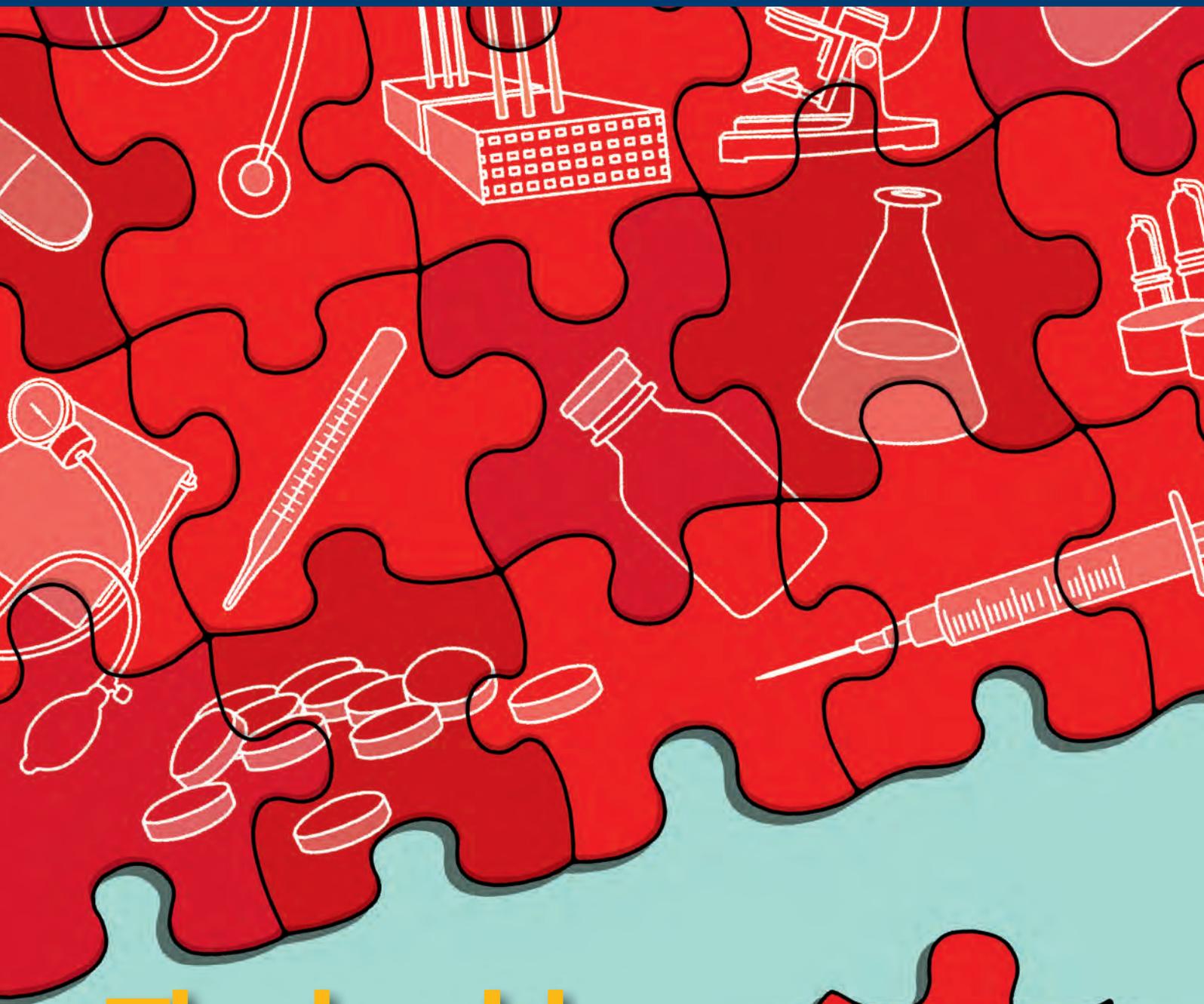


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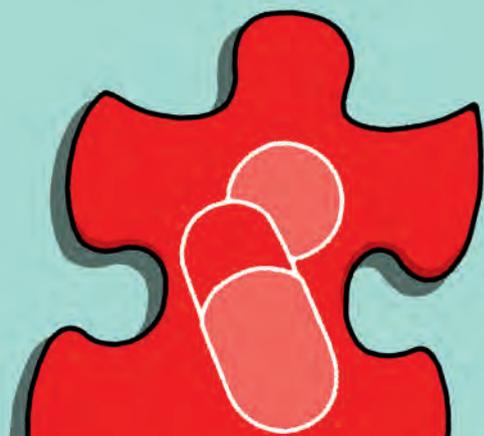
Industry for Development

2nd quarter 2012

- Creating impact by design
- Gas flaring
- Deadly denim
- Quality medicines for all
- Viet Nam



The health of nations





NUMBER 1, DECEMBER 2009
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 ● The International Energy Agency's Nobuo Tanaka looks at energy transitions for industry ● Energy for all – Kandeh Yumkella and Leena Srivastava on what needs to be done to improve energy access



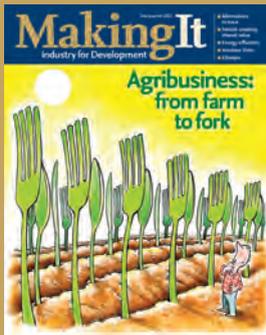
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 ● China's stunning economic rise: interview with minister of commerce, Chen Deming ● Towards a more productive debate – Ha-Joon Chang calls for an acceptance that industrial policy can work



NUMBER 4, NOVEMBER 2010
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NUMBER 5, FEBRUARY 2011
 ● A window of opportunity for world trade? – Peter Sutherland assesses the prospects for the conclusion of a multilateral trade agreement ● A path to mutual prosperity – Xiao Ye on trade between sub-Saharan Africa and China



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 ● Feeding a crowded world – IFAD's Kanayo Nwanze argues that smallholder farmers must have opportunities to be entrepreneurs ● Nestlé CEO Paul Bulcke on 'Creating Shared Value' ● Hot Topic: Does energy efficiency lead to increased energy consumption?



NUMBER 7, JULY 2011
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NUMBER 8, NOVEMBER 2011
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NUMBER 9, JANUARY 2012
 ● Jeremy Rifkin on the Third Industrial Revolution ● Morgan Bazilian and Kandeh Yumkella on the new economy: inclusive and sustainable ● Hot topic: Climate change, climate action

A quarterly magazine. Stimulating, critical and constructive. A forum for discussion and exchange about the intersection of industry and development.

Editorial

In terms of international development, it is often taken for granted that wealth inevitably leads to health, and that therefore only the countries with wealthier economies will be able to foster the conditions for a healthier population. In this context, international development efforts usually focus on interventions to kick-start economic growth, on the assumption that economic success will help eradicate sickness and disease. But what if the paradigm is flipped, and healthy populations become a building block for healthy economies? As well as *The Wealth of Nations* – the title of Adam Smith’s ‘free market bible’ – should we perhaps also be talking about the ‘health of nations’?

In this issue of *Making It*, our contributors consider some of the many intersections where productive activities and health concerns meet. In the keynote article, Professor Klaus Leisinger argues that tackling the cycle of poverty and poor health requires partnerships along the entire health value chain, and that pharmaceutical companies have a valuable contribution to make, alongside governments, international organizations and non-governmental organizations. Jürgen Reinhardt looks at the pharmaceutical industry from a different perspective, examining the prospects for the local production of pharmaceuticals in Africa.

Of course, there is much more to health and industry than just the pharmaceutical sector, and other contributors explore issues such as the risk to garment workers’ health in the name of fashion, the design of health care equipment for those on lower incomes, and the nutritional inadequacies of ‘fast’ or ‘junk’ food. Our Hot Topic offers contrasting views on efforts to bring an end to gas flaring, a practice all agree is a waste of potential energy, but those who live in the vicinity of where it takes place also claim is damaging their health.



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Cover illustrator **Mike King** is a graphic designer and poster artist from Portland, Oregon, USA, who works primarily in the music business. Best known for his album covers for Ben Harper, Jack Johnson, Pink Martini and Elliott Smith, his poster art has been exhibited in the US and around the world. His work can be viewed at www.crashamerica.com

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GLOBAL FORUM

The Global Forum section of *Making It* is a space for interaction and discussion, and we welcome reactions and responses from readers about any of the issues raised in the magazine. Letters for publication in *Making It* should be marked 'For publication', and sent either by email to: editor@makingitmagazine.net or by post to: The Editor, *Making It*, Room D2142, UNIDO, PO Box 300, 1400 Wien, Austria. (Letters/emails may be edited for reasons of space).

LETTERS

Greenwash

"Building the architecture for green growth" by the Korean president's representative in the last issue (*Making It*, issue 9) was a load of greenwash. Too bad that you were taken in. But not everyone is so gullible. This is from a recent article in the *Financial Times*: "South Korea has experienced one of the fastest development trajectories of any nation and has created a grim environmental mess. It is the fastest growing carbon emitter in the Organization for Economic Co-operation and Development. Environmental scientists are tearing their hair out, as Seoul rides rough-shod over international standards and agreements while being feted internationally for its green rhetoric."

The billions that South Korea is pumping into what it calls 'environmental projects' are in fact funding construction work and tourist resorts, further eroding the eco-systems already battered by rapid industrial growth. As the *FT* rightly points out, "Much of the Korean countryside has already been savaged by construction and many so-called green projects are just an excuse to lay more tarmac, build hotels and develop wilderness that should be left as animal

habitat.... South Korea's continuing land reclamations of fragile wetlands are an environmental disgrace."

● **John Devine, received by email.**

Women as entrepreneurs

I strongly support UNIDO's programme of promoting women's rural industries (*Making It*, issue 8). This effort continues a programme that we pursued for 26 years in Ghana, at the Technology Consultancy Centre of the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi. The work involved upgrading the technology of existing women's groups processing cassava and corn, extracting vegetable oils and spinning and weaving cotton. Just as in Mali, shea butter making featured in our programme and by upgrading the technology women's groups in the Northern Region were helped to export directly to the Body Shop, an internationally known beauty products manufacturer. Perhaps the most widely adopted innovation was beekeeping using the Kenya top-bar hive, which was taken up by women throughout the country, enabling them to produce honey to nourish their children, as well as to sell to support their families.

To learn more about books



describing the grassroots industrial revolution in the turbulent Ghana of the second half of the twentieth century, please refer to my website.

● **John W. Powell OBE, www.ghanabooksjwp.com website comment.**

I found the "Empowering women entrepreneurs, at home and abroad" article about gender equality and female entrepreneurship fascinating (*Making It*, issue 8). Thank you for discussing such an important and timely topic! I completely agree with Jan O'Sullivan that the lack of financing, experience and training are contributing factors, and also that the lack of high-profile role models and networks are other limiting factors.

As the founder of Australia's number one organization for female entrepreneurs, Women as Entrepreneurs, I have been trying to identify some of the key challenges women face when it comes to entrepreneurship and investigate why only 17% of established entrepreneurs are women in Australia. In my opinion, in order to fix the global problem of gender gap and enable more women to be successful, we need to address and understand the main driving forces behind the complex system of issues. Some of these forces are differences in male and female thinking; society expectations towards men and women; and also how we raise our boys and girls.

I believe that gender – and



For further discussion of the issues raised in *Making It*, please visit the magazine website at www.makingitmagazine.net and the social networking *Facebook* site. Readers are encouraged to surf on over to these sites to join in the online discussion and debate about industry for development.



other forms of – diversity leads to more sophisticated thinking and ultimately more competitive economies. Greater representation of female leaders will have the power to shape a better world for all of us. Women have so much potential and it is our responsibility to leverage them by providing more opportunities for women all around the world, including ongoing support and empowerment of female entrepreneurs in both developed and developing countries.

● **Orsi Parkanyi, founder and CEO, Women as Entrepreneurs, Sydney, Australia, received by email.**

East Africa: a missed opportunity?

In March, industrialization experts convened in Bujumbura, Burundi, to formulate an action plan for the East African Community's (EAC) Industrialization Policy and Strategy. In his opening address, Dr. Nyamajeje Weggoro, the EAC Director of Productive and Social Sectors, boldly proclaimed that the goal was to “create a modern, competitive, and dynamic industrial sector, fully integrated into the global economy”. This grand rhetoric, like many industrial

visions, was worrying: industrialization must work for, and benefit, citizens; not promote a global image.

The current industrial landscape in East Africa is largely informal. For example, micro and small enterprises (most with a single employee) comprise over 70% of Kenya's non-agricultural employment and contribute over 90% of new jobs. Efforts that ignore this fact will find themselves operating in an idealized vacuum in which it is assumed that all businesses are managed formally. Few jobs can be created this way, and exporters that are propped up by the government – however well-meaning – usually only pad the pockets of executives and bureaucrats, until they fail.

Instead, the focus should be on boosting organically developed enterprises, which would benefit not only a vast number of entrepreneurs but also the local consumers whose needs they meet every day. Protecting them is important too: thousands of Kenyan textile manufacturing jobs were lost due to trade liberalization in 1991.

Thankfully, the results of the EAC meeting showed more promise than the originally stated goals. The plan prioritizes intra-regional trade, suggesting that products could meet local demand. A focus on

local supply chain linkages suggests that many inputs will be sourced locally. Mentions of credit guarantee schemes and an incubator for small and medium enterprises demonstrated acknowledgement of the importance of the regions' most effective job creators. I applaud the authors for these conclusions and challenge them to push further to implement programmes that work effectively in an informal landscape: improve access to skills, tools, and business services for microenterprises; and encourage domestic sourcing and subcontracting. These strategies require significant research and implementation effort, and can't simply be tacked on as an after-thought.

● **Steve Daniels, editor-in-chief, *Makeshift* magazine, received by email.**

Business fights poverty

It was with pleasure that we showcased the *Making It* website interview with the popular economist and author, Ha-Joon Chang, on our online network, Business Fights Poverty. Thinking creatively about how to harness business to drive long-term growth and poverty reduction is a common focus of the more than 10,000 professionals with whom we connect.

Two aspects of Professor Chang's interview were particularly striking. First, the importance of manufacturing in driving value creation: recently, on the margins of the World Economic Forum on Africa 2012 in Addis Ababa, we co-hosted an event on what the latest research has to say about the economic benefits of business in developing countries, not least through job creation. A richer understanding of the benefits across sectors – including manufacturing – is needed to shape strategies for enhanced business performance and development impact. The second interesting point raised in the interview is around industrial policy, which is attracting a growing level of interest, including with some whom I spoke to during our Addis event. The World Bank's Chief Economist for Africa, for example, has recently suggested sector-focused industrial policy may have a role to play in driving job creation. It is clear that an effective public sector that can encourage innovation, entrepreneurship and jobs will be an important element, alongside a thriving private sector, in delivering long-term and broad-based prosperity in the developing world.

