

Information for Youth Forum Participants: Press Articles reporting on Post-2015 Consensus Research

All articles are op-eds by Dr. Bjorn Lomborg published in The East African, Aug 2014 - Feb 2015.

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Additional materials, including the assessment papers by leading economists from around the world, the perspective papers, and the viewpoint papers on each topic area, are available from the Copenhagen Consensus Center website - www.post2015consensus.com/research

SUSTAINABLE DEVELOPMENT GOALS



The MDGs, which expire in 2015 to pave way for the SDGs, set 21 targets in eight areas, including gender equality and child and maternal health. Picture: File

For its next development agenda, UN needs a fix on achievable goals

If you could come up with goals for the world to aspire to over the next 15 years, what would they be? What should we focus on?

The United Nations is currently conducting an online survey, asking people from around the world what matters most to them. Over 2.5 million people have responded, with everything from better transport and roads, to affordable and nutritious food, under consideration. So far, the top global priority is better education, followed by better healthcare and an honest and responsive government, with reliable energy and climate change at the bottom. But to make a more considered priority list, we need much more information on what solutions exist, their costs and their likelihood of success to make a better prioritisation.

This survey is part of a larger effort by the UN to find a successor scheme for the Millennium Development Goals (MDGs), which are set to expire in 2015. The MDGs set 21 mostly sharp and achievable targets in eight areas, including poverty and hunger, gender equality, education, and child and maternal health.

These goals have been hugely successful, not only in driv-

COMMENTARY DR BJØRN LOMBERG

"Negotiators now need to zero in on the targets that promise the biggest benefit for the \$2.5 trillion in development aid the world will spend until 2030."

ing more development funding but also in making the world a better place. For instance, the MDGs aimed to halve the proportion of people hungry counting from 1990. And the progress has been remarkable. In 1990, almost 24 per cent of all people in the developing world were starving. In 2012, "only" 14.5 per cent were starving, and if current trends continue, the world will reach 12.2 per cent in 2015, just shy of the halving at 11.9 per cent.

MDG successor scheme

Likewise, we promised to cut by half the proportion of the poor. In 1990, 43 per cent of the developing world lived below a dollar a day. In 2010, the proportion had already been more than halved at 20.6 per cent — on current trends the proportion will drop below 15 per cent by 2015, showing spectacular progress.

With the MDGs expiring next year, the UN is now working to replace the MDGs with a successor scheme, called Sustainable Development Goals (SDGs). But that's easier said than done. One tracker shows a list of more than 1,400 proposed targets. Clearly we need priorities.

The SDGs will determine a large part of the \$2.5 trillion development aid the world will spend until 2030. In order to spend the money most effectively and help as many people as possible, negotiators now need to zero in on the targets that promise the biggest benefit for the investment.

My think-tank, the Copenhagen Consensus, has engaged in a project to determine which targets will do the most good per dollar spent. We have commissioned 57 teams of renowned economists to estimate costs and benefits within 19 major

areas, comprising about 50 targets, throughout the rest of this year. Estimating the benefits will take account not just of economic benefits but also the health, social and environmental benefits that may be accrued from these targets. The recommendations will be peer-reviewed. At the same time, UN agencies, NGOs and businesses will comment on the findings. Three Nobel Laureates will then evaluate the economic evidence to classify all targets into categories ranging from phenomenal, good, and fair to poor. Phenomenal targets will be colour coded dark green, fair targets yellow, and poor targets red. Backed by thousands of pages of peer reviewed economic research, such a simple colour scheme will hopefully help the world's busy decision makers focus on picking the most effective targets.

But with the negotiations already begun, we asked our economists to prepare a preliminary assessment on about 200 of the proposed targets.

They found that reducing malaria and tuberculosis, for example, is a phenomenal target. Its costs are small because solutions are simple, cheap and well-documented. Its benefits are large, not only because it

avoids death and prolonged, agonising sickness, but also improves societal productivity and initiates a virtuous circle.

Similarly, we should focus on at least halving malnutrition, because there is robust evidence that proper nutrition for young children leads to a lifetime of large benefits — better brain development, improved academic performance, and ultimately higher productivity as adults. For every dollar spent, future generations will receive almost \$60 in benefits.

But at what point do goals simply become aspirations? While many ambitious goals are commendable, they may be unrealistic in practice — and could hinder instead of advance progress. For example, setting an absolute goal of ending global malnutrition, warn the economists, may sound alluring, but is implausibly optimistic and inefficient. We cannot achieve it, and even if we could, the resources to help the last hungry person would be better spent elsewhere.

Change of focus

At the other end of the scale, some proposed targets are ineffective. The doubling of the renewable energy share by 2030, for example, sounds great in theory but practically is an expensive way to cut just a little carbon dioxide. Instead, the focus should be on providing more energy to poor people, a proven way of inclusive growth and poverty alleviation. And in order to reduce carbon emissions, removing fossil fuel subsidies in Third World countries promises much higher benefits. Reducing these subsidies in countries where fuel is sometimes sold for a few cents per litre would stop wasting resources, send the right price signals, and reduce the strain on government budgets, while also cutting emissions.

Labelling development targets as great, good, fair and poor is not rocket science, but surprisingly, it has never been done systematically before.

Over the coming months, I look forward to sharing the economists' thinking over 19 important areas and help kick-start the conversation on our goals for 2030. Of course, the ultimate decision for the 2030 targets is a political one. No doubt, economics is not the only measure of what global society should ultimately choose as its development priorities, but costs and benefits do play an important role. If well-documented economic arguments can help swap a few poor targets for a few phenomenal ones, leveraging trillions of dollars in development aid in the right direction, could make this the best thing any of us get to do this decade.

Dr Bjorn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre

“While many ambitious goals are commendable, they may be unrealistic in practice — and could hinder instead of advance progress.”

SUSTAINABLE DEVELOPMENT GOALS

Use less smoky stoves to combat air pollution

Around 1880, when the air was worst in London, it is estimated that 9,000 people died each year from air pollution, about one of every seven deaths. Today, London air is cleaner than it has been since medieval times.

Yet, air pollution is still a huge problem, especially in the developing world. It kills seven million people each year, or one of every eight deaths globally. In Rwanda, for instance, it now kills 7,000 people each year or one of 12 deaths. However, the total number is still down from 10,500 deaths in 1990.

This is not, however, mostly the air pollution that we generally think about. The most deadly air pollution comes from inside people's houses, because 2.8 billion people still use firewood, dung and coal for cooking and keeping warm, breathing polluted air inside their homes every day.

To people who don't live under these conditions, it is hard to imagine how dirty the indoor air is. WHO points out that the outdoor air for instance in Beijing, Delhi and Karachi is several times more polluted than the outdoor air in Berlin, London and Paris. But the typical indoor air in a developing country dwelling with an open fire is many times more polluted than Beijing, Delhi or Karachi. That is why indoor air pollution kills 4.3 million people each year, making it one of the world's leading causes of death.

Yet, indoor air pollution is rarely among the big issues the world discusses. In 2000, the world made a number of smart, short promises for 2015 called the Millennium Development Goals, focusing on poverty, hunger, education and child mortality. These were mostly good promises, but indoor air pollution was missing.

Now, the world's 193 governments are discussing which targets to set for 2030, and there is a bewildering array of targets



Biogas used for cooking in rural Kenya. Smokeless fuels like biogas will reduce the burden of air pollution. Picture: File

COMMENTARY DR BJØRN LOMBORG

The most deadly air pollution comes from inside people's houses, 2.8 billion people still use firewood, dung and coal for cooking and keeping warm

Economist Bjorn Larsen has done a comprehensive study on air pollution and found both good — and less good — solutions.

The simplest solution is to replace inefficient, smoky stoves by more efficient, less smoky ones. Providing 1.4 billion people with such improved stoves would save almost 450,000 lives each year and avoid almost two and a half billion days of illness annually.

Moreover, because the stoves are more efficient, they would on average save about 30 per cent fuel, which translates into a savings of up to \$57 per household per year, and at the same time make cooking more efficient providing valuable time savings. In total, the health and non-health benefits are estimated at about \$52 billion per year.

In many parts of the world, an effective, improved stove costing

just \$30 is all that is needed to reduce indoor air pollution dramatically. The price is higher in some parts because of particular needs, in China, heating is needed as well as cooking, so the cost of an effective, improved stove rises to somewhat over a hundred dollars. Nevertheless, providing improved stoves for 50% of those cooking on unhealthy, smoky, traditional ones would cost about \$5 billion per year.

So for every dollar spent, better stoves would do \$10 worth of good. This gives us an excellent opportunity to compare this target for air pollution with all the other worthy targets proposed for the next 15 years.

However, helping 1.4 billion people with better stoves doesn't solve the problem. Another 1.4 billion are still cooking with unimproved stoves, and even improved stoves still cause more pollution than found

proposed, 169! While indoor and outdoor air pollution are now part of the targets, so is everything else: with so many promises we have no priorities.

That is why my think tank, the Copenhagen Consensus, has asked 60 teams of the world's leading economists to estimate which targets will do a lot of good for every dollar spent, and which will not.

International Development

Oil prices drop, time to tax carbon-based fuels

By LAWRENCE SUMMERS
The Washington Post

THE CASE FOR carbon taxes has long been compelling. With the recent steep fall in oil prices and associated declines in other energy prices, it has become overwhelming.

There is room for debate about the size of the tax and about how the proceeds should be deployed. But there should be no doubt that, given the current zero tax rate on carbon, increased taxation would be desirable.

The core of the case for taxation is the recognition that those who use carbon-based fuels or products

do not bear all the costs of their actions. Carbon emissions exacerbate global climate change. In many cases, they contribute to local pollution problems that harm human health. Getting fossil fuels out of the ground involves both accident risks and environmental challenges. And even with the substantial recent increases in US oil production, the US remains a net importer. Any increase in its consumption raises dependence on Middle East producers.

When we all drive our cars, heat our homes or use fossil fuels in more indirect ways, create these costs without paying for them. It follows that we overuse these fuels.

Advocating a carbon tax is not some kind of argument for government planning; it is the logic of the market: That which is not paid for is overused. Even if the government had no need or use for revenue, it could make the economy function better by levying carbon taxes and rebating the money to taxpayers.

While the recent decline in energy prices is a good thing in that it has, on balance, raised the incomes of Americans, it has also exacerbated the problem of energy overuse. The benefit of imposing carbon taxes is therefore enhanced.

On the other side of the ledger, there has always been the concern that a carbon tax would place an

unfair burden on some middle- and low-income consumers.

Those who drive long distances to work, say, or who have homes that are expensive to heat would be disproportionately burdened. Now that these consumers have received a windfall from the fall in energy prices, it would be possible to impose substantial carbon taxes without them being burdened relative to where things stood six months ago. The price of gasoline has fallen by more than a dollar.

A \$25-a-tonne tax on carbon that would raise far more than \$1 trillion over the next decade would lift gasoline prices by only about 25 cents.



Cost of crude oil has dropped. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

For each \$1 spent to save reefs, \$24 of environmental benefits are made

COMMENTARY

DR BJØRN LOMBERG

"We rely on the natural world for many different benefits or what experts call 'ecosystem services.' Forests don't just provide timber and firewood, but also flood protection."

Biodiversity — the range of species we share our planet with — is important, but can we put a value on it? And can we estimate the benefits and costs of conservation? In three new scientific papers for the Copenhagen Consensus, Prof Anil Markandya and two other economists — Luke Brander and Alistair McVittie — find that not only can we estimate the costs and benefits for some projects but also that conservation can be a great investment.

A target to prevent the loss of coral reefs will, for each dollar spent, deliver at least \$24 of environmental benefits. Likewise, the researchers find that reducing future loss of forests by half would likely do about \$10 of good for each dollar spent. This is of particular relevance for Tanzania, for instance, where about 37 per cent of the country is covered by forests. The economists also find that increasing protected areas is likely to be a poor target, an important point as 32 per cent of the area of Tanzania is already protected.

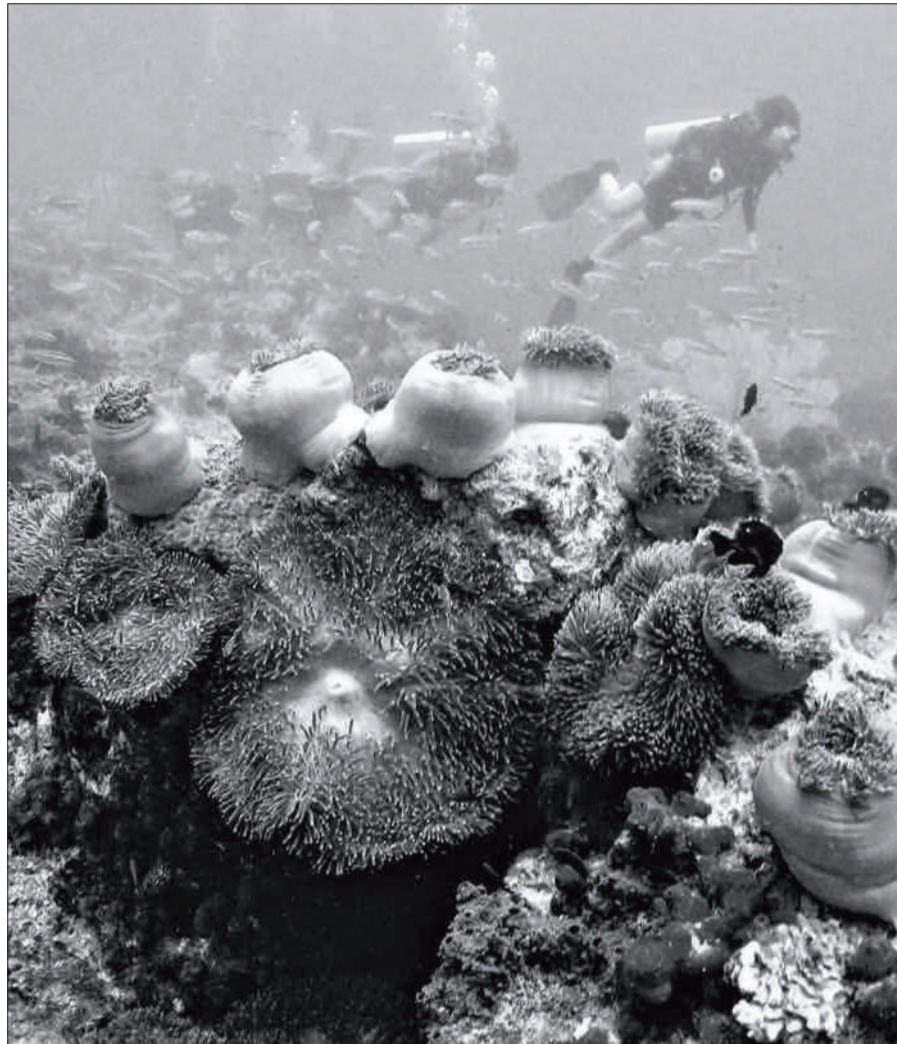
This matters because the global community, spearheaded by the UN, is currently working to formulate a set of key targets, which will guide how resources are used from next year until 2030. These follow on from the Millennium Development Goals, an ambitious set of targets that has directed the spending of hundreds of billions of develop-

ment dollars since 2000.

The problem is that right now, most interest groups understandably battle to include their favourite targets, but having more than a thousand potential targets leaves the world with no priorities. That is why the Copenhagen Consensus is helping by asking top economists to analyse what works and what we can afford.

Of course, some of the obvious issues relate to adequate food, clean water and better schooling and healthcare. But humans don't live separately from the natural world. Rather, we rely on it for many different benefits or what experts call "ecosystem services." For example, forests don't just provide timber and firewood, but also provide flood protection, because they can soak up intense rainfalls — a big part of the reason Pakistan had such hugely damaging floods in 2010 was because large parts of its mountain forests had been cut down. Here forests could have protected many of the poor whose homes were flooded and whose children perished.

Forests also provide aesthetic experiences for local residents while drawing in tourism, generating more benefits. At the same time, growing forests take up carbon dioxide from the air and lock it away for decades or even centuries while producing oxygen. Forests also provide refuge for enormous numbers of bird, animal and plant species,



Coral reefs possess an amazing beauty that shows up not only in large tourism revenues but also in most individuals saying they are willing to pay a certain amount to make sure they continue to exist for their grandchildren.

Picture: File

especially tropical rainforests.

All of these benefits can be valued. Timber has a commercial price, so that is straightforward. Locking away carbon can be priced based on likely costs of avoided climate damage, and likewise flood protection value shows up as lower costs of future floods. There is also a value for recreation and tourism, but not all of this is paid for by the users. Moreover, preserving species clearly has a benefit, but typically not one we pay for. This is where putting a price on

a natural resources become more difficult, and economists have to fall back on surveys that ask people how much they are willing to pay to keep forests in place.

That makes it more difficult to put a firm value on a hectare of forest, but the academics all agree that spending a dollar is likely to do more than a dollar 'sworth of good. The most likely outcome of a series of cost-benefit analyses shows that setting the goal "reduce global forest loss by 50 per cent" is likely to

do about \$5-\$15 worth of social good for every \$1 spent.

The same kind of analysis suggests that preserving wetlands could be a good idea. The economists show that reducing global wetland loss by 50 per cent will most probably do more good than its cost, falling in the same range of about \$10 back on each dollar.

More spectacular is the analysis for coral reefs, which both act as fishery hatcheries and fishing resources while storing abundant numbers of species. At the same time, coral reefs possess an amazing beauty that shows up not only in large tourism revenues but also in most individuals saying they are willing to pay a certain amount to make sure they continue to exist for their grandchildren. The analyses illustrate that reducing global coral loss by 50 per cent may cost about \$3 billion per year but the total benefits are likely to run to at least \$72 billion, or about \$24 back for every \$1 invested.

However, economics also reveals poor targets: Substantially increasing protected areas is likely to cost so much — close to a trillion dollars — that it will generate less environmental benefit than the cost.

Of course, as we look forward to the next 15 years, we have to focus most of our attention on the obvious wrongs that afflict billions of people who are poor, lack food, water, health and education. But these analyses suggest that carefully crafted environmental targets should also be a part of this solution.

Our job is to make sure that economic arguments are heard so we pick the smart targets but drop the poor ones, to make sure the next 15 years help the world and its inhabitants as much as possible.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

UN: Emissions pledges by US, others 'not enough'

By **JOBY WARRICK**
The Washington Post

PLEDGES BY the US and other countries to sharply reduce greenhouse-gas emissions still aren't enough to prevent global temperatures from rising beyond levels that scientists believe could be dangerous to the planet's health, a UN-commissioned study says.

The report by the United Nations Environmental Programme (UNEP) cited a sizeable "emissions gap" between the promises made by world leaders to lower pollution and the maximum amount of carbon the atmosphere can safely absorb.

"Without additional climate policies, global emissions will increase hugely up to at least 2050," said the study, which also argues that nations could eliminate the gap by ramping up investments in renewable energy and making smarter policy decisions on economic development.

"On the one hand, we're way off track. But on the other hand, there is increasing evidence that much of this can be done more cheaply than has previous been estimated," said Andrew Steer, president of the World Resources Institute, a Washington think tank that provided technical support for the study.

Citing warnings from climate scientists, world leaders agreed four years ago to a goal of limiting the rise in global temperatures from greenhouse gases to no more than 2 degrees Celsius. But carbon emissions have continued to soar, making that goal harder to achieve.

