhancing services and programs. This could undermine efforts to improve health in poorer countries by reducing their burden of disease, as proposed by the Commission on Macroeconomics and Health. The Commission presumes the development of health system, education and other public program capacities alongside its more specific and narrowly targeted health interventions.

- What impact is liberalization having on national tax capacities, especially for poorer nations?
- What is the “healthiest” balance in policy options between increased economic growth through tax competition (attracting FDI) and/or tariff reduction, and any ensuing loss in the ability to provide for essential health-enhancing public services?
- What are the distributional effects of changes in national tax capacities, i.e. who benefits most?

³⁵ UNDP, 1999. *Human Development Report 1999*. New York: Oxford University Press.

³⁶ Global Social Policy Forum 2001. “A North-South Dialogue on the Prospects for a Socially Progressive Globalization,” *Global Social Policy* 1(2):147-62. Gough I. 2001. “Globalization and Regional Welfare Regimes: The East Asian Case,” *Global Social Policy* 1(2):163-90.

28. *Food (In)Security*

Food (in)security is a bridge between health-promoting social and environmental conditions. A strong argument from the South is that opening Northern markets to their products (primarily agricultural and textile) is the most important lever for economic growth and development, and subsequent health improvement. Tariffs on manufactured products (benefiting developed countries) have declined rapidly. Tariffs on agricultural and textile products, though scheduled for reduction, remain high.

- Will increased food or non-food (cash crop) exports to developed countries create sufficient income for developing countries to pay for the increased food imports they will need to offset the decline in domestic food production?
- What effects will agriculture export-led development have on poverty and income distribution profiles in poorer nations, public tax regimes and associated social development programs, such as health care, education and so on?
- What are the distributional effects of economic gains associated with increased food exports, especially considering that most farmers in the world's poorest countries produce for personal or domestic markets only?
- What are the probable environmental effects of increased crop production, particularly for African countries where soil degradation, nitrogen cycles and water shortages are already severe, and how will this affect medium and longer term food security and health?

29. *Trade in Health Damaging Products*

Most research in this area has gone towards examining the effects of trade liberalization of tobacco products on tobacco use, demonstrating a positive relationship (liberalization leads to increased consumption).³⁷ It remains to be seen if the WHO Framework Convention on Tobacco Control is able to stem this trend. There is also recent growth in trade in hazardous waste, much of it illegal. Most of the world's toxic waste is generated in OECD countries. Stricter environmental regulations and higher costs for disposal in these countries are leading to a growing export market to developing nations, which often lack the technical and regulatory capacity to ensure safe disposal. Generally, there is a paucity of data tracking the global movement of toxic wastes, making research into its health effects difficult to undertake. While important, it is difficult to determine if this specialized area of trade in health-damaging products warrants health research priority, given the amount of study already underway around tobacco, and the current lack of data concerning hazardous waste.

30. *Governance*

Much of the preceding discussion relates to governance, and calls into question the capacities of nations to provide the programs or services that enhance the health of their population, particularly the poor, and to create or support domestic conditions that facilitate this. A major concern with globalization and global trade agreements, in this regard, lies precisely in its effect on the abilities of national and sub-national governments to govern effectively – in maintaining adequate provision of public goods and in having the scope and authority to address needs, over and above pressures that may be imposed by limitations on the capacity to raise adequate tax revenues to do this.

³⁷ Taylor, A. et al, 2000. "The impact of trade liberalization on tobacco consumption," in Tobacco Control in Developing Countries. Jha, P. and Chalupka, F.J. (eds.) Oxford: Oxford University Press.

Developed countries have generally done better than developing countries in ensuring their poorer obtain access to health care. At the same time, the health gains from such care in developed countries have been much more marginal than it is for the poor in poorer nations.³⁸ Health care in poorer countries still tends to favour the wealthy over the poor and hospital care over primary care. Even in the case of programs intended for the poor (such as oral rehydration therapy) many initiatives fail to reach the poor and so widen health inequalities within the country. The challenge of governance calls into question whether the conditions for supporting a Primary Health Care (PHC)³⁹ or Close-to-Client (CTC)⁴⁰ focus will be supported in practice. While the intent of the Poverty Reduction Strategy Paper (PRSP) framework⁴¹ provides a basis for correcting the negative impacts imposed by donor-imposed Structural Adjustment Policy experience⁴², the challenge will be to monitor the success of its implementation.

The potential list of research questions here would be extensive. In more general terms, the larger questions are:

- How are liberalization and macroeconomic adjustment programs (i.e. privatization, deregulation, decreased public spending) affecting governments' abilities to provide health, educational and welfare services or programs to the poorer members of their citizenry?
- What impact is this having on measures on health status (both absolute and distributional), and the rates of change in these measures?⁴³

As technological innovation proceeds, and assuming it diffuses to poorer nations, another question arises:

- How will technological innovation bias health care provision towards hospital-based or "high-end" interventions in poorer nations, with what opportunity costs to primary care services of greatest benefit to the poor within those nations?

