Economic reality spurs intervention

More is being done to tackle ‘NTDs’ as research reveals their impact on countries’ growth, writes Andrew Jack

as arsenic-based injected medicines that painful spinal taps for diagnosis and medical techniques, which require Geneva trying to improve decades-old stigmatised and regarded as mad.”

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for boats and bikes to reach affected those,” says Mr Kande, a health offi-“Our government has many prob-lems, and all attention is focused on
tropical diseases. Everyone sees and deals with malarial vectors problem, which occurs in the west. Another is sleeping sick-ness, which is a tropical disease. It is found in Africa and Asia. It is caused by a parasite called Trypanosoma brucei. The disease is transmitted by the tsetse fly, which feeds on blood. The symptoms of sleeping sickness include fever, headache, and muscle weakness. If left untreated, the disease can be fatal.

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Less dramatic.

on individuals, communities and regions. According to the best statistics available, the number of people infected with sleeping sickness is estimated to be between 500,000 and 1 million, with the highest prevalence in Sudan, South Sudan, and Uganda. The disease is caused by the parasite Trypanosoma brucei and is transmitted to humans by the tsetse fly. The symptoms of sleeping sickness include fever, headache, and muscle weakness. If left untreated, the disease can be fatal.

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The World Health Organization (WHO) describes neglected tropical diseases (NTDs) as “the ancient diseases of poverty.” They affect over a billion of the poorest, most marginalized people in the world, often keeping them from working or going to school, and perpetuating a cycle of disease and poverty.

What makes a disease neglected?

Or are they simply diseases of neglected people?

The World Health Organization (WHO) describes neglected tropical diseases (NTDs) as “the ancient diseases of poverty.” They affect over a billion of the poorest, most marginalized people in the world, often keeping them from working or going to school, and perpetuating a cycle of disease and poverty.

Just think what would be possible in a world free from NTDs?

That is exactly what a new coalition is working to achieve. Earlier this year, G8 was joined in its task by other pharmaceutical companies, NGOs, and international organizations.

Meeting this goal will mean getting prevailable treatments to all of the people who need them. Over the past twenty years, good progress has been made, but the number of people living with NTDs is still too high. For diseases where access to treatments is limited, we need to encourage more active partnerships.

GSK is helping to deliver on this pledge in two fronts:

We are an active partner in all of the main public–private partnerships. We are committed to working with others to help address the needs of people living with NTDs.

We recently expanded our programs to include school-age children at risk of intestinal worms being treated. In total, we will serve up to one billion children worldwide with deworming treatments.

Partnerships and openness are key.

We are also working to help advocate and to get the right investments in NTDs. Our goal is to get as many people as possible treated. We are committed to work with others to make sure that the treatments are available to all who need them.

Ivermectin is a powerful drug that has been proven effective against a range of NTDs, including river blindness. We are committed to working with others to make sure that the drug is available to all who need it.

Today’s “Open Lab” is one of the many research projects that we are working on to help address the needs of people living with NTDs. We believe that by working together, we can make a difference.

The G8 Summit on NTDs was a significant step forward in the fight against NTDs. We are committed to working with others to make sure that the treatments are available to all who need them.

GlaxoSmithKline (GSK) CEO Sir Andrew Witty is today speaking at a meeting hosted by the organisation "Trust for the Fight Against Neglected Tropical Diseases" to discuss the importance of neglected tropical diseases and the need for collaborative efforts to address them.

Visit www.gsk.com for more information on how we do our work. See also: http://www.gsk.com

The Trust for Tropical Diseases (TTD) is currently seeking proposals for research projects. For more information, visit: http://www.ttdf.org
**Combating Neglected Diseases**

Science is fighting the dengue war on four fronts

**Prevention** Developing a vaccine against dengue is especially difficult – but potential benefits are enormous, says Denise Roland

A breakthrough in tackling the world’s most widespread neglected disease is about to happen but disappointing results from the latest vaccine trial have cast a shadow over the hopes of millions of people across the globe every year.

The disease is on a northeastward march towards the subtropical and temperate United States.

The first local transmissions in Europe were recorded in France and Croatia in 2008, and last month Greek health authorities confirmed dengue had reached the Ionian islands.

In 2010, 500,000 people each year developed the fever, a virus that is tantalisingly close, yet has hidden its impact from the global health community.

New weapons are needed to fight dengue – and dengue fever.

It causes a range of symptoms, from fever and headache to severe bleeding.

If untreated, dengue can cause severe blood clots and complications such as dengue shock syndrome, which could be fatal.

In 2010, there were between 30,000 and 100,000 cases of severe dengue fever in Asia, and in the Philippines, the number of dengue cases increased by 30%.

There is no dengue vaccine, which is why governments are having to spend billions of dollars in the fight against mosquito-borne diseases of poverty.

A little effort can produce great strides

John Rollfor had long been aware of the burden of dengue fever in the Philippines, but it took the visit of a commercial group of state officials to mobilise his country’s health system.

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**Projects need coordinated approach**

**Interactive graphic**

Focus on neglected diseases in different parts of the world www.FT.com/reports

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Estimates:

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Estimates:
Funds sharper scientific focus

Research

The response to exotic parasites may underpin future cancer treatments, writes Claire Cookson

The potential for saving money and improving health by co-ordination is substantial.

The link of linking the efforts of scientists and policymakers in different countries to tackle diseases, neglected or otherwise, would help strengthen health systems more broadly and in recipient countries, allowing the connections to be used to help save lives in situations that a single country could not.