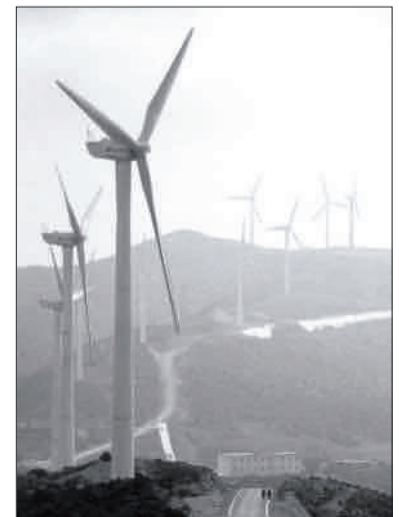
To stay below a 2-degree temperature rise, nations will have to achieve "global carbon neutrality" — meaning no net increase in the amount of carbon in the atmosphere — sometime in the second half of the century, the report said. For that to happen, countries will have to rapidly shift to cleaner forms of energy while also creat-

ing new carbon "sinks," such as expanded forest cover, to draw carbon dioxide out of the atmosphere.

Under current projections, the study said, the growth of global carbon emissions will have to peak within the next decade and fall by half by 2050 to meet the 2-degree goal.

"Taking more action now reduces the need for more extreme action later to stay within safe emission limits," said Achim Steiner, UNEP executive director.

The report comes after China and the US announced historic pledges to scale back carbon emissions in the next two decades.



Countries have to rapidly shift to cleaner forms of energy. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

To combat climate change, consider better technology

COMMENTARY
DR BJØRN LOMBORG

"In order to make progress, we can't afford to pour money into projects that pay back less than what we put in. Likewise, we can't afford not to focus on projects that will do immense amounts of good."

Climate change has certainly received immense exposure among the most eminent issues of the 21st century so far. United Nations Secretary-General Ban Ki-moon argues that it is "an existential challenge for the whole human race." On the other hand, when five million people were asked by the UN what they saw as most important, climate change came at the bottom of the list of 17 issues: Way below healthcare, education, corruption, nutrition and water — and even below phone and Internet access.

This is startling, particularly given the consensus that climate change is real and happening. Are people right to be sceptical about current policies?

The Copenhagen Consensus has asked teams of expert economists to analyse all the options facing humanity — from health and education to violence, water and global warming — to estimate where we can do the most good for our money. This matters, because the UN is about to set its next set of targets for the world from 2015-2030. Like the Millennium Development Goals, set 15 years ago, these targets will determine where trillions of dollars will be spent. In order to

make progress, we can't afford to pour money into projects which pay back less than what we put in. Likewise, we can't afford not to focus on projects that will do immense amounts of good.

The author of the main paper, economist Isabel Galiana, comes to a conclusion that is sure to be controversial: Present policies designed to reduce emissions of greenhouse gases are failing and cannot be effective until better technology is available. Despite the Kyoto Protocol and many national initiatives, emissions have increased by almost half since 1990 and will continue to increase for many decades to come.

In stark contrast, the UN and many governments aim to keep the average temperature rise below 2°C above pre-industrial times. However, the problem is that there is no realistic chance of keeping to this limit with current trends in fossil fuel use. To do this, emissions would have to peak and then be drastically cut with some technology capturing carbon dioxide, liquefying it and injecting it deep underground. But this technology on the vast scale needed doesn't exist yet. Moreover, solar and wind, though very popular, will even

in 2035 contribute just a tiny fraction of global energy needs.

The upshot is that pursuing this 2°C target is costly and not guaranteed to be successful. Estimating all the economic, social and environmental costs and benefits is difficult, but one thing is clear: The programme would cost much more than the benefits it would bring. In the meantime, that money could have been used to improve people's welfare in much more cost-effective programmes.

Galiana suggests that investing 0.5 per cent of global GDP, which would be around \$220 million for Kenya, into development of better energy technology would be a much better use of money. This could be funded with a slowly rising carbon tax (giving businesses an incentive to cut emissions but not telling them how to do it) and could give a payback of \$11 for every dollar spent.

Galiana also suggests the world should spend 0.05 per cent of GDP for adaptation, essentially helping many nations to cope better with specific climate impacts. Every \$1 spent will likely do more than \$2 of social good.

The cost of action on climate change rises rapidly as the targets get tougher, points out Robert Mendelsohn, another economist who has contributed his perspective. Keeping average temperature rises below 5°C could cost about \$10 trillion, but aiming for a 2°C target would cost ten times as much.

Much better, then, to target a maximum of, say, 3°C rise, which will cost about \$40 trillion but avoid most damages. If we insist on 2°C, we will pay an extra \$60,000 billion, but only prevent a stream of \$100 billion damages that begins in 70-80 years. Moreover, all of these estimates assume cost-effective climate policies, whereas in real life they have often become many times more expensive.

Climate change is a big issue and cannot be ignored. But we need to take the emotion away and look at the facts; otherwise it will be the world's poorest that will suffer. Money that is not spent on costly, ineffective carbon dioxide cuts can be used to fund programmes that are guaranteed to improve their lives.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

Solar and wind, though very popular, will even in 2035 contribute just a tiny fraction of global energy needs.

Picture: File



New policy aims at lower energy costs

By **KENNEDY SENELWA**
Special Correspondent

KENYA HAS drafted a national energy and petroleum policy that seeks to ensure competitively priced energy while protecting the environment.

According to the draft, the national government will explore and adopt financing options from local and international sources for cost-effective utilisation of all energy resources.

"Tax and other concessions are planned to encourage investment in oil and gas exploration, exploitation of geothermal energy, hydroelectric power and other forms of renewable energy such as wind, solar and biomass," says the draft.

This is important especially since petroleum products and electricity, as sources of energy, are the main drivers of the economy in Kenya.

Kenya relies on imported petroleum products but the discovery of oil is expected to bring about major changes. Electricity generation is predominantly hydro, supplemented by geothermal and thermal sources.

According to the draft policy, a National Upstream Petroleum Advisory Committee will be responsible for exploration and development of oil with gas while the National Coal Advisory Committee will be in charge of coal. The Rural Electrification Authority will be transformed into the Rural Electrification and Renewable Energy Authority, the lead development agency for renewable energy resources other than geothermal and large hydro.

Kenya will support pub-



The draft policy has a roadmap to raise Kenya's power generation capacity by at least 5,000MW by 2016."

lic-private partnerships in development, operation and maintenance of energy infrastructure as well as set up a consolidated energy fund to cater for the proposed National Energy and Petroleum Institute.

The fund will support acquisition of strategic petroleum reserves, energy sector environmental disaster mitigation, water towers conservation, energy efficiency and conservation programmes, and renewable energy initiatives.

The fund will also support the National Energy and Petroleum Institute to undertake training, research and development, nurture talent, innovation and enhance capacity building in the sector.

The draft policy has a roadmap to raise Kenya's power generation capacity by at least 5,000 Megawatts from 1,664MW by 2016. The generation cost is projected to reduce from US cents 11.30 to US cents 7.4. The indicative end-user tariffs are projected to reduce from US cents 14.14 to US cents 9 for commercial as well as industrial customers and from US cents 19.78 to US cents 10.45 for domestic customers.

The government will support the Kenya Electricity Transmission Company (Ketraco) to build about 5,000 kilometres of transmission lines in the short term. To enhance security, reliability and affordability of electricity supply, 16,000 kilometres of new transmission lines will be built by 2031. The draft said a robust distribution network is to be developed with gradual elimination of overhead distribution systems to ensure efficient and safe provision of distribution services by licensed network service providers.

Once adopted, it will replace Sessional Paper No. 4 of 2004, which has policies guiding energy sector development governed by Geothermal Resources Act of 1982, the Energy Act of 2006 and Petroleum (Exploration and Production) Act of 1986.



Electricity generation is predominantly hydro, supplemented by geothermal and thermal sources. Pic: File

SUSTAINABLE DEVELOPMENT GOALS

The hidden, far reaching costs of violence against women and children

Violence holds a huge cost for our world. Globally the cost runs to more than 11 per cent of the world's GDP. But this is not mostly about the highly visible violence that dominates TV and news.

Civil wars and conflicts rumble on far too long in far too many places like Syria and the Sudans, and they are devastating for those involved. Economists have measured the costs of all such conflict, from the death toll from civil wars, regular wars, terrorism along with the costs of refugees but also including the way conflicts can blight countries' economic growth for decades. Yet, their total impact, though important in specific hotspots, is globally fairly small, with a total cost of about 0.2 per cent of global GDP.

But surprisingly, other forms of violence are probably a much greater problem and they certainly deserve more of the world's attention. This is the argument by James Fearon and Anke Hoefler in a new research paper for the Copenhagen Consensus.

Take the stark fact that, for each civil war battlefield death, roughly nine people are murdered. If you measure the total cost, not just of homicides but assaults and the fear associated with these, the global cost runs to more than 1.4 per cent of GDP. For sub-Saharan Africa, because of higher crime rates, the cost is nearly 4 per cent of the region's GDP. This does not mean that the region loses some \$86 billion each year from this violence, but rather that if we could avoid these murders and assaults, the region would be better off in a way that would be comparable with everyone being 4 per cent richer.

But even murders are not the



most important part of violence. The most devastating impact of violence comes from two areas that are often neglected, and the economic analysis shows us why we need to give them much more attention.

The first area is child abuse: Across the world, many children still have a very violent upbringing. Almost all parents use non-violent discipline like explaining why certain behaviour is wrong and perhaps taking away privileges. But each month, more than 15 per cent of all children experience what the UN calls severe physical punishment. They are being slapped on the face, head and ears and 4 per cent are even being beat up with an implement, being hit over and over as hard as possible. This is the fate of 290 million children across the world each month, with 125 million cases occurring in sub-Saharan Africa.

The economists estimate the cost of such child assault, not

Scouts march in Nairobi to promote peace and harmony. To reduce violence against women and girls, a programme in Uganda called SASA! (Swahili for "Now!") that promotes the view that violence against a partner is unacceptable, has halved the level of violence.

Picture: Gerald Anderson

COMMENTARY
DR BJØRN LOMBORG

"If we could avoid these murders and assaults, the region would be better off in a way that would be comparable with everyone being 4 per cent richer.

just from the obvious costs of increased child welfare interventions, but also from the well-documented loss of future earnings from an assaulted child. The total global cost reaches an astounding \$3.5 trillion annually. For Kenya, the cost is estimated at \$15 billion.

Violence against women is the biggest global cost, and it includes female infanticide, genital mutilation and incitement for widows to commit suicide. But far bigger is the cost of intimate partner violence, including being slapped, pushed, shoved, kicked, choked, burnt

on purpose and forced to have sex. Over the past year, this violence afflicted more than 28 per cent of women in sub-Saharan Africa.

The total cost of such violence against women runs to \$4.4 trillion per year, or about \$10 billion just for Kenya. Together with violence against children, the social cost of violence reaches almost \$25 billion in Kenya annually.

The world and the UN are trying to answer the question: What kind of world do you want in 2030? The focus is to find the best targets for the

world to concentrate on.

That is why my think-tank, Copenhagen Consensus, has asked some of the world's top economists to look at the economic, social and environmental costs and benefits of many different proposed targets, from areas like health, food and education to the thorny question of violence.

The economists find that a target to reduce civil wars could be achieved with more active deployment of peacekeeping forces. While costly, these could help prevent future civil wars, and the analysis shows that each \$1 spent could do between \$2 and \$7 worth of good. They also find changing alcohol laws could partially reduce assaults: In the UK such change has lowered assaults so much that the benefits outweighed costs 17-to-1.

To reduce violence against women and girls, a programme in Uganda called SASA! (Swahili for "Now!") promotes the view that violence against a partner is unacceptable, and has halved the level of violence. While such a programme seems like a great idea, we still don't have the analysis to show how much good it does for each dollar.

Reducing violence against children could be helped by strengthening social services. Studies from Washington state show that home visitation programmes can reduce child abuse hence reduce both further spending on child welfare and litigation, while helping the children avoid medical, mental health and quality of life costs. For each dollar spent the benefits could reach \$13-\$14.

We now need to start a conversation about which targets for the world we want to set. Knowing the costs and benefits of ways to reduce violence is one part of that puzzle.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

'World still failing on equality between boys and girls'

By **CHRISTABEL LIGAMI**
Special Correspondent

ONE IN four adolescent girls globally experience physical violence, says a United Nations Children's Fund (Unicef) report.

The data reveal damaging perceptions on the acceptability of violence, particularly among girls. Globally, nearly half of girls aged 15 to 19 believe a man is justified in beating his wife or partner under certain circumstances such as refusing to have sex, leaving the house without permission, arguing, neglecting the children or burning dinner.

"These numbers speak to a mindset that tolerates, perpetuates, and even justifies violence — and should sound an alarm to everyone, everywhere," said Unicef deputy executive director Geeta Rao Gupta.

Despite new legislation and proactive policies such as quotas, the report shows that the world is failing to deliver on equality between girls and boys.

The Unicef report was launched to coincide with the International Day of the Girl Child on October 11.

It sought to identify actions that could address unequal power relations. It also investigated whether power always protects the status

quo or whether it can be a force for positive change.

While the report acknowledged substantial progress, it warned that "warm words" on equality sometimes mask the reality that girls and women face barriers to the exercise of real power at home, at work and in politics.

"We shouldn't let the notion that we are now on some irreversible path to equality creep in. Scratch the surface, and across the world you'll find that girls' and women's pathways to power remain blocked," said the report.

The report said a "curriculum of chores" still held girls back at

home, while women and girls remain disproportionately affected by domestic violence. It pointed out that women make up just 22 per cent of parliamentarians, while just 19 states have female leaders.

Unicef points to specific actions to prevent violence against girls. They include: Keeping girls in school; providing them with critical life skills; supporting parents, including with cash transfers to mitigate risks to girls; changing attitudes and norms through community conversations; and strengthening judicial, criminal and social systems and services.



Girls and women face barriers to the exercise of real power at home, at work and in politics. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

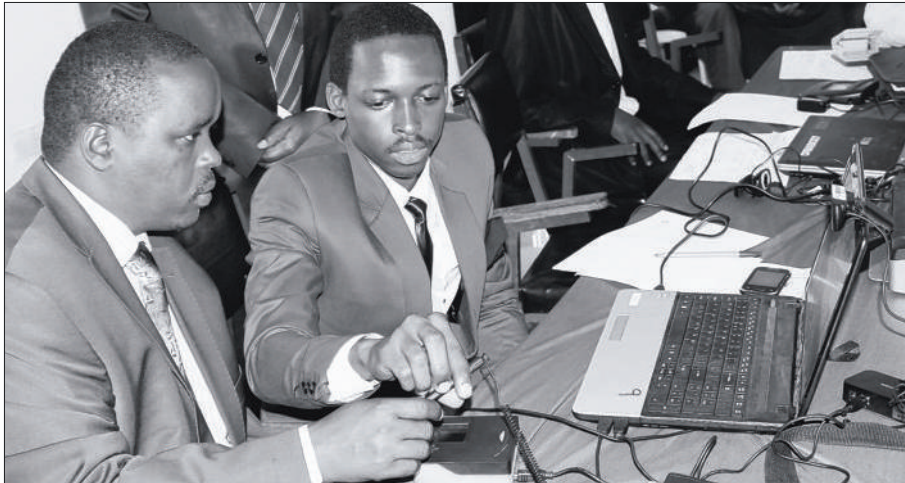
Better data is needed for better results
but it will cost a huge chunk of aid

While the world has generally seen success with the Millennium Development Goals (MDGs) — halve the proportion of hunger and poverty, get all children into school and drastically reduce child mortality — drawn up nearly 15 years ago, not all promises will be achieved.

What is somewhat surprising, however, is that we have fairly little information about what exactly we achieved. According to World Bank data, in 1990 there were 850 maternal deaths out of 100,000 live births in sub-Saharan Africa and this number went down to 500 in 2010. However, the World Health Organisation has warned that measuring the maternal mortality ratio remains a challenge as less than 40 per cent of countries have a complete civil registration system that appropriately attributes the cause of death.

Actually, most of the available numbers are rather projections and estimates, not data. In total, there are more gaps than real observations and the observations themselves are often dubious. This matters, because the world is now discussing a new set of targets for the next decade and a half. To do the most good, the Copenhagen Consensus, has asked 63 teams of the world's top economists to look at the economic, social and environmental costs and benefits of all the top targets. Of course most of the attention is on the high-profile issues like health, education, food, water and environment.

But to be able to measure how well we handle all these issues has real costs. How much this will cost and how much the international community can justify spending in this way is the important topic covered by Prof



Government officials during Kenya's recent biometric registration of civil servants. Countries where data collection has not yet started will spend even more on the exercise. Picture: File

COMMENTARY
DR BJØRN LOMBORG

"Most of the available numbers are projections and estimates, not data. In total, there are more gaps than real observations and the observations themselves are often dubious."

Morten Jerven in his new paper for the Copenhagen Consensus.

Take the original MDGs. There were just 18 simple targets. Data collection for these targets had many gaps, and much of the information collected was of dubious quality. However, Prof Jerven collates the information we have about survey costs across the world and estimates that the proper monitoring of all 18 targets and 48 indicators would have cost the world \$27 billion.

That is a significant number, but given that the world will spend about \$1.9 trillion over the same period, 1.4 per cent is perhaps not unreasonable to spend on getting information.

The problem is, that the next set of targets is growing ever larger. A high-level panel with UK Prime Minister David Cameron, President Susilo Bambang Yudhoyono from Indonesia and Liberian President Ellen Johnson Sirleaf along with leaders

from civil society and the private sector suggested 59 targets and advocated building "better data-collection systems, especially in developing countries." And some months ago, 70 UN ambassadors in the Open Working Group proposed a bewildering 169 targets. One of these argued that by 2020 the world should "increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts."

Doing even a minimum data collection for all these 169 targets will cost at least \$254 billion, or almost twice the entire global annual development budget, Prof Jerven estimates.

And this is a very low esti-

mate, since it does not take account of basic administrative data gathering by national governments, or costs for all the household surveys, which are recommended. And countries where data has not yet been collected, will likely prove even costlier. Remember, six of 49 countries in sub-Saharan Africa have never had a household survey and only 28 have had one in the past seven years.

Moreover, there is a serious question of capacity. World-wide, only about 60 countries have the basic registration systems needed to monitor trends in social indicators. Many poor countries do not have the capacity to collect useful data on a national basis. In the \$254 billion estimate there is no allowance for maintaining the statistical office, training and retaining personnel, analysing along with disseminating the data. There is ample evidence that the MDG agenda has already stretched statistical capacity and strained statistical offices in poor countries and that 169 new targets will only make it much worse.

Most participants discussing the Sustainable Development Goals recognise that we need much, much fewer targets. Taking into account the formidable costs of data collection for each target, it is reasonable to reconsider the best number of targets. For comparison: both the Norwegian and British governments have official statistical services, which cost about 0.2 per cent of their GDP. Using this figure as a measure of willingness to pay would suggest that we should aim more at four SDG targets, which could be properly monitored, rather than a massive 169.

*Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of *The Skeptical Environmentalist* and *Cool It*. His new book is *How To Spend \$75 Billion to Make the World a Better Place*.*

“ Given that the world will spend about \$1.9 trillion over the same period, 1.4 per cent is perhaps not unreasonable to spend on getting information.

Elderly and want to retire in EA? Go to Rwanda, Uganda and Tanzania

By CHRISTABEL LIGAMI
Special Correspondent

RWANDA, UGANDA and Tanzania are the best countries in East Africa for the elderly to retire in, according to a new Global AgeWatch Index.

The three East African countries are among the 11 African countries ranked out of 96 globally.

Mauritius is ranked top at position 38 globally followed by South Africa at 80, Ghana 81, Morocco 83, Nigeria 85, Rwanda 86, Zambia 88, Uganda 89, Tanzania 92, Malawi 93 and Mozambique 95.

HelpAge International's Global Index ranks countries according

to the social and economic wellbeing of its citizens over the age of 60 years in four key areas: Income, security, health, personal capacity and enabling environment.

Norway is the top at the first position globally followed by Sweden that is closely followed by Switzerland, Canada and Germany.

Over the past decade, Tanzania has taken steps towards the introduction of a universal pension, but the scheme — which could lift 1.5 million people out of poverty — has yet to be implemented.

The report says that although Africa's population is predominantly young, the number and proportion of older people are growing rapidly.

