Reducing maternal deaths through family planning

In a 2010 Lancet paper (Hogan et al., 2010), researchers from the University of Washington presented maternal mortality patterns over the last three decades. Based on an analysis of mortality data from 181 countries, they concluded that the improvement made in decreasing maternal deaths was much more substantial than previously assumed. According to the authors, nowadays almost 350,000 women die every year as a result of pregnancy or delivery. This figure is indeed noticeably lower than the half million deaths that was commonly cited until then, but it remains nonetheless an unacceptably high number of lives lost.

An important factor influencing maternal mortality is the number of children a woman bears during her life. The lifetime risk of dying during a pregnancy is almost linearly correlated with the number of pregnancies. In contrast to the important reduction that was achieved in maternal mortality ratios (the number of women who die of pregnancy-related causes per 100,000 live births), the fertility rate at global level decreased between 1980 and 2011 from 3.6 children per woman to 2.5, only a 32% decrease (United Nations, 2011). These figures however mask important regional differences. In Sub-Saharan Africa, the decrease over these three decades was approximately 22%, compared to 33% in Asia and 42% in Latin America. Today, the fertility rate in Sub-Saharan Africa is still approximately 5 children per woman; in Asia and Latin America this figure is respectively 2.2 and 2.3.

The slow decrease in fertility rate in Sub-Saharan Africa is caused partly by the fact that the level of unmet need for contraception has almost stagnated over the last decade: the use of contraception methods among married women increased from 20% in 2000 to 22% in 2007 (United Nations Population...
Fund, 2010). This low use of contraception in Sub-Saharan Africa is however markedly discrepant with the high need for family planning interventions in many of those countries. These family planning interventions are meant to provide assistance to women who wish to avoid or space pregnancies through, among others, contraception. Indeed, an average of 40% of pregnancies in Sub-Saharan Africa (70 million) is unintended, either unwanted or mismeasured. Studies suggest that avoiding these pregnancies may result in a reduction of 150,000 maternal deaths every year, including over 50,000 deaths due to unsafe abortions (UNFPA, 2009). In addition, the effects of investing in family planning go far beyond the reduction of maternal deaths alone.

**Family planning to ensure sustainability and eradicate poverty**

Human subsistence depends entirely on the fruits of the earth. Humanity has succeeded in exploiting the earth in an increasingly efficient way, but there are strong indications that we are approaching or even exceeding limits, thereby endangering sustainability and jeopardizing the well-being of future generations (United Nations Population Fund, 2001). A concept that allows comparing the level of consumption with the carrying capacity of the earth is the ‘ecological footprint’, measuring the area of biologically productive land and water that a population (an individual, a city, a country or all of humanity) uses to generate the resources it consumes and absorb its wastes under prevailing technology (Kitzes et al., 2008).

The Global Footprint Network calculated the average ecological footprint of the global population in 2007 at 2.7 ‘global hectares’ per capita, and the ‘bio capacity’ (the capacity of ecosystems to produce useful biological materials and to absorb carbon dioxide generated by humans, using current management schemes and extraction technologies) at 1.8 global hectares per capita, which means that humanity is already in an ‘overshoot’ situation: humanity’s demand on nature exceeds the biosphere’s supply, or regenerative capacity (Global Footprint Network, 2010). This means that we are over-exploiting land and sea, thereby destroying habitats and harming biodiversity, and taking away means of existence from future generations.

The 2007 calculations are based on a world population of 6.7 billion. If the bio capacity remains unchanged and the population grows, the overshoot will increase. The middle variant of the 2010 Revision of World Population Prospects projects the world population to reach 9.3 billion by 2050, and 10.1 billion by the end of the century (United Nations, 2011). In fact, in many African countries (e.g. Mali, Niger, Benin) population growth during the period 2000-2050 will be bigger than that during 1950-2000. In order to feed all these people and satisfy the expanding individual needs that go together with development—such as meat consumption—food production would have to double by 2050 (Parry and Hawkesford, 2010). If the use of fossil energy sources decreases—driven by depletion or by climate change policies—biofuels crops will increasingly compete with food and feed crops for land and water. Expanding the area of arable land will be very difficult without further destroying eco-systems and harming biodiversity, and in addition the quantity and quality of the existing arable land is threatened by erosion, salinization and urbanisation.