There are also several important issues raised by the new WTO trade regime, including the General Agreement on Trade in Services (GATS), still in negotiation. Disputes over the interpretation of GATS' implications with respect to privatization of health or other health-promoting services are particularly rancorous. Key concerns appear to be:

- GATS requires progressive liberalization, i.e. a country can only liberalize more services in the future, and not withdraw those to which it presently commits liberalization?
- Interpretation of preamble and textual clauses, i.e. does it protect domestic policy-making in service areas where there is already a mixture of public/private provision, which is the case with almost all "public" services?
- The role of powerful economic forces behind the GATS negotiations; major private service providers in the US and the EU, with open acknowledgements that the intent of GATS is to increase the private provision of health, education and other services globally.

³⁸ Wagstaff A. 2001. Poverty and health. Paper WG1-5. WHO Commission on Macroeconomics and Health. <http://www.worldbank.org/research/bios/awagstaff.htm> Accessed February 28, 2002.

³⁹ Wagstaff, 2001.

⁴⁰ WHO, 2001.

⁴¹ WHO, 2001.

⁴² Breman A. and Shelton C. 2001. Structural Adjustment and Health: A literature review of the debate, its role-players and presented empirical evidence (Draft for Discussion), World Health Organization: Commission on Macroeconomics and Health, Paper WG6:6.

⁴³ Existing studies of SAPs produce mixed findings (see Breman and Shelton, 2001), although effects on Africa have generally been more singularly negative.

- The potential bias towards technologically-driven, hospital-based Western-style health care systems in developing countries if, and as, exports of Western health care management styles increase under GATS
- More narrowly, mode 4 provisions that govern the movement of persons providing services; how this will effect the already increasing migration of health and other professionals from poorer to richer countries?⁴⁴

Finally, the TRIPS agreement has been the source of tremendous concern with respect to the availability and affordability of anti-retrovirals (or any other new therapeutic inventions) in poorer countries.

- A basic question here is how TRIPS in its current, or potentially amended, form, will affect access to new therapeutics. More systemically, and perhaps more subtly, is research into how TRIPS may increase resource and knowledge control (and hence economic benefit, with all of its associated health gains) by developed nations, at the expense of developing nations.⁴⁵

31. *War and Conflict*

While the end of the Cold War was greeted as the beginning of an era of peace and prosperity, the reality of the past decade has been more sobering. The security of the world's states may have improved, but the security of its peoples has declined. Armed conflict in particular has become more brutal and deadly. The number of armed conflicts between states has declined over the last 25 years, but the number of intra-state conflicts has increased. Of the 108 armed conflicts since the end of the Cold War, 101 have been fought within rather than between states, such evident in the Great Lakes region of Africa, in Bosnia and Kosovo, in East Timor, in Angola and in Sierra Leone.⁴⁶

Civilians are increasingly the principal targets and instruments of these modern wars. Casualties from armed conflict have doubled in just the last decade, with approximately one million people losing their lives each year. Direct impacts are profound from conflict itself and its residual trauma, such as the amputation epidemics caused by landmines. Scars are also inflicted upon the psychological well-being of populations, particularly younger generations. In the environment of conflict, populations are forced into makeshift transient communities and camps where they are cut off from basic supports and infrastructure and subject to yet further health risks. The indirect effects, while more subtle, are perhaps even more profound, with already strained capacity to achieving good health and providing health services under especially severe strain in conflict situations.

- How can health-related interventions contribute to primary (averting conflict) and secondary (alleviating the impact of health effects associated with war and conflict)?
- Can Canada, with its history of “peacemaking,” play a leadership role in addressing both the health impacts of world conflict, as well as how health professionals can best intervene?
- As is the case with other IGIHs, how can collaboration with civil society stakeholders increase the effectiveness of interventions?

⁴⁴ Drager N. 1999. “Making trade work for public health,” *British Medical Journal* 319:1214.

⁴⁵ The point here being that price differentials, special funds and other measures intended to make developed world drugs more affordable or accessible in poorer nations does not address the important role of generic pharmaceutical companies in poorer countries in developing or enhancing local knowledge, increasing domestic economic development and capacity, and improving the nation’s competitive ability in global medical research.

⁴⁶ DFAIT, 2000. *Freedom from fear: Canada’s foreign policy for human security*, Ottawa: Department of Foreign Affairs and International Trade. (http://www.dfait-maeci.gc.ca/foreignp/humansecurity/HumanSecurityBooklet-e.asp#P24_3547). Accessed November 15, 2001.