"The low rankings of African countries in the Index may reflect the low priority given to ageing issues on domestic policy agendas," it says.

Five countries — Bangladesh, Iraq, Mozambique, Uganda and Zambia — have been added to the Index this year, bringing the total to 96, representing 790 million people

38

The position globally of the top country in Africa, in the ranking, Mauritius

aged 60 and over — 91 per cent of the global older population.

The inclusion of new countries, together with new and improved data, has led to new rankings.

The Index shows that average life expectancy at age 60 is at least 16 more years. On average, a woman aged 60 today can expect to live until she is 82, whereas in 1990, she could expect to live until she was 80.

In countries like Rwanda, life expectancy at 60 has risen on a par with high-income countries. People aged 60 can expect to live three years longer in Rwanda even though it ranks in the lower half of the Index, showing that gains

in longevity are not being accompanied by policies to improve the quality of life and wellbeing of their older citizens.

The 2014 Index reveals some encouraging developments, but also highlights areas where more action is needed. For instance, while in many countries people are living longer, there is considerable variation in life expectancy at age 60 and healthy life expectancy at 60.

Social policies to support healthy ageing are lagging in many countries, and a dearth of robust sex- and age-disaggregated data continues to hinder a full assessment and comparison of older women and men's wellbeing.

SUSTAINABLE DEVELOPMENT GOALS

Let universal education have rest; put more money in expanding pre-schooling

As the United Nations is currently debating how to allocate about \$2.5 trillion in development aid for the 2015-2030 period, education will most likely gain prominence. But do we fund early education or secondary school? Economist George Psacharopoulos says the priority should be increasing the number of preschool children in sub-Saharan Africa.

With the Millennium Development Goals (MDGs) expiring next year, the world is busy prioritising various highly important issues and setting goals for the next 15 years. Education has been among the objectives in the forefront, and will remain so, partially because the noble goal of achieving universal education has proved impossible to achieve so far. In 1961 Unesco set the goal of achieving 100 per cent primary enrolment by 1980 (from a then baseline of 40 per cent), and since then a set of goals has been missed and simply reformulated with a later target date.

The post-2015 proposals follow the trend by pushing targets out to 2030, while 60 million children remain out of school. Sub-Saharan Africa is where the greatest problems lie and where the most can be achieved.

While Africa made very good progress on education — the total net primary school enrolment for Africa rose from 64 per cent in 2000 to 84 per cent in 2009, according to the United Nations — it has not achieved universal primary education. In Kenya, 74.2 per cent of children attended primary school in 2003 according to the Unesco, and 81.8 per cent by 2009.

Uganda is also unlikely to achieve universal primary education by 2015, even though it was one of the first African nations to introduce a policy of providing free schooling to pri-



Pupils in group work. Children are highly receptive to knowledge when young because there is generally no cultural barrier to education of girls and young children can contribute relatively little in terms of labour. Picture: File

COMMENTARY DR BJØRN LOMBORG

"It seems that pre-schooling gives children a boost in social skills or emotional development, which is not easy to quantify."

mary children. According to a 2014 Unicef study, the country has a 92 per cent net primary school enrollment rate, but a poor retention rate — only one-third of Ugandan children who enter primary school complete it. The main reason is poverty — while tuition is free, education is not "costless" (e.g. books, uniforms, opportunity cost) and families cannot afford to continue primary education.

Instead of once again pushing back the deadline of universal education, it is time for the international community to prioritise targets and focus limited resources on the most effective, says economist George Psacharopoulos, formerly of London School of Economics and the World Bank, the first in a series of papers commissioned by the Copenhagen Consensus Center looking at the post-2015 development agenda.

Abandoning the concept of universal education, money should be spent on expanding pre-schooling, in Sub-Saharan Africa, Psacharopoulos says, as it is at this age, and in this region where the greatest benefit can be achieved for every dollar spent. Pre-schooling provides children a head start in life, improves their life-long earning power and has wider societal benefits.

Using cost-benefit analysis, Psacharopoulos states that funding schooling and pre-schooling for all, will require spending more than the entire global education budget. This is clearly not sustainable. The reasons for focusing resources first on pre-school and primary education include that children are highly receptive to knowledge when young, there is generally no cultural barrier to education of girls at this stage, and young children can contribute relatively little in terms of labour. It is also cheaper to deliver early years' education.

The longer term effects of funding early education are more profound and less obvious than the short-term ones. While the initial learning boost from attending pre-school does not provide an advantage for long compared to that in primary school, it does give an unexpected payback later in life, with adults earning more.

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“The longer term effects of funding early education are more profound and less obvious than the short-term ones.”

It seems that pre-schooling gives children a boost in social skills or emotional development, which is not easy to quantify.

However, to make choices between different education targets and goals from other areas — health and nutrition, for example — estimates have to be made. While it is straightforward enough to work out the costs of education — mainly the obvious costs of providing teachers and school buildings, plus the opportunity cost of child labour — the benefits are less clear-cut.

Based on the most extensive data collected, Psacharopoulos shows that the best target is likely to be: "Increase the pre-school enrollment ratio in sub-Saharan Africa from the present 18 per cent to 59 per cent," which has a benefit-cost ratio of 33.5. This means that for every dollar spent on pre-school, SSA will get \$33.5 back in improved future earnings for the individual, and other social benefits.

Achieving 100 per cent primary education in sub-Saharan Africa alone shows a benefit of 7, which is much lower than the 50 per cent target for pre-school in the same region. Concentrating on the most cost-effective goal would be a better use of scarce resources.

Undoubtedly, quality of education is also important, but hard to achieve. Extra expenditure on factors like reduced class sizes alone make surprisingly little impact, but investment in institutional changes such as exams and teacher accountability could have a higher impact.

If the world's poorest are to be helped the most, tough choices have to be made between competing goals. In an ideal world, universal, high quality secondary education would be an excellent goal, but first the urgent problem of basic level education in the world's most deprived regions has to be addressed. This way, we have the best hope of doing the most good with limited resources over the next 15 years.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre

Human-wildlife conflict reduces number of lions in Tanzania

By ADAM IHUCHA
Special Correspondent

THERE HAS BEEN a huge decline in the number of lions in wildlife-rich-Tanzania in the past decade, thanks to retaliatory killings.

A recent survey shows that Tarangire-Manyara ecosystem, the country's key lion's refuge, has been losing an average of 25 lions annually during the period under review.

Findings by the Tarangire Lion Project show a total of 226 lions have been killed between 2004-

2013 in retaliation by neighbouring communities for the killing of livestock. Dr Bernard Kissui, a leading lion researcher warned that the entire big cat population could disappear and hurt the \$1.9 billion tourism industry if affirmative action is not taken.

"Retaliatory killing of lions is silent, but a real threat to the lion population in the Tarangire-Manyara ecosystem where incidences of spearing and poisoning of lions by livestock keepers has been recorded," Dr Kissui says.

The worst mass killing was in

2009 when a pride preyed on villagers' cows, and over 26 lions were slaughtered by angry villagers, near Tarangire National Park in western Arusha, shaking Tanzania's reputation as one of the remaining lion strongholds in the world.

Official estimates show that there are between 15,000 and 16,000 li-

25

Number of lions Tarangire-Manyara ecosystem lost annually, according to a recent survey

ons in national parks and game reserves with a smaller population in unprotected areas.

This is the largest population in Africa and about 40 per cent of the total population of remaining lions in the world. Tanzania Association of Tour Operators council member, Peter Lindstrom, suggests the state should protect migration corridors and wildlife dispersal areas outside protected areas.

He said that the state should reform policies to devolve management and benefits from wildlife.

"We need to encourage commu-

nity based tourism and investment in areas outside game parks and protected areas by allowing communities to be amply rewarded for protecting lions and other wildlife through tangible and realistic financial rewards for doing so" Mr Lindstrom noted.

Records show that the entire Tarangire-Manyara ecosystem faces a massive decline in wildlife populations due to an increase in human population coupled with an ever increasing demand for land uses not compatible with conservation interests.

SUSTAINABLE DEVELOPMENT GOALS

Cleaner cooking, electricity, better lives: A case for reliable, affordable energy

Nutritious food, clean water and basic healthcare for all may be obvious high-priority targets for the international community, but we shouldn't ignore energy. Reliable and affordable energy is as vital for today's developing and emerging economies as it was before the Industrial Revolution. Driven mostly by its five-fold increase in coal use, China's economy has grown 18-fold over the past 30 years while lifting 680 million people out of poverty.

The energy ladder is a way of visualising stages of development. At the bottom are traditional biofuels — firewood, dung and crop waste. Almost three billion people use these for cooking and heating indoors, which is so polluting that the World Health Organisation (WHO) estimates they kill one of every 13 people that die on the planet.

The next rung on the ladder is "transition fuels" such as kerosene, charcoal and liquified petroleum gas, while the top of the ladder is electricity. Because electricity is often powered by fossil fuels, it contributes to global warming. Hence an alluring option could be to move to clean energy, like wind, solar and hydro. Some are suggesting that developing countries should skip the fossil step and move right to clean energy.

What should the world prioritise? Fifteen years ago, the world agreed the Millennium Development Goals (MDGs), ambitious targets to tackle poverty, hunger, health and education. These goals have given direction to international aid and mostly led to improvement.

Now, the UN is considering the next set of targets for 2015-2030. Some argue that we should continue with the few, sharp targets from the MDGs, since we are not done. Others point out that many other issues, like environment and social justice, also need attention. At Copenhagen Consensus, we have asked some of the world's top



An alluring option could be to move to clean energy like wind, solar and hydro. Some are suggesting that developing countries should skip the fossil step and move right to clean energy. Picture: File

COMMENTARY DR BJØRN LOMBORG

"Providing cleaner cooking facilities would improve health, increase productivity, allow women to spend time earning money and children to go to school."

economists to carry out analyses within all major challenge areas, estimating the economic, social and environmental costs and benefits of different targets.

So, should the almost-three billion people cooking with toxic open fires take higher priority than the broader, long term objective of cutting back on fossil fuel use? It turns out there are smart ways to help on both accounts, say Isabel Galiana and Amy Sopinka, the two economists who wrote the main paper on energy.

Burning firewood and dung on open indoor fires is inefficient and causes horrendous air pollution. More than four million

people each year die from respiratory illness because of smoke from indoor open fires. In Kenya alone, the WHO estimates 15,700 people die each year. In Uganda, another 13,200 die annually.

Most of these are women and children, who are also the ones spending their time fetching firewood, often from quite far away. Providing cleaner cooking facilities — efficient stoves that run on liquefied gas — would improve health, increase productivity, allow women to spend time earning money and children to go to school.

The economic benefits of getting everyone off dung and wood are as high as the human welfare

ones — more than \$500 billion each year. Costs would be much lower, about \$60 billion annually, including grants and subsidies to purchase stoves. Every dollar spent would buy almost \$9 of benefits, which is a very good way to help.

However, the economists also provide a more realistic (and more efficient) target. Since it is awfully hard to get to 100 per cent, they suggest providing modern cooking fuels to 30 per cent. This will still help 780 million people, but at the much lower cost of \$11 billion annually. For every dollar spent, we would do more than \$14 worth of good.

While clean cooking is important, electricity can bring different benefits. Lighting means that students can study after dark, clinics can refrigerate vaccines, and water can be pumped from wells so that women do not have to walk miles to fetch it. Nearly 84 per cent of Kenya, or about 33.4 million people, still miss access to electricity, according to 2011

data by the International Energy Agency. Only nine per cent of Ugandans had electricity in the same year.

The value of getting electricity to everyone is about \$380 billion annually. The cost is more difficult to work out. To provide electricity to everyone would need the equivalent of 250 more power stations, but many rural areas may best be served by solar panels and batteries. This is not an ideal solution, but would still be enough to make an enormous improvement to people's lives. The overall cost is probably around \$75 billion per year, which still does \$5 of benefits for each dollar spent.

If we want to tackle global warming, on the other hand, there are some targets we should be wary of; for example, doubling the world's share of renewables, particularly solar and wind is a rather ineffective use of resources. The extra costs of coping with the intermittent and unpredictable output of renewables makes them expensive, and the cost is likely to be higher than the benefits.

However, the world spends \$544 billion in fossil fuel subsidies, almost exclusively in Third World countries. This inhibits public budgets from being able to provide health and education, while encouraging higher carbon dioxide emissions. Moreover, fuel subsidies mostly help rich people, because they are the only ones to afford a car. To phase out fossil fuel subsidies would be a phenomenal target because it would cut carbon dioxide while saving money for other and better public uses. The economists estimate that every dollar in costs would do more than \$15 of climate and public good.

With such high-return targets, the economic evidence shows that — if carefully chosen — energy targets should definitely be part of the goals for the next 15 years.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Skeptical Environmentalist and Cool It. His new book is How To Spend \$75 Billion to Make the World a Better Place.



The economic benefits of getting everyone off dung and wood are as high as the human welfare ones — more than \$500 billion each year."

Kenyan trends, insights and terms on Twitter through letters of the alphabet

By **CHRISTABEL LIGAMI**
Special Correspondent

APPROXIMATELY 700,000 Kenyans on Twitter are active each month out of a possible 2 million users in the country, says a report by Nendo Ventures, a Nairobi-based social media strategy and digital story telling consultancy.

Dubbed *A-to-Z of Kenyan Twitter*, the report is presented using

the 26 letters of the alphabet, each with an accompanying explanation, visual, video and supporting digital material.

It features Kenyan terminologies, brands and personalities. Notable inclusions are events, television shows, politicians, musicians, athletes and socialites.

"The *A-to-Z of Kenyan Twitter* celebrates the culture, quirks and characters behind the millions

of updates that are shared with the world," said report author and founder of Nendo, Mark Kaigwa.

700,000

The number of Kenyans who are active on Twitter each month, out of a possible 2 million

The publication will serve as a guide for local, regional and global businesses and brands seeking to connect with Kenyans online, said Mr Kaigwa.

"Whether government, business or society, it is paramount to engage online Kenyan communities from a point of understanding if one wishes to create and derive value," Mark Kaigwa affirmed.

The digital publication, website

and campaign presents 26 of the most important trends, insights and terms from the Kenyans on micro-blogging social networks.

Launched online from Nairobi using the hashtag #AtoZofKOT, the publication features an array of social networks, each highlighting aspects of *The A-to-Z of Kenyan Twitter's* in different forms including video, audio, photographs, an animated photo and more.

SUSTAINABLE DEVELOPMENT GOALS

Build better infrastructure to feed more people

COMMENTARY

DR BJØRN LOMBORG

Avoiding waste in the food chain seems like a really good way to make the most of the crops a farmer grows.

Almost one-quarter of all food in the world is lost each year, from harvesting and storage to wastage in the kitchen. In sub-Saharan Africa, about 21 per cent of all food is wasted. If we could halve the sub-Saharan waste, we could feed an extra 100 million people.

We can expect almost a doubling of demand for food until 2050. This is both because the world will add another two billion mouths to feed and a surging new middle class will demand much more meat and dairy products, which again requires much more animal feed.

Fortunately, new analyses show that there are smart ways to reduce the world's enormous food waste. For every \$1 spent we can end up doing \$13 of good ensuring more food security for the world. Interestingly, these solutions have little to do with the food waste campaigns heard throughout most of the rich world.

At the turn of the century, the global community agreed on a set of ambitious targets — the Millennium Development Goals — which aimed to make a substantial difference to people's lives by 2015. There have been some real successes, but there's still plenty to be done. That's why 193 national governments are now working to agree to a new set of targets for 2030, to be adopted by the UN in September.

Not surprisingly, there are as many proposals for targets as there are interest groups vying for attention and funding. So, to make smart choices, we have to make objective comparisons across a range of competing proposals, from healthcare and edu-

cation to climate change and illicit financial transactions. One way to do that is to make an economic analysis of their benefits and costs. The Copenhagen Consensus has asked over 60 teams of top economists to assess which targets will do the most good — and which won't.

So, what is the best way to increase food security? This is a really vital issue because, if people aren't properly fed, they get sick more easily and can't work well, while children's growth is stunted, disadvantaging them for the rest of their lives. Avoiding waste in the food chain — in the field, during processing and storage and in people's houses — seems like a really good way to make the most of the crops a farmer grows.

In the rich world, the focus is mostly on food waste with the consumer. This makes sense, because more than half is lost in first world kitchens. But this is also because we can afford it — in the UK, the most wastage comes from salads, vegetables and fruits, which are luxury goods compared with the cheapest calories like grains and tubers eaten throughout the poor world. Likewise, smaller households waste more per person, because it is harder to put everything to use, while richer households waste more because they can afford the extra luxury of buying "just to be safe."

The world's poor lose little of their food, simply because they cannot afford to. In Africa, food waste loses 500 calories per person every day — but just five per cent are lost with the consumers. Instead more than three-quarters are lost in agricultural production, both when birds and rats eat them during



With good roads, farm produce can be sent to market and other produce brought in, otherwise a lot of food goes to waste.

Pic: File

harvesting and when pests spoil them in storage.

There are many smart solutions — from simple curing of roots, tubers and bulbs, to expensive refrigeration. All of these technologies are very good investments in industrialised countries, so why aren't they adopted in the developing world? In a new report, a team of economists from the International Food Policy Research Institute pointed out the main problem is lack of infrastructure. Simply put, if there are no proper roads, farmers cannot easily sell their surplus produce, which may then spoil before it can be eaten. The researchers

found that four key factors could make a real difference to losses in the food chain: An electricity supply, paved roads, rail capacity and road capacity. These mean that farm produce can be sent to market and other food supplies brought in, and that grains can be dried or vegetables kept cool.

They estimate the overall cost to halve post-harvest losses in the developing world would cost \$239 billion over the next 15 years, but it would generate benefits of just over \$3,000 billion, generating \$13 of economic benefits for every \$1 spent.

This has real-world impacts — it will bring down food prices

to make food more affordable for poor people. By 2050, better infrastructure could mean that 57 million people — more than the current population of South Africa — would no longer be at risk of hunger. In particular, about four million children would no longer suffer from malnutrition. Most of these gains would be in sub-Saharan Africa and South Asia, the world's most deprived regions.

But it turns out there is an even better food target. Per \$1 spent, we can achieve thrice the economic benefits and larger reductions in the number of people at risk of hunger and the number of malnourished children by focusing on higher efficiency rather than on preventing food losses.

Today, only about \$5 billion is spent each year on research to improve the seven major global food crops, and just 10 per cent of that is targeted to help small farmers in Africa and Asia. Investing an extra \$88 billion in agricultural research and development over the next 15 years will increase yields by an additional 0.4 per cent each year. This would reduce prices and improve food security to give nearly \$3 trillion worth of benefits, an enormous \$34 of good for every dollar spent.

We all want to help get a better world by 2030. If we listen to the economic evidence and pick the best targets, we can make sure resources are spent doing the most good possible. The new research makes a strong case for including targets on yield research and agricultural waste to our promises.

Dr Bjorn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It, His new book is How To Spend \$75 Billion to Make the World a Better Place.

Bananas edge out maize as staple crop in Mt Elgon

By DAVID NJAGI

Special Correspondent

MAIZE IS losing out to the banana as staple crop in parts of Kenya, a development experts term good for the country's food basket.

Low yields, new pests, and appetite for better nutrition are some of the factors behind this loss, according to the Green Africa Foundation (GAF).

Experts say the banana is winning a fair share of acreage on the farm due to the money families are making by growing it.

"Consumers have started questioning whether maize is food or

food is maize," GAF executive director John Kioli said. "Farmers want cash in their pockets."

The International Union for the Conservation of Nature (IUCN) links the emerging trend to a regional approach to fighting food insecurity in Africa. For example, communities sharing boundaries are crossing into each other's areas for farming technologies and inventions that appear to weather climate change upsets.