● **Zahid Torres-Rahman, founder and director, Business Fights Poverty, www.businessfightspoverty.org received by email.**

Just as Britain influenced the course of the 19th century and the United States of America the latter half of the 20th, many believe that we are now entering the 'Asian century', that the balance of social, economic and political power is rapidly shifting from the West to the East. Asian commentators are jumping on the bandwagon, voicing opinions which can be summarized as, "It is our time now. We win and you lose".

In Europe, on the other hand, all of this has created a great deal of navel-gazing. The rise of Asia, which should not have surprised anyone, nevertheless seems to have caught everyone off guard. It is not fully understood and has thus given rise to fears. Underlying these fears is a view which implies that others who are now seeking the good life are not playing by the rules (written by the West), or are doing it by despoiling the world.

And then there is the US, which is in the throes of an economic slump, the roots of which go to the heart of the inherent, fatal flaw in consumption-led economics: urging people to live beyond their means. In the last twenty years, this was further aided and abetted by a finance industry that was poorly regulated. But, predictably, the American world view continues to be: "We are the best, nothing will change and we will come roaring back to be the one and only superpower".

The prevailing views of the political elite in all three regions are however counter-productive. They hark back to 20th century geo-politics, which are well past their sell-by date. They all seem to lazily suggest that hegemony and dominance are inevitable, and therefore will be our collective fate.

What is needed now is a realization that the next century will not be Asia's – or anybody's. Even if China and India become economic powerhouses, they

Photo: World Economic Forum (www.weforum.org)/Adam Nadel



No escaping the numbers

Chandran Nair argues that Asia's burgeoning population means that indulging in Western-style consumption is not an option. The planet's resources, from oil to water to the rare earth metals essential for high-tech manufacturing, won't support it.

will not be able to dominate global politics the way the West – particularly the US – did in the 20th century.

The reason for this is the scarcity of resources – and the demands that will be put on them. Last year, the world's population hit seven billion. It will rise to around 9-10 billion by mid-century, and then peak at somewhere between 12 and 15 billion in 2100.

Already, resources are stretched to their limits. Since Britain launched the Industrial Revolution, one country after another has propelled itself on to the world stage by systematically plundering the world's land and seas while polluting

its air, either within their own borders or overseas through colonies, investment and trade.

Despite three centuries of growth based on extractive and exploitative economics, as well as the under-pricing – or giving away – of resources, governments and companies still refuse to talk about limits or constraints. Instead, the mantra is of continuing growth through the promotion of ever more consumption.

We need to look afresh at how the world uses and manages its resources. For the West, this will not be easy, as the privileges of exploitative growth going

back two to three centuries will need to be reshaped. This will be a tough message to sell at home, but austerity messages which promise that the good old days of never-ending growth will be back – once financial markets are calmed, debt issues resolved and Asians consume more – are simply deliberately misleading.

But Asia can play a crucial role. Nowhere has more potential to address these issues than the region that will be home to the vast majority of the world's population over the coming decades. The five billion Asians who will be alive in mid-century cannot consume as North Americans do now. Encouraging those who are living now to aspire to such a goal, in the name of rebalancing the global economy, is the height of irresponsibility.

Asian political leaders must reject the Western consumption-driven model of economic growth. In its place, they must create economies where resource-use is constrained via a true pricing of environmental externalities. This calls for the establishment of a constrained form of capitalism – one under which people are still encouraged to pursue prosperity, but in a very different framework.

This does not mean reintroducing central planning, but it does mean having the institution of the state take the lead in shaping the incentives under which companies and individuals make decisions, so as to protect public goods. Taxes and fees must be used to make resources – be they energy, fisheries, forests, water or land – more expensive, in order to encourage people to use them far more efficiently. This will ensure more equitable access, the lack of which is the source of most conflicts.

Companies can continue to do all the things they now do – develop and produce the goods and services people

“Asian political leaders must reject the Western consumption-driven model of economic growth. In its place, they must create economies where resource-use is constrained via a true pricing of environmental externalities.”

CHANDRAN NAIR is the founder of the Global Institute for Tomorrow (GIFT), an independent think-tank dedicated to advancing an understanding of the impacts of globalization through thought leadership and positive action to effect change. He is also the Chairman of Avantage Ventures, an investment and advisory firm, based in Hong Kong and Beijing. Until 2004, he was chairman of Environmental Resources Management – Asia-Pacific, establishing the company as Asia's leading environmental consultancy. He is the author of *Consumptionomics: Asia's Role in Reshaping Capitalism and Saving the Planet*, published in 2011.

need or want. But they must do so in a world where the external impact of their activities and output is properly priced, so that there is no free ride. Inevitably within this framework some may not survive; their goods and services will be replaced by others.

This means fully incorporating everything from resource extraction and waste disposal into manufacturing costs. It means building transport infrastructure that emphasizes public mobility rather than the individual's right to car ownership. It means water should no longer be treated as a free public good, and agricultural practices must end their over-reliance on chemical inputs instead of labour to increase farm productivity.

Across Asia, capitalism does not need replacing, but it must be reshaped if it is to meet the most basic needs of all of the continent's people in the coming decades. It must operate in a framework of strict management of resources, with constraints on consumption, externalities priced in, and, where necessary, with curbs or bans on the use of certain resources.

To establish these frameworks, governments have to make themselves stronger and more effective than most are now. This is admittedly a tall order, as vested interests will resist change. But it is a requirement that governments cannot duck, as their legitimacy will hinge on implementing this trade-off. Only then can economies run in ways that ensure everyone has fair access to the resources they need, and that their environmental impact is truly included in the price companies and individuals pay for the goods and services they consume.

Taken worldwide, such practices can ensure that everyone has a future, in and beyond the 21st century. ■

HOT TOPIC: GAS FLARING

Global Gas Flaring Reduction partners make progress

BENT SVENSSON and MAURICIO O. RÍOS explain how a World Bank-led partnership between oil-producing countries and companies is harnessing potential opportunities for reducing the waste of a valuable resource.

Kazakhstan, one of Central Asia's major oil producing countries, has cut gas flaring associated with oil production by a third in just five years, according to satellite estimates, thereby reducing CO₂ emissions equivalent to those emitted by one million cars.

Kazakhstan is one example of a country that has achieved important flaring reduction results by implementing projects like the one undertaken by Tengizchevroil (TCO). In 2010, the company completed a four-year US\$258 million Gas Utilization Project, which has eliminated routine gas flaring in the giant Tengiz oil field.

TCO, a joint venture that includes Chevron, ExxonMobil, Kazmunaigaz, and LukArco, has reduced flaring emissions by over 94% since 2000, while simultaneously increasing crude oil production by 147%.

The fact that Kazakhstan, Chevron, and ExxonMobil have achieved this flaring reduction is no accident. All three are members of the Global Gas Flaring Reduction (GGFR) public-private partnership. This partnership, launched by the World Bank in 2002, recently marked another milestone, with satellite data estimating a 9% drop in gas flaring

worldwide in 2010. The reduction from 147 billion cubic metres (bcm) in 2009 to 138 bcm in 2010 occurred despite a two million barrels-a-day increase in crude oil production over the same period, and means that since 2002 there has been roughly a 15% drop in gas flaring intensity (the ratio of gas flared to oil production volumes).

As the GGFR partnership gets ready to celebrate its tenth anniversary, this is encouraging news. However, there still is

too much flaring around the world. While it is clear that GGFR partners are making some good progress, it is also imperative that flaring reduction efforts are scaled up.

Downward trend

Over the past six years, flaring of gas associated with oil production has registered a drop worldwide: between 2005 and 2011, gas flaring decreased by almost 20% from 172 bcm to 140 bcm, according to latest satellite estimates commissioned by the GGFR partnership. This 32 bcm decline is roughly equivalent to 85 million tons of CO₂ emissions, or to taking some 16 million cars off the road.

However, the 140 bcm of gas that were still flared worldwide in 2011 is equivalent to almost one third of the European Union's annual natural gas consumption. Overall, the flaring of gas adds some 360 million tons of carbon dioxide in annual emissions, roughly equivalent to the annual emissions from 70 million cars.

Most of the recent estimated reductions were achieved in Russia and Kazakhstan, ➤

What is gas flaring?

When crude oil is brought to the surface, gas associated with the oil comes to surface as well. The gas may be used at the installation as fuel for generators, may be transported via pipelines and sold elsewhere, or may be injected into the ground. But in areas of the world lacking gas infrastructure and markets, this associated gas is usually released into the atmosphere, ignited (flared or burned) or unignited (vented).

Flaring and venting are important safety measures at oil production facilities, safely disposing of gas during emergencies, power and equipment failures, or other upsets in oil production that might otherwise pose hazards to workers or nearby residents. But, in many oil-producing countries, the practice goes far beyond normal operational and safety levels. (GGFR)

Photographer KADIR VAN LOHUIZEN has covered conflicts in Africa and elsewhere, but is probably best known for his long-term projects on seven of the world's rivers and the diamond industry. He has received numerous prizes for his work, including two World Press Photo awards. In September 2007, he and ten others established the NOOR agency – www.noorimages.com. To date, he has published four photo books, including *Diamond Matters: the diamond industry and Aderen*. He is based in Amsterdam, the Netherlands.

A Shell gas flare in Iwhrekan, Nigeria.



Photo: Kadir van Lohuizen/NOOR

HOT TOPIC

► where public and private stakeholders have increased investments in associated gas utilization projects. Since the GGFR began, Russia and Nigeria have seen important reductions but still top the list of flaring countries in 2011, which also includes, amongst others, Algeria, Angola, Canada, China, Iran, Iraq, Kazakhstan, Libya, Saudi Arabia, the USA and Venezuela.

Public-private collaboration

The GGFR partnership brings around the table representatives of governments of oil-producing countries, state-owned companies and major international oil companies, so that together they can overcome the barriers to reducing gas flaring by sharing global best practices and implementing country-specific programmes.

The GGFR partners have established a collaborative Global Standard for gas flaring reduction. This Standard provides a framework for governments, companies, and other stakeholders to consult each other, take collaborative action, work on projects across two or more countries, and reduce barriers to associated gas utilization. GGFR partners commit to avoid flaring from new projects, and to eliminate continuous production flaring, except where no economic alternatives exist.

Specifically, the partnership helps developing countries overcome barriers to reducing flaring. These barriers include the high costs of capturing and utilizing the associated gas currently flared; undeveloped domestic gas markets and limited access to international markets; a lack of financing to put the necessary gas infrastructure in place; undeveloped regulatory frameworks; and inefficient gas

“Between 2005 and 2011, gas flaring decreased by almost 20% from 172 billion cubic metres (bcm) to 140 bcm, according to latest satellite estimates.”

pricing systems (mostly due to subsidies).

To help governments and companies overcome these barriers, GGFR's work focuses on:

- commercialization of associated gas by identifying potential uses;
- regulations for flaring and venting, and the use of associated gas;
- implementation of the Global Standard for flaring and venting reduction;
- capacity-building to obtain carbon credits for flaring and venting reduction projects.

An enabling environment for gas flaring reduction can be established through effective legislation, regulation and market/economic measures. Specific policy measures will depend on each country's circumstances, and are likely to include both upstream and downstream sectors.

Challenges ahead

As the international community looks for options to reduce greenhouse gas emissions and move toward low-carbon economies, natural gas is increasingly becoming an attractive component of the energy mix in countries around the world, along with renewable energies.

Part of the attractiveness of natural gas is that it is the least polluting fossil fuel in terms of CO₂ emissions. Yet, in several oil and gas producing countries, vast amounts of natural gas are still being flared and, therefore, wasted.

Gas flaring wastes resources and harms the environment. Flaring deprives developing countries of an energy source that is cleaner and often cheaper than others available, and reduces potential tax revenue and trade opportunities.

In order to address this wastage, the GGFR partnership aims to help unlock the value of currently wasted natural gas by improving energy efficiency, expanding access to energy, and contributing to climate change mitigation, hence promoting sustainable development.

A significant reduction of global gas flaring still needs to be achieved in order to complete the GGFR's mission with the

Gas
flaring adds
360m
tons of carbon
dioxide



desired impact. Thus, a major challenge for the next phase of the GGFR partnership is to bring other key players on board. Some important flaring countries and oil companies are still to join the GGFR partnership, including Brazil, Canada, China, and Libya, and Russia's major oil companies.

Another challenge is the need for faster implementation of gas flaring reduction projects, so that global gas flaring continues to decline in greater volumes. For this to occur, all relevant stakeholders – governments, industry, technology developers and financial institutions – need to do their part to “unlock” the value of this wasted gas.

Initial achievements demonstrate that gas flaring and venting reduction efforts are not only relevant in today's energy debate, but also viable, as demonstrated by several countries and companies, and desirable for the obvious environmental and economic benefits. On the 10th anniversary of the founding of the GGFR, partners need to take these achievements to the next level.

● **Bent Svensson is the GGFR programme manager, and Mauricio O. Ríos is GGFR's communications officer.**

Making profits while gas continues to flare

NNIMMO BASSEY claims that in Nigeria the authorities' efforts to curb gas flaring are being thwarted by the big oil companies.

While the world dithers on actions to curb the release of greenhouse gases, oil companies in Nigeria are busy pumping the gases into the atmosphere through gas flaring, and they are reaping huge profits as they do so. This is happening even though gas flaring in Nigeria was confirmed unconstitutional and an abuse of human rights by a High Court in November 2005.

Communities living in the oil fields of Nigeria have been complaining about human rights abuses related to gas flaring for over five decades. Indeed, the act of routine gas flaring was outlawed in Nigeria in 1984, when a law on gas re-injection came into effect. From that date, oil companies were prohibited from engaging in routine gas flaring and could only flare with a special permit from the responsible minister. They would also pay a fine. However, these measures proved to be insufficient.

In 1984, the fine was a mere US\$0.003 (0.3 cents) per 28,300 cubic metres of gas flared. It increased in 1988 to US\$0.07 per 28,300 cubic metres, and in January 2008 to US\$3.50 for every 28.3 cubic metres.