An example is the Global Fund to Fight AIDS, Tuberculosis and Malaria, where the connections between many conditions and diseases can still be deadly in the tropics.

Most of the vaccine work is carried out by public sector and non-profit groups.

Synergy would help in tackling diseases, writes Andrew Jack

Combating Neglected Diseases

Joint approach is still a dream

Neglected Tropical Diseases are a convenient name for a disparate group of infections that hardly exist in the rich world but are major public health problems in the poorest regions of Africa, Asia and South America. However they are so diverse in their molecular and disease mechanisms that it may be misleading in two ways according to Professor Jaques Duval of the London School of Tropical Medicine. First, he says “the group of the diseases are no longer neglected.”

Medical science is paying more attention to neglected tropical diseases. The recognition that diseases are emerging from the pharmaceutical industry, government and ministries. Policy  makes a health charity that tracks spending on neglected diseases in 2011 , says Dr. Calla Tow in The Lancet Infectious Diseases.

Another reason for the neglect is that many of the diseases can be diagnosed and treated with drugs already on the market. New drugs are not being created for these diseases, and the diseases can be致命 across broad categories, according to the pathogen responsible for the infection and the vector that transmits it. There are four main types of pathogen: helminthic (worms), arboviral (viruses transmitted by insects), bacteria, fungi, and viruses none of which cause a disease that truly reigns in the way that yellow fever or dengue fever do. Fungi and helminth drugs are mainly derived from natural sources: fungi and bacteria. Vector-borne infections are in early class clumps, with species or vectors such as sandflies, tsetse flies, or mosquitoes. The vector-borne diseases are mainly transmitted by biting arthropods. A rapid diagnostic test is needed when it comes to the development of new drugs. The following figures from PLoS show a particular increase in corporate investment in neglected tropical disease treatments in recent years – from $25 m in 2007 to $178 m in 2011. This investment has been focused particularly on drugs. There is now more research funding that than before neglected diseases.

The latest, published this month in the Biochemical Journal, is substantial in tackling diseases, especially those that 3.15 helminthic infections. The Leishmania parasite needs the enzyme, pyruvate kinase or PYK, for the glycolysis process that converts glucose into energy. Without it, the parasite can’t do its job. That’s particularly interesting as it has implications for treating tropical diseases, neglected or otherwise.

Several major biological pathways that benefit helminthic diseases are still by the National Institute for Improvement and malaria control in the field. The Global Fund to Fight AIDS, Tuberculosis and Malaria, the largest multilateral role, is still in its early days. It has shown that it can fund to support a distributed programme by linking the global Fund to Fight and to projects such as the Programme for Economic Development and the African Programme for the Control of Tropical Diseases.

These community-based initiatives using local volunteers with government support tend to be very accurate and acceptable compared to expensive mass campaigns run by huge international organizations. They would increase the likelihood that new drugs would be used to protect against malaria, while also helping to convince governments and other donors to continue funding these programs.

Neglected diseases are the “neglected diseases” that many American scientists have been looking for… A recent report by the National Academy of Sciences on the Nigerian Delta and poor neighborhoods in some cities of fungal meningitis just came to light. The injectable steroid used during this month in the Biochemical Journal, is substantial in tackling diseases, especially those that 3.15 helminthic infections. The Leishmania parasite needs the enzyme, pyruvate kinase or PYK, for the glycolysis process that converts glucose into energy. Without it, the parasite can’t do its job. That’s particularly interesting as it has implications for treating tropical diseases, neglected or otherwise.

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Tide may be turning against guinea worm

Eradication Simple, practical steps involving communities have been vital in the fight against this debilitating parasite, says Sarah Murray

With cases of guinea worm, disease, deaths and disfiguring blinding eye injuries on the wane, many credit the long-term commitment of the global health community’s efforts, including the use of simple, cheap interventions such as formaldehyde, to drive down the numbers. But even as the eradication of this disease formally begins, its elimination is still a decade away.

As the battle continues, many are intrigued by how a simple, pioneering solution can prove so persistent, when so many other seemingly more sophisticated interventions have failed.

But while the vaccine is prized as the holy grail of the war against guinea worm, an equally important smallpox control effort was launched in the late 1960s, when the disease was still rampant. The campaign was a massive national effort in three sub-Saharan African countries today, the near elimination of smallpox and the eradication of the virus worldwide is now 40 years old.

A shared way forward offers hope

The battle against guinea worm is one that has been fought by communities, scientists, governments and the drug industry. The research and development efforts that have led to the elimination of this disease have been a model for future efforts.

A common goal has brought together experts from across the globe to tackle neglected diseases, with the aim of eradicating guinea worm and other diseases. The success of these efforts has inspired others to join the fight, leading to increased momentum and a renewed commitment to eradicating guinea worm.

The eradication of guinea worm has shown that concerted efforts from multiple sectors can lead to significant outcomes. This model, known as the “partnership approach,” is being applied to other neglected diseases and has the potential to revolutionize the way we approach global health challenges.

Companies strive for better outcomes from donations

But the eradication of guinea worm has demonstrated that sustained efforts and collaboration can lead to success. The lessons learned from the smallpox eradication program provide valuable insights for future efforts to tackle other neglected diseases.

A focus on partnerships and community engagement is crucial for the success of any eradication campaign. The lessons learned from the smallpox program can inform future efforts to eradicate other neglected diseases, including malaria and tuberculosis.

With a common goal and a commitment to eradicating these diseases, the efforts to eliminate guinea worm provide hope for the future of global health and the potential to save countless lives.