According to Dr Arthur Mugisha, the IUCN country head in Uganda, it is from such cross-border interactions that farmers on the Kenyan side of Mt Elgon are

abandoning maize for the Ugandan plantain, also known as matooke, while Ugandans have adopted skills such as terracing, soil and water conservation.

IUCN says trans-boundary farming patterns could be a solution to pull Africa from its food insecurity hole.

According to Africa Harvest, Kenya is presently banana secure at the farm level and has its sights trained on processing and value addition.

"Kenya used to import bananas from neighbouring countries," says Florence Wambugu, the chief executive officer at Africa Harvest.

"Currently, the tissue culture banana is a success story."

Meanwhile, the International Crops Research Institute for the Semi Arid Tropics is betting on "orphan crops" such as sorghum, millet and groundnuts, if Africa hopes to feed the continent in a post 2015 faceoff.

The number of people living in sub-Saharan Africa increased to 414 million in 2010 compared with 290 million in 1990, according to the 2014 UN's MDG report.

At the same time, Africa spent \$40 billion to import food and received \$3 billion in food aid in 2010.



The banana is edging out maize as staple crop in parts of Kenya. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

Empowering women benefits all from the individual to the nation

COMMENTARY
DR BJØRN LOMBORG

"What does gender equality do to improve lives? Are women just equally free to live in poverty, or are they freer to help families and societies lift themselves out of poverty?"

Even if we believe that we have come a long way regarding gender equality, women still tend to hold lower-paying jobs, be under-represented in politics and the upper levels of business and bear the brunt of domestic violence. In parts of the developing world, women have it even tougher: Traditional cultural norms may mean that many girls receive little education, are married off and bear children while still adolescents and cannot even open a bank account.

In Tanzania, the World Economic Forum finds that women still only make 65 per cent of men's salary for the same work. And while the current Speaker of the Tanzanian parliament is a woman, for every female in the senior public or private legislative positions, there are five men.

Simple morality dictates that men and women should be treated equally but the more difficult question is what does gender equality do to improve lives? Are women just equally free to live in poverty, or are they freer to help families and societies lift themselves out of poverty? What are the most cost-effective ways to achieve better treatment of women? It is tough questions

like this that the Copenhagen Consensus is trying to answer.

Working out the costs and benefits of a programme is a complex enough task for something concrete like providing clean water but for a wider issue like women's rights it is fiendishly difficult. Despite this, it is possible for some specific targets, and it turns out that investing \$1 in family planning programs can produce benefits worth \$120, an amazingly high return. But before we can say this is the best we can do for the developing world, we need to compare this with other worthy goals.

With the United Nations planning for the next set of goals to follow the Millennium Development Goals and take us through to 2030, we have to ask: Which targets should we include?

Because having hundreds of targets is like having no priorities, and as resources of time, money and trained people are limited, we need to focus on where we can do the most good.

So, should targets to increase gender equality be on our priority list? One way to help decide this is to compare all the options by analysing how much each will cost and how much good each will do. This is what the Copenhagen Consensus has



done with 60-plus teams of top economists across education, hunger, energy, violence and now gender equality.

Gender equality is a big issue with various important components, including reproduction: Allowing women control over pregnancy means fewer deaths in childbirth, reducing infant deaths and giving mothers more time to devote to raising their families and earning an income.

But that is not the only way to think about gender equality. We should also think of reducing violence against women, ensur-

ing they have equal rights and lifting them out of poverty by getting out of the cycle of early marriage and childbirth, and empowering them to be full members of society.

This is easier said than done, of course, but one good approach is to keep girls in school for longer and to make sure that well-paid jobs are available for them when they finish education. For example, in rural India, recruiters for well-paid back-office jobs visited randomly selected villages over three years. Those villages

saw more female employment and women aged 15-21 were 5-6 percentage points less likely to get married or give birth over this period. Moreover, the better job opportunities gave an education incentive, with younger girls staying in school longer and women enrolling in after-school training courses.

When we look at the evidence across a number of different studies and countries, each \$1 spent on improving women's access to economic opportunities does \$7 of good. Enhancing female education is also a good target but notoriously difficult to achieve. Studies show that for each \$1 spent, the benefits probably amount to about \$5 of social good.

There are many other possible targets that seem self-evidently good but for which we lack estimates of costs or benefits. For example, ensuring women have equal rights to inherit, sign a contract, register a business or open a bank account would cost very little but would have far-reaching benefits — but we simply do not have the data to quantify them.

Female equality is a complex issue and is not going to be achieved using a set of neat, standardised solutions. However, economic analyses can help show where we can do the most good. Clearly, family planning can be one of the best targets we can put on the UN list of priorities because it will do \$120 of social good for each \$1 spent. But many other ways, like education, economic opportunity, along with women's rights and equal opportunities vie for a place among the other priorities of nutrition, health and poverty reduction.



Each \$1 spent on improving women's access to economic opportunities does \$7 of good.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

Fast-track approach to end Aids epidemic by 2030

By CHRISTABEL LIGAMI
Special Correspondent

A FAST-TRACK approach will allow the world to end the Aids epidemic by 2030, says the United Nations Programme on HIV/Aids (UNAids) in a report.

Entitled "Fasttrack: Ending the Aids Epidemic by 2030," the report says that through such an approach nearly 28 million new HIV infections and 21 million Aids-related deaths could be averted by 2030.

UNAids estimates that by June some 13.6 million people had access to antiretroviral therapy,

which is a huge step towards ensuring that 15 million people have access by 2015.

Success will depend on focusing on the locations and populations where risk is greatest.

Many recent national Aids targets are aligned with the new global targets for post-2015. For example, many national programmes for HIV treatment are being revised to implement the WHO 2013 consolidated antiretroviral guidelines while programmes for the prevention of mother-to-child transmission are also being revised.

While the end of the Aids epidemic can be achieved with the

tools currently available, more investment in research and development is needed. In particular, innovation is required to produce more potent and long-lasting formulations of antiretroviral medicines for treatment and prophylaxis, a prophylactic or curative vaccine, and a cure, in order to accelerate the end of the Aids epidemic.

By extending the upward trend observed in the past 10 years of domestic and international support for HIV, it will be possible to decrease the annual number of HIV infections and Aids-related deaths by 90 per cent by 2030. Achieving these targets could generate

economic benefits of 15 times the investment needed. It will also substantially strengthen health systems by building critical infrastructure and enabling health systems to focus on increasing services for other priorities, such as emerging or chronic diseases and outbreaks of highly infectious diseases.

The cost of inaction will be huge—if countries do not scale up HIV prevention and treatment services rapidly by 2020, but instead continue with the existing coverage levels of services, they will lose the opportunity to save 21 million lives, and an additional 28 million people could be living with HIV by 2030.



Inaction would mean an additional 28 million people would be living with HIV by 2030. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

Providing legal identity, a step to good governance

Corruption last year cost the world more than \$1 trillion. A study shows that corruption in Kenya costs each citizen \$140 each year. And corruption is only part of the problem of poor governance — many countries are run ineffectively, lacking accountability, transparency and rule of law.

Running countries better would have obvious benefits. It would not only reduce corruption but governments would provide more services and at better quality. It is also likely that economic growth would increase.

In a recent UN survey of seven million people around the world, an honest and responsive government was fourth in the list of people's priorities, with only education and healthcare and better jobs being rated higher. Survey participants from East Africa placed it sixth, before access to clean water and freedom from discrimination.

At the turn of the century, the international community agreed on a far-reaching set of targets to improve the lives of the world's poorest people by 2015: the Millennium Development Goals. They focused on health, poverty and education and did a great deal of good. But they didn't mention governance.

This September, the world's 193 nations aim to set the next set of targets for the year 2030. They want to look across all major areas, from health and nutrition, to environment, conflicts and education, and they want to include some targets on good governance.

Without it, tackling problems like nutrition and environment becomes harder — if there is corruption, most of the money for food may go elsewhere, and if there is little institutional control, ambitious environmental rules may just be flouted.

It is vitally important that we



Residents of Muhoroni in Kenya queue to apply for identity cards during the launch of mobile registration. Providing legal identification is good governance. Pic: File

COMMENTARY DR BJØRN LOMBORG

Many countries are run ineffectively, lacking accountability, transparency and rule of law

choose the best targets. Right now, there are 169 proposed targets but not all of them are good. To help the world's governments pick the best targets, the Copenhagen Consensus Centre, has asked 60 teams of experts

to do an economic analysis of the more promising proposals, showing which targets will cost little and do much good — and which ones will cost lots but do little good, essentially providing a level playing field to compare widely different targets.

Mary E. Hilderbrand of the Centre for International Development at Harvard has written the main paper on improving governance. As she points out, it is obvious that well-governed nations are better than ill-governed ones. But there are two problems.

The first problem revolves around whether good govern-

ance is a prerequisite for development or a consequence of it.

Historical analyses have shown that good institutions like security of property rights are the single most important factor behind the variation in wealth of countries, and that more corruption goes together with less economic growth. That seems to suggest that better secured property rights and less corruption will generate more wealth. However, further analyses have shown that it could just as easily be that higher wealth and economic growth lead to better governance. For now, it is hard to say that good governance is the main way to start a virtuous circle.

The second problem is that we don't know much about how to get good governance. A study of 80 countries where the World Bank had programmes to improve governance showed that governance improved in 39 per cent of countries but worsened in 25 per cent — what could look like a moderate success.

However, countries the World Bank didn't help had similar success and failure rates — suggesting that the World Bank programmes had made no difference.

The simple point is that while everyone can agree it would be great to have more transparent and accountable government, we often know very little about how to achieve it. That is why proposed targets like "Substantially reduce corruption and bribery in all its forms" sound great, but are well-meaning slogans with little content.

Indeed, Ms Hilderbrand finds that many proposed targets are too generalised and some even a poor use of resources.

However, she does find one target that would do a lot of good for each dollar spent. "By 2030 provide legal identity for all, including birth registra-

tion." This may sound like a very unambitious step to those of us lucky enough to live in democracies where such things are taken for granted, but it would be a major step for many developing countries.

Importantly, this is a measurable outcome, so progress can be monitored. It also means that there must be functioning public services to provide registration facilities and maintain records. Building this capacity in a single well-defined area would provide a clear model for how other services can be provided effectively. It is also unlikely in any case that a registration service would exist in a vacuum; an effective one would almost certainly be a sign of an emerging public service competence.

There are real benefits to each citizen of having a proper legal identity. It helps them to claim their legal rights, for example, and would certainly also help to establish property rights, which are vital to allow individuals to prosper and the economy to grow. Elections become less vulnerable to corruption when voters are properly registered. And, as an economy grows, a proper legal identity is essential for opening a bank account or getting a driving licence.

Good governance is important. But instead of platitudes we should focus on measurable, attainable targets that will actually make a big difference for the next 15 years.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of 'The Sceptical Environmentalist and Cool It, His new book is How To Spend \$75 Billion to Make the World a Better Place.'

Ethiopian dam to affect pastoralists in Turkana — study

By PAUL REDFERN
Special Correspondent

VULNERABLE PASTORALIST communities living in and around Lake Turkana have not been consulted about the effects of a new dam in Ethiopia scheduled to be up and running later this year.

A report by International Rivers, based on research on the effects of the Gibe III hydroelectric dam on the Turkana Basin carried out by the African Resources Working Group (ARWG), "indicates more potential risk to the environment and the indigenous communities than that suggested by the environmental impact assessment done by the Ethiopian government."

The report predicts that during

the first five years of the dam that Lake Turkana's water level will fall by up to seven metres, lake salinity will increase and the destruction of aquatic organisms will increase.

The report says that many people who depend on Lake Turkana for their livelihood will be severely affected and that the dam threatens their human rights.

"The Kenyan government must do more to protect the interests of the peoples of northwest Kenya, and the ecosystems that they depend upon," the report says.

"The agreement with the Ethiopian government needs to be made public. We need to know if the impact on Lake Turkana was even considered before the agreement was signed.

"The Ministries of Energy, Water, and Northern Kenya must account for their plans to preserve the environment and livelihoods of the region. The Members of Parliament representing Northern Kenya need to know what is planned, and have a chance to voice their communities' concerns."

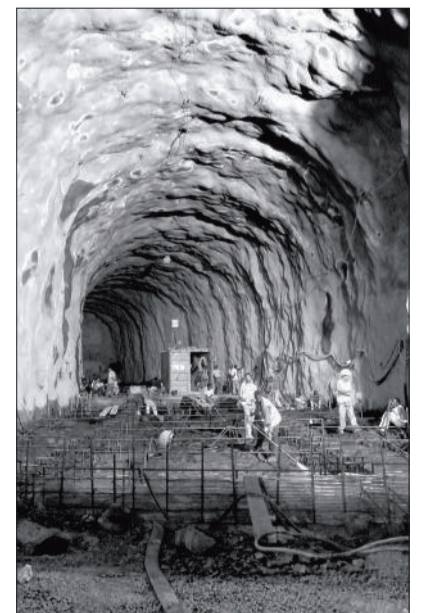
Fishermen, farmers, teachers and others living nearby say that Lake Turkana's volume has reduced significantly over the past 30 years because of higher temperatures and changing weather patterns. But few of the 100 people interviewed by a Kenyan researcher for International Rivers said they had been consulted or warned about what could happen when the reservoir of the Gibe III dam, one of Africa's largest

hydropower projects, is completely filled in about three years.

The \$1.8 billion construction project, which is 90 per cent complete, will start limited power generation in June.

A report in the *Guardian* newspaper says that the downstream impact of the dam "is hotly contested." It adds that some hydrologists have predicted that Ethiopia's expansion of sugar and cotton plantations on the Omo river, which the Gibe III dam will allow, could reduce water flow to Lake Turkana by up to 70 per cent.

But both the Kenyan and Ethiopian governments have strongly backed the dam, which they maintain will promote development by providing more electricity.

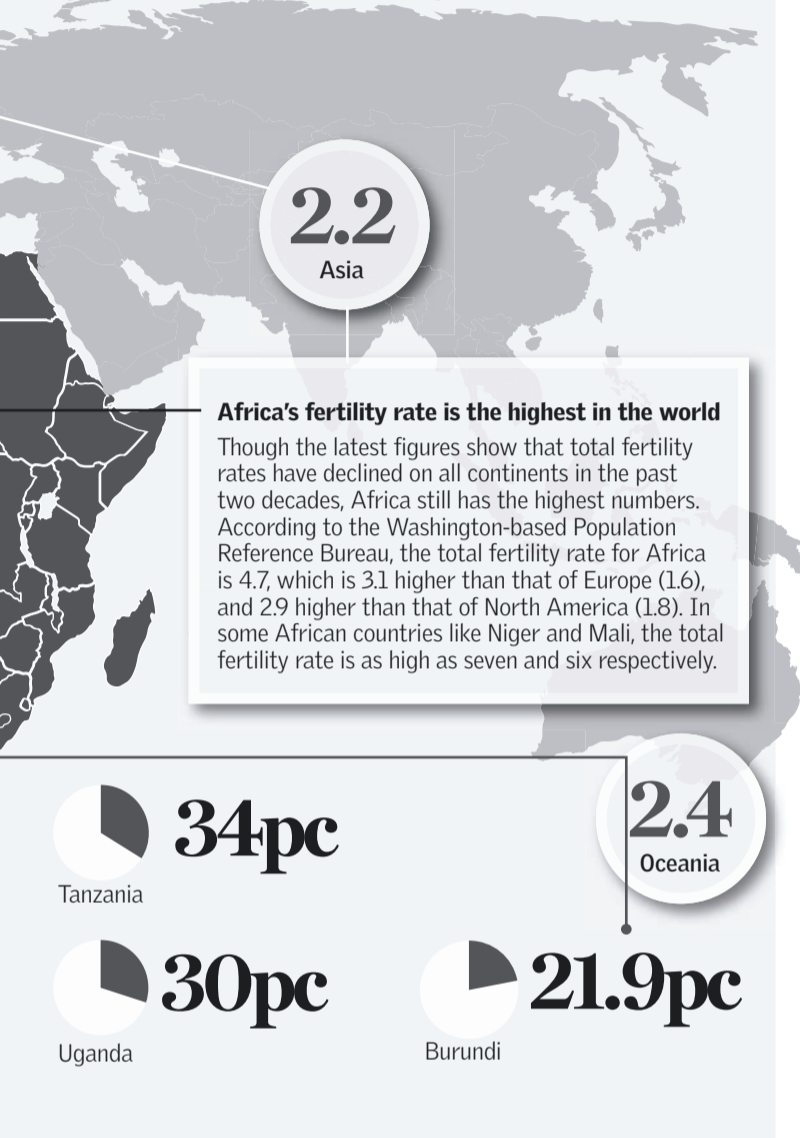


The Gibe III dam under construction. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

led by Africa

GLOBAL FERTILITY RATES



Africa's fertility rate is the highest in the world

Though the latest figures show that total fertility rates have declined on all continents in the past two decades, Africa still has the highest numbers. According to the Washington-based Population Reference Bureau, the total fertility rate for Africa is 4.7, which is 3.1 higher than that of Europe (1.6), and 2.9 higher than that of North America (1.8). In some African countries like Niger and Mali, the total fertility rate is as high as seven and six respectively.

rica will continue being youthful — about 33 per cent being young people aged 10-24.

“This age structure creates a powerful momentum for future population growth. In order to build capacity for these young people, in terms of education and skills training, more resources have to be used in providing such social services, reducing the level of investment in other priority areas needed to expand the economy,” said Mr Jarabi.

He, however, added that while this youthful segment of the population has major demographic, social and economic implications, it remains a critical resource that can bring about meaningful development in future, if well tapped.

However, there is always a problem when such capabilities are not effectively tapped.

“A number of negative outcomes can come about, including high unemployment rates, child labour, rural to urban migration that can lead to proliferation of slums, rising poverty, drug and substance abuse,” said Mr Jarabi.

The recent examples of serious social unrest in North Africa are a testimony of a restless youthful population experiencing high unemployment rates

and facing an uncertain future.

Social unrest aside, it is feared that the population of inhabitants living in the continent's arid and semi-arid areas will double by 2050, the same time that global warming is likely to have the severest effects on the world.

Scientists have warned that the world will witness drought, hunger and conflict over resources in Africa as population growth and global warming coincide.

However, some scientists warn that forecasting something that is 80 years or even 100 years away is highly ambiguous. The sceptics argue that long range population predictions are hinged on large assumptions about fertility rates, adding that there is no watertight method of predicting birth levels a generation from now.

But if Africa's population increase, as the UN's medium prediction, the continent will have about 3.6 billion people by the end of the century. However, the analysis also shows that the population could reach 5.2 billion or 2.4 billion by 2100, depending on whether fertility is 0.5 children above or below the UN's medium estimate. No scientist can say exactly which way it will go.

For better quality life, health systems must be strengthened

Last year, life expectancy on the planet reached 70 years. This is remarkable progress considering that 115 years ago in 1900, life expectancy was about 30 years. In Roman times, life expectancy was about 22 years. Compared with a century ago, each of us has been granted more than two lifetimes. But there are still many health problems we must tackle better. The question is, which of them should be our key focus?

In September, 193 governments, under the United Nations will be deciding which targets the world should focus on until 2030. More than \$2.5 trillion will be spent on these targets over the next 15 years. In order to stretch every dollar that will be spent, my think tank, the Copenhagen Consensus Centre, has asked over 60 economists to assess which targets across all areas from health and nutrition to environment and education should be prioritised.

There are a number of good proposals to address health challenges such as malaria, vaccination and infant death. But focusing on these single issues that get a lot of media attention and straightforward solutions would mean forgetting about many other ailments. Our new peer-reviewed reports suggest that we should strengthen the entire health system.

In South Africa, the government spends \$308 annually on public health care per person. Contrast this with low-income countries, where the world's poorest one billion live, and where governments will spend a measly \$14 per person on public health care this year. Not surprisingly, spending just a little more could do a lot of good.