It is hard not to conclude that we are trapped within the limits of the earth. Technological improvements can increase crop yield considerably, and climate change may also help through its beneficial impact on photosynthesis, but doubling food production in 40 years’ time, against the background of land degradation and increased land use for other purposes than food production is a tremendous challenge.

Bringing down the ecological footprint of the inhabitants of the countries where it is highest is certainly a valid option. While the footprints of countries like Burundi (0.9), Mozambique (0.8), Afghanistan (0.6) and Bangladesh (0.6) are shockingly low and must increase urgently and strongly to allow people to live decent and food-secure lives, the footprints of countries like the United States (8), the United Arab Emirates (10.7) and Denmark (8.3) are shockingly high and are symptoms of overconsumption and dissipation (Global Footprint Network, 2010). The average ecological footprint of high income countries was 6.7 global hectares in 2007 compared to 1.2 global hectares for low income countries. If all countries would converge towards the global average of 2.7 global hectares, then high income countries would have to reduce their ecological footprint per capita with a factor 2.5, but even then we remain in an overshoot situation (World Wide Fund, 2010). In order to stay within the limits of the earth’s bio capacity, a further reduction with a factor 1.5 will be needed, resulting in an overall decrease in environmental footprint of nearly a factor 4. Technological solutions may make this possible without eroding too much our comfort and standards of living, but this will take time, and part of the gain will be offset by population growth. If the world population reaches 9.3 billion, as is projected for 2050, the average ecological footprint would have to be reduced to 1.4 global hectares in order to match with the bio capacity, implying an additional reduction of the ecological footprint of high income countries.
with 22%. At that point, our ecological footprint would be at the same level as that of Nigeria, Somalia and Vietnam today, which is probably not an attractive perspective for people who are used to food and drink abundance, luxury goods and long distance vacations. The conclusion is that we are facing a tremendous challenge to bring our use of natural resources within ecological limits, most likely at the cost of a considerable decrease in living standard for inhabitants of high income countries, and the more the population grows, the greater this challenge will become.

On the other side of the ecological footprint spectrum, with the low income countries, we are facing the opposite challenge: how to achieve economic development and eradicate poverty? In 2008, per capita GDP in Sub-Saharan Africa was US$ 1,930, compared to US$ 36,120 for Northern Europe and 46,970 USD for the USA (Population Reference Bureau, 2010). Per capita GDP in itself says nothing about the distribution of wealth within a country, nor about the degree to which the produced goods and services meet basic needs, but it is obvious that without an increase in GDP, the poorest countries will not be able to provide sanitation, food safety, education and health service to their population. Between 2004 and 2008, average GDP growth in Sub-Saharan Africa was 6.5%, which may seem high when compared to the growth rates of 2-3% that we are used to in Europe, but which is not at all impressive given the much lower levels of GDP in absolute terms. In addition, the growth in GDP does not automatically mean that people actually get richer on average: when the population grows, the wealth has to be distributed over more individuals, so again part of the progress is offset by population growth. This becomes clear when we look at GDP growth per capita. For Sub-Saharan Africa this was only 4.3% (compared to 6.5% growth of GDP in absolute terms). A country like Uganda, facing a high population growth rate, achieved an average raise in GDP with 8.2% between 2004 and 2008, but the growth per capita was only 4.5%. In Côte d’Ivoire, the very modest GDP growth by 1.6% resulted in a per capita negative growth of -1.7%, so the country grew richer but the population grew poorer (International Monetary Fund, 2010).

As demonstrated above, two of the most important global challenges of our time, achieving ecological sustainability and eradicating poverty through economic development, are influenced to a significant extent by demographic evolutions. Of course, family planning as such will not solve these problems, but in addition to the beneficial health impacts of generalized access to family planning, in particular contraception, it will also contribute to slowing down population growth and hence to ecological and economic well-being. In fact, contraception is in itself a sound investment from an economical point of view: studies show that each dollar invested in contraceptive services saves between US$ 1.70 and 4 in expenditures on antenatal, maternal and newborn health care (Population Secretariat, 2009).