Since the restoration of democratic politics in Nigeria in 1999, successive administrations set many final dates for

the halting of gas flaring – with none being honoured. Gas flaring was supposed to end in 2007, 2008 and 2010!

The Nigerian National Assembly also attempted proposing a new deadline of 2012 when the Senate passed a bill that effectively criminalized it, and raised the levels of punishment and fines in an attempt to make the fine equal to the commercial value of the gas being flared. According to some observers, that bill failed to see the light of the day, due partly to heavy industry pressure.

Public relations

Claims by oil companies that they are working to reduce gas flaring are best seen in the context of public relations. The reality is that these companies are busy raising hurdles in the path of halting the criminal activity, and this is obvious in two key ways.

Firstly, Shell, ExxonMobil and Chevron are said to be deliberately frustrating government efforts to install real-time measurement equipment at 166 gas points which would accurately measure the amount of gas being produced in the country. According to the Nigeria's Directorate of Petroleum Resources, the measuring equipment has been installed at only ten out of the 166 points. This posture compounds the lack of transparency in the Nigerian oil and gas sector, where the true amount of crude oil extracted in the oilfields remains a mystery. ➤

Emissions
from

70m

cars

HOT TOPIC

► More power plants will have come on-stream by now, but gas-to-power investors complain that the flaring oil majors have generally refused to cooperate with them, denying them access to the gas that is currently being flared. In fact, three years after thirteen companies were prequalified by the Nigerian government to gain access to and harness gas from 180 identified onshore and offshore flare sites, the oil companies have not granted these companies the access they need.

Secondly, they are vigorously resisting the moves by the government to bring in a Petroleum Industry Bill (PIB) that would demand more transparency, as well as more socio-economic justice in oil and gas sector operations. By the close of Parliament in May 2011, there were seven versions of the PIB in circulation because of intense pressure from those with vested interests. In fact, there was only one mention of gas flaring in the version of the PIB that civil society groups believed was likely to be passed into law at that time. Shockingly, the draft PIB said nothing about stopping gas flaring.

The World Bank states that gas flaring decreased in 2009 in Nigeria from 21.3 billion cubic metres to 15.2 billion cubic metres. However, one of the major offenders, the Shell Petroleum Development Company (Shell), admitted that their flares went up 33% in 2010 compared to their 2009 figure. This clearly shows that whatever may have caused the decrease in 2009, it was not likely a result of the oil companies' actions to curb the practice.

New flares

Oil companies in Nigeria claim that gas flaring became standard industry practice from the onset of oil exploitation in

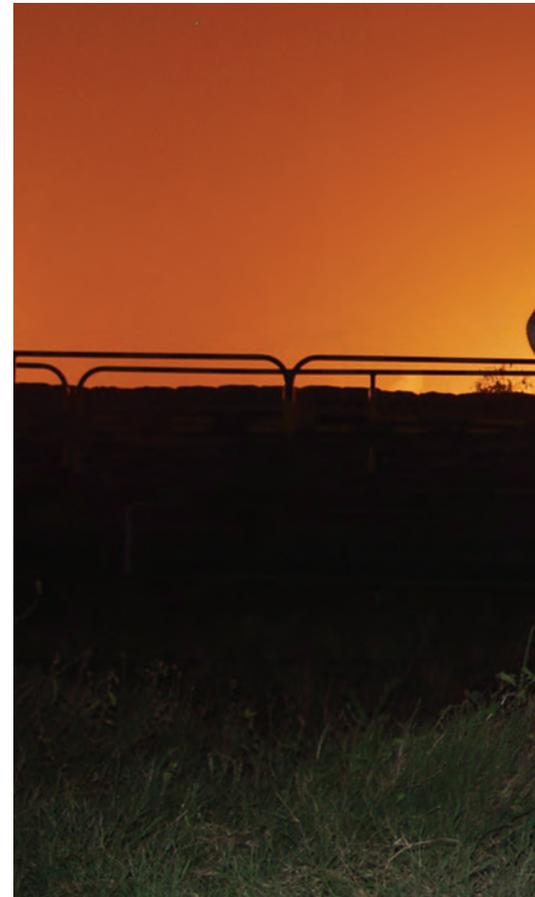
Impacts on health

Even in the absence of concrete localized scientific studies on this issue, there are studies in other countries with far less flaring than Nigeria which provide conclusive proof that flaring harms people and the ecosystem. The combustion of associated gas leads to the release of particulate matter, sulphur dioxide, nitrogen oxides and other substances such as benzene, toluene, xylene etc. which are known to cause cancers.

According to the United States Environmental Protection Agency (EPA), "many scientific studies have linked breathing particulate matter to a series of significant health problems including: aggravated asthma, increases in respiratory symptoms like coughing and difficult and painful breathing, chronic bronchitis, decreased lung function and premature death". Furthermore, the EPA asserts that "it has been clearly established and accepted that exposure to benzene and its metabolites causes acute non-lymphocyte leukaemia and a variety of other blood related disorders". (Environmental Rights Action)

Nigeria because of the lack of a market for the gas. There is a huge market now, but the companies are still lighting up new flares.

For example, Shell lit a new one at Opolo-Epie in 2010 (although this has been off for the last few months). They also lit another one at their Central Oil and Gas Processing Facility at Gbaran-Ubie in the same year. (Interestingly, an environmental evaluation study commissioned by Shell gave a dubious verdict, passing off gas flaring as having health and environmental benefits. For example, one of the findings of the evaluation was that the incidence of malaria in the area declined from 29.1% to



26% after their flare lit up the sky.)

AGIP, the Italian oil giant, commenced flaring at their location at Ondewari, Bayelsa State, in mid-2011. Like Shell's flares at Oben and elsewhere, this flare is aligned horizontally at ground level at Ossiam Creek. The AGIP company employees work under heavy guard, mounted by the Nigerian Joint Military Taskforce, and community people passing by in canoes or boats are forced to keep their hands in the air whenever they are close to the location. Local people are humiliated, while oil companies and the Nigerian government continue to reap profits as gas flaring continues.

Flaring was recently stopped at some

In front of a Shell gas flare in the Niger Delta.



Photo: Peter Roderick/Friends of the Earth

CDM projects should fulfill an ‘additionality’ requirement (that is, the emissions of greenhouse gases should be reduced to less than would have occurred in the absence of the registered CDM project activity) but these gas-flare-to-power plants do not fulfil this requirement, as they are just partially halting an already illegal activity. Accepting gas-flare-to-power plants as registered CDM projects is unethical, and must be stopped.

Carbon reduction exaggerated

Several analysts believe that the carbon reduction claims made by oil companies are grossly exaggerated and that the power projects are aiming to utilize gas from gas fields, rather than gas associated with crude oil extraction. The reason for this is that the gas associated with crude oil extraction is more expensive to harness than non-associated gas (from gas fields).

In recent years, some projects have been hyped as keys to halting, or at least massively reducing, gas flaring in the Niger Delta. An example of this is the West African Gas Pipeline project backed by the World Bank. The hype did not materialize. It is estimated that 80% of the gas conveyed by this pipeline is non-associated gas and only 20% is associated gas.

The world has been drunk on oil. The harm done by gas flaring to people living in the backwaters of the oil fields, and to the planet at large, must spur decision-makers to stop this destructive practice. Even drunks are capable of just decisions during moments of sobriety.

● **Nnimmo Bassey is a Nigerian environmentalist activist. In 1993, he co-founded Environmental Rights Action (ERA), a Nigerian advocacy non-governmental organization, to deal with environmental human rights issues in the country. In 2008, Bassey was elected Chair of Friends of the Earth International, the world’s largest grassroots environmental network.**

facilities, for instance, at Shell’s facilities at Imiringi (Kolo Creek), Etelebou and JK4. In some cases, the flaring stopped due to gas-to-power plants coming on-stream in the Niger Delta. These gas-to-power plants are essential in an electricity-poor nation like Nigeria, but, overall, the flaring in the region remains massive.

Shockingly, the United Nations Framework Convention on Climate Change (UNFCCC) recently started accepting gas-flare-to-power plants as Clean Development Mechanism (CDM) projects. For instance, an AGIP project at Kwale and a Pan Ocean project at the Ovade-Ogharefe oil fields in Delta State have been accepted.

“Gas-to-power investors complain that the flaring oil majors have generally refused to cooperate with them, denying them access to the gas that is currently being flared.”

trends



■ Africa is one of the fastest growing regions in the world after escaping the worst of the global financial crisis – but the phenomenon of jobless growth combined with the world's youngest population threatens progress, according to the *African Economic Outlook*. With the number of youth in Africa set to double by 2045, the lack of jobs for young people is “an immense challenge but [is] also the key to future prosperity”.

■ When Mexico's legislative body passed sweeping climate change legislation in April 2012, it became only the second country in the world with legally binding emissions goals to combat climate change (the other is the United Kingdom). The new law will reduce the country's carbon emissions, end fossil fuel subsidies, and establish a voluntary carbon trading market. This law builds on Mexico's previous commitments to take action on climate change. (The Energy Collective)

■ Scientists from 15 countries are calling for a better political response to the provision of water and energy to meet the challenge of feeding a world of nine billion people within 30 years. The joint statement by some of the world's leading science academies was issued in May, ahead of the G8 summit in the United States. The scientists argue that looming shortages in water and energy supplies should be treated as a single issue. “Major stresses on availability of

energy and water are already being felt in many countries and regions and more are foreseeable,” the joint statement said. (Reuters)

■ In May 2012, 20 of the world's leading off-grid clean energy entrepreneurs wrote to the World Bank Group president, Robert Zoellick, requesting US\$500 million in financial commitments to help them deliver on the world's energy access goals. The United Nations Sustainable Energy for All campaign seeks to deliver universal energy access by 2030. In order to make good on that pledge, the International Energy Agency has found that

BUSINESS MATTERS

China joins the Global Alliance for Clean Cookstoves

In May 2012, China joined the Global Alliance for Clean Cookstoves, an innovative public-private partnership to save lives, improve livelihoods, empower women, and combat climate change by creating a thriving global market for clean and efficient household cooking solutions. China is the 33rd country to join the Alliance since its inception.

Exposure to smoke from traditional cookstoves and open fires – the primary means of cooking and heating for three billion people in developing countries – causes almost two million premature deaths annually, with women and young children affected most.

The majority of China's rural population, over 800 million people, relies on solid fuels (biomass and coal) for household cooking and heating. According to the World Health Organization, more than 380,000 of these people die each year as a result.

“We welcome China's leadership role in the Alliance,” said Radha Muthiah, Executive Director of the Global Alliance for Clean Cookstoves. “Their participation is a testament to the country's long-standing commitment to addressing this devastating health and environmental problem and a tremendous boost to a global effort to foster the universal adoption of clean cooking solutions by making them more accessible and affordable to those who most need them.”

The Alliance's ‘100 by 20’ goal calls for the adoption of clean cooking solutions in one hundred million households by the year 2020. China's role in this global effort will result in greater collaboration on research and testing, support for the development of robust efficiency and emission standards, and transformative approaches to manufacturing cleaner cookstoves.

China's determination to tackle environmental and health problems associated with cooking on traditional cookstoves goes back decades. In the early 1980s, China launched the National Improved Stove Program (NISP), the world's largest publicly financed initiative to improve cookstove efficiency.

China's domestic cookstoves industry is one of the world's largest, with over 100 domestic manufacturers. Chinese manufacturers are experts in stove design, efficiency, and lowered emissions. China's participation in the Global Alliance opens many avenues for collaboration between Chinese and stove experts worldwide.

“China's experience in the sector makes it a clear leader among national implementing partners of the Alliance,” added Muthiah. “Its leadership in manufacturing and exporting clean cookstoves, coupled with its potential role in stove research and standards, makes it an ideal partner to help lead outreach efforts in Asia and ultimately scale up adoption of clean cooking solutions worldwide.”



half of all energy services must be provided by off-grid clean energy. Unfortunately, today's investments in energy access are heavily skewed toward traditional grid extension, with billions going to large-scale centralized power projects which are often heavily polluting coal plants. (Sierra Club)

■ The resources on which business relies are becoming difficult to access and more costly. Increasing strain on infrastructure and natural systems is likely as patterns of economic growth and wealth change. Physical assets and supply chains will be affected by

the unpredictable results of a changing climate. And businesses can expect an ever more complex web of sustainability legislation and fiscal instruments. But this is not the whole story. According to the KPMG report, *Expect the Unexpected: Building Business Value in a Changing World*, the central challenge of our age – decoupling human progress from resource use and environmental decline – can also be one of the biggest sources of future success for business. More corporations are recognizing that there is value and opportunity in a broader sense of responsibility beyond the next quarter's results; that

what is good for people and the planet can also be good for the long term bottom line and shareholder value.

■ The Latin America and the Caribbean region has the potential to uncouple regional economic growth from fossil fuel consumption and develop a green economy based on cleaner energy sources, while at the same time reducing social inequalities, according to José Rivera, the permanent secretary of El Sistema Económico Latinoamericano y del Caribe (SELA, the Latin American and Caribbean Economic System). SELA is a regional intergovernmental organization

that groups 28 Latin American and Caribbean countries. "One out of three Latin Americans is living in poverty, and nearly 90 million people are surviving on less than one dollar a day, so we need long-term growth that is more equitable and environmentally sustainable," Rivera told IPS. According to Rivera, "it is not a question of changing production and consumption patterns overnight, but of moving forward in that direction, building regional consensus on investments, public policies, incentives, subsidies, regulations, training and awareness-raising, and international cooperation." (IPS)



Transition to green economy could yield up to 60 million jobs

The transformation to a greener economy could generate 15 to 60 million additional jobs globally over the next two decades and lift tens of millions of workers out of poverty, according to a new report by the Green Jobs Initiative.

The study, *Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy*, says that these gains will depend on whether the right set of policies are put in place.

At least half of the global workforce – the equivalent of 1.5 billion people – would be affected by the transition to a greener economy. While changes would be felt throughout the economy, eight key sectors are expected to play a central role: agriculture, forestry, fishing, energy, resource-intensive manufacturing, recycling,

building and transport.

Millions of jobs have already been created by this transformation. For example, the renewable energy sector now employs close to five million workers, more than doubling the number of jobs from 2006-2010. Energy efficiency is another important source of green jobs, particularly in the construction industry – the sector hardest hit by the economic crisis.

● The Green Jobs Initiative is a partnership between the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), the International Organization of Employers (IOE) and the International Trade Union Congress (ITUC).