Premature death means dying before the global average age of 70. This year, nine million people will die prematurely in low-income countries like Bangladesh, Uganda and Haiti. Another 19 million will die before this age in lower middle-income countries like India, Nigeria and Guatemala. In total, these poorest countries make up about half the world's population.

As countries get richer by 2030, they will also get healthier. It is estimated that by 2030, the total premature deaths will have dropped from 28 million to 24 million per year, despite the population having grown by almost a billion. Yet, we can do much better.

The Canadian researchers writing the lead study on health find it is possible to achieve a further reduction in mortality, resulting in a two-thirds drop from 2010 child mortality and a one-thirds drop from 2010 deaths of people between five and 69 years of age. In total, this would reduce deaths in the poor half of the world by another seven million annually by 2030.

This would require increasing health spending. In low-income countries, public health spending will have risen to \$23 per person by 2030 because countries will be rich-



A doctor attends to a patient at a hospital in Nyahururu, in Kenya's Rift Valley. Researchers say strengthening health services will achieve an overall cut in premature deaths. Picture: File

COMMENTARY DR BJØRN LOMBORG

The overall estimate shows that for every dollar spent, we will achieve \$4 of human benefits

er. But raising it another \$34 will allow us to avoid an extra two million deaths each year.

For Kenya, the public health spending will be at \$46 per person in 2030. An extra \$69 could likely avoid 212,850 children dying each year.

Because we are talking about helping half the world's population, this is not cheap. Total extra costs will run to almost \$0.5 trillion each year by 2030. Yet, it still compares favourably to the benefits of saving seven million lives, both as measured in lost productivity and as the intrinsic value ascribed to human beings. The overall estimate shows that for every dollar spent, we will achieve \$4 of human benefits. For the poorest one billion, because the spending is so much lower that there are many more low-hanging fruits, each dollar spent would do \$13 worth of good.

This compares with some high-profile diseases like tuberculosis, which will do \$43 worth of good for every dollar spent, or malaria, which will produce \$36 of benefits for every dollar spent. These are higher, because it is very effective to save the lives of children and young adults afflicted with easily curable diseases. Helping everyone through a more comprehensive health system means dealing with diseases that are not that easily curable, and helping higher age groups where you can save fewer life-years.

Of course, it is more complicated than just spending more money on cures; the funds have to be into more trained staff, more clinics and more medicines, to be employed as effectively as possible in each area to reduce overall mortality (and also the wider burden of disease and disability). But the benefits of having better health provision are undeniable. Medical staff not only provide continuing care and prevent or treat the normal range of illnesses and ensure safer births, but they are in a position to react to emergencies as they arise.

For example, a considerable number of people die from injuries each year, and the team of economists reckons that this number could be reduced by a third. The Ebola outbreak in West Africa is another example. The countries suffering the most have very poor general health provisions and large amounts of international assistance is being poured in to halt the epidemic. With a properly functioning local health service, the disease may never have got a hold in the first place.

There are plenty of potentially good health targets proposed as priorities for the next 15 years, focusing on HIV, malaria, TB and infant mortality in particular. All are worthy of our attention, but a good case has been made for simply strengthening health services to achieve an overall cut in premature deaths.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It, His new book is How To Spend \$75 Billion to Make the World a Better Place

SUSTAINABLE DEVELOPMENT GOALS



Children playing with a balloon. Under five deaths have reduced drastically since 1990. Picture: File

Malaria mortality high in EA

By CHRISTABEL LIGAMI
Special Correspondent

THE NUMBER of people dying from malaria remains high in East Africa despite WHO reports that the number of people dying from malaria globally has fallen sharply.

According to the WHO Malaria Report 2014, about 20,000 deaths were reported in East Africa in 2013 with Kenya, Uganda and Tanzania ranked among the countries in sub-Saharan Africa accounting for 90 per cent of the estimated number of *P. falciparum* infections by number of infections in all ages.

Tanzania, Uganda and Burundi, the report shows, have the highest number of deaths caused by malaria in the region with Tanzania reporting the highest number of 8,526, Uganda 7,277 and Burundi 3,411.

Kenya and Rwanda reported the lowest malaria deaths in 2013 of 360 and 409 respectively.

Globally, there were an estimated 198 million malaria cases in 2013, 82 per cent of which were in the African region. Malaria was responsible for an estimated 584,000 deaths worldwide in 2013, killing an estimated 453,000 children under five years of age.

Apart from Rwanda, which reported the same number of fatalities as last year, all the East African countries reported an increase in malaria deaths.

Testing improves

However, the WHO report shows that access to accurate testing and effective treatment has significantly improved worldwide.

Analysis across sub-Saharan Africa reveals that despite a 43 per cent population increase, fewer people are infected or carry asymptomatic malaria infections every year: the number of people infected fell from 173 million in 2000 to 128 million in 2013.

The report says that between 2000 and 2013, access to insecticide-treated bed nets increased substantially. In 2013, almost half of all people at risk of malaria in sub-Saharan Africa had access to such protection, a marked increase from just three per cent in 2004. Between 2000 and 2013, malaria admission rates decreased by 75 per cent in Eritrea, Rwanda and Tanzania.

Given the intense malaria transmission in the worst-affected countries, including the East African countries, which saw an estimated 6.6 million malaria cases in 2013, WHO said it has issued new guidelines on temporary measures to control the disease during the Ebola outbreak, including administering anti-malarial drugs even when patients have not been tested for malaria.

Dealing with neonatal deaths, cervical cancers must inform new smart targets

COMMENTARY DR BJØRN LOMBERG

Deaths in the first seven days after birth are virtually one-third of all under-5 deaths; premature birth accounts for half of these.

to 22,000.

The problem is that the more progress you make, the harder the remaining targets are to reach. Much of the progress in controlling infant mortality since 1970 has been in areas such as controlling infectious diseases and improving nutrition. Progress in this should and will continue but this won't be as rapid as before. It's a sobering thought that, with the current birth rate, under-5 mortality would still exceed 4 million each year even if all infectious diseases were eradicated.

One of the biggest challenges going forward will be providing high quality care to newborns, particularly to those born too early and with low birth weight. Deaths in the first seven days after birth are virtually one-third of all under-5 deaths, and premature birth is the biggest single cause, accounting for half of these.

As well as the perils of prematurity, birth complications and sepsis are significant causes of deaths of young babies. Proper care can have a really big impact but it costs money

to build more clinics and train and pay more doctors and nurses: about \$14 billion a year to hit the target of a 70 per cent reduction in neonatal deaths, according to estimates.

That sounds a lot, but the benefits are much bigger at more than \$120 billion annually. For each dollar spent, we will help the world's newborn to the tune of about \$9.

Reducing infant mortality is not the only good target, of course. One that gets a lot of attention is access to contraception, which enables women to have children when the time is right for them, gives them better employment prospects and enables them to invest more in their children's future. A dollar spent on this could pay back perhaps 120-fold.

But while family planning is high profile, there are other good ways for the international community to invest in women's health. This was analyzed in another paper from Dara Lee Luca and colleagues from Harvard University.

The fourth most common cancer among women globally is cervical cancer, with half a million cases diagnosed annually and more than 200,000 deaths each year. Some 85 per cent of all cases occur in the developing world, where it is actually the second deadliest cancer among women, after breast cancer. Its impact is particularly great because it also affects younger women who are raising and supporting families.

Fortunately, many of these cases are preventable, because nearly all are associated with a

viral infection, and a vaccination is available. The vaccine is more expensive than most and three doses are needed but in total, a course of treatment in developing countries would cost \$25 per girl.

Vaccinating 70 per cent of girls in one cohort throughout most of the developing world would cost about \$400 million, and would save 274,000 women from dying, often in the prime of their lives, from cervical cancer. For each dollar spent, we would, do more than three dollars worth of good.

For Rwanda, one year of vaccination would cost about \$1.6 million and would avoid 2,000 deaths. Each dollar spent would do \$5.46 of good.

Health is obviously high on everyone's agenda but the escalating costs in rich countries show there are no easy answers. Choosing the best targets for the international community to support between now and 2030 is going to be very important if we are to do the most good with the resources available.

Dealing with neonatal deaths and cervical cancer could be two of the smart targets we should choose.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Skeptical Environmentalist and Cool It. His new book is How To Spend \$75 Billion to Make the World a Better Place

In a world where there are so many worthwhile targets demanding our attention, we need to focus on those where we have the best chance of doing the most good. How about saving more than 14 million newborn by 2030?

That's a pretty eye-catching figure but one that the author of a new analysis for the Copenhagen Consensus believes is not only achievable, but also highly cost-effective.

Günther Fink, from the Harvard School of Public Health, is one of more than 60 expert economists my think tank has asked to make the case for that the world's governments and the UN are currently debating. These will shape global progress over the next 15 years, so it's important to get them right.

Is it really possible to make such a dramatic difference to the survival of newborn babies? Past experience would suggest that it is. UN figures show that nearly 18 million children around the world died before reaching the age of five in 1970, while in 2013 that figure had come down to just above 6 million.

Tougher targets?

This is still way too high, of course, but it's nevertheless a very impressive figure, even more so when we realise that the number of births annually has increased during those 40 years. In 1990, nearly 50,000 children died before their fifth birthday each year in Rwanda.

Today, that number is down

SUSTAINABLE DEVELOPMENT GOALS

Tackling killer diseases is a good investment

Ebola, which has killed about 8,000 people so far, received a lot of attention in 2014. In the same year, about four million people died from Aids, tuberculosis and malaria. The truth is that, despite great progress in healthcare, much of the world is still afflicted with preventable diseases, with the poorest people suffering the most. The good news is that tackling these diseases turns out to be an extraordinarily good investment.

It may sound cold-hearted to set health priorities based on cost-effectiveness, but it's actually the best way to do the most good in a world with limited resources.

One hundred and ninety three governments are working on a set of priorities for the world to focus on by 2030 (in 19 key areas, including health), and the final list will be decided in New York by September. To help them make the right decisions, the Copenhagen Consensus Centre has asked 60 teams of top economists to assess some of the key proposals and make a case for which targets should be in the final list.

Health is a big topic, and we have had the perspectives of five expert groups plus a number of commentaries. They make a strong case for tackling killer diseases.

Take TB for example: Two billion people worldwide carry the bacterium that causes it, and one in 10 of them will go on to develop the disease. TB probably killed about 100 million people over the 20th century, and was one of the major killers before antibiotics became available. The success of treatment with antibiotics has almost wiped out TB in rich countries, but it continues to be a disease of the poor, killing about 1.5 million each year.

In Uganda, the risk of TB has dropped only 11 per cent since



Doctors attend to a malaria patient at the Kisumu East District Hospital in western Kenya. Picture: File

COMMENTARY DR BJØRN LOMBORG

The WHO recommends TB preventative drugs costing just \$21 per person... and each dollar spent this way will generate \$43 worth of benefits

1990, with 4,100 people dying from the disease in 2013.

The global risk of dying from TB has declined by more than one-third over the past 20 years, and since 1995, 37 million people are estimated to have been saved from dying. But progress has been hampered by weak health systems, poverty and multi drug-resistant strains of TB. Despite the toll it takes, TB treatment receives just 4 per cent of total development assist-

ance spent on health, compared with 25 per cent for HIV.

TB can be difficult to detect, particularly in countries with poor health systems. The World Health Organisation recommends a preventative course of drugs costing just \$21 per person, for high-risk populations. Treatment is highly effective, and on average can give people a further 20 years of productive life, and each dollar spent this way will generate \$43 worth of benefits.

Malaria is another killer disease. Ninety per cent of those it kills live in sub-Saharan Africa, and 77 per cent are children under five. Uganda had 1.5 million cases in 2013. By far the most effective treatment is to use a drug called artemisinin, and it is crucial that it is used in combination with other malaria medicines to prevent parasites becoming resistant to it. In to-

tal, this would cost about \$0.5 billion but have benefits of \$20 billion, or some \$35 plus worth of benefits for each dollar spent.

But what about HIV/Aids? Treatment with anti-retroviral drugs has made an enormous difference to people with HIV, but the disease continues to cause large-scale human suffering in sub-Saharan Africa, where 70 per cent of the global population of HIV positive people live.

Globally, 35 million people live with HIV, out of which 1.6 million live in Uganda. The team studying this disease estimates that the current use of anti-retroviral drugs should be expanded — doubling the amount spent on it — to reach all people with significantly weakened immune systems.

This is not a cheap option, needing another \$10 billion annually, but reaching 90 per cent

of the target group of patients would save many lives and is cost-effective.

Every dollar spent would give benefits (extra years of life) valued at \$10. And this is not the only option. Male circumcision is a one-off treatment, which can reduce the transmission of HIV to men during intercourse by 60 per cent and with some delay, also reduce transmission to women. Although not as effective as widespread drug treatment, the cost would be about \$30 million annually, but each dollar spent would return \$28 worth of benefits.

However, one of the economists working on this project has proposed a radically different approach. Her argument is that focusing on a handful of key diseases has created islands of excellence in a sea of dysfunction. Much better, she suggests, to build up strong health systems that can deal with all medical problems. The problem is that the cost is phenomenally higher and the efficiency per dollar probably much lower. However, it is worth remembering that there are bigger problems than the four million killed by Aids, TB and malaria — take working-age injury and trauma, which kill almost six million each year.

In the health sector, we are spoilt for choice when it comes to projects to spend money on efficiently — and transform people's lives. Now it's up to the world's governments to look at the evidence and make good choices on priorities for the next 15 years.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It. His new book is How To Spend \$75 Billion to Make the World a Better Place.

Chronic diseases killing more in poorer countries

By SABRINA TAVERISE
New York Times News Service

CHRONIC DISEASES such as cancer and heart disease are spreading rapidly in low- and middle-income countries, striking far younger populations than in rich countries and causing much worse outcomes, according to a new report.

Deaths from chronic diseases have risen by more than 50 per cent in low- and middle-income countries over the past two decades, according to the report by the US think tank, Council on Foreign Relations. The increase is part of a shift in global mortality patterns in which infectious diseases such as malaria and tuberculosis have

declined substantially and are no longer the leading cause of death in the developing world.

Chronic diseases claim the vast majority of lives in rich countries like the US, and some experts have said that the rise of such diseases in poorer countries is a sign of success, as it is evidence that people in those places are now living long enough to die of diseases that typically hit in old age.

But the report also finds that chronic diseases are disproportionately striking younger populations in developing countries. Working-age people in poorer countries have little access to preventive care and more exposure to health risks, such as air pollution, poor nutrition and

lax anti-smoking laws, than their counterparts in rich countries, and are more likely to develop a chronic disease. And with limited resources to pay for treatment, the sick are much more likely to become disabled and die as a result.

Deaths, disabilities

In all, about 80 per cent of the deaths and disabilities from chronic diseases in Africa and South Asia involved people under the age of 60, more than double the share in many rich countries, said Thomas J Bollyky, a fellow at the council and one of the report's authors. In lower-income countries in particular, about 40 per cent of the deaths from chronic diseases occur in

people younger than 60, compared with 13 per cent in rich countries.

If the trend continues unabated, it could have far-reaching consequences, the report notes, including catastrophic health expenditures and impoverishment among low-income populations. At the national level, it would further strain already overburdened health systems and could lead to lower economic productivity.

The report, for example, notes that spending on health care in middle- and low-income countries has tripled over the past 20 years. All the governments in sub-Saharan Africa together spend about as much on health care a year as Poland — about \$30 billion.



A breast cancer survivors' awareness walk in Mombasa on Kenya's Coast. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

Fight non-infectious diseases and save 5m lives

COMMENTARY

DR BJØRN LOMBORG

For the first time, more people in the developing world are dying from strokes and heart attacks than infectious diseases

In rich countries, the biggest causes of death are strokes, heart attacks and cancer, accounting for more than two-thirds of all deaths. For the poorer ones, people often assume that infectious diseases like diarrhoea, tuberculosis, Aids, malaria, measles and tetanus are the biggest killers. That is no longer true. While they are still substantial threats, the availability of medication and vaccines along with higher living standards have caused deaths due to communicable diseases such as these to drop to below nine million each year.

For the first time, more people in the developing world are now dying from strokes and heart attacks than infectious diseases. Combined, the diseases that are not infectious — the non-communicable diseases or NCDs — cause almost two-thirds of all deaths in the developing world, over 30 million each year. For Kenya, almost 22 per cent of all deaths are caused by NCDs.

The good news is that there are ways to help, that could avoid up to five million deaths each year. Because generally the NCDs have received less attention, the solutions are often very effective and cheap.

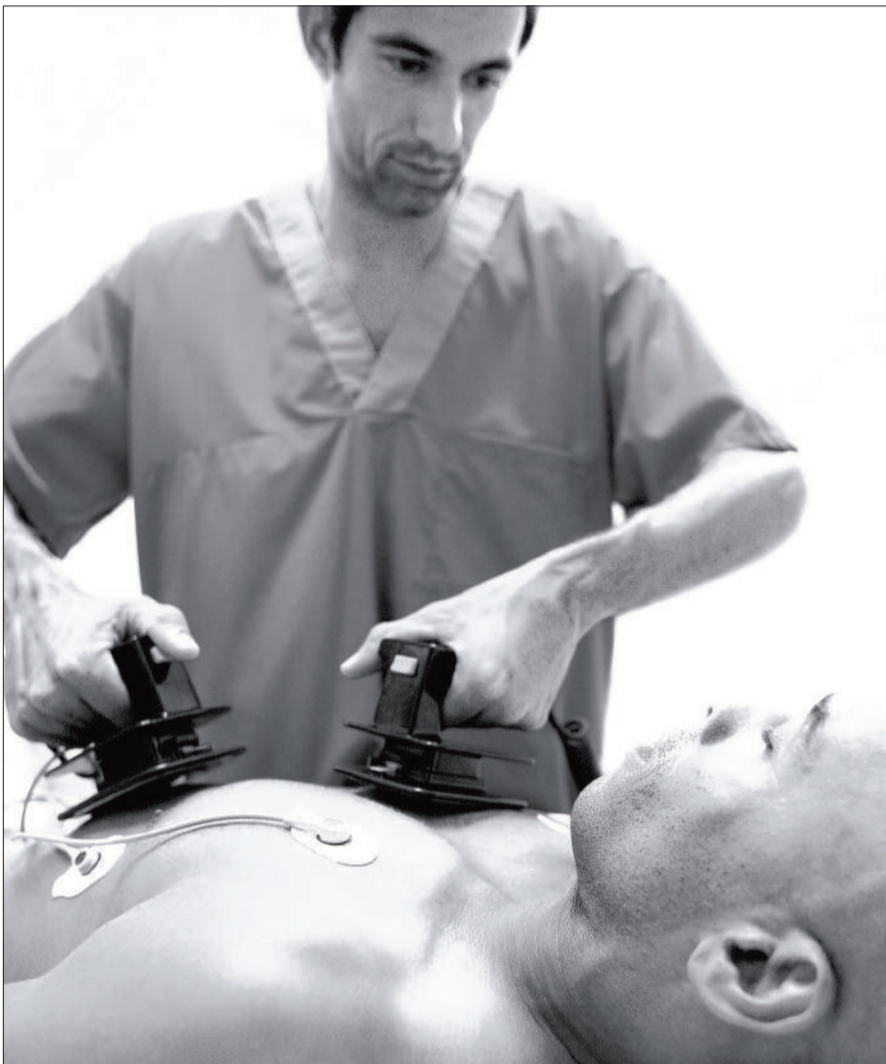
This is the argument made in a new paper written by Rachel Nugent of the University of Washington. Hers is one of a series commissioned by the Copenhagen Consensus Centre, from over 60 teams of top economists. The idea is to be able to compare the costs and benefits of a wide range of proposed tar-

gets to help the global community adopt the best.

In the year 2000, the world's governments made an historic commitment to a set of ambitious 15-year targets under the umbrella of the Millennium Development Goals. While much has been achieved, there is still more to be done. That's why 193 national governments are now debating hundreds of proposed targets for the next 15 years. In September, the world will agree to a list of targets to help build a better life for the world's poorest people. Our economic analyses show where the world's leaders can help the most for each dollar spent.

