Madagascar: Escape 2 Africa is the 2008 sequel to the 2005 animated film Madagascar. This film about New York zoo animals has again delighted millions while strongly advocating the fourth biggest island to probably every household in the world. The success has been so great that the producers are planning a third Madagascar film, probably in 2011.

Real-life Madagascar, an island-nation in the Indian Ocean off the south-eastern coast of Africa, is home to slightly more than 19 million people and some of the rarest plants and animal species in the world.

The country contains rich mineral deposits, with potential for future oil and gas projects. Tourism, textiles and forestry are the main sources of economic growth. The main activities, agriculture and fishing, expose the largely rural population to neglected tropical diseases, including schistosomiasis. Schistosomiasis is reported to be highly endemic on the island and has long afflicted children and countless generations of Malagasy. Statistics show that almost 10 million people, mainly children, are at risk for schistosomiasis, lymphatic filariasis and soil-transmitted helminthiases.

Schistosomiasis is a parasitic disease that leads to chronic ill-health. Infection is acquired from contaminated freshwater containing the larval forms (cercariae) of blood flukes, known as schistosomes. The centimetre-long worms mature in the human bladder and intestines, laying eggs that can cause massive damage. Once released by the body into water through faeces and urine, the eggs hatch and their larvae (miracidia) penetrate suitable snail hosts. The cercariae emerge from the snail into water from where they penetrate a human host within seconds, thereby perpetuating the life-cycle.
According to official 2007 figures, 70% of Malagasy live in rural areas. Of the 19 million population, almost 10 million are at risk of contracting one or more neglected tropical diseases.

Two forms of schistosomiasis are endemic to Madagascar. The first, intestinal schistosomiasis, is endemic in the southern and eastern parts of the country. Infection is acquired from worms residing in the blood vessels lining the intestine.

The second form, urinary schistosomiasis, is endemic in the northern and western regions of the country. Schistosomiasis affects 95 out of 111 districts, with an estimated national prevalence rate of 31%. However, in some areas, the prevalence rate may be as high as 70%. About 5 million people are thus estimated to be infected, with a further 15 million at risk of infection. This situation makes schistosomiasis a major public health problem in Madagascar.
**ACTION PLAN 2007–2012**

In 2006, the Government of Madagascar initiated a Madagascar Action Plan 2007–2012 to help the country achieve its Millennium Development Goals and overall targets for economic development. Of the eight commitments outlined in the plan, one focusing on health, family planning and HIV/AIDS contains bold measures to rid the country of poverty and achieve long-term economic development through general improvements in peoples’ health.

With the implementation of the fifth commitment, a coordinated approach involving preventive chemotherapy interventions has been launched to target diseases such as lymphatic filariasis, schistosomiasis and soil-transmitted helminthiases.

The strategy involves “operational and institutional strengthening at central, regional, village and community levels”. This provides for:

- Large scale distribution of anthelmintic drugs in communities and schools
- Treatment of people with disabilities
- Preventive measures to promote health, including safe drinking-water, improved sanitation and vector control
- Surveillance, and monitoring and evaluation
- Advocacy to promote control of helminth infections.

**UNPRECEDENTED SCALE-UP**

Between June and October 2008, more than one million school-aged children were treated for schistosomiasis, compared with just over 110 000 people treated during the eight-year period 1999–2006. This scaling-up was made possible by the donation of 3.4 million praziquantel tablets by Merck KGaA.

In June 2008, a total of 912 568 of the 1 074 000 eligible school-aged children received treatment, representing 82% of the target population in 21 districts. A further 340 000 children were treated in October. On 29 October 2008, 14 year-old Jaonary, a 5th grader at the Collège Catholique Saint Maurice in Marovoay.
To maintain consistency and accuracy in data reporting, WHO recommends that statistics on all treatments delivered be reported through the health system in a timely manner by the completion of a standard form during treatment sessions. This will accurately reflect levels of drug coverage achieved by the control programme and help determine the setting up of sentinel schools in selected districts to monitor epidemiological and programme indicators. As schistosomiasis transmission is variable across the country, it is important to determine the impact of treatment through these sentinel sites to guide programme implementation and to determine treatment cycles. The lymphatic filariasis elimination programme already has sentinel sites in each of the 22 regions of Madagascar.

In most areas, primary-school teachers are responsible for treating school-aged children; community drug distributors deliver treatment in areas where MDA for lymphatic filariasis is being implemented. Drug distributors are trained by officials of the Ministry of Health, with support from nongovernmental organizations such as AICU,1 RISEAL2 and the WHO Country Office.

The National Office of Nutrition of Madagascar provides mebendazole and helps train teachers in the annual deworming programme. At present, deworming for soil-transmitted helminthiasis is being done through schools, whereas mass drug administration for lymphatic filariasis is being implemented through communities. WHO recommends that treatment for schistosomiasis be integrated into existing systems for delivering treatment in order to maximize the use of resources and expand drug treatment to all eligible populations.

1Associazione Italiana Carlo Urbani; http://www.aicu.it
2Réseau International Schistosomoses Environnement Amenagements et Lutte; http://www.riseal.org
ERRONEOUS BELIEF

Ramose Jean, a teacher living in Tsimahajao Marovoay in western Madagascar where urinary schistosomiasis is endemic, understands what it means to be infected with schistosomes, having been affected as a child.