A photograph of a worker in a denim sandblasting plant. The worker is wearing a light-colored, long-sleeved button-down shirt and dark pants. They are using a cloth with a green and red checkered pattern to cover their face and head, instead of proper safety gear. The worker is holding a long, dark, cylindrical object, likely a sandblasting nozzle, with both hands. The background is dark and industrial, with some equipment visible. The lighting is somewhat dim, highlighting the worker's face and the cloth.

Workers without proper face protection at a denim sandblasting plant outside of Dhaka, Bangladesh, March 27th 2010.
Photo: Allison Joyce 2010

DEADLY DENIM

The Killer Jeans Campaign, launched in November 2010, called on major brands and retailers to stop sandblasting, a method of giving jeans a worn-out look. The process can seriously damage workers' health if performed without suitable protective equipment. Over 40 major brands and retailers have issued a ban on sandblasting but, as **Dominique Muller** explains, garment workers are still being asked to risk their lives for fashion.

DOMINIQUE MULLER is coordinator of the Killer Jeans Campaign at the International Secretariat of the Clean Clothes Campaign, Amsterdam, the Netherlands.

Silicosis, a fatal lung disease, caused by the inhalation of crystalline silica, is one of the oldest known occupational diseases; it was first observed among stone workers by the Romans. It is usually associated with quarry workers, stone masons and workers in the gem and mining industries. Silicosis is an incurable and irreversible lung disease and extremely high exposures – such as in the unventilated jeans sandblasting process – can result in acute silicosis within weeks of exposure. Workers die because they cannot breathe properly any more.

In 2004 and 2005, doctors in Turkey started noticing a series of silicosis cases among young garment workers. This was unusual because silicosis was – until then – seen as an older person's disease, linked to years of exposure to silica from stone working or coal mining. The unexpected occurrence of a string of cases of acute silicosis in workers in their twenties started to form a deadly pattern, and the medical profession began to publicize the epidemic.

Fast forward to 2012 and over 1,800 cases of garment workers with silicosis have been registered in Turkey. Fifty-four people are officially known to have died as a result ►

“Sandblasting is used to create worn patches on the legs, back and knees of denim jeans. In... many countries it is done manually by workers using hoses filled with sand to blast away at jeans creating a massively dusty environment. Often workers are not given any form of protection... It is estimated that almost half of the 200 million pairs of jeans exported from Bangladesh each year are sandblasted.”

► of sandblasting jeans in Turkey – mainly young men, many from the same family, and usually migrant workers coming from Georgia and Azerbaijan who had been employed without contracts, pensions or papers. Many more workers have not been traced, despite the extensive efforts of a group of former workers and supporters, the Turkish Solidarity Committee of Sandblasting Labourers, which succeeded in getting the Turkish government to ban sandblasting in the garment industry in 2009.

Why jeans?

In the mid-1980s, manufacturers began to use techniques to ‘distress’ the denim in order to make it look worn. By the 1990s, worn-look jeans had become popular throughout the Western world, ushering in the widespread adoption of sandblasting. As the name implies, sand is blasted under high pressure creating an abrasive process to clean, smooth or alter surfaces. Traditionally it has been used in construction and metal-working.

Sandblasting is used to create worn patches on the legs, back and knees of denim jeans. In some cases, machines are used, but in many countries it is done manually by workers using hoses filled with sand to blast away at jeans creating a massively dusty environment. Often workers are not given any form of protection, and many simply wind cloths around their face to protect themselves from the sand. One workplace in Bangladesh has been described as like a desert during a sandstorm. It is estimated that almost half of the 200 million pairs of jeans exported from Bangladesh each year are sandblasted.

Sandblasting without any concern for the health risks is a very inexpensive process. Silica sand is cheap, and manual sandblasting only requires simple techniques. Denim jeans with a worn-out or vintage look can be sold at a much higher retail price – up to three times more – than ordinary jeans.

Silica exposure, and, in particular, sandblasting, has long been known to cause silicosis. The use of crystalline silica was banned for most blasting in the UK as far back as 1950 and in other European Union countries in 1966. In 1974, the National Institute for Occu-

pational Safety and Health in the United States recommended that the use of silica sand as an abrasive blasting material be prohibited and that less hazardous materials be substituted. Only substances containing less than 1% silica (in Europe) or 0.5% in the USA can be used. The sand used to sandblast in Turkey usually comes from local beaches and contains up to 80% silica. In Bangladesh, the local sand comes from nearby rivers. In some instances, less silica-heavy sand imported from China is used but generally local sand is preferred because it is cheaper.

Despite knowing the dangers, jeans manufacturers continued to use sandblasting as a normal process to make fashionable lived-in looking jeans. Indeed, when the government of Turkey banned the use of sandblasting in the production of denim, companies simply moved production elsewhere – for example, a significant rise was observed in North Africa as Turkish manufacturers moved there. In Asia too, production increased after 2009.

Clean clothes campaigning

The Clean Clothes Campaign (CCC) launched a major campaign in late 2010 and, within

months, around 40 big name jean producers had publicly signed up to a ban. Some brands were very quick to stop the process once the dangers were clearly shown. Levi Strauss and Co., for example, were among the first, and has (according to company information) verified, through on-site inspection, that none of its authorized suppliers continue to use sandblasting at sites where their garments are produced. Levi’s also requires its suppliers to remove all abrasives and sandblasting equipment from these sites. In addition, Levi’s also publicly disclose their official supplier list. Gucci also responded by taking steps to work with local trade union representatives and non-governmental organizations to end the process.

Other brands made less extensive promises, instead stating that they would be phasing out sandblasting from their production. Still others stated they had never used the process and that never would, without providing any more details. Out of all the brands targeted in the initial campaign phase, only one – Dolce and Gabbana – refused to discuss the issue or provide any details whatsoever.

However, none of the brands agreed to take responsibility for the comprehensive screening of workers for silicosis and ensuring that any affected have proper medical treatment and access to adequate medical facilities. Companies must take responsibility for these workers – if they are tempted to leave responsibility for their workers’ health to others further down the supply chain, this could provide local suppliers with the opportunity to cover up potential or real cases of silicosis when they arise. This is especially true in countries such as Bangladesh where the doctor on site is paid for by the factory and may be the only medical professional available to the workers.

Reality on the ground

Despite the bans imposed by many companies, recent research undertaken by CCC partners in Bangladesh showed a very different reality. In interviews with workers from nine factories, nearly half of them identified the labels of brands shown to them as being manufactured and sandblasted in the factories in which they worked. These brands in-

Activists in Belgium stage an awareness-raising demonstration designed to bring home to consumers the realities of sandblasted jeans production.

Photo: CCC 2010



cluded many which claim to have banned sandblasting.

There was some evidence that buyer bans have had an impact on the use of sandblasting in Bangladesh. For example, several known sandblasting units have now closed down. However, in general, the impact of bans appears to have been patchy, poorly monitored and widely circumvented, at least in the majority of factories the CCC investigated. For example, shockingly, the CCC found that regardless of whether a brand has 'banned' sandblasting or not, manual sandblasting still takes place, often at night to avoid detection by auditors or others. In addition, smaller workshops, producing for the local market, continue to use manual sandblasting extensively.

Health and safety

The CCC's recent investigation also uncovered a pressing need to increase awareness of the health risks of sandblasting among workers. Research shows that although some workers are aware of the potential dangers of sandblasting, they are prepared to work for the higher wages offered. It was also dis-

covered that the medical diagnosis and treatment available to workers is woefully inadequate, and that awareness of the link between garment sandblasting and silicosis among medical practitioners is almost non-existent. Given that the latency period of silicosis can be up to ten years, the CCC is calling for urgent action to prevent a potential epidemic among young workers.

In late March, the CCC held an experts meeting in Geneva to discuss the continued use of sandblasting in denim production and the need to develop proper models of compensation workers affected or potentially affected by silicosis. During the meeting, workers and medical professionals from Bangladesh, China and Turkey related their experiences. The similarities were startling – young workers falling ill after several months at work; workers paid higher wages, effectively because factory owners knew their working lives would be much shorter; and workers forced to work up to 12 hour shifts in incredibly dusty environments with little or no protection from the sand. Once sick, the workers all faced problems in getting a proper diagnosis – partly because they lacked

proper work contracts and therefore could not prove a work relationship with the factory, making it possible for a factory to deny the workers had ever worked there and were suffering from an "occupational" ailment. In turn, this means that workers are often denied social security and pension rights. Doctors told the meeting that colleagues often failed to diagnose silicosis because this was not a disease they expected to see in a healthy young garment worker – instead they diagnosed tuberculosis or a general lung problem.

A dangerous occupation

In 1995, the World Health Organization (WHO) and the International Labour Organization (ILO) launched an International Programme on Global Elimination of Silicosis but, so far, it does not include action on silicosis in the garment industry. The CCC wants to ensure that silicosis in the garment industry is included in the Programme's sphere of work, and that garment industry is defined as a dangerous occupation under ILO/WHO rules. This will help raise awareness of the possibility of garment workers suffering from silicosis and help support the CCC's calls for a ban. A core part of the Killer Jeans Campaign is a call for the European Union to ban the importation of sandblasted jeans from countries which have not implemented a national ban.

The CCC is concerned that the failure of brands to change their designs, and/or to increase production time to allow suppliers to shift to more labour-intensive and slower finishing techniques, is not helping bring an end to the practice – sometimes clandestine and sometimes overt – of sandblasting. In order to really make a difference, companies must adapt what they order from factories. They need to help end the demand for jeans that need to be sandblasted in order to look 'cool'. In 2007, the average import price per pair of jeans imported to the European Union from Bangladesh was only €3.89. Given the end price of a pair of jeans and given that human life is priceless, it is time big brands made some serious production changes. ■





Meeting the
global health
challenge:
the role of the
pharmaceutical
industry

by
Klaus M. Leisinger,
Chairman of the
Novartis Foundation
for Sustainable
Development

Health is a crucially important social and economic asset – a cornerstone for human development. Three of the eight Millennium Development Goals (MDGs) call for specific health improvements by 2015: reducing child and maternal mortality (MDG 4 & 5), and slowing the spread of HIV/AIDS, malaria and tuberculosis (MDG 6). Health is also increasingly viewed as fundamental to the achievement of other MDGs, including eradicating extreme poverty and hunger (MDG 1), achieving universal primary education (MDG 2), promoting gender equality and empowerment (MDG 3), and ensuring environmental sustainability (MDG 7).

Improving global health, particularly among the poor, is an international development priority. Worldwide, over the past four decades, impressive advances have been made: deaths of under-fives have dropped to their lowest level in six decades; more women get skilled help during childbirth; more people have access to safe drinking water and sanitation; and deaths from malaria have been reduced by 20%. But enormous challenges remain.

The scale of the challenge

As highlighted in the Millennium Development Goals Report 2011, in spite of substantial progress, child mortality remains unacceptably high, notably in sub-Saharan Africa. Worldwide, each year, over eight million children die from preventable causes and more than 350,000 women die from preventable pregnancy and childbirth-related complications. Progress is most limited in the lowest income and least developed countries, particularly among the rural poor.

In 2011, about 1.4 billion of the world's seven billion people were living in extreme poverty (measured at US\$1.24 a day) and 2.5 billion in absolute poverty (measured at US\$2 a day). Ill-health affects the poor disproportionately: they suffer from higher levels of disease and die earlier than the better-off. Along with low incomes, they face malnourishment, nutritional deficiencies, lack of safe drinking water and sanitary facilities, squalid living conditions, and inadequate access

to basic preventive and curative healthcare. Disease itself reinforces poverty by decreasing people's ability to work and depleting productivity.

No silver bullet

Changing this is a sustainable development priority, but there is no silver bullet: tackling the cycle of poverty and poor health is complex and something no single organ of society can do alone. It involves more than reducing the price of medicine. It requires partnership along the entire health value chain – from researching neglected diseases and training personnel, to reorienting policy choices and the distribution of resources at global, national and local levels.

Global multi-stakeholder approaches that include industry are the solution. Pharmaceutical companies have a valuable contribution to make in fulfilling the right to health – alongside governments, international organizations, non-governmental organizations (NGOs) and others.

The right to health

Being healthy is a foundation for economic development and essential to a good quality of life. Article 25 of the Universal Declaration of Human Rights states that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care.” Fulfilling the right to health is not only about ensuring the absence of illness, infirmity and disability; it also means enabling social well-being.

Realizing the basic health rights of the world's poor includes addressing underlying conditions for health, such as adequate nutrition, sanitation, safe water, decent housing and working conditions. It also means good governance to ensure fair allocation of public health resources to reduce the burden of disease and preventable mortality.

A primary responsibility

The main responsibility for ensuring public health lies with local governments and national

institutions. Governments have the duty to respect, protect and fulfill the right to health progressively, within their means. They should do their best to ensure availability, accessibility, acceptability and quality of health services – including reforming current healthcare systems to positively impact the health of the poor.

National economic and social policy priorities determine what resources get allocated to health, education, sanitation and infrastructure, shaping the state of health of a population. Where resources are scarce, tough choices have to be made, often at the expense of healthcare. As a result, the fundamental building blocks for effective health systems – good governance, primary healthcare policies,

“Ill-health affects the poor disproportionately: they suffer from higher levels of disease and die earlier than the better-off.... Disease itself reinforces poverty by decreasing people’s ability to work and depleting productivity.”

funding of universal coverage, available and affordable essential medicines and vaccines, well-trained personnel and adequate infrastructure – are often lacking.

In situations where the right to health is not being effectively fulfilled, due to the nature of its core business, the pharmaceutical industry has a special responsibility to contribute, in particular, to improving access to medicines.

Access to medicines

Pharmaceutical products play an important role in healthcare. Along with well-trained and motivated health professionals, medicines are among the most effective ways to prevent, alleviate and cure disease. The majority of illnesses affecting people living in poverty can be treated using the medicines listed on the World Health Organization (WHO) Essential Medicines List.

Many primary healthcare interventions known to reduce mortality and the burden of disease (especially infant and maternal) are not costly. A package of six vaccines assembled by the WHO, for example, costs less than US\$1 and deworming (which can increase school attendance) costs just 50 cents a year. The price of a state-of-the-art malaria treatment is under US\$1 and is available in dispersible form for paediatric use.

Today, however, around two billion people worldwide – more than 80% of them in low-income countries – have inadequate or no access to essential medicines and vaccines, and many have substantial difficulty paying for medical care. The death toll due to deficits in access to medicines is estimated at ten million people a year.