Prof Nugent looks at a range of targets that collectively could cut almost a third of all premature deaths from NCDs by 2030. This is a pretty demanding target because premature death rates are already quite low in the developed world, and most of those below the age of 70 occur in poorer countries. And the problem is accelerating. The number of people affected by these diseases is set to increase by 17 per cent over the next 10 years, and by 27 per cent in Africa. For Kenya, deaths from NCDs have increased by more than half over the past two decades.

Tobacco, the single biggest killer will cause 10 million deaths by 2030. In China, one-third of all male deaths will be caused by tobacco then (but very few female deaths, since just a small percentage of Chinese women smoke). As the rich



A man receives emergency defibrillation. Defibrillation is used to treat a life-threatening irregular heart-beat (arrhythmia) or in the case of cardiac arrest (stopped heart). Pic: File

countries have shown, the most effective way to cut smoking is to increase taxes dramatically. A tax in low- and middle-income countries that causes a rise in the cost of cigarettes by 125 per cent would still leave cigarettes cheaper than in the West. Even considering that smuggling would increase, it would likely cut consumption by half.

Administration of this tax costs \$3.5 billion annually, but it would save 2.5 million premature deaths every year. Every dollar spent would give benefits valued at \$22.

About a billion people on the planet suffer from high blood pressure, causing nine million deaths. This affects 44.5 per cent of adults in Kenya. This is not just a disease of the rich world — it affects 46 per cent of African adults and 49 per cent in Uganda. The cost of diagnosis and cheap hypertension medication would be \$2.50 per year per capita, so helping the higher-risk patients would cost \$500 million but avoid 770,000 premature deaths each year. Every dollar invested would do \$47 of good.

One of the simplest ways to reduce high blood pressure is to lower the salt intake. Gradual reduction of the salt content in bread and other processed foods has been successful in a number of countries, with very little sign of consumer resistance. Reducing salt intake by 30 per cent is reckoned to avoid 815,000 premature deaths (and more than double this number if deaths over the age of 70 are also counted). It would also be a great use of resources, paying back \$39 for every dollar spent.

Finally, there are about 100 million people below 70 surviving their first stroke or heart attack, or at high risk of dying from heart disease. Providing them with a multi-drug regimen including aspirin, blood pressure lowering drugs, and cholesterol-lowering drugs can prolong their lives considerably. At \$55, the cost is substantial but it will save almost a million lives. Every dollar will provide a benefit of \$7.

The choice that the global community is faced with when agreeing the set of post-2015 goals is not an easy one, but it is vital that the targets included can do the most good and provide value for money. Based on this analysis, reducing deaths from non-communicable diseases deserves very serious consideration.

See related story on page 34

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of *The Sceptical Environmentalist* and *Cool It, His new book is How To Spend \$75 Billion to Make the World a Better Place.*

Scientists find promising drug for multiple sclerosis

By CHRISTABEL LIGAMI

Special Correspondent

SCIENTISTS AT the Centre for Addiction and Mental Health in Toronto, Canada, have discovered a promising new drug to treat multiple sclerosis.

Multiple sclerosis (MS) is a progressive, often disabling neurological disease, which is most often diagnosed among young adults between the ages of 15 and 40.

While the exact cause of MS is unknown, the body's immune response is involved, and is the target of all current medications used in treatment. These medications do not cure the illness, but help to alleviate symptoms and slow the progression of the disease.

In their findings reported in

the *Annals of Clinical and Translational Neurology* journal, the scientists they identified a previously unknown change in the spinal cord related to MS, and a way to alter this change to reduce the nerve cell damage that occurs with the disease.

"This approach aims to stop the nerve damage related to an important brain transmitter called glutamate," said Fang Liu, the lead scientist for the study.

The focus of the scientists' investigation was a spinal cord change that involved a protein, that attaches to a specific cell receptor for the glutamate neurotransmitter. Glutamate is involved in learning and memory.

"This linked receptor-protein complex was present at higher

levels in spinal cord tissues of deceased MS patients and in animal models for MS," said Dr Liu.

Using techniques developed in the lab, the researchers created a new peptide — a tiny piece of protein — to try and disrupt this change in animal models of MS.

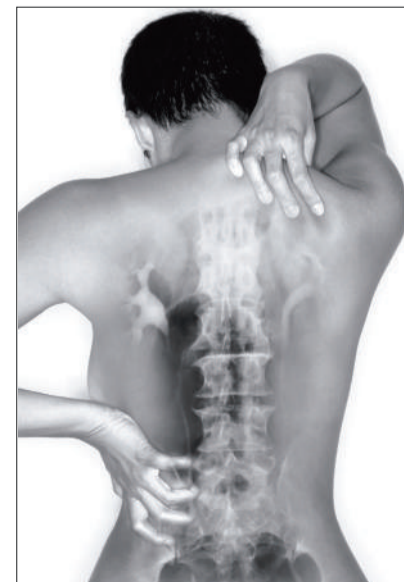
"We found that our peptide disrupted this linkage, and led to major improvements in neurological functioning," said Dr Liu.

Specifically, motor function was significantly better compared with a comparison group. The peptide also had a positive impact on the nerve damage associated with MS — it reduced neuron death, and rescued the protective coating of neurons called myelin, which is characteristic of MS. It also increased the survival of the cells

that produce myelin.

In MS, inflammation damages myelin in the central nervous system, which can harm the underlying nerves and interrupt the transmission of nerve impulses. MS is associated with a wide variety of symptoms, based on where the damage occurs in the central nervous system.

Importantly, the new peptide didn't appear to suppress the body's immune response system directly, and did not impair physiologically essential neuron transmission in the brain — a common side effect for drugs targeting the glutamate system, said Dr Liu. "Our priority now would be to extend this research and determine how this discovery can be translated into treatment for patients."



Scientists have identified and found a way to alter a previously unknown change in the spinal cord that would reduce the nerve cell damage linked to multiple sclerosis. Pic: File

SUSTAINABLE DEVELOPMENT GOALS

Curbing illicit financial flows: How to raise \$770b for Africa's development

If we think about development priorities for the next 15 years — with the Millennium Development Goals expiring in 2015 — adequate nutrition and basic education immediately come to mind. Illicit financial flows (IFF) would not be top priority, but in a paper for the Copenhagen Consensus Centre, economist Alex Cobham argues that they are important enough to be included in the post-2015 goals now being debated by the international community.

If we look at the costs of IFF, he clearly has a point: 20 sub-Saharan Africa countries are estimated to have lost more than 10 per cent of their GDPs since 1980, while Africa as a whole is still estimated to be losing 3.4 per cent of GDP, that is, \$76 billion each year. The Washington-based think tank Global Financial Integrity (GFI) estimates illicit flows to total ten-times the current level of international aid.

Nigeria offers a particularly egregious example of the problem. The well-respected governor of the central bank, Lamido Sanusi, was suspended for blowing the whistle on an apparent \$20 billion difference between the country's recorded oil exports and those reported to the bank.

Illicit cash flows are not necessarily strictly illegal. Money laundering — transferring the proceeds of crime through apparently legitimate channels — is clearly illegal and the subject of stringent checks in the banking sector. Abuse of power by kleptocratic regimes to skim off a country's wealth into Swiss bank accounts at the expense of the rest of society is morally wrong and often also criminal.

What is less clear-cut is the avoidance of tax; while being



The revenue lost through misinvoicing by African countries could have been invested in development, including into education, healthcare, or infrastructure improvements. Picture: File

COMMENTARY DR BJØRN LOMBORG

"A recent study by GFI found that between 2002 and 2011, \$60.8 billion moved illegally into or out of Ghana, Kenya, Mozambique, Tanzania, and Uganda using trade misinvoicing."

legal in the strict sense of the word, this is frowned on by society. Recently, this has become a big story in some countries as multinational companies have, quite legitimately, minimised their tax liabilities by being registered in a low-tax country and declaring their profit there while in practice doing most of their business elsewhere.

A recent study by GFI found that between 2002 and 2011, \$60.8 billion moved illegally into or out of Ghana, Kenya, Mozambique, Tanzania, and Ugan-

da using trade misinvoicing. This practice means that companies alter the value of their exports and imports to justify illicitly moving money in and out of a country.

The potential average annual tax loss from trade misinvoicing came to about 12.7 per cent of Uganda's total government revenue between 2002 and 2011, followed by Ghana (11 per cent), Kenya (8.3 per cent), and Tanzania (7.4 per cent), GFI states. This tax revenue could have been invested in develop-

ment, including into education, healthcare, or infrastructure improvements.

While public exposure is often enough for companies to change practices to protect their reputation, Cobham — research fellow at the Centre for Global Development — suggests transparency should be achieved via statutory public registers rather than investigative journalism and naming and shaming.

He makes three proposals: to make public full details of company ownership (that is, no shell companies with the real owners remaining hidden), ensure that there is automatic exchange of tax information between jurisdictions and require multinationals to report on a country-by-country basis. This transparency should greatly reduce illicit transfers.

Cobham proposes that one of

the key targets for the UN system should be "Reduce to zero the legal persons and arrangements for which beneficial ownership info is not publicly available." If this gave just a 10 per cent reduction in the average losses to IFF in the decade from 2002, the benefit would be \$768 billion, but reducing current losses by half would raise this to a staggering \$7.5 trillion.

A wide range of compliance costs have also been estimated, but even using the highest of these (\$66 billion) with the lowest benefit scenario gives a very attractive benefit-cost ratio: for each dollar spent on the above goal, \$13 would be gained.

Not reassuring

However, these transparency proposals have to be as closely adhered to universally as possible, if there is to be a substantial impact — otherwise more money will simply pass through other channels which remain open. The precedent of the existing anti-money laundering framework is not reassuring.

This system is universally accepted and most countries obey the letter of the law without stemming the flow of illegal money in practice. Even major international banks are sometimes found to have flagrantly flouted the rules. However, these systems are complex and varied and the wider transparency proposals have the benefit of greater simplicity, so perhaps we should be more optimistic about them.

In an ideal world, it would not be possible for criminals to move their money about with impunity; neither should companies and individuals pay less tax than society deems to be fair in comparison with others. It is now up to us to consider whether it is worth putting scarce resources into trying to make the financial world more ideal, or whether there are better ways to use them.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre

“Transparency should be achieved via statutory public registers rather than investigative journalism and naming and shaming.”

Research Fellow,
Alex Cobham

Endemic violence inflicted daily on children at home, says Unicef report

By SOMINI SENGUPTA
New York Times News Service

ONE IN 10 girls worldwide have been forced into a sexual act, and 6 in 10 children ages 2 to 14 are regularly beaten by parents and caregivers, according to a Unicef report.

The report, drawing on data from 190 countries, paints a picture of endemic physical and emotional violence inflicted daily on children, mostly at home and in peacetime rather than on the streets or during war. Homicide is especially common in some of the Latin American countries from which children are fleeing by the tens of thousands into the US: It is the leading killer

of adolescent boys ages 19 and younger in El Salvador, Guatemala and Venezuela. Central and Eastern Europe report the lowest rates of homicide among children.

Overall, war accounts for a small share of violence against children. But during conflicts and other humanitarian crises, domestic violence against women and children rises measurably, according to the authors of the study.

"Most violence against children occurs at the hands of the people charged with their care or with whom they interact daily — caregivers, peers and intimate partners," the report says.

About 6 in 10 children, 1 billion

worldwide, are subjected to corporal punishment as a form of discipline by their caregivers, including parents, although the report concludes that "the most severe forms of corporal punishment — hitting a child on the head, ears or face or hitting a child hard and repeatedly — are less common over all."

Among girls ages 15 to 19, almost

60pc

Or 6 in 10 children aged 2 to 14 are regularly beaten by parents and caregivers, according to a Unicef report.

one-fourth said they had been the victims of "some form of physical violence since age 15." They said they suffered most at the hands of the men to whom they were closest. In countries as varied as India and Zambia, for instance, more than 70 percent of girls named their current or former husbands or partners as the perpetrators of physical violence against them.

There seems to be widespread social acceptance of the practice: Half of all girls ages 15 to 19 said they believed a man was sometimes justified in hitting his wife.

Likewise, girls worldwide reported being subjected to sexual violence at the hands of their hus-

bands and boyfriends. One in 10 said they had experienced "forced intercourse or other forced sexual acts at some point in their lives." Boys were found to have experienced sexual violence, too, but to a lesser extent.

In the US, 35 per cent of girls ages 14 to 17, and 20 per cent of boys in the same age range, had experienced such violence.

Separately, an advocacy group called the Watchlist on Children and Armed Conflict issued a report Thursday documenting the recruitment of child soldiers by the militant group Boko Haram in Nigeria, and by a civil defence group formed to counter the militants.

SUSTAINABLE DEVELOPMENT GOALS

Mobile broadband can make you \$11,000 richer

Where should the global community focus its attention over the next 15 years? Health, nutrition and education seem obvious priorities, but surprisingly, there is also a strong case for broadband access to be considered. Tripling mobile Internet access from 21 per cent to 60 per cent in developing countries over the next 15 years could make this part of the world \$22 trillion richer.

This discussion matters because the world's 193 governments will meet at the UN headquarters in September to finalise a list of targets for the world to meet by 2030. The Copenhagen Consensus has asked 60 teams of economists, including several Nobel laureates, to investigate which targets would do the most good for every dollar spent, to help this meeting make the best choices.

Prof Emmanuelle Auriol and Alexia Lee González Fanfalone from the Toulouse School of Economics suggest in a new analysis that broadband could very well be one of the best investments for the future.

The rapid rollout of broadband services has transformed the lives of people in the industrialised world, and there is every reason to expect that developing countries could benefit at least as much. Access to market information will enable farmers to know the market price for their surplus crops so they are not cheated by unscrupulous traders, and fishermen can land their catch at the port offering the best price. Economic models project that tripling mobile broadband coverage in the developing world could add up to \$400 billion to global GDP and create over 10 million direct jobs.

A World Bank study showed that a 10 per cent increase in broadband penetration increased GDP growth by 1.4 per cent in low to medium income countries. This is important, be-



Mr Mwangi Muhoro uses his mobile phone to control a self-modified incubator in Nyeri town, central Kenya. The technology helps to minimise human interference during the incubation process. Picture: File

COMMENTARY DR BJØRN LOMBORG

The biggest benefits will always come from providing Internet connection to people who don't already have them.

cause the digital divide among developed and developing regions of the world persists and closing it could give a big boost to development. For example, while mobile broadband is used by over 83 per cent of people in the industrialised world, penetration is only 21 per cent in developing countries.

While governments in Europe and elsewhere continue to invest in faster and better broadband, the biggest benefits will always come from providing Internet connection to people who don't already have them, most of whom live in developing and emerging countries. Here, the developing world can leapfrog industrialised countries, eschew expensive fibre-optic cables in

what is called the "last mile" or access part of the network, and go straight to mobile broadband.

The use of mobile phones is already spreading rapidly in developing countries. Data services can use the same system. In China, three-quarters of Internet users access it via mobile phones, and in Ethiopia and Uganda, four out of five use the mobile Internet. Thus rolling out mobile broadband seems a cost-effective solution given its pervasiveness and recent technological advances in mobile networks.

The World Bank study shows that increasing mobile broadband about three fold in developing regions — from 21 to 60 per cent — will have a significant cost (about \$1.3 trillion). This is the cost of the extra infrastructure needed to hook up about three billion more connections to the Internet. However, it will also increase GDP growth.

By 2020, the benefits would be about \$0.5 trillion annually, and these would increase further towards 2030. Over the com-

ing decades, the total benefits would reach about \$22 trillion. For every dollar spent on mobile broadband, the academics estimate a benefit of \$17. Investing in mobile broadband for the developing world looks like a smart move.

If the goal of 60 per cent broadband by 2030 is achieved, it will make each person in the developing world who was previously not connected almost \$11,000 richer on average.

Broadband is such an important enabling technology that it is difficult to estimate the complete impact on the economy, which will vary with local circumstances. What the study does show, though, is that rolling out Internet access is money well spent. Jobs are created directly in the organisation providing the network and indirectly in the supply chain.

Once in place, broadband helps to create more jobs in the wider economy. Companies become more efficient and innovative. All these factors increase the rate of economic growth.

Apart from the direct effects

on economic growth and job creation, broadband has other key benefits for least developed countries.

Dr Pantelis Koutroumpis of Imperial College London contributed his analysis of these: Nine hundred million people live in LDCs, and only 6.7 per cent are Internet users. On the other hand, almost 60 per cent of these people use a mobile phone.

Adding broadband via mobile networks would reach a large part of the population quickly, giving them access to the same information as European or American citizens. But the benefits are much wider. Smartphones with simple adaptations can be used in a range of health screening tests (for example, for cardiovascular disease, HIV and other pathogens, or malaria) and the results sent straight to hospitals for an immediate response. Broadband access could provide educational material and improve schooling. And Internet access could enable real time, on-demand transport services for remote areas.

With the Internet being such an important resource in the modern world, broadband has become a vital platform technology that helps to boost economic growth and has the potential of lifting people out of poverty. Health, nutrition and education are among the other important areas that would benefit them. There is a strong case for governments looking to the next set of global targets to include broadband access.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of "The Sceptical Environmentalist and Cool It." His new book is "How To Spend \$75 Billion to Make the World a Better Place."

In 2015, technology shifts accelerate, china rules

By STEVE LOHR
The New York Times

IN THE year-end predictions game, most technology forecasts tend to be either blue sky or boring, flights of imagination or a firm grasp of the obvious.

For the past several years, International Data Corporation (IDC) has published prediction reports that generally avoid the pitfalls of the genre, and offer a useful framework for thinking about the trajectory of trends in technology. In the technology research firm's predictions for 2015 a couple of larger themes stand out. First is China. Most of the reporting and com-

mentary recently on the Chinese economy has been about its slowing growth and challenges.

"In information technology, it's just the opposite," Frank Gens, IDC's chief analyst, said in an interview. "China has a roaring domestic market in technology."

This year, IDC estimates that nearly 500 million smartphones will be sold in China, three times the number sold in the US and about one third of global sales. Roughly 85 per cent of the smartphones sold in China will be made by its domestic producers like Lenovo, Xiaomi, Huawei, ZTE and Coolpad.

The rising prowess of China's homegrown smartphone makers

will make it tougher for outsiders, as Samsung's slowing growth and profits recently reflect. Another theme in the IDC report is the quickening pace of the move from older technologies to new ones.

IDC predicts there will be a growth of 13 per cent in what the research firm calls "3rd platform" technologies (cloud, mobile, social and big data). By contrast, older technologies will face a no-growth "near recession," according to IDC, and "will shift fully into recession" by the second half of next year.

Cloud-computing data centres are the engine rooms of the other 3rd platform technologies of mobile, social and big data. Building these

cloud power plants is increasingly a costly, high-stakes endeavour. In 2015, IDC predicts, there will be a winnowing.

Candidates to drop out of delivering computing resources as a cloud service, Mr Gens said, include Hewlett-Packard and the telecommunications companies. But while some retreat, China will likely produce a major cloud rival or two, IDC predicts. Alibaba, China's dominant online merchant, Baidu, the Chinese search engine, or Tencent, China's big social network, might well move beyond building data centres for their own use to supplying cloud computing as a service — the path taken by both Amazon and Google.



Chinese technology giant Lenovo shop in Beijing. Picture: AFP

SUSTAINABLE DEVELOPMENT GOALS

Good nutrition makes healthy children and productive adults

COMMENTARY
DR BJØRN LOMBORG

"Over a working life (ages 21-50), we can expect that \$1 spent on early childhood nutrition will do about \$45 worth of good over a wide range of low- and middle-income countries."