Failing to ensure basic human rights

If meeting the unmet need for family planning is so important for public health, for sustainable development and for eradicating poverty, then why has there been so little progress, despite the commitment of the international community.

Religious and philosophical opposition against contraceptive use and abortion is certainly playing a role in this unfortunate evolution. An obvious example of this strong lobbying is the political ping pong that has been on-going for almost thirty years over the so-called Mexico City Policy, commonly known as the Global Gag rule (Crandall and Dusenberry, 2004). This US policy, which was established in 1984 under Reagan, stated that NGO’s active in promoting or providing advice on abortion, would no longer be eligible for receiving USAID funding for any of their activities. As a result, several family planning NGO’s were faced with considerable cuts in their budgets. In 1993, however, Clinton overturned the rule stating that “These excessively broad anti-abortion conditions are unwarranted.” Still, two terms later, in 2001, George W Bush reinstated the policy, only to have it rescinded once again by Obama in 2009. It is obvious that this back and forth is a serious impediment to a sustained global family planning strategy.

In addition to political lobbying from religious groups, there has always been an important pressure from nationalist movements towards restricting the access to abortion in an attempt to boost birth rates and thus increase population size (Albanese, 2004). Extreme examples were the anti-birth control policies under totalitarian regimes like Germany, Italy and Russia in the 1920s and 30s, which included among others banning of abortions, contraceptives and sex education and taxes imposed on unjustified celibacy and childless marriages. Similar rules were introduced in Romania under Ceausescu in the 1960s. More recently, Russia has adopted new policies limiting advertising of abortion services, but also stating that no married woman can have an abortion without written consent of her husband (Osborn, 2011).

There remains considerable information and sensitization work to be done for scientists and health workers to explain the many and serious
adverse impacts of denying women in need access to family planning services. However, this ‘educational work’ – though important and necessary – will not suffice to solve the problem. In order to fulfil the promises of the international community, and to make the leap towards universal access to family planning, a worldwide concentration of efforts and means is probably the best, the fastest, and maybe also the only way. Unfortunately, as mentioned above, the last decade has seen an evolution in the opposite direction.

Towards a global commitment to strengthen family planning strategies

In 1999, the aid budgets from the 24 DAC (Development Assistant Committee) countries amounted to a total of US$ 36 billion, including US$ 870 million (2.4%) for population policy and reproductive health programs (Organisation for Economic Co-operation and Development). Of this, 59% went to reproductive health care, 13% to family planning and 23% to the control of sexually transmitted diseases (including HIV/AIDS). One decade later, in 2009, these proportions had changed considerably: reproductive health care and family planning accounted for 13% and 7% respectively, while HIV/STD programs totalled 79% of the overall budget. In absolute figures, the HIV/STD program funding increased from US$ 281 million to US$ 5.7 billion, a 1900% rise.

A key event in this evolution was the G8 summit in 2000 in Okinawa, Japan, where for the first time, WHO representatives were invited at the annual meeting of world powers. To that occasion, the then Director-General of the WHO, Gro Harlem Brundtland, delivered a speech in which she heralded a “a new framework for concerted action […] a massive effort against HIV, malaria and TB - the infectious diseases that sustain poverty” (Brundtland, 2000). She further stated that “We know what needs to be done to tackle infectious diseases, and how to intensify action against HIV, malaria and TB. We now have a framework to link actions together and yield results.” In the 18 months following this declaration, discussions were held among donors and UN agencies on the practical implementation of the

**Fig. 1**

![Trends in Aid Funding from DAC Countries](source:OECD)
framework Brundtland referred to. These negotiations resulted in the official establishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria in January 2002. Nine years later, this fund has already approved over 800 proposals amounting to US$ 22 billion and it is commonly considered a success story (Global Fund, 2011). Its success however has been overshadowed by the recent decision to cancel funding round 11 meaning that no new projects would be funded before 2014. This decision was a consequence of decreased resource availability due to suspended donor contributions as a result of allegations of corruption, as well as the economic crisis that affected many donor countries (Moszynski, 2011).