Solving the access puzzle

Affordability of medicines is part of the solution, but it is not the only key to unlocking the access puzzle: pricing alone does not guarantee access. Also required are professional medical expertise and functioning, efficient healthcare and supply systems.

The World Health Report 2010 estimates that as much as 20–40% of health spending is wasted through inefficiencies such as ineffective use of medicines, underuse of generics, use of substandard or counterfeit medicines, inappropriate staff mix and hospital admissions, as well as health system ‘leakages’ such as waste, corruption and fraud.

Among the barriers to access, according to the Working Group on Access to Essential Medicines, are inadequacies in national commitment, human resources, funding from the international community for developing countries, and in coordination between international donors. ➤

► The experience of the Novartis Foundation for Sustainable Development (NFSD) shows that, even if drugs are given for free (as in the case of the anti-leprosy multi-drug therapy by Novartis), effective use cannot be guaranteed without considerable additional efforts in social marketing, product advocacy and securing patients' acceptance and compliance – together with the vital contribution of NGOs. To suggest that access to medicines is just a matter of high prices and patents is to oversimplify.

Ensuring sustainable, equitable access to appropriately used medicines for poor people in low-income countries is not a one-off event, as much as a process involving many actors and activities over time. Pharmaceutical companies can be important collaborators in this process. Indeed, target 17 of MDG 8 specifically calls for “global partnership for development” in cooperation with pharmaceutical companies to provide access to affordable essential medicines in developing countries.

The role of the pharmaceutical industry

The primary function of the research-based pharmaceutical corporations is to create value by discovering and producing effective medicines, vaccines and services that improve patients' well-being, and can be sold in markets at a profit. As well as increasing shareholder value, this contributes significantly to the quality and protection of life and helps make the world a better place.

In the past 60 years, innovation and technology have driven huge improvements in global health. According to the Human Development Report 2010, growth in life expectancy that took over 300 years to achieve in developed countries has been secured by developing countries in just half a century, thanks largely to innovations in medicine and other public health interventions.

Intellectual property has played a key role in this progress. Discovering and developing a new drug, conducting clinical trials and gaining regulatory approval can cost around US\$1 billion. Less than 1% of the compounds examined in pre-clinical stages are cleared for testing in human beings, and only 22% of compounds entering

clinical trials successfully reach development stage and regulatory approval. Without patents, it is estimated R&D outlays would be reduced by 64%, jeopardizing the well-being of future patients and the innovation process itself.

Doing no harm and doing good

Beyond innovation, companies hold a wider responsibility to ‘do no harm,’ by acting with integrity, complying with national laws, respecting human rights, applying fair labour norms, protecting the environment, and working

“Ensuring sustainable, equitable access to appropriately used medicines for poor people in low-income countries is not a one-off event, so much as a process involving many actors and activities over time. Pharmaceutical companies can be important collaborators in this process.”

against corruption to prevent harm to people, communities and future generations.

There is also a growing social expectation – and management conviction – that it is in a company's enlightened self-interest to ‘do good’ and ‘be part of the solution,’ for example by supporting social, ecological, cultural, or other projects and programmes. These are voluntary actions undertaken because the company feels it ought to – or can – make a difference, particularly in areas closely linked to its core business expertise. To ensure sustainable success, corporate responsibility activities have to be professionally managed, with clearly defined objectives, cost-



effectiveness, performance monitoring and accountability, as well as transparent communication.

Among the benefits to a business of adopting this wider sense of corporate purpose are the ability to create new markets and healthier, more productive societies, earn reputational capital; attract quality employees and socially responsible investors; build constructive stakeholder relationships; and enhance business intelligence.

Delivering on the right to health

Novartis and the NFSD are involved in a wide range of measures to improve patient access to medicines and health services, including for the poorest in LDCs. In 2011, an estimated 1.1 billion people were protected and treated with Novartis products. Of these, 89 million disadvantaged people benefited from Novartis access-to-medicine programmes valued at US\$1.7 billion. Ninety-four percent of these were malaria patients, through at-cost provision of Coartem® for public sector use. Some 51,000 patients benefited from Novartis Gleevec® patient assistance programmes, ranging from co-payment and shared contribution, to full donation of the cancer treatment drug. In India, a Novartis social business model, Arogya Parivar, targets the health needs of rural populations at the bottom of the pyramid by means of community health educators.

Tackling neglected diseases in the developing world is the focus of the Novartis Institutes for Developing World Medical Research, which conducts pro bono research on malaria, tuberculosis, dengue fever and diarrhoeal diseases. As well as granting access to its compound library to support research, Novartis also partners with coalitions like the Global Alliance for Vaccines and Immunization, and Medicines for Malaria Venture, to support product development of medicines for poverty-related and neglected diseases.

Such activities go a long way to improve the health of the world's poor. But more is needed. The access-to-medical-care chain is only as strong as the weakest link – which may be a shortage of health workers, low morale or weak

management practices. Tackling the entire chain requires robust partnerships, political will and trust in each other's integrity.

Strengthening the chain

Everyone in the health value chain shares a moral imperative to improve access to medicines for poor patients in low-income countries. This shared responsibility means working together to achieve what no single actor can do alone. It includes pooling expertise and resources to achieve shared goals. And it means developing mutual trust, respect and an understanding of other parties' values and priorities.

Innovative alliances, financing mechanisms and cost-sharing models are essential to ensure that patients worldwide can access existing medicines. They are also critical to develop treatments for neglected, poverty-related diseases which have little prospect of being profitable.

Industry has a vital contribution to make through the responsible use of patents to ensure broad access to existing life-saving medicines. This can include applying differential pricing strategies and market segmentation to make medicines more affordable for those with low purchasing power – provided there is political safeguarding to prevent diversion of medicines to mature markets.

Patents – and the intellectual property they protect – incentivize the future research and development needed to find innovative treatments for today's neglected diseases and tomorrow's emerging health challenges. Through their responsible use, with global partnerships for health, we can meet the global health challenge head-on. ■



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Amar arrived underweight and listless at a hospital in northern India. It had been four days since his diagnosis of severe jaundice at a rural health clinic a few hours from his home. Had Amar had access to effective treatment – phototherapy from intense blue light for several days – by now he would be home.

Because of Amar's deteriorating condition, Dr. Kumar, the neonatologist who treated him, rushed to start an exchange transfusion. This procedure circulates the newborn's blood twice, filtering the bilirubin – a neurotoxin that's natural to our bodies but that becomes dangerous when a newborn's liver fails to normalize its levels. Exchange transfusions for underweight and premature babies can be risky, especially without highly skilled medical staff and modern equipment. But without it, Amar was at risk for brain damage, or even death.

Four days between diagnosis and hospital arrival isn't as unusual as it may sound. Home can be in a village, far from help. Illness may be masked by other conditions. It is often a financial hardship for a parent to leave home.

In untangling Amar's journey before arriving at his hospital, Dr. Kumar learned that the parents had sought medical care early. They'd taken him to the closest clinic where he was treated by phototherapy. What went wrong?

The treatment at the rural clinic was ineffective. The phototherapy device there provided light, but not the right type or intensity. So Amar became sicker even as his parents and clinic staff sought to treat him.

Global realities

Amar's case is not unusual. Working with Stanford's School of Medicine, D-Rev found that, based on a sample of clinics in four Indian provinces, more than 90% of phototherapy devices in hospitals did not meet recommended international standards. And many more hospitals had no phototherapy devices at all.

Why? – because good devices are too expensive (more than US\$3,000), are not designed for remote settings, and are too costly or difficult to maintain. Furthermore, replacement bulbs are expensive and difficult to source, proper use requires access to skilled training, and many devices aren't adjustable –

D-Rev's CEO, **Krista Donaldson**, introduces the California-based non-profit organization with a mission is to improve the health and incomes of people living on less than US\$4 a day.

CREATING IMPACT BY DESIGN

for example, they can't be used if the child is being treated with other devices.

Although moving Western health care products out across the world may seem like a beneficial idea, Amar's case illustrates the danger of good intentions gone wrong. A treatment device's inability to "fit" – economically, practically, or in terms of realistic access – can actually increase the risk and impact of treatable disease.

To understand the problem – and engineer a solution – D-Rev visited more than 180 hospitals and clinics in low-income settings. We learned about how doctors, nurses, and other medical staff worked to treat dangerous, even deadly, conditions that should be easy to address. Case in point: the seven million babies each year who need to be treated for jaundice, but are not.

D-Rev seeks to change this by designing and delivering products that address large-scale, curable health issues. We do this through innovative design (the name refers to our design "revolution") that challenges

traditional assumptions about the cost, look, and feel of medical products.

As a non-profit, we focus on saving lives. We have three core tenets:

- D-Rev develops world-class products – products that meet international standards and/or exceed the quality of the best products on the market.
- Our products are market-driven, meaning that they must be radically affordable and appropriate for our users and the environments in which they live, work and thrive. Building in profit margins, and leveraging the market, encourages economic sustainability and scalable impact.
- Our products are user-centric, meaning that we start, end, and iterate constantly with users. If users like and see value in products – they use them.

Commitment to impact

D-Rev was founded in 2007 – but it took an injection of young engineers and designers from Stanford University with significant on-the-ground experience to catalyze the organization in 2009. D-Rev shifted its focus from convincing designers to solve problems facing low-income populations worldwide, to designing and delivering sustainable, scalable, economically-viable products benefitting the



KRISTA DONALDSON has worked at the intersection of design and international development for more than twelve years. Prior to joining D-Rev in 2009, she was a Diplomacy Fellow for the American Association for the Advancement of Science (AAAS) at the US Department of State. She is a 2010-2012 Rainer Arnhold Fellow, and a 2011 Pop!Tech Social Innovation Fellow.



4 billion people worldwide who live on less than US\$4 per day. Although we cultivate a portfolio of products, we currently focus on two breakthrough health care solutions: Brilliance, a radically-affordable phototherapy device, and the ReMotion JaipurKnee.

Brilliance, now in production in India, not only meets American Academy of Pediatrics standards, but is designed to cost US\$400 retail – a fraction of the cost of traditional phototherapy devices. Partnering with Phoenix Medical Systems, India's largest maker of neo-natal care equipment, provides D-Rev with access to distribution, training, and support systems. Phoenix pays variable royalties to D-Rev based on the types of institutions they sell Brilliance to. For example, if Brilliance is sold to a public or rural hospital where the need for phototherapy devices is the greatest, royalties to D-Rev are less. Phoenix has financial incentive to target low-income facilities.

A very different D-Rev product, the ReMotion JaipurKnee, is also positioned to create broad impact. So far, this innovative device – which started as a student project in Stanford University's Biodesign program – has already remobilized 3,500 amputees in India and four other countries. The knee uses a polycentric mechanism already found in high-end pros-

thetic knees, but the ReMotion team adapted it to plastic for lower-cost, high-quality centralized production. With its full range of motion and radically-affordable cost, it has the potential to transform the lives of above-the-knee amputees in low-income areas.

Working with India's Jaipur Foot Clinic (Bhagwan Mahaveer Viklang Sahayata Samiti, or BMVSS), D-Rev is scaling-up the delivery of the knee from the main clinic in Jaipur to all 22 of BMVSS's clinics, and is currently moving to mass production to meet demands from other clinics.

Sustainable partnerships

It's rarely viable for for-profit companies to develop critically-needed products for the four billion people worldwide who live on less than US\$4 per day. Healthcare is a category largely unaddressed for this market. At D-Rev, we look for critical health and social needs, along with market demand, that can be remedied through large-market, low-profit design innovations. Then, working with global partners, we fill the gap.

All of our projects leverage in-market infrastructure and distribution channels. Whereas traditional aid has focused on "building capacity", we see our partnerships as partnerships on equal footing. Like other models

optimizing globalization, we often bring new technologies and design methods, but our partners best understand market intelligence, user insights, and clarity on governance challenges. Based on our staff's global experience, we favour centralized or semi-centralized manufacturing to maintain consistency and quality – both critical for world-class products and meeting the needs of our end users. All of our projects leverage and strengthen local networks and delivery infrastructures. In moving away from "aid", we seek to create tools for health care and income generation that enable lower-income societies to help themselves.

While we call ourselves a design firm and design incubator, fundamentally we are a product company. Unlike traditional design firms, we take a systems approach and responsibility for impact. Our definition of design is the entire product life cycle – working with partners, we fully execute products from understanding and identifying needs, through scaling and measurement of impact.

A challenge we see in our work is the mismatch between the health priorities of medical personnel in low-income areas and the donors who fund global health projects. This mismatch was documented late last year by two American professors who looked at the major health issues in 27 low-income countries and tracked the funding. They found that private foundations seem to be responsive to neither preferences nor disease burdens at the national level. We urge donors to fund global health initiatives that enable people to meet their own critical needs.

D-Rev's work is driven by on-the-ground needs and implementers. Brilliance was started at the request of an Indian doctor who was frustrated by the unnecessary disability resulting from untreated jaundice – not only on the child, but on his family. The ReMotion JaipurKnee began with BMVSS actively seeking a higher-quality affordable prosthetic.

We want to disrupt markets

Our goal at D-Rev goes beyond creating and delivering products that have long-term impact. We want to disrupt markets. We want to set an example that inspires other companies – even our competitors – to raise their quality standards and to lower their costs.

And ultimately, we want people – no matter where they live – to be able to go to their local clinic, wherever it may be, and have confidence that the products they rely on for treatment will deliver the results their doctors expect – and they deserve. ■



Photo: WHOP/ Vivot

Quality medicines for all

Jürgen Reinhardt considers the role of Africa's pharmaceutical industry

Ensuring that patients in the developing world get access to the medicines they need remains an unfulfilled desire. This is true in spite of the significant progress over the last decade in providing treatment to poor people suffering in particular from the “big three” pandemics, HIV/AIDS, malaria and tuberculosis. The reasons for this access gap are manifold, which points at a need for multiple responses by a diverse set of actors: policymakers, businesses, civil society at large, as well as development partners at national and international levels alike.

The indispensable role to be played by public health agents in alleviating the access challenge cannot be overestimated. Deficient public health systems in general, and deficient medicine distribution mechanisms in particular, but also institutional weaknesses (notably on the part of drug regulatory authorities), medicines pricing and procurement issues, and the inappropriate use of medicines at the patients' end, all bear witness to this need.

Recent years have, however, also seen a rise in the number of players who advocate the local production of pharmaceuticals (LPP) in developing countries as *one* valuable means to

achieve access improvements. A good part of the pertinent and lively debate has focused on Africa, which imports an estimated 70% of its overall medicines needs from outside. What prompted this interest in the LPP agenda? And why would a stronger local pharmaceutical industry benefit African patients?