The world faces many problems, among them feeding a growing population adequately. The good news is that we are well on track to halving the proportion of people suffering chronic hunger between 1990 and 2015. The bad news: That still leaves over 800 million people who go to bed hungry every night. Unfortunately, there are no easy ways to solve this problem quickly, but there are smart ways to use resources to do a lot of good both now and in the long term.

Both children and adults need a good quality diet but feeding young children well makes a big difference for their entire lives. The first 1,000 days of a child's life — from conception to age two — are vital for proper development. Poorly nourished infants don't grow as tall as their peers, and measuring the proportion of stunting (being smaller than the expected height for age) is a simple way of checking for malnourishment. In Rwanda, about 44 per cent of children under 5 years are stunted. These children don't just fail to thrive physically; they also fall behind better-fed ones in developing cognitive skills. Result? Stunted children do less well at school and lead poorer adult lives.

Actually, halving the proportion of hungry in the world was part of the promise of the United Nations (UN) in the Millennium Development Goals. Now, 193 national governments are work-

ing through the UN to decide on targets for the coming 15 years. Making smart choices is important, because that's the way we will do most good in the world by 2030. Putting money into ineffective projects would fail the world's poorest people.

Although there are lots of factors to take into account, the best basis for comparing competing targets is an economic assessment of costs and benefits. The Copenhagen Consensus Centre has asked over 60 expert economists to contribute to this important task. Their studies analyse a wide range of targets proposed as part of this next agenda, covering 18 broad areas.

Most people would feel that feeding people properly — particularly young children — is something we simply have to tackle. And it turns out that what looks like a good idea morally is also really good economically. Good nutrition helps children develop properly and produces people who are able to make the best of all the opportunities which come their way.

The difference is dramatic, and well illustrated by a follow-up to an experiment in Guatemala. Starting in 1969, preschool children in several villages were given a nutritionally enhanced diet and compared with similar children in neighboring communities, who got a less nutritionally useful diet. Going back to these same chil-



Feeding children properly is something we have to address. Picture: File

dren 35 years later, when they were mature adults, showed some startling differences. The well-nourished children were not stunted by age three, stayed in school longer and developed better cognitive skills as adults. They were more likely to be employed and earned higher wages; their better physical and mental development made them

more suitable for both skilled manual and white-collar jobs. A study in Brazil, for example, showed that just a one per cent increase in height raised average adult male earnings by 2.4 per cent.

In Guatemala, the children who were better nourished, turned out to have a much higher income as adults, com-

pared with the control group. They had a 66 per cent higher household consumption, an impressive improvement in quality of life from simple interventions in childhood. Spending a small amount — just \$96 in total — on providing nutritional supplements, improving the balance of the diet and deworming pays back handsomely. Over a working life, between the ages of 21 and 50, we can expect that a dollar spent on early childhood nutrition will on average do about \$45 worth of good over a wide range of low- and middle-income countries. That makes it a truly phenomenal use of money.

For Uganda, the benefit of better nutrition is estimated at up to Ush45 back on every Ush1. In the case of Kenya, this is higher still, up to Ksh60 of benefits for every Ush1 spent and this illustrates an important point.

It costs about as much to deliver good nutrition in each country, but the benefits are greater when income levels are already higher and the economy is growing strongly. The great thing about feeding infants well is that it starts a virtuous circle, with increasing benefits for succeeding generations. Good childhood nutrition produces people who can contribute more and help boost economic growth and can themselves bring up well-fed, healthy children. Healthy children grow up to be healthy, more productive adults who bring up the next generation to be even better fed, better educated and more productive.

Feeding people properly — and starting early — is not just a moral imperative; it also makes a lot of economic sense. That's the message that the world's governments and the UN will hear as they make their choice of targets for the post-2015 period.

“What looks like a good idea morally is also really good economically.”

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.



A good harvest: Uganda has initiated a project to increase access to financial services by rural populations to boost agricultural trade and commerce. Pic: File

\$29m for Uganda's agricultural project

By HALIMA ABDALLAH
Special Correspondent

UGANDA HAS secured a \$29 million loan from the International Fund for Agricultural Development (IFAD) for a project that aims to increase access to financial services by rural populations and increasing agricultural trade and commerce.

The seven-year Project for Financial Inclusion in Rural Areas (Profira) will be managed by the Ministry of Finance through the microfinance department.

The project is co-financed with \$5 million from the government of Uganda and \$1.4 million from the

beneficiaries, bringing total financing to \$36.6 million.

The financing agreement was signed last week in Rome by Grace Dinah Akello, Uganda's representative and Michel Mordasini, vice-president of IFAD.

It is expected that participants will see increased income and improved food and nutrition security by the end of the project.

"The supply of financial services to rural areas in Uganda is still very limited, falling significantly short of demand," said Mr Mordasini. "In these areas, community-based savings and credit groups are the only financial intermediaries responding

to financial services demands of the rural people," he added.

Profira is designed to help 576,000 financially excluded rural households, particularly women and young people, improve their economic activities and livelihoods. It will also expand and improve the communities' access to financial services, aiming to increase loans and savings resources available to and used by members.

Since 1982, Ifad has invested a total of \$325.5 million in 15 programmes and projects in Uganda. It is estimated nearly five million Ugandan rural households have benefitted from these investments.

SUSTAINABLE DEVELOPMENT GOALS

Making modern contraception freely available globally is a good investment

COMMENTARY DR BJØRN LOMBORG

"Providing contraception to the 215 million women who want to avoid pregnancy would cost about \$3.6 billion. It would result in 650,000 fewer newborn deaths."

There was a time we worried about a "population explosion," with ever more people fighting over ever fewer resources. However, the population growth has decreased since the late 1960s and resources have not run out.

There are still population problems, but the two main ones are very probably different from what you think.

The UN expects 2.4 billion more people by 2050. But contrary to common knowledge, this is not mostly about couples having lots of babies. Remember, the average woman in the developing world had 5.4 children in the early 1970s, but today that number has dropped to 2.7. In Uganda, the average woman used to have 7.1 children in 1970, today that number has dropped to 6.4.

Even if every man and woman just had one baby survive, world population would still increase by 1.9 billion by 2050. Still, if families have fewer children, they can invest more in their future, giving them much greater earning potential. As countries become more prosperous, their birth rates fall. Mothers have fewer children who are better-educated and have small families.

Increasing prosperity is shared among fewer people. This is what first happened in the Old World during the Industrial Revolution, and the living standards

of Europeans rose rapidly. More recently, a number of East Asian countries have gone through a similar transition, none more so than China. The good news is that it could work anywhere, also allowing African countries to catch up fast.

The Chinese government slowed the growth of its population by imposing a "one-child per family" rule. This may have been good economically, but was also an infringement of human rights. Fortunately, there are other, less drastic, ways to travel this road, particularly by making modern contraception available to everyone who wants it.

Population is just one key issue on the agenda for the international community at the moment. The problem is that, although everyone agrees that we should be doing everything we can to make poor people's lives better, prioritising a particular set of targets is difficult.

Governments and NGOs have been working together to agree how best to improve people's lives in the period to 2030, but there are still literally hundreds of possible targets, all of them stoutly defended by someone.

Having hundreds of priorities is like having none at all. That is why the Copenhagen Consensus is trying to help focus on the most effective targets, using the tools of economic analysis. Although economics does not provide the entire picture, un-



derstanding where we do most good is at least a very good starting point.

Groups of top economists are looking at each of 19 possible issues and making their recommendations. On the population issue, Hans-Peter Kohler and Jere Behrman from the University of Pennsylvania argue that making modern contraception freely available is a phenomenally good investment. Providing

contraception to the 215 million women who today want to avoid pregnancy but cannot, would cost about \$3.6 billion. It would annually result in 640,000 fewer newborn deaths, 150,000 fewer maternal deaths and 600,000 fewer children who lose their mother. Estimating this misery in economic terms may seem cold, but it makes it possible to compare contraception to other big challenges. In total, contra-

Contraception — including these free condoms at a clinic in Kenya — would avoid about \$145 billion in human misery.

Picture: File

ception would avoid about \$145 billion in human misery. That alone means that every dollar spent will do \$40 worth of good.

But experts also estimate that with fewer children, parents can afford better schooling, while society benefits from fewer costs from children and more income from a larger working population. Those benefits total \$288 billion per year, making a dollar spent on contraception do \$120 worth of good.

But development also means growth in older people and possibly shrinking populations. This is already happening in Europe and Japan, but will also start soon in China and eventually most places. Today, 12 per cent of the world's population is above 60, but in 36 years, that will almost double to 21 per cent. Uganda has fewer than one million people older than 65 today, but will have about five million by mid-century.

Although ageing may seem a less pressing problem than global population growth, it is real and has to be tackled. Policies aimed at increasing the birth rate in Europe and elsewhere have not been successful, but there is a better solution: Allow more migration. Properly managed, this can benefit the receiving nation (getting more workers), the migrants (getting better pay) and the sending country (getting remittances). In total, it turns out that the benefits are more than forty times the cost.

There are other promising targets, which are more difficult to cost — discouraging early retirement and dependency, for example. But overall, the economists make a powerful argument for why contraception and migration should be prioritised on the list of global targets.

Dr. Bjorn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

EA oil and gas sector in dire need of infrastructure

By SPECIAL CORRESPONDENT
The EastAfrican

OFFSHORE EXPLORATION has increased exponentially over the past five years but East Africa will first need to secure financing to develop infrastructure if it is to gain momentum, the Standard Bank Group said on Wednesday.

Standard's director of oil and gas Charlie Houston said Uganda, Kenya and Tanzania will need \$50 billion to \$75 billion in energy investments over the next five to seven years.

Mr Houston said crude oil and natural gas resources will require associated infrastructure like export pipelines, refineries and LNG facilities on a continent that lags behind with regard to energy access.

"Development of oil and gas across East Africa

will be staggered over time. The success of initial development will drive further investment as recoverable resources increase with further exploration and appraisal," he said.

Tullow Oil and Africa Oil Corporation have discovered 600 million barrels of crude oil in South Lokichar basin in northwestern Kenya. Oil resources in the Albertine basin in western Uganda were revised upwards in August by the government to 6.5 billion barrels after further appraisal work.

Mr Houston said the immediate challenge is for stakeholders to agree on the commercial ownership structure of the pipeline to the Kenyan Coast, from where crude will be shipped to export markets.

"Without this agreement and the pipeline, the vast bulk of the discovered reserves cannot be

monetised and will not attract the necessary investment from the international investor base," he said.

Kenya and Uganda are next year set to jointly start building next year a \$4 billion crude oil export pipeline running 1,300 kilometres from Hoima in Uganda to Lamu in Kenya. Completion of the line is expected in 2018.

The Anadarko and Eni discoveries in Areas 1 and 4 in Mozambique could hold more than 100 trillion cubic feet of gas while in Tanzania, BG Group and Ophir Energy have also found major gas deposits, as has Statoil and its partner ExxonMobil.

However, before that can happen, a huge challenge is to build facilities to turn the reserves into liquefied natural gas, which can then be shipped to the markets.



Associate infrastructure like export pipelines, refineries and LNG facilities is sorely needed. Picture: File

SUSTAINABLE DEVELOPMENT GOALS

Food, free trade, immigration and other smart ways to end poverty

Extrême poverty — or living on less than \$1.25 a day — is a continuing problem for far too many people today. In Uganda, for example, such poverty still afflicts about 13 million people, according to the World Bank.

It is also arguably one of the most important challenges to address because more prosperous people can afford more to eat, get better access to education and healthcare and generally live better lives. So it's good to see that excellent progress has been made in poverty reduction in recent years. The proportion of people in developing countries living in poverty more than halved between 1990 and 2010. In Uganda, the number of poor has dropped from 10.6 million people in 1992 to 8.1 million in 2009.

Globally, according to the World Bank, just over one billion people continue to live in poverty, although that's down from 1.9 billion in 1990. The big question now is whether this rapid improvement can be maintained so that we can truly make poverty history.

This is the question Prof John Gibson of the University of Waikato sets out to answer in a paper commissioned the Copenhagen Consensus Centre. He is one of more than 60 expert economists looking at a range of ambitious targets covering 18 broad themes and estimating the costs and benefits of various options. This is the most effective way for a level playing field enabling sensible choices between the large number of competing options designed to make the world a better place.

At the turn of the century, the Millennium Development Goals (MDGs) were agreed, and great progress has been made in a range of important areas, including poverty reduction. Now 193 national governments are working at the UN to agree to a new set of global targets for the next 15 years. Since we have limited means to address all the world's ills, the targets have to be chosen carefully to be both achievable and cost-effective.

The obvious solution is probably not to address poverty head-on but focus on another policy that could help dramatically: Free trade. The costs of successfully completing the Doha Round of World Trade Organisation talks would generate more than 2,000 times their value in benefits for developing countries and lift



Smart programmes can help millions of people, like the residents of Katwe slums in Kampala, out of poverty. Picture: File

COMMENTARY DR BJØRN LOMBORG

We can estimate the lowest cost for taking people out of poverty as the money needed to plug their poverty gap

160 million out of poverty. For Uganda, this would mean \$150 more per person in 2030.

However, this policy has also turned out to be very hard to implement, and Doha is languishing.

Prof Gibson points out that already for the MDGs in 2000, a number of targets were assessed and rejected in favour of a simple one: Halving the rate of absolute poverty. He argues that this kind of target is still the most sensible one.

However, any target can sound deceptively simple but measuring progress — or even setting a reliable baseline — can be fraught with difficulty. Collecting reliable statistical data is almost impossible in countries with little survey infrastructure, the very places where poverty is still a big problem. And, if we can't measure it, we don't know if resources are being used properly.

The best that can be done is to take figures where they are available and draw whatever broader lessons we can. This is

possible for Vietnam, which has made astonishing progress in recent years. In 1993, 64 per cent of the population were below the poverty line; by 2010 this had fallen to just five per cent. The benefits are wide-ranging. Not only are people earning more and have better access for good nutrition but more prosperous people are typically better educated, live longer and can make a bigger contribution to the wider economy.

We can estimate the lowest cost for taking people out of poverty as the sum of money needed to plug their poverty gap. It turns out that each \$1 transferred pays back \$6-\$9 in overall benefits, both measured in increased longevity, better education and higher incomes.

This, however, assumes that money can be perfectly targeted but this is an impossible task. Some of the money will be misused and some lost, so the true payback may be reduced by half, to perhaps \$4-\$6 for each \$1 spent.

The other important point is that the tremendous progress made in a range of East Asian countries (including Vietnam) in the recent past is due to a number of factors unlikely to come together elsewhere. This is particularly true of sub-Saharan Africa, where poverty is becoming concentrated although in the mid-1980s rates of poverty were very similar in both regions. Many East Asian countries can be thought of as states with the capacity to make institutional

reforms to boost growth. There are unfortunately few African states in a similar position.

Another important factor at play in East Asia is the fact that the staple food is rice. As prosperity has increased and more wheat and meat have been eaten, rice has become cheaper for the poor who depend most on it. In African countries, where there is much more dependence on wheat and maize, the demand for these grains for animal feed and biofuels pushes the price up. This doesn't mean we should give up on other regions but we have to recognise the difficulty of maintaining the rapid rate of global poverty reduction seen over the past two decades.

Poverty is an undeniably complex issue but experience shows that plenty can be done. Free trade, for one, can boost the growth of developing economies and provide more jobs. Freer migration could also be a great way to raise individual incomes. Investing in smart programmes can help millions of people out of poverty.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Skeptical Environmentalist and Cool It. His new book is How To Spend \$75 Billion to Make the World a Better Place

'We have a homicide problem'

HOMICIDE AND acts of personal violence kill more people than wars, and are the third-leading cause of death among men aged 15 to 44, according to a United Nations report.

Around the world, there were about 475,000 homicide deaths in 2012 and about 6 million since 2000.

The figures are based on detailed data collection from 133 countries that together account for 88 per cent of the global population. Figures are not yet available for 2013 or 2014.

The study, a collaborative effort of the World Health Organisation, the UN Development Programme and the UN Office on Drugs and Crime, is intended to provide a baseline for assessing efforts to address domestic violence, including child maltreatment, youth violence, intimate partner and sexual violence, and elder abuse, as well as homicides.

According to the report, 1 in 4 children has been physically abused, 1 in 5 girls has been sexually abused, and 1 in 3 women has been the victim of physical or sexual violence committed by an intimate partner at some point in life. The findings are based on analysis of a wide range of surveys; in the case of abuse of children, it draws on information provided by adults.

Alexander Butchart, WHO coordinator for prevention of violence, said that he was astonished not just by the high rates of violence found in the survey, but also that the rates were similar in all regions of the world.

More than one billion people are affected by violence in their lifetime, according to Dr Etienne Krug, a senior WHO official. Dr Krug said that the consequences of the deaths and injuries from acts of personal violence were themselves "a huge public health problem."

Only one-third of the countries surveyed offer services to reduce or prevent the problem, such as anti-bullying programmes in schools or home-nurse visits to families at risk. Half the countries surveyed have no intervention services to protect or support victims of violence.

While most countries have enacted laws meant to prevent violence, the report said, only slightly more than half are enforcing them.

Mental health services for victims are provided by fewer than half of the countries surveyed, and by only 15 per cent in Africa, where the need can be especially acute, the report said.

SUSTAINABLE DEVELOPMENT GOALS

From 'brain drain' to 'brain gain': Up migration to make the world richer

There is a way to make the poor of this world \$500 billion better off, but this solution is rarely discussed. This matters, because the international community is gearing up to produce the next set of development goals for 2015-2030, to follow on from the Millennium Development Goals. Some \$2.5 trillion in development aid plus unknown trillions from national budgets hang in the balance, so getting our priorities right is vital. Spending money on poor targets is possibly a wasted opportunity to do much more good elsewhere.

To do the most good, the Copenhagen Consensus has asked 63 teams of the world's top economists to look at the economic, social and environmental costs and benefits of all the top targets. One of these is the transfer of technology from rich to poor and middle-income countries as an aid to sustainable development.

The reason technology is so important is that it makes people more productive, so boosting overall economic growth. Not just that but, once knowledge has been gained, it is embedded in society and can be used as a stepping stone for future growth. Countries with a reasonable technical or research and development base are in a better position to absorb and make the best use of more new technologies as they become available.

Prof Keith E. Maskus from the University of Colorado has written an extensive paper on what works and how much good it will do. As he rightly points out, the UN's technology-related targets are simply too general and bland. Instead, using the economic literature, he puts forward two proposals.

The first proposal is straightforward: If our goal is to get more technology available for



the poor, maybe we should simply increase investment in research and development, especially in the developing world.

The point is the benefits from R&D do not just go to the company doing it; there are also broader societal benefits as productivity gains occur elsewhere in the economy and other people learn on the job or see the possibility for more innovation. After Apple produced an innovative touchscreen on its first iPhone, the knowledge is now available to lots of products in many different areas.

This broader benefit justifies governments supporting research, either through tax credits or direct government spending on research in public institutions. On average, the developing countries spend just 0.2 per cent of their GDP on R&D and perhaps 0.3 per cent in 2030. If we instead aim at 0.5 per cent of GDP by 2030 and 1.5 per cent for emerging economies, this would naturally increase the direct government costs, but it would also increase the long-run technological innovation and capa-

If there is an opportunity to go abroad and make more money as a doctor or engineer, it will induce more young people to invest in a professional education, meaning more doctors and technicians in the long run.

Picture: File

COMMENTARY
DR BJØRN LOMBORG

"Instead of focusing on innovating more technology to make people more productive, we could focus on getting more people to places where they would be productive."

bilities. For comparison, Kenya already spends about 1 per cent, so it is above the target, even if the average developing country is not.

The models estimate in total that for every dollar spent, we could likely end up doing \$3 worth of good. That is not bad.

However, there is another, and much more effective way to increase technological capabilities in low-income countries. Instead of focusing on innovating more technology to make people more productive, we could focus on getting more people to places where they would be productive.