Nevertheless, the positive impact of the Global Fund is also reflected in the HIV/AIDS statistics of the last decade. In 2001, the annual number of newly infected HIV patients amounted to 3.1 million, whereas in 2009, this number had decreased to 2.6 million (UNAIDS, 2010). Similarly, the number of AIDS-related deaths dropped from a peak of 2.1 million in 2004 to 1.8 million in 2009. These positive trends are to a large extent the results of increased HIV prevention efforts as well as the increased availability of antiretroviral therapy, care and support. Although there is still a long way to go, for the first time in many years, the ambition of eliminating HIV is no longer considered utopic. In fact, at the 2011 High Level Meeting on AIDS in New York, world leaders agreed to push towards eliminating new HIV infections among children in the next five years (UNAIDS, 2011).

What can be done in the field of HIV/AIDS, can also be done in the field of family planning. According to a 2010 report from UNFPA and the Guttmacher Institute, the cost of fulfilling the current unmet needs in family planning amounts to an additional US$ 3.1 billion annually (UNFPA, 2009). This amount is the same as the average annual aid budget for HIV/AIDS over the last ten years. In other words, if we succeed in putting the same effort in family planning as we did in the fight against HIV/AIDS, then we would have the means to avoid every unwanted pregnancy worldwide.

It is therefore time to build on the example set by the HIV/AIDS community, including for example the establishment of a Global Fund for Family Planning, and to achieve similar results for family planning and SRHR by 2020. After a “Decade of the fight against HIV”, let’s make sure the second decade of the 21st century will be remembered as the “Global Family Planning Decade”.

References
Albanese P. Abortion & reproductive rights under nationalist regimes in twentieth century Europe. Women’s Health & Urban Life, 2004;3:8-33.
Brundtland GH. The massive effort to tackle infectious diseases: a key to global prosperity. ROUND TABLE MEETING: CHALLENGES FOR DEVELOPMENT, 2000.
Crane BB and Dusenberry J. "Power and politics in international funding for reproductive health: the US global Gag Rule." Reprod Health Matters. 2004;12:128-37.
Global Footprint network. Results from National Footprint Accounts 2010 edition. Extracted on October 13, 2010.
Global Fund. Making a Difference – Global Fund Results Report 2011.
Hogan Mc, Foreman KJ, Naghavi M et al. (2010). "Maternal mortality for 181 countries, 1980-2008: a systematic analysis of progress towards Millennium Development Goal 5." Lancet. 375(9726):1609-23.
International Conference on Population and Development. Programme of Action, 1994.
International Monetary Fund. Regional Economic Outlook, Sub-Saharan Africa: Back to High Growth?, 2010.
Kites J, Wackernagel M, Loh J et al. Shrink and share: human-ity’s present and future ecological footprint. Philos Trans R Soc Lond B Biol Sci, 2008;363:467-75.
Moszynski P. Global Fund suspends new projects until 2014 because of lack of funding. BMJ. 2011;343:d7755. doi: 10.1136/bmj.d7755.
Osborn A. Russia proposes strict limits on abortions to boost population. BMJ. 2011;342:d3103. doi: 10.1136/bmj.d3103.
Parry, MAJ and Hawkesfor MJ. Food security: increasing yield and improving resource use efficiency. Proceedings of the Nutrition Society. 2010:69:592-600.
Population Reference Bureau. 2010 World Population Data Sheet, 2010.
Population Secretariat, Ugandan Ministry of Finance, Planning and Economic Development. “Empowering Communities to Overcome Challenges of Poverty”. Population and Development 2009;10.
UNAIDS. Report on the global AIDS epidemic 2010, 2010.
UNAIDS. Bold new AIDS targets set by world leaders for 2015. Press Statement, 2011.
UNFPA, Guttmacher Institute. Adding It Up. The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health, 2009.
United Nations Population Secretariat, Uganda. Abortion & reproductive rights under nationalist regimes in twentieth century Europe. Women’s Health & Urban Life, 2004;3:8-33.
United Nations. Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2010 Revision. New York. (comprehensive Excel tables), 2011.
United Nations Population Fund. The State of World Population 2001 – Footprints and Milestones: Population and Environmental Change, 2001.
United Nations Population Fund. How Universal is Access to Reproductive Health? A Review of the Evidence, 2010.
World Wide Fund. Living Planet Report. Biodiversity, bio-capacity and development, 2010.