Why support pharmaceutical production in Africa?

From a public health perspective, the quality, safety and efficacy of medicines that comply with the demands of availability, acceptability and affordability at the point of need are the keys. While no one would seriously question these fundamental considerations, industrial development agents refer to the favourable economic effects (e.g. employment, income or foreign exchange gains and technology spillovers) that a dynamic pharmaceutical industry in Africa can potentially bring about. Presently, only a minuscule portion of the billions of dollars made available for the procurement of international medicines – e.g. through the Global Fund to Fight Aids, Tuberculosis and Malaria (GFATM) – finds its way

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to African suppliers. In addition to the frustrations voiced about this state of affairs by local manufacturers, this fact has also raised concerns at political levels about the risk of a perpetuated dependency on outside sources for the supply of medicines.

Of late, public health and industrial development views on LPP seem to be converging. Under certain conditions – the argument goes – LPP can in fact positively impact health and development goals at the same time. Medicines produced in closer proximity to patients may quite practically improve the continuity of supplies and mitigate stock-outs. It is also likely that local production would increase the chances for better oversight, quality control and assurance by severely constrained drug regulators, thereby helping to stem the currently observed spread of sub-standard and counterfeit medicines. More generally, a growing share of locally produced medicines could help prepare the ground for sustainable supplies beyond the present ‘era of donations’, which may not last forever. Indeed, funding constraints in the wake of the global financial crisis are starting to be a threat, as illustrated by the recent cancellation of Round 11 of the GFATM.

In view of the many constraints that African pharmaceutical manufacturers face as they strive to supply quality, essential medicines at competitive prices, fostering LPP is anything but an easy undertaking. The challenges begin with the frequently observed disconnects between public health and industry/trade policies, and also – for that matter – between these and science and technology policies, resulting in incoherent policy measures and an absence of a level playing field between local producers and importers. At the institutional level, weak capacities and deficient service providers are further impediments to the manufacture of quality medicines. This holds true with regard to national drug regulatory authorities, medicines testing labs, bio-equivalence testing facilities, adequate training entities and business membership organizations, such as pharmaceutical manufacturers’ associations. At the same time, plant-level viability is undermined by human resource shortcomings, lack of

access to finance for the upgrading of facilities and processes to reach international quality standards, such as current Good Manufacturing Practices (GMP), and by the need to import raw materials, active pharmaceutical ingredients, packaging materials, labels and most other inputs.

Needed: a holistic approach

Commercial viability and quality compliance considerations must guide any effort to further promote Africa’s pharmaceutical industry. The complexity of the challenges implies that it is best to adopt a holistic approach to the sector’s development. Such an approach requires parallel and well-coordinated action at policy, institutional and industry levels alike. It also needs to accept that, in spite of its tiny share in the global context – a mere 1.5% or so, pharmaceutical production in Africa has been a reality for many years. An estimated 38 countries have production capacities, albeit displaying large variations in terms of size and the number of companies, quality adherence and in the strength of regulatory oversight. Regarding sub-Saharan Africa (SSA), just one country – South Africa – accounts for 70% of production, and just three others – Ghana, Kenya and Nigeria – together represent a further 20%. While there ought to be room for commercial success beyond these relative ‘heavyweights’, a quest for LPP in each and every country would, in turn, appear unrealistic.

A UNIDO advisory and capacity-building project, initiated in 2006, is helping to create

“A growing share of locally produced medicines could help prepare the ground for sustainable supplies beyond the present ‘era of donations’.”

an operating environment that allows pharmaceutical manufacturers to better meet the competitiveness challenges. The intervention, which focuses on SSA, has shown that the commercially viable manufacturing of quality pharmaceuticals is possible. ‘Standard’ references to the minimum production volumes – such as 1.5 billion tablets per year – needed to allow for economies of scale may be less relevant than at first thought. UNIDO research implies that issues to do with efficiencies of production are probably much more important and key to competitiveness. To lift companies up to the requisite international quality levels, a ‘carrot and stick’ model is needed. This would link incentives, and other government support, to strict timelines for adherence, adopting a GMP roadmap approach.

The AU Pharmaceutical Manufacturing Plan for Africa

The African Union Commission (AUC), in partnership with UNIDO, has prepared a business plan for the accelerated implementation of the Pharmaceutical Manufacturing Plan for Africa (PMPA), endorsed by African Union Heads of State in 2007. The business plan advocates a comprehensive approach to the pharmaceutical industry’s development on the continent, and its implementation will require inputs and support from many sides. Partnerships of varied kinds – e.g. public-private, North-South/South-South, commercial, corporate social responsibility-related or non-profit ones – will be key to its success, as will be an ongoing political will at the highest levels to align a multitude of parties to the PMPA’s vision.

Demographic factors, evolving disease patterns and overall economic growth projections for Africa mean that the macro prospects for the pharmaceutical industry’s development in Africa are intact. If an operating environment can be set up that requires – and enables – high-quality production to be the norm, previous notions of an inherent tension between public health and economic development objectives in supporting LPP will have been overcome for good. LPP will then contribute its share in providing “quality medicines for all”. ■



Sunita Narain introduces the first comprehensive Indian study to look at nutritional claims made (or not made) by junk food makers, and how they compare with the benchmarks for recommended daily intakes of salt, sugar, carbohydrates and fats issued by India's National Institute of Nutrition and the World Health Organization.

WATCH WHAT YOU EAT

SUNITA NARAIN is director of the New Delhi-based Centre for Science and Environment and editor of the fortnightly magazine, *Down To Earth*.

Junk food is junk by its very definition. But how bad is it, and what are the companies that make it not telling people about this food? This is what the Centre for Science and Environment (CSE) laboratory checked. The results were both predictable and alarming. What was equally predictable was the response of big food companies and their spokespeople – denials and dismissals.

First the study: the CSE tested all that is readily available in fast food outlets or as branded and packaged items in shops across the country. These ranged from instant noodles, chips and Indian *bhujia*, to the ubiquitous colas, chicken fries and burgers.

Junk food is defined as food with empty calories – it provides fat, sugar and salt, without nutrition. The CSE study reconfirmed this, but with a difference. Labels on packages do not explain just how much of our daily salt, sugar or fat quota this 'fun' food is using up. We are not told that one packet of chips, easily devoured, supplies half of the recommended daily intake in terms of fat and salt. Nor that ►



Morgan Spurlock's 2004 docudrama, *Super Size Me*, depicts an experiment he conducted in which he ate three McDonald's meals a day every day (and nothing else) for 30 days. The end result, he claims, was a diet with twice the calories recommended by the US Department of Agriculture. By the end of the period, Spurlock (left) had gained 25 pounds (11 kg), become quite puffy and suffered liver dysfunction and depression.

➤ one bottle of cola has twice the recommended daily added sugar allowance for adults and children. It is not in the interests of the food companies to advertize this. But it is in our interest to know.

The study also found that companies are not just irresponsible by omission, but also by deliberate misrepresentation of facts about the quantity of unsaturated fat with trans-isomer fatty acids – trans fats in short – in their products. Trans fats, formed during the hydrogenation of vegetable oil, are linked to serious health problems (particularly to an increased risk of coronary heart disease). However, in India, the law does not require companies to declare the quantity of trans fat in their products. What it does say is that a company can make a “health” claim that its food item is trans fat-free, provided that each serving contains less than 0.2 g.

This regulation misses the mark because companies can determine the size of serving themselves, and they do. For example, the Indian food giant Haldiram's takes 10 g, which is less than a mouthful, as the serving size. That is how it claims to be ‘trans fats-free’. Haldiram's *bhujia*, PepsiCo's *Lays* chips and ITC Food's *Bingo* chips all contained trans fats, when they claimed otherwise. Companies can get away with this because nobody is checking.

Take the case of PepsiCo. It went on an advertising spree, saying its potato chips were healthy because they did not have trans fat and were cooked in rice bran oil. Film star, Saif Ali Khan, was its brand ambassador, urging children and adults to eat without guilt and to feel carefree. The chips were branded ‘snack-



smart’, implying their goodness. Then PepsiCo decided that these chips were heavy on its pocket. So, it changed the means of cooking, and then removed the ‘snack-smart’ logo and the declaration of zero-trans fats from the packets. But, this time, it did not launch an advertising campaign.

The CSE study found the company has added insult to injury. First, even what was claimed to be trans fats-free had 0.9 g per 100 g. Second, packets of chips manufactured in February 2012 had the dangerously high trans fats levels of 3.7 g per 100 g – much more than the recommended daily intake.



Fried potato chips

Contain around 33% fat, which means that if you munch a standard-sized packet of chips (65-75 g), you will consume about half of the daily fat quota.



Indian snacks

High in fats and carbohydrates, 100 g of *Kurkure* cheese puffs provide enough calories to satisfy one quarter of the recommended daily quota. If you are fond of *aloo bhujia*, you will get high doses of salt and trans fats, along with a high amount of calories.



Instant noodles

This “tasty and healthy” meal comes with high salt and empty calories. A packet of noodles has around 3 g of salt – the recommended daily intake is 6 g. The addition of vitamins, as advertised in Maggi noodles, doesn’t make it a healthy food, as it has negligible fibre; 70% of it is just carbohydrates.



Potato fries

The fries often eaten with a burger and a soft drink are laden with fats: 20% is fat and 1.6% is trans fats. Eating a large serving (220 g) means that you will exceed the safe limit for trans fats. There are additional trans fats in the accompanying burger too.



Burger

KFC's Chicken Zinger burger contains 16.9% fat, while McDonald's McAlloo Tikki burger contains 8.3% fat.



But under India's weak food regulations, they did not have to tell people what was in the packet. It is no surprise then that PepsiCo, in its official rebuttal of the CSE study, said, "All products are fully compliant with regulations, including those on labeling." Clearly, food companies are not in the business of

food, but in the business of profit.

Following the CSE tests, two questions were raised. One, why test junk food when it is already known to be bad? Two, why test only packaged food, when all Indian snacks are said to be equally bad?

First, as the study shows, we do not know just how bad this food really is. We should know more, because it is critical that we take informed decisions about our health. Non-communicable diseases – from hyper-tension to cancer – are a global epidemic. Bad food and bad lifestyle are major causes of these diseases. Indians are especially vulnerable when it comes to diabetes; as compared to Caucasians, they are genetically disposed to have more fat than muscle and have a greater propensity to put on fat around the abdomen. They are also too poor to cope with the horrendous health costs of debilitating diseases, like diabetes. Therefore, Indian food regulations have to be even more stringent in limiting quantities of salt, sugar and fat in food.

Secondly, regarding food other than junk food, it must be made clear that traditional and local diets are built on the principles of moderation and balance. The traditional Indian diet, with its diversity of regional cuisines, celebrates good food. The problem arises when we "McDonaldize" it or "supersize" junk food. The right thing to do is not to pit junk food against Indian snacks, but to consider how much and what we eat.

● The Centre for Science and Environment report, *Eat at your own risk*, was published in April 2012.



Carbonated drinks

The 300 ml serving, consumed with all kinds of junk food, contains twice the amount of sugar (over 40 g) recommended as the optimum daily intake. Any additional sugar intake in the same day will make you fatter.



Fried chicken

Regular consumption is likely to make you obese. A KFC two-piece fried chicken (about 250 g) contains nearly 60 g of fat, which is the entire amount recommended for a whole day.



Pizza

Pizzas were found to be a much healthier option when compared with the other junk foods tested. They have low levels of salt and fat, and the level of trans fats is also low.

Five ways to tackle disastrous diets

"Our food systems are making people sick," warned Olivier De Schutter, the United Nations Special Rapporteur on the right to food, in March 2012 as he presented his report on nutrition to the UN Human Rights Council.

"One in seven people globally are undernourished, and many more suffer from the 'hidden hunger' of micronutrient deficiency, while 1.3 billion are overweight or obese."

"Faced with this public health crisis, we continue to prescribe medical remedies: nutrition pills and early-life nutrition strategies for those lacking in calories; slimming pills, lifestyle advice and calorie counting for the overweight. But we must tackle the systemic problems that generate poor nutrition in all its forms," the independent expert said.

"The right to food means not only access to an adequate quantity of food, but also the ability to have a balanced and nutritious diet. Governments must not abstain from their responsibility to secure this right."

De Schutter identified five priority actions for placing nutrition at the heart of food systems in the developed and developing world:

- taxing unhealthy products;
- regulating foods high in saturated fats, salt and sugar;
- cracking down on junk food advertising;
- overhauling misguided agricultural subsidies that make certain ingredients cheaper than others; and
- supporting local food production so that consumers have access to healthy, fresh and nutritious foods.

"Urbanization, supermarketization and the global spread of modern lifestyles have shaken up traditional food habits. The result is a public health disaster," the Special Rapporteur said. "Governments have been focusing on increasing calorie availability, but they have often been indifferent to what kind of calories are on offer, at what price, to whom they are accessible, and how they are marketed." ■



Viet Nam

In 1986, a landmark sixth Communist Party congress made a historic commitment to “economic renovation” (*Doi Moi*), which would open the country to the world and allow private enterprise to operate. Over the subsequent decades, Viet Nam has undergone dramatic restructuring, from a centrally planned to a market-based socialist economy, and the country has emerged as one of Asia’s great success stories. Since 1986, the economy has posted annual per capita growth of 5.3% – faster growth than any other Asian economy, apart from China.

Viet Nam is increasingly integrating into the global economy, a move formalized through membership of international organizations. The most important of these are the Association of South-East Asian Nations (ASEAN), which Viet Nam joined in 1995, the Asia-Pacific Economic Cooperation (APEC) forum, which it joined in 1998, and the World Trade Organization, of which it became a member in January 2007.

Measured by employment, Viet Nam is still an agrarian society, with around half of the labour force working in agriculture, forestry and fisheries, but in 2011 the agricultural sector only accounted for 20% of nominal GDP, down from 40% in 1991. By contrast, in 2011, industry contributed 40% of GDP, compared with only around 23% in the early 1990s. The services sector has grown in line with GDP over the past several years, so its

share of GDP has remained steady at about 38% of the total.

The *Viet Nam Industrial Competitiveness Report 2011* – the result of a collaboration between Viet Nam’s Ministry of Industry and Trade and the United Nations Industrial Development Organization (UNIDO) – contends that industrialization lies at the core of Viet Nam’s economic growth. But it argues that, in order to sustain current growth levels in the long-run, Viet Nam needs an industrial policy aimed at structural change towards high value-added manufacturing sectors.