While allowing the free mobility of goods (free trade) can add several percentage points to global GDP, we have long known

that free mobility of people could add anywhere from 67-147 per cent to global GDP. Allowing free mobility could essentially double the world's income.

This is because people in poor areas are not inherently unproductive but their circumstances mostly make them unproductive. So, if they were to migrate, from say, Kenya to the European Union, they would become much more productive.

Of course, absolutely free mobility would result in a massive relocation from poor to rich countries, which would likely engender huge political issues. But Prof Maskus suggests that we could start off

with a modest goal of increasing current skilled migration by 5-20 per cent with 10-year visas.

An increase in skilled migration could mean about 117,000 more managerial and technical workers, with about half going to the EU, 13,000 to other large economies like Turkey and South Africa, and 50,000 would be crossing borders to work within the African continent. Although other research shows migrants would only become half or less as productive as Europeans and other more productive neighbours, this would still make them much better off. The model shows they would earn \$22 billion more over the next 25 years. Moreover, as they would bring with them new ideas and concepts, they will increase productivity in the EU and elsewhere by \$660 million.

Of course, this will also mean an outflow of skilled workers from poorer countries. Maybe 6,900 people will leave Kenya for 10 years. But they will send back money — about \$410 million in total. And while many worry about a "brain drain," there is actually more evidence for a "brain gain": If there is an opportunity to go abroad and make more money as a doctor or engineer, it will induce more young people to invest in a professional education, meaning more doctors and technicians in the long run. And as these skilled professionals come back after 10 years, they will also bring back new ideas and higher productivity.

In total, the costs, mostly in lost tax revenue, are significantly outweighed by the gains. For every dollar spent, this target could do \$10 to \$48 worth of good. The potential benefits could go as high as \$500 billion. That should make the target of higher labour mobility a strong contender for the world's next set of goals.

*Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of *The Skeptical Environmentalist* and *Cool It*.*

Courageous and controversial scholar, artist and philosopher

FROM PAGE 25

ment and democracy. There are yet to emerge national leaders who will entrench the culture of accountability, inclusion and selfless service to the people. In his last days, Ali Mazrui was searching for national leaders who would steer the economic transformation of Africa, especially within the context of recent discoveries of natural resources. When will the leaders of pan-Africanism with

the fire of Kwame Nkrumah and Patrice Lumumba light up the African continent?

An interesting concept in the speculative discourse of pan-Africanism supported by Prof Mazrui, is Afrabia. This concept, inspired by the blurring of the boundaries between Africa and the Middle East, would seem to suggest that the two regions are in the process of merging. The East African Coast seems to be a continuum of parts of the Middle East, especially Oman.

In fact, the number of families that speak Kiswahili in Oman is quite impressive and my own Kiswahili teacher, the late Hilal Bualy, retired to Oman. So did Mwalimu Tejani, formerly of Kenyatta University College. Whether it is cultural connections or relations of ideology, geography or genealogy, the interaction between Africa and the Middle East is extremely intense.

Moreover, the concept of Afrabia is not too far-fetched when one considers the im-

pact of global terrorism and the spread of Islam as a cultural and political force.

Inclusive politics

Ali Mazrui was totally committed to inclusive politics. Writing on language and governance in *The Power of Babel*, he laments the political dependence on imperial languages. This dependence excludes the majority of citizens from the governance process. Even more comical is the fact that on days of national signif-

icance, citizens are addressed by their leaders, not in the national language, but in a European language. Furthermore, European languages are the official languages of constitutions in Africa, notwithstanding the fact that the majority of the people who face the courts on a daily basis speak African languages. Without a clear understanding of the purpose of leadership, these contradictions will persist.

As we celebrate the life of Prof Ali Mazrui, the contro-

versial and courageous son of Africa, let us take time to critically read his writings. Let us ask the question: What happens to a soul genuinely wanting to come home, but denied the opportunity to do so by an elite frightened by the power of ideas?

Prof Kimani Njogu is the director of Twaweza Communications and chair of the Kenya National Kiswahili Committee (kimani.njogu@gmail.com)

SUSTAINABLE DEVELOPMENT GOALS

Free regional trade could make every East African richer by \$200 a year

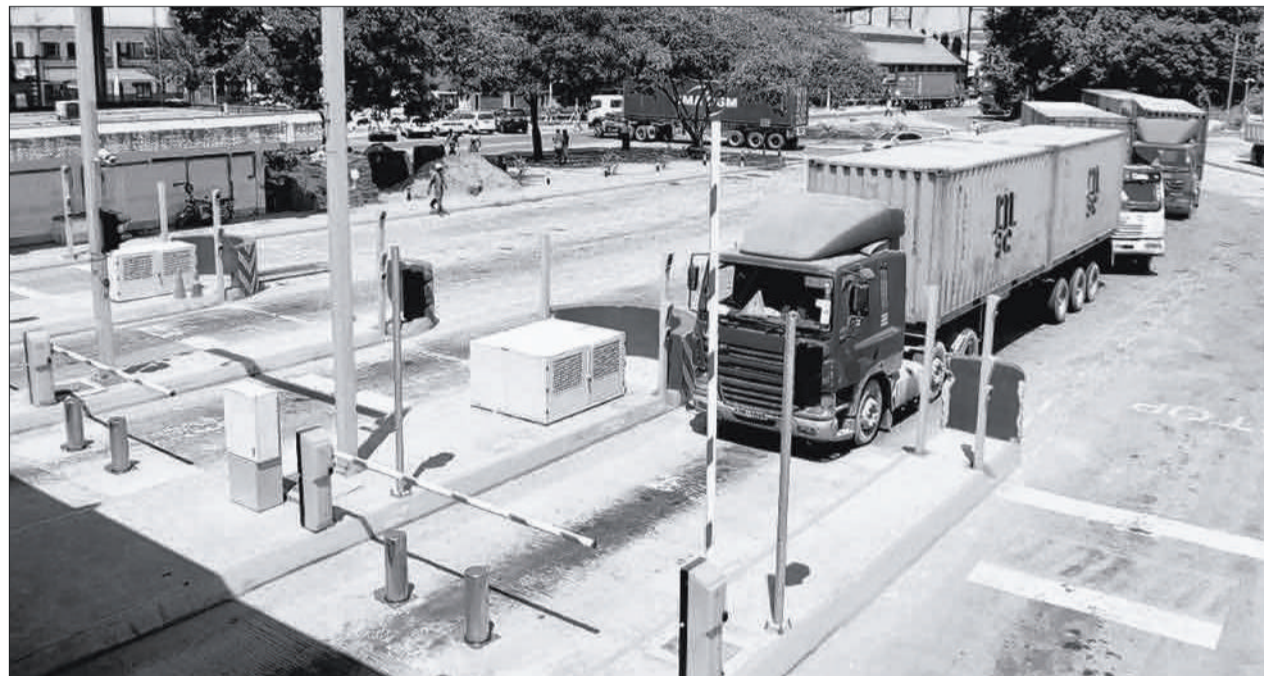
With one simple policy — more free trade — we could make the world \$500 trillion better off and lift 160 million people out of extreme poverty. If there is one question we have to ask ourselves, it is: Why don't we?

In 2000, the international community agreed to a set of important targets to improve the lot of the world's poorest by 2015, the Millennium Development Goals. Many of these goals were extremely successful in vital areas such as reducing poverty and hunger, but there is still much to be done. Through the UN, world leaders are now working on the next set of targets for 2015-2030. As the world will spend \$2.5 trillion just on development aid over that period, and countless trillions in national budgets, there are lots of contenders for these targets.

That is why the Copenhagen Consensus has asked some 60 of the world's top economists to look at the economic, social and environmental costs and benefits of many different targets, in areas like health, nutrition and education. These are all important but one issue is often missing. As argued in a new paper by Prof Kym Anderson of the University of Adelaide, reducing trade barriers not only makes the world richer, it is a great enabler for reducing poverty, curtailing hunger, improving health, and restoring the environment.

What it does best

Freer trade means that each country can focus on doing what it does best, making all countries better off. Big strides have been made in liberalisation since the Second World War, but the latest phase — the Doha Development Agenda — seems stalled, with



little hope of a resolution. This is dreadful, particularly for developing countries, because two of the main areas where agreement is elusive are agriculture and textiles, both sectors where lower wage countries in the tropics and sub-tropics have a comparative advantage.

A successful Doha round could get Africa better prices for agricultural produce and textile, which would make Africa richer. But more importantly, free trade will help Africa focus on what it does best, boosting growth as happened with China.

Analysis shows that there would be substantial rewards for completing the Doha round. The direct economic benefits would be a 1.1 per cent increase in global GDP. This sounds modest. But because it would impact the entire world economy, by 2030 we would be about \$1.5 trillion richer every year.

But open economies also grow faster. In the past 50 years,

A loaded truck leaving the Mombasa port. Free trade will help Africa focus on what it does best, boosting growth as happened with China.

Picture: Laban Walloga

COMMENTARY DR BJØRN LOMBORG

"The jobs that are lost from free trade are obvious — witness Western farmers protesting losing their subsidies. But the benefits are spread out — for example, food will be a bit cheaper for everyone."

countries as diverse as South Korea, Chile and India have seen their rate of growth shoot up by 1.5 per cent per annum on average, shortly after liberalisation. If Doha can be completed, it is estimated that the global economy will grow by an extra 0.6 per cent for the next few decades. By 2030, such dynamic growth would make the world economy \$11.5 trillion larger each year, leaving us 10 per cent more resources to fix all other problems.

And a large part of the benefit will go to the developing world, which by 2030 would see

its economy \$7 trillion larger each year. On average, this increased GDP is equivalent to \$1,000 more for every person in the developing world. For Kenya and Uganda, this would mean the average person could be making an extra \$250 and \$150 respectively, while an average Rwandan and Tanzanian would both be \$200 richer per year.

By the end of the century, free trade could leave our grandchildren 20 per cent better off, or with \$100 trillion more every year than they would otherwise have had.

For now, powerful vested interests make it hard for politicians to compromise. The jobs that are lost from free trade are obvious and concentrated — witness Western farmers protesting losing their subsidies. But the benefits are spread out — for example, food will be a bit cheaper for everyone, and Third World farmers will see greater profits.

Yet we need to keep a sense of proportion. There are real costs from free trade in terms of workers needing retraining and the provision of unemployment benefits. These outlays will occur mostly over the next decade and will cost \$100 billion-\$300 billion. But the benefits will accrue for at least the next nine decades, and total \$500 trillion in present day dollars. For every dollar spent, we will achieve more than \$3,000 of benefits.

And this will have huge impacts for the world's poor. We know that economic growth has been one of the major drivers of poverty reduction — China's rapid growth over the past 30 years has pulled 680 million people out of poverty, the most ever achieved in human history.

Yet we still have about 1.2 billion people living in abject poverty today. With future growth, this number will likely be reduced to a still chokingly high 700 million by 2030. But if we achieve freer trade through the Doha round, the faster growth could lift an extra 160 million people out of poverty by 2030.

It is worth stepping back and realising this amazing opportunity for the world. Yes, we should help in areas like food, education, health, and the environment. But if we could just get it right on free trade, we could possibly do more good here than anywhere else — leaving the world \$500 trillion better off, with 160 million fewer poor.

Dr. Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Sceptical Environmentalist and Cool It.

Make 'ageing well' a global priority, urges new report

By **CHRISTABEL LIGAMI**
Special Correspondent

AS PEOPLE live longer, soaring levels of chronic illness and diminished wellbeing are poised to become a major global public health challenge and thus "ageing well" must be a global priority, according to a new series on health and ageing, published in *The Lancet*.

It warns that unless health systems find effective strategies to address the problems faced by an ageing world population, the growing burden of chronic disease will greatly affect the quality of life of older people.

The Lancet report indicates that worldwide, life expectancy of older people continues to rise. By 2020, the number of people aged 60 years and older will outnumber children younger than five years.

By 2050, the world's population aged 60 years and older is expected to total 2 billion, up from 841 million today. Eighty per cent of these older people will be living in low-income and middle-income countries.

The increase in longevity, especially in high-income countries, has been largely due to the decline in deaths from cardiovascular disease, mainly because of simple, cost-effective strategies to reduce tobacco

use and high blood pressure, and improved coverage and effectiveness of health intervention.

However, people are not necessarily healthier than before — nearly a quarter (23 per cent) of the overall global burden of death and illness is in people aged over 60, and much of this burden is attributable to long-term illness caused by diseases such as cancer, chronic respiratory diseases, heart disease, musculoskeletal diseases (such as arthritis and osteoporosis), and mental and neurological disorders.

This long-term burden of illness and diminished wellbeing affects patients, their families, health

systems, and economies, and is forecast to accelerate. For example, latest estimates indicate that the number of people with dementia is expected to rise from 44 million now, to 135 million by 2050.

"Deep and fundamental reforms of health and social care systems will be required," says John Beard, director of the Department of Ageing and Life Course at the World Health Organisation, and co-leader of the series.

"But we must be careful that these reforms do not reinforce the inequities that drive much of the poor health and functional limitation we see in older age."



By 2020, the world's population aged 60 years and older is expected to reach two billion. Picture: File

SUSTAINABLE DEVELOPMENT GOALS



Villagers in Kano, Kenya carry jerricans with water fetched from ponds that are about to dry. They walk for longer distances with many abandoning their routine way of life to look for the precious commodity. Picture: File

Improved sanitation, access to water good for development

There are plenty of things, that those of us lucky enough to live in the industrialised world take for granted; running water and flush toilets are among the most basic of these. Almost half the developing world — 2.5 billion people — lack even a basic latrine and 1 billion have to resort to what is politely known as open defecation. In Kenya, nearly 23 million people in rural areas still lack basic sanitation, and across sub-Saharan Africa it affects almost 450.5 million people.

Each day, 136 million town dwellers spend more than 40 minutes to fetch water. Each day, more than 600 million in rural areas spend more than an hour to fetch their water. About 750 million people have no access to any basic source of drinking water. In rural Kenya, almost 14.8 million people still lack basic water access, a fate shared with nearly 275 million across sub-Saharan Africa.

The good news is that we can do something. Over the past 25 years, more than 2 billion have gained access to better water and almost 2 billion to sanitation.

Investing a dollar in basic sanitation can provide \$3 worth of benefits. Basic water supply into the home can do even more good, giving more than \$4 in benefits for each dollar spent. Getting rid of open defecation can help to the tune of \$6 per dollar spent.

Doing this sort of analysis is difficult but very worthwhile. At the turn of the century, the global community committed to a set of targets under the umbrella of the Millennium Development Goals, aimed at improving the world as much as possible

COMMENTARY

DR BJØRN LOMBORG

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over the next 15 years. Their water and sanitation goal helped two billion people get better access.

Now, with the deadline fast approaching, 193 national governments are aiming to build on the successes already achieved and agree on a new set of targets to improve people's lives even more by 2030.

But resources and capabilities are not infinite, so we have to get this right. That's why the Copenhagen Consensus Centre has asked more than 60 teams of expert economists to analyse some of the more promising proposals put forward and make their own recommendations for which should make the final cut. Get it right, and limited resources can be used to make a real difference to the world over the next 15 years. Get it wrong, and the world's poorest are the ones who will suffer.

So, what is the case for prioritising clean water and sanitation? The most obvious benefit comes in the form of better health. Providing even basic latrines and hand washing facilities can make a big impact on the spread of disease.

There are a number of water-borne infectious diseases that could be curtailed. The biggest and deadliest are those that cause diarrhoea, including cholera and a range of viral infections. These are a significant cause of death, particularly among young

children, but infected adults may be too ill to work, and older children unfit to go to school.

The other big benefit is time-saving. The analysis of the basic water supply and sanitation targets assumes that people in rural villages no longer have to spend an hour a day on average fetching water, but can collect the same amount in 20 minutes. In urban areas — which will continue to grow fast over coming decades — it is expected that people will halve the time needed to collect water from 40 to 20 minutes. For an American or European it may still sound onerous, but the time saving and health improvement that come from even something as rudimentary as this would be an enormous benefit for hundreds of millions of people.

Because we will add an extra billion people to the global population over the next 15 years, getting water and sanitation to everyone will require a substantial effort.

However, a team of economists from the World Bank has estimated that providing sanitation for 3 billion more people will cost about \$31 billion annually. This is the cost of providing such low-cost solutions as pour-flush and dry pit latrines in rural areas and flush toilets to a septic tank in urban areas, shared by less than 30 people. Yet, the benefits will amount to \$92 billion annually, about three-quarters of which are time

benefits, and the remaining one-quarter are health benefits. This means that every dollar spent on sanitation will save the world's most vulnerable about \$3, measured in better health and less time wasted.

Providing improved water to an extra 2.3 billion people will cost \$14 billion annually. This doesn't mean industrialised world standards of piped water to every household, but simply providing a protected community source of water that can be reached within 30 minutes or less. Yet again, it will create much larger benefits, with less disease and death and less wasted time. In all, the benefits are estimated at \$52 billion annually, so that each dollar spent will generate \$4 of benefits.

One stop on the way to better sanitation is simply avoiding open defecation in rural areas with shared latrine or communal toilets. Because this is even cheaper at \$13 billion annually, each dollar can deliver a substantial benefit of \$6.

In short, there is a strong case for investing in improved water supplies and sanitation. This would help half this world's population and benefit the poorest the most.

Dr Bjørn Lomborg, an adjunct professor at the Copenhagen Business School, directs the Copenhagen Consensus Centre, ranking the smartest solutions to the world's biggest problems by cost-benefit. He is the author of The Septic Environmentalist and Cool It, His new book is How To Spend \$75 Billion to Make the World a Better Place.

Schoolgirls facing more threats — UN

ATTACKS AGAINST girls attending school or seeking access to education appear to be increasing despite legal protections of gender equality, the United Nations has said in a report issued Monday last week.

The report, posted on the UN Human Rights Council's website, says that attacks on schools have occurred in at least 70 countries from 2009 to 2014, and that many of the attacks were "specifically directed at girls, parents and teachers advocating for gender equality in education."

It also says that based on UN data, an estimated 3,600 attacks against educational institutions, teachers and students were recorded in 2012 alone.

Although constitutional guarantees are enshrined in more than 140 countries and a global consensus prevails on the right to education for all, the report says, "Attacks against girls accessing education persist and, alarmingly, appear in some countries to be occurring with increased regularity."

The study, conducted by the Women's Human Rights and Gender section of the Human Rights Council, was an assessment based on a compilation of research, including by other UN agencies and outside rights groups and academics.

It did not provide year-by-year or country-by-country data to substantiate its assertion of an increase, but highlighted some of the brazen assaults on women and girls in school that have captured the world's attention in recent years.

They included the Pakistani Taliban's assault on a school in Peshawar in December that killed at least 132 uniformed schoolchildren, both boys and girls;

the abduction in April of nearly 300 schoolgirls in northern Nigeria by Boko Haram, the radical Islamist insurgent group; the 2012 shooting of Malala Yousafzai, the Pakistani schoolgirl who won a Nobel Peace Prize last year for her education activism; and numerous episodes of poisoning and acid attacks on schoolgirls in Afghanistan between 2012 and last year.

In conflict zones, the report says, women and girls have sometimes been abducted or forcibly recruited precisely because they were educated. It cites as an example the Lord's Resistance

3,600

Estimated number of attacks against institutions, teachers and students

Army, the renegade guerrilla force of Central Africa, which has captured secondary school girls in northern Uganda known for their literacy and mathematics skills, making them "valuable recruits for military communications work."

In addition to attacks on schools, the report says, "many more girls around the world routinely experience gender-related violence and other forms of discrimination that limit or prohibit the free exercise of their right to education."

The report also speaks of what it called the ripple effect from attacks on girls' education. Not only do they affect "the lives of the girls and communities who are directly concerned," the report says, "they also send a signal to other parents and guardians that schools are not safe places for girls."

New York Times



A screen grab from a video of Nigerian Islamist extremist group Boko Haram shows a girl talking to the camera. It is believed these were the abducted schoolgirls. Picture: File