SETTING PRIORITIES

32. Given the scope and complexity of the global health challenge, it is imperative that efforts be as well-organized as possible to have an optimal effect and impact. Efforts should build upon established strengths while pursuing effective partnerships, particularly with Southern researchers and institutions. In setting global health research priorities based on both burden of disease (BoD) and IGHIs, there are five useful considerations.
- A balanced approach that allows an examination of BoDs in the context of IGHIs
 - The role of strategic partnerships
 - The value of synthesis research
 - The importance of nation-based case studies
 - Integration with intervention (evaluation) research
34. The two approaches to identifying global health research priorities (i.e. the BoD approach, and the IGHIs approach) can be viewed together as a matrix where the rows are the diseases while the columns can be considered as the set of drivers or pressures at a global level (Table 2).

Table 2: Design for a Matrix Integrating the Two Approaches to Scoping Global Health Research Priorities

Drivers	Ecological degradation	Poverty	Financial instability	Digital divide	War and conflict	Etc.
Diseases						
Infectious Disease						
Injuries						
Cardiovascular Disease						
Cancer						
HIV/AIDS						
Etc.						

An additional column can be added to the left of the rows, identifying those groups or states most vulnerable to these diseases, for example, heavily indebted or least developed countries, women, children, indigenous people. Global health research can be supported through the entry points of vulnerable groups and/or specific diseases. At issue is the extent to which such research should be required to include some study and analyses of IGHIs that may impact upon the specific disease or vulnerable group. An overlay of questions in all of the research would include some analysis of the impact of trade agreements and liberalization.

35. Much of the research on the impacts of global forces on health or health-determining conditions is presently undertaken by multilateral agencies, such as the World Health Organization, the World Bank, and numerous UN agencies (e.g. UNDP, UNEP, UNCTAD). Much of the commissioned research is undertaken by scholars in developed countries, which raises an interesting issue of global equity. While perhaps minor in direct economic transfer terms, this first-world reliance does little or nothing to enhance the knowledge/research capacity in developing nations. These points raise two questions:
- To what extent should developed country-funded global health research be strategic and primarily supplement or “add on” to other multilaterally funded global health research

- initiatives? This would require a careful scanning of such research to ensure that it adequately addresses the global “drivers” of health status/health inequalities.
- To what extent should developed country-funded global health research require partnerships with researchers in developing countries, or otherwise seek to enhance the research capacity in poorer countries?
36. Several models attempting to describe how global forces might influence health are now being developed. All of these posit several pathways that are associated with known health-determining social, economic and environmental conditions (e.g. poverty, income distribution, physical environment quality, and public services such as health care, education and social services, labour market/employment). The importance of these conditions on health will vary by the level of development of different countries. The effects of economic globalization (using different methods and methodologies) on many of these pathways (for example, transportation-related greenhouse gas emissions, poverty rates) have been studied, but syntheses of these disparate studies into some larger framework for policy purposes are still nascent.
- To what degree should synthesis research be a priority?
37. A key problem facing research on IGHIs is determining how much of the trends is merely an extension of pre-existing national trajectories and how much is a result of qualitatively new global changes in economic and political structures/practices. This can only be done through carefully constructed comparative national studies. Many of the health-related research questions can only be answered in any detail by closer intra-national study and then cross-national comparison. This applies particularly to questions surrounding the health effects of global economic and political changes. In examining such countries, particularly for global comparative purposes, it is important to assess not only shifts in health status (for example, <5 mortality rates) and health determining conditions, but also the degree of equity in such status and access to such conditions across the population. Just as we know there are high income, high inequality, poor health countries/states, and low income, high equality, high health countries/states, there are some countries where health status is more equitably distributed, and some where it is not.
38. A great deal of Official Development Aid and health Non-Governmental Organization work is for programmatic interventions in the medical manifestation of disease and its treatment, its behavioural risk factors and/or its underlying determinants. Evaluation research on these interventions is often minimal. This is not a problem confined to interventions in poorer countries, but concerns funders in most developed countries as well. There is a need for more rigorous evaluation research. Research questions generated from the BoD/IGHI matrix could also be added to evaluation research of intervention programs, increasing the value of the research effort.
39. The Briefing Paper identifies many important research topics, but does not define what *should* be the specific research priorities. Rather, it identifies a set of sequential principles that could potentially guide funding selection of appropriate research proposals, without *a priori* confining the content area:
- Give priority to research on inherently global health issues that will reduce the burden of disease.
 - Give priority to research on the burden of disease that includes study of inherently global health determinants.
 - Within either, give priority to research that represents Southern-defined concerns or questions.

- Within such research, give priority to proposals that will increase equity in health outcomes between groups within nations.
- Within such research, give priority to proposals that have solid civil society engagement.
- Within such research, give priority to proposals that will increase equity in knowledge capacities between the North and South.