The report finds that while trade liberalization in Viet Nam has been one of the driving forces of economic growth, it is not a sufficient factor in triggering structural change. Industrial diversification calls for specific industrial policies that nurture private entrepreneurship and the development of new manufacturing activities: the Vietnamese experience is no exception.

In this context, a new strategy is needed to promote structural change. The report calls for a new industrial policy that focuses on the industrial transformation of strategic sectors that can support sustained growth and reap the benefits of technological change, innovation and learning. While all manufacturing sectors are important, the report argues that a shift towards technology intensive sectors is needed to promote



Can the dragon continue to rise?



Photo: istock

industrial deepening and value addition.

To achieve this, the report presents five key policy areas for government action:

- The government of Viet Nam has undertaken considerable efforts to internationalize the country's economy by entering into trade agreements with various global partners. These efforts are paying off, and Viet Nam's manufactured trade performance has been impressive over the last decade. However, many now question whether trade liberalization has triggered industrial dynamism and value addition at the firm level. Evidence shows that the Vietnamese industrial sector continues to struggle to compete in international markets.

Given the challenges that the industrial sector faces, the report advocates that trade liberalization in Viet Nam be achieved through a strategic and controlled approach to both strengthen existing capabilities and develop new ones. It argues for the strategic

targeting of Foreign Direct Investment (FDI) and global value chains in order to extract the maximum benefits for production, exports and employment. The government should play an active part in this process and learn from role models in the region.

- The report reveals that Viet Nam is vulnerable to third country competition due to its concentration on a few labour-intensive manufacturing sectors. Five of the largest ten low-tech export products are items of apparel. To sustain growth rates in manufactured trade and MVA, Viet Nam should enter into new, high value-added manufacturing activities. (Examples of high-tech manufactures include office/data processing/telecom equipment, televisions, transistors, turbines and power-generating equipment; as well as pharmaceuticals, aerospace, optical/measuring instruments, and cameras.)

- Viet Nam's current educational and

vocational training system does not produce an adequate level of skills for its workforce. Many firms are forced to retrain workers at high costs so they are able to work in those firms. This reduces Viet Nam's competitiveness and makes the country less attractive to medium- and high-technology manufacturers looking for lower cost producing countries or alternatives to their Chinese production bases. The government should enact policy actions to boost the country's human resources for manufacturing.

- Viet Nam lags well behind many other countries in the region in technology development. This has resulted in the country being a net importer of technology products, which, given the unsophisticated nature of its exports, has contributed to a negative trade balance. Moving up the technology ladder calls for the government and the private sector to design and implement an agenda to boost the country's technological and innovation capacity.

- It is increasingly apparent that Viet Nam needs to pay more attention to the quality of the FDI it is attracting. While FDI in real estate and investments may be welcome, when there is a capital shortage, it can also help fuel dangerous asset bubbles. The current structure of FDI also has little positive effect on Viet Nam's trade balance, with many FDI firms relying heavily on imports for production.

All these measures are needed if Viet Nam is to escape the middle-income trap. The country can continue to specialize in export-oriented, labour-intensive manufacturing, which may lead to immiserizing growth – a situation where economic growth could result in a country being worse off than before the growth, or it can pursue a diversification strategy towards higher value-added and technology-intensive manufactures. The *Viet Nam Industrial Competitiveness Report 2011* argues that, as international competition mounts and national income rises, Viet Nam has no choice but to choose the latter.



Viet Nam



Photo: istock

Viet Nam has achieved an impressive economic performance over the last decade or so, and industry's share of GDP has increased significantly. What have been the keys to this transformation?

In the past decade, Viet Nam's economy continued to register dynamic development, with sustained GDP growth of over 7% per annum and a structure shifting towards industrialization. Viet Nam has maintained socio-political stability, and recorded enormous achievements in poverty reduction and the improvement of people's lives.

These successes can be attributed to the continued implementation of a reform policy, in accordance with the specific conditions of Viet Nam, to unleash people's work capacity and encourage the dynamism and creativeness of all economic sectors. This helped create a strong momentum for growth. We have also developed the socialist-oriented market economy mechanism, with all economic sectors being equal in front of the law. In the process of development, we always ensure a harmonious combination of economic growth and socio-cultural development and poverty reduction. This has helped

Interview with His Excellency Prime Minister Nguyen Tan Dung

Above: Busy traffic outside Bến Thành Market in the downtown area of Hồ Chí Minh City, the country's biggest city and its economic centre.

Opposite page: top: Construction worker. Viet Nam is making significant investments in infrastructure.

It already has a more advanced road infrastructure than the Philippines and Thailand, and electricity networks cover more than 96% of the country; Opposite page: bottom: His Excellency Prime Minister Nguyen Tan Dung.

unleash the potential and promote the resources of the Vietnamese people from all strata, and has won the support of the people.

We have been implementing, in a vigorous and consistent manner, the policy of openness, diversification and multilateralization of international relations, under the motto: "Viet Nam is a friend and reliable partner of countries, and a responsible member of the international community." This has enabled us to continue combining our domestic resources with international support and cooperation. Viet Nam has diplomatic relations with 179 countries, and has established strategic partnerships and comprehensive cooperation with most of major powers in the world. We have developed economic and trade ties with 224 countries and territories, and attracted US\$200bn in Foreign Direct Investment from over 100 countries and territories.

We highly value the active cooperation and effective support of countries and international organizations, including the United Nations, which is considered as an important factor for Viet Nam's great achievements in socio-economic development in the past years. **The country's rapid economic development has also created some environmental challenges. What are your plans to cope with these challenges and to achieve a green economy?**

It is Viet Nam's consistent policy to ensure fast, sustainable development, while protecting and improving the environment. To this end, we have been taking numerous measures. We have stepped up the development of ecosystem-based economic sectors in order to maintain and build on the advantages of "natural capital" in various regions of the country, such as the production of food in the Red river and Mekong river deltas, industrial agriculture in the Central Highlands and Northwest region, aqua-farming in the coastal region and Mekong river delta, and development of various eco-economy models, such as eco-tourism.

We are investing in the innovation of production technologies, which are environ-



mentally friendly, low-carbon and energy-resource efficient, and we are developing environmental services and the recycling industry to deal with the environmental issues arising from industrial development.

We are also completing the policy and legal frameworks to enhance the capacity for resource management, environmental protection and to respond to climate change; and we are raising people's awareness and applying administrative/economic tools to establish environmental friendly lifestyles, activities and modes of consumption.

One notable feature of the period has been the extension of the private sector. How would you characterize the partnership between the public and private sector in Viet Nam?

It is Viet Nam's policy to develop the socialist-oriented market economy with various forms of ownership and various economic sectors. These economic sectors operate in accordance with the law, are equal before the law, grow together on a long-term basis, and cooperate and compete with one another in a healthy manner. While the state sector is playing the key role in the national economy, the private sector is one of the engines of the economy. We have been vigorously implementing a process to rearrange, reform and develop the state-owned enterprises (SOEs), with a focus on the equitization of SOEs, placing them on a level playing field with enterprises from other sectors. In the coming years, Viet Nam will step up the reform of economic institutions to remove obstacles and to facilitate and unleash the development of productive forces, based on the enhanced application of scientific and technological developments, on modernization as a way to increase development efficiency and mobilization, and by the utilization of all resources for development.

How has Viet Nam coped with the global financial crisis and subsequent global recession?

As an economy with a high level of openness, Viet Nam has been significantly affected by the crisis, especially in relation to trade, exports, foreign investment, tourism, labour,

employment and people's livelihoods.

To respond to the crisis, the Vietnamese government has enhanced the administration, management and coordination of government agencies to implement uniform measures to control inflation, stabilize the macroeconomic situation and maintain social welfare nationwide. These measures include a tightened and cautious monetary policy, ensuring the stability of monetary, credit and banking systems; a tightened fiscal policy, including public investment cutbacks and a reduction in the budget deficit; the promotion of production, business and exports, the reduction of the trade deficit, and the improvement of the balance of payments; poverty reduction; and so on.

To date, the above-mentioned actions have yielded encouraging and positive results, and have been praised by the International Monetary Fund, the World Bank, investors and the

business community as necessary, timely and effective. However, Viet Nam has been facing a number of challenges, such as high inflation and interest rates, and some difficulties in business and production.

What will be the next phase of economic development and what will industrial policy look like in practice?

The 2011-2020 socio-economic development strategy of Viet Nam sets out the target of turning the country into a modern-oriented industrialized nation by 2020. The policy that Viet Nam is pursuing is to achieve fast and sustainable development, conduct uniform and suitable economic and political reforms, maximize the human factor, and build a self-reliant and independent economy in the context of deepened integration.

In the coming period, Viet Nam will focus on the three strategic breakthroughs: we will complete the institutionalization of the socialist-oriented market economy, with a focus on the establishment of a level playing field and administrative reform; we will quickly develop our human resources, especially high-quality human resources, focusing on a fundamental and comprehensive reform of national education, linking human resource development with the application of science and technology; and we will develop a uniform infrastructure system, with some modern projects focusing on major transportation and urban infrastructure.

As for industrial development, Viet Nam will promote the restructuring and modernization of this sector in order to enhance its quality and competitiveness. We will focus on developing key industries and those industries having comparative advantages and strategic significance for the fast, effective and sustainable development and higher independence and self-reliance of the economy, while gradually integrating into the global production and distribution chain. The industrial sector will shift from extensive to intensive growth, to higher technology-driven inputs and domestic value added, to industries with comparative advantages. ■





Photo: UNIDO



In the first of a series focusing on remarkable companies that are making waves in the areas of green industry and sustainable development, *Making It* spoke to **K. M. Rezaul Hasanat**, Chairman and CEO of the Viyellatex Group, the Bangladeshi textiles and apparel manufacturing company.

Viyellatex

The Viyellatex Group is composed of a variety of operational and functional units such as spinning, knitting, dyeing, washing, printing, embroidery, and stitching, all based in the greater Dhaka area. It supplies knit and woven garments, mainly t-shirts and shirts for top European and American brands, including Puma, Calvin Klein and Tommy Hilfger. Monthly production varies from 1.5 to two million pieces, and the Group employs around 18,000 people. Viyellatex's yearly turnover is close to US\$200 million.

As Hasanat explains, the company has come a long way in a short time. "When I started Viyellatex in 2001, it was just one small garment factory. At that time, I wasn't concerned about sustainability. My concern was survival."

Since then, the company has not only grown to be a commercial success, but has won plaudits for its commitment to sustainability by ensuring environmental protection, maintaining robust labour standards, upholding human rights and combating corruption. Viyellatex has won several awards from international organizations, private sector forums, local workers' organizations, and the government of Bangladesh. For example, in 2010, HSBC, the leading international bank, and *The Daily Star*, Bangladesh's largest English daily newspaper selected Viyellatex as the winner of their annual Green Business



Photo: Viyellatex

Entrepreneurship award in recognition of the company's moves to adopt green and energy-saving technology in manufacturing garments.

In 2009, Viyellatex signed up to the United Nations Global Compact, and was subsequently selected by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) as a model for putting the Global Compact principles into action in the region. The UNESCAP report stated that Viyellatex "demonstrates that there is an opportunity to make profits, provide worthwhile and well-numerated labour without the need for forced labour or other forms of exploitation."



Artist's impression of Viyellatex's Eco Couture factory, under construction on the outskirts of Dhaka. Eco Couture will house a 144,000 sq ft establishment for all its operations, from sewing to packing the finished product. The project will be LEED (Leadership in Energy and Environmental Design)-certified and is scheduled to be completed by the end of 2012.

Hasanat explains, "Workers' welfare committees operate in our factories and, for three consecutive years, we have been commended for our practice by the federation of garment workers' unions. It is not only about providing good working conditions, but we also pay 20% more than the national minimum wage. I told my directors that we have high-end customers, so why should we follow the government's minimum wage."

For Hasanat, the logic behind his company's progressive approach to labour relations is simple. "The tangible return is that, over the last 11 years, we have never had a workers' strike or any problems with the community."

Viyellatex is also winning accolades for its commitment to green industry and sustainability. Recalling how his company first started on the road to sustainability, Hasanat says, "Our first sustainable initiative was all about steam. Releasing steam from our factories was a waste of energy. I sat with my directors and said, 'Let's use that steam and hot water'. The result is pre-heated water, free of charge."

Viyellatex takes steam, which is produced as the output wastage from the steam supply system for garments and dyeing units, and uses it to heat water boilers to an instant 70-80 degrees. The company's 2010 report to the *Global Reporting Initiative* states that the system saves 40% of the previous cost of heating water.

Other initiatives followed: more than 300,000 litres of treated effluent water are used for the toilet flushes every day, saving large volumes of underground water; approximately 45 million litres of rainwater are collected from one factory roof each year and are then used in textile processing, saving valuable underground water and avoiding the expenditure on chemicals to soften the water; and water from workers' wash basins is filtered and used to irrigate trees that are planted in patches throughout the factory compounds..

Yet another initiative involves the company diversifying into tea production. Food leftovers from the workers' lunches and kitchen waste are mixed with cotton dust from the spinning mill and are converted into compost fertilizer that is then sent to the company's newly purchased tea estate in the north-east of the country.

Hasanat explains that there are clear rewards for greening his company. "We can be environmentally friendly but, unless there is a return, we can't continue the initiative. We are saving money."

Asked, if the benefits are so clear, why are other companies not adopting the same sustainable practices, Hasanat replies, "They don't see it yet, but my factories are practicing steam, water and exhaust recovery, and if they knew how much we are saving, they would do it too. Who wouldn't be interested?"

At the UN Private Sector Forum 2011 in New York, organizations were encouraged to commit to sustainable energy-related activities in support of the UN Sustainable Energy for All initiative. Viyellatex committed to become a carbon-neutral company by 2016, and announced that it would install energy-efficient and smart lighting systems, replace inefficient machines and invest more in renewable energy sources.

To the question, 'apart from saving on costs, what drives sustainability at Viyellatex?' Hasanat responds frankly, "Membership of the Global Compact, the Global Reporting Initiative and Sustainable Energy for All provides me with a benefit. All these awards for environmental initiatives and corporate social responsibility give us a competitive edge. Our customers are inviting me to speak to their shareholders. They are showcasing me to their customers. When companies negotiate a price with me, I can get a better price from them, because they don't want to lose me. I am in a better bargaining position." ■

Busan – a new milestone for effective development cooperation

By **ENNA PARK**, Director-General for Development Cooperation, Ministry of Foreign Affairs and Trade, Republic of Korea

On November 29th 2011, over 3,000 participants gathered in the Korean city of Busan to attend the Fourth High Level Forum on Aid Effectiveness. The venue for this global event holds special meaning. It was the city where relief goods arrived after the Korean War (1950-1953) and which has, within one generation, been transformed into the world's fifth largest port city. The history of Busan offered an inspiring setting for discussion of the effectiveness of development cooperation.

The international community is facing a number of global crises. The impact of economic and financial crises, climate change, food insecurity, energy instability, fragility and conflicts, and natural disasters is now much broader in scope and larger in scale. These multiple challenges pose a serious threat to achieving sustained growth and development in developed and developing countries alike.

While North-South cooperation remains the mainstream of development cooperation, developing countries and emerging economies are increasingly becoming vital sources of trade, investment, knowledge, and development cooperation. Moreover, non-governmental organizations, global programmes, private funds and businesses are actively engaging in development cooperation, providing innovative thinking and approaches to development. The increasingly complex

“The Forum demonstrated that developing countries can and should take the lead in setting the development agenda.”

global development architecture presents both opportunities and challenges.

With the target year of the Millennium Development Goals (MDGs) approaching in less than four years, the Busan Forum was uniquely positioned to address these global challenges and opportunities in development cooperation.

The Busan Forum brought together the broadest range of stakeholders in development. Several heads of states, over 100 ministers from 160 countries, 30 heads of international organizations, around 90 parliamentarians, 300 partners from civil society organizations, and more than 100 representatives from the private sector and academia attended the event.

The unprecedented high level of participation reflected the gravity of the international community's responsibility to take tangible steps to make development cooperation more effective and to bring about better development results where they matter most. Today, all development actors are tasked with responding to the increasing call for more effectiveness, accountability and, most importantly, better results from their efforts.

The Busan Forum produced meaningful progress on deepening the aid effectiveness agenda by making concrete commitments on transparency, ownership and accountability, and predictability, among others. At the same time, it also marked a new beginning. Building on the foundations laid in Monterrey, Rome, Paris and Accra, the Busan Forum represented a turning point in



development cooperation by making an important step forward in three ways.

First, it set broader global partnerships for effective development cooperation, providing an open platform that embraces diverse modalities and approaches to development. The outcome document, *Busan Partnership for Effective Development Cooperation*, was the result of an inclusive year-long process of consultation with a broad range of governmental, civil society and private sector actors in development. It set out common principles, commitments and actions for effective cooperation in support of international development.

While respecting their differences and complementarities, all development actors represented in Busan recognized that they were all parts of a development agenda in which they participate on the basis of common but differential commitments. Most notably, emerging economies, such as China, India and Brazil, not only participated in the Busan Forum, but also

endorsed the Busan outcome document. They also agreed to engage in the Busan follow-up process to shape the nature and working arrangements of the *Busan Partnership*. Moreover, active participation from civil society and the private sector's expanded engagement at the Forum provided a firm basis for more inclusive, effective partnerships for development.

Second, the Busan Forum shifted the paradigm from 'aid' to 'development'. Recognizing the catalytic role of aid to leverage other development resources, the participants put greater importance on sustainable development results. Taking into account this shift, a number of global initiatives or 'Building Blocks' on core development challenges were launched at the Busan Forum to make further progress on the agreement of the *Busan Partnership* document on a voluntary basis.

Third, the Forum ushered in a new era of systematic cooperation among global development fora. Departing from the

previous development process led by donor countries, the Forum demonstrated that developing countries can and should take the lead in setting the development agenda. The participants also recognized the role of the United Nations in enhancing effective development cooperation, and invited the United Nations Development Programme (UNDP), along with the Organization for Economic Cooperation and Development (OECD), to work together in supporting the effective functioning of the Busan Partnership. Given the UN's universal convening power and its field presence in developing countries, redefining the role of the UN in advancing development effectiveness will be an important issue for a global reflection and discussion.

Ensuring the effectiveness of all forms of development cooperation is critical to achieve the MDGs by 2015 and promote sustainable development. The *Busan Partnership* will serve as a milestone for change and progress towards this end. ■

Enabling manufacturing competitiveness through sustainable interventions

By **DOUGLAS COMRIE**, Managing Director of B&M Analysts, an organization that provides specialized support services to drive sustainable industrial development.

Developing countries face a challenge as they strive to develop globally competitive industries: which industries should they promote, what policies should they adopt, and what implementation mechanisms will make these policies most effective?

Industrial upgrading initiatives take a number of potential forms, but one common factor seems to be the limited success in sustaining these initiatives. This is particularly problematic when one considers that many funders typically commit to providing support over the short to medium-term, while substantive industrial upgrading outcomes are only likely to be achieved in the medium to long-term.

One potential solution to this problem is clustering, and an automotive manufacturing cluster in South Africa represents an interesting case study.

Five hundred and forty thousand vehicles were produced in South Africa in 2011, of which 272,000 were exported. The domestic market is comparatively small and fragmented, with seven local manufacturers competing alongside imports in a market of around 700,000

“The Durban Automotive Cluster’s activities have had a meaningful impact on the industry, and in particular, on its competitiveness.”

vehicles. The Southern African Development Community (SADC) market is growing rapidly, but remains comparatively small and largely open to the import of inexpensive, used vehicles. While well-established manufacturing value chain competencies exist in South Africa, levels of local content still lag behind major developed, and emerging, automotive manufacturing economies. As a result, manufacturing costs are, at least in part, negatively influenced by the logistical costs associated with shipping parts to South Africa.

In response to these and related challenges, in 2002 the Durban Automotive Cluster (DAC) was established, with the primary purpose of developing the local automotive industry through knowledge enhancements and enabling collective efficiency via external scale economies. Instituted as a public-private partnership (PPP) between local government and local industry, the DAC currently has the support of 35 automotive manufacturing firms, representing over 90% of all automotive manufacturing activity in KwaZulu-Natal province.

The DAC set itself the strategic objective of doubling the size of the local automotive manufacturing industry by 2020. This objective is significant to both public and private sector interests, as local manufacturing value addition would reach €3bn, and total employment almost 60,000. Five strategic focus areas were identified:

- growth through enabling market linkages and attracting investment;
- supporting increased localization of parts and enhancing supplier competitiveness;
- enabling skills development and supporting improved skills retention;
- improving infrastructure, and logistical reliability and competitiveness;
- empowering the greater economic

participation of previously marginalized population groups.

The DAC is entering its eleventh year of existence, and its longevity is, to a significant extent, a reflection of the core founding principles. One of the most important of these is strong leadership by industry. While this should not detract from the value of the PPP, it should be acknowledged that industry leadership serves to entrench industry commitment, ensure the validity of initiatives, and maintain accountability in respect of service delivery.

The practical application of the clustering interventions implemented by the DAC can be demonstrated by three examples:

- 1) Recognizing that procurement-related decisions can either support or undermine supplier development, the DAC partnered with a local tertiary education institution to develop programmes in automotive purchasing management. As of 2011, over 100 people had qualified from these programmes, representing a major milestone in the professionalization of the procurement function.
- 2) To help develop vehicle makers' supplier companies, the DAC implemented an initiative that has brought ten direct suppliers together to provide support for the development of 110 supplier companies further down the supply chain.
- 3) When member firms identified a shortage of skilled engineers as a common problem, the DAC established a modular graduate programme in technical skills development.

An evaluation of the effectiveness of the DAC is difficult because it was established at the same time as a change in ownership of Toyota South Africa, which subsequently launched a major export programme. Toyota South Africa is not only the largest vehicle manufacturer in South Africa, but also the only major vehicle manufacturer



operating in this specific part of South Africa, and it has undoubtedly had a major impact on the industry in respect of both growth and performance improvement.

However, extremely impressive firm-level performance improvements in certain areas are evident in both those suppliers (direct and indirect) that supply Toyota South Africa and those that don't, which indicates that the clustering activities of the DAC have had a meaningful impact on the industry, and in particular, on its competitiveness.

The experience of the DAC suggests that a successful and sustainable clustering model is dependent on a range of key principles, the most fundamental of which are:

- **Partnership:** a balance between private sector and public sector objectives and interests needs to be maintained, with this principle applicable to goals, commitment, time, and funding;
- **Industry leadership and ownership:** this enables higher levels of commitment from industry and ensures validity of cluster initiatives;
- **Trust relations:** clustering represents a partnership between the public and private sector that is enabled by cluster facilitators. Transparency, reliability and accountability are important in the relationships that exist between the various parties;
- **Consistency and credibility:** a cluster's credibility is enabled through reliable and consistent delivery, with this taking place within a framework of defined objectives, transparent leadership and strong trust relations;
- **Flexibility:** the ability to adapt to changing external factors is important and, as such, a cluster should be able to adapt to emerging industry threats and opportunities, while keeping within a framework that maintains credibility and accountability. ■

Climate concern rises in the East

Looking ahead to the next issue of *Making It*, which focuses on youth perspectives on global industrial development, the Carbon Trust unveils new research that shows Asia's young adults most likely to favour brands that reduce their carbon emissions.

A new study from the Carbon Trust reveals a divide between Generation Y's attitude to carbon reduction in the East and West. The study, which questioned over 2,500 young people aged 18-25, across five continents in Brazil, China, South Africa, the Republic of Korea, the United Kingdom and the United States of America, sought to understand whether tomorrow's consumers are concerned about climate change and will favour brands that reduce their carbon emissions.

The research, which was commissioned by the Carbon Trust and conducted by TNS, reveals that Generation Y in China is leading the call for brands to reduce their impact on the environment. Eighty-three percent of young people questioned in China say they would be more loyal to a brand if they could see it was reducing its carbon footprint, compared to 73% in the Republic of Korea, 57% in the USA and 55% in the UK. Sixty percent of Chinese young adults who participated in the research say they would stop buying a product if its manufacturer refused to commit to measuring and reducing its carbon footprint, followed by 57% in Brazil, 53% in Korea, and 36% and 35% in the UK and US respectively.

Tom Delay, Chief Executive of the Carbon Trust, comments, "These new findings are startling. Sixty percent of young adults questioned in China would

"The survey of consumers aged 18-25 in China, the Republic of Korea, South Africa, Brazil, the USA and the UK reveals a divide between attitudes to carbon reduction in the East and West."

stop buying a product if its manufacturer refused to commit to measuring and reducing its carbon footprint, compared to just 35% of those in the US. Perhaps it is the Chinese, and not the US consumer, that really holds the key to unlocking the mass demand for the new low carbon products necessary to deliver an environmentally sustainable economy. If global brands don't build international carbon reduction strategies even faster, they risk missing out on the spending power of emerging economies."

There is also evidence that young adults want brands to be clearly accountable for their action on carbon. Eighty-one percent of those questioned in Brazil said companies should be obliged to provide proof of their policy to reduce their carbon footprint, higher than any other nation. Sixty-eight percent of those surveyed worldwide want to see companies' carbon impact quantified by an independent organization. This is highest in China at 84% and lowest in the USA at 55%. Across all the markets, on average a third of young consumers (33%) say they are prepared to buy a more expensive product if it has a lower carbon footprint.

When asked which products and categories can do the most to reduce their carbon footprint, 68% of young consumers cited consumer electronics companies in the top three, followed by consumer healthcare brands (50%), clothes manufacturers and retailers (50%), and food manufacturers and retailers (48%).

● The research was conducted online by TNS between February 24th and March 6th 2012. The Carbon Trust is a not-for-profit group with the mission to accelerate the move to a low-carbon economy.



Attitudes to industry

Top four products and categories which young adults think can do more to reduce their carbon footprints



1
Consumer electronics
 68% thought they could do more



2
Consumer healthcare brands
 50% thought they could do more



3
Clothes manufacturers and retailers
 50% thought they could do more



4
Food manufacturers and retailers
 48% thought they could do more

FURTHER READING

- Bassey, Nnimmo – To Cook a Continent: Destructive Extraction and Climate Crisis in Africa
 Farmer, Paul – Pathologies of Power: Health, Human Rights, and the New War on the Poor
 Hayton, Bill – Vietnam: Rising Dragon
 Kenny, Charles – Getting Better: Why Global Development Is Succeeding – And How We Can Improve the World Even More
 Kent, George – Ending Hunger Worldwide
 Lawrence, Felicity – Eat Your Heart Out: Why the food business is bad for the planet and your health
 Leisinger, Klaus – The Role of Corporations in Shaping Globalization with a Human Face, in Straus J. (ed), The Role of Law and Ethics in the Globalized Economy
 Nair, Chandran – Consumptionomics: Asia's Role in Reshaping Capitalism and Saving the Planet
 Nestle, Marion – Food Politics: How the Food Industry Influences Nutrition and Health
 Schwartz, Beverly – Rippling: How Social Entrepreneurs Spread Innovation Throughout the World
 Vierra, Brian and Vierra, Kimberly – Vietnam Business Guide: Getting Started in Tomorrow's Market Today

FURTHER SURFING

- d-rev.org – D-Rev is a non-profit technology incubator whose mission is to improve the health and incomes of people living on less than US\$4 per day.
 worldbank.org/ggfr – The World Bank's Global Gas Flaring Reduction public-private partnership.
 www.chinadialogue.net – A platform that creates communication across barriers of language and culture on environment and climate change, to inform, educate and build a global consensus for equitable, constructive and implementable solutions.
 www.cleanclothes.org – The Clean Clothes Campaign is an alliance of organizations in 15 European countries. Members include trade unions and non-governmental organizations.
 www.cseindia.org – The Centre for Science and Environment is a public interest research and advocacy organization based in New Delhi.
 www.eration.org – Environmental Rights Action is a Nigerian advocacy group dedicated to the defence of the human ecosystem in terms of human rights.
 www.global-inst.com – The Global Institute For Tomorrow (GIFT) is an independent pan-Asian think-and-do-tank.
 www.novartisfoundation.org – A non-profit-based organization that forms part of the corporate responsibility portfolio of the multinational pharmaceutical company, Novartis.
 www.srfood.org – Website of Olivier De Schutter, United Nations Special Rapporteur on the Right to Food.
 www.unglobalcompact.org – A strategic policy initiative for businesses that are committed to aligning their operations and strategies with fundamental principles in the areas of human rights, labour, the environment and anti-corruption.

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