His main message to parents is to better understand the disease:

“Traditional beliefs pose a problem as people think that for a child to become mature, he has to pass bloody urine. Our message to parents is clear: this is a sign of urinary infection and needs to be urgently treated”.

The Ministry of Health and Family Planning has trained hundreds of teachers and volunteers to help promote distribution of anthelminthic drugs free of charge. The aim is to reach 100% of the school-aged population in endemic areas.

Evelina, a 12-year old grade 7 student at the public primary school of Tsimahajao, has suffered chronic abdominal pain and cramps for more than 2 years and has occasionally passed bloody urine. She was unable to eat or sleep properly, which seriously affected her general health and school performance. Her parents, however, were not worried as they strongly believed that Evelina would outgrow her condition as she approached adolescence.

Evelina could not attend school when classes resumed in September 2008. Her teacher, Ramose Jean, visited her parents and informed them that Evelina might be suffering from schistosomiasis and that she needed to be treated with drugs being distributed free of charge at the school.

Today, Evelina is cured. Like her, hundreds of thousands of children have now been treated for schistosomiasis in some 24 districts of eastern Madagascar.

1. DETERMINE THE APPROPRIATE DOSE BY HEIGHT
2. ADMINISTER THE CORRECT NUMBER OF PRAZIQUANTEL TABLETS
In April 2007, WHO and Merck KGaA signed a memorandum of understanding for the donation of praziquantel tablets to treat children for schistosomiasis in countries highly endemic for the disease.

Six countries are designated to receive the first shipments: Angola, Benin, Cameroon, the Central African Republic, Madagascar, and Senegal. The Carter Center assisted health programmes in Nigeria’s Nasarawa and Plateau states, which were also allocated praziquantel from the donation. Benin, Madagascar, Nigeria, and Senegal received their first delivery of drugs during the first half of 2008.

The drug donation programme which started in June 2008 was officially launched in Madagascar on 5 October 2008.

WHO MARKS TURNING POINT FOR 1 BILLION PEOPLE

Partners commit to global action against forgotten diseases

19 April 2007 | Geneva – WHO and key partners are meeting on Thursday and Friday to demonstrate an unprecedented commitment to combat the so-called neglected tropical diseases. This commitment comes from political leaders and ministries of health in affected countries, from development agencies and banks, foundations, scientists, and some of the world’s leading pharmaceutical companies.

Most of the neglected diseases are caused by parasites that thrive in impoverished settings, where water supply, sanitation, and housing are poor. Apart from this strong link to poverty, the diseases form a group because they permanently deform and disable large numbers of poor people, trapping them in poverty.

Worldwide, an estimated 1 billion people—one sixth of the world’s population—are affected by one or more of these diseases. Recent evidence of their severe impact on socioeconomic development has spurred unprecedented commitment to reduce this burden. Control of these diseases is now considered part of the global drive to reduce poverty.

“This event marks a turning point in the long and notorious history of some of humanity’s oldest diseases,” the WHO Director-General, Dr Margaret Chan, said in her opening address. “The burden imposed by these diseases measured in terms of human misery alone, is unacceptable. We are committed to take action.”


“The fact that a total of 1 million children have been treated as of October 2008 clearly demonstrates the tremendous accomplishments of all those involved in such a short period of time. A concerted effort by WHO, the Ministry of Health and Education, district administrative authorities, mayors and teachers made the successful launch of the programme to combat schistosomiasis possible... I therefore consider Madagascar to be a best practice example that other African countries can emulate.”

Elmar Schnee, President, Merck Serono

“One of the ways to help reduce endemcity is through behavioural change. Schistosomiasis is directly linked with water and personal hygiene. The use of latrines is important in controlling worms that trigger the disease. We should also educate the population and make everyone better understand the disease.”

Yvette Céline Seignon, WHO Resident Representative, Madagascar

“The rapid scale-up is largely due to a collaborative action between the Ministries of Health and Education and their partners, RISEAL, AICU, as well as the WHO Country Office. The private-public partnership between Merck KGaA and WHO arranged the donation of praziquantel, but the actual implementation was made by stakeholders in Madagascar. A little support can go a long way. We expect the scale up to continue with the same enthusiasm and momentum until the children at risk are treated and that deworming of school-aged children becomes routine in the country.”

Dr Lester Chitsulo, Scientist, WHO/NTD
CONTROL AND TREATMENT OF SCHISTOSOMIASIS

Schistosomiasis is known to have existed since the time of the Egyptian pharaohs.

The worms responsible for the disease were discovered in 1851 by Theodore Bilharz, a young German pathologist, from whom the disease took its name, bilharziasis. The disease is indicated either by the presence of blood in the urine or, in the case of intestinal schistosomiasis, by initial atypical abdominal symptoms that can lead to serious complications involving the liver and spleen.

Although schistosomiasis is rarely fatal, its impact on economic conditions and general health is considerable: it heavily compromises the capacity for work and the healthy development of children. Studies have pointed to a link between urinary schistosomiasis and a form of bladder cancer.

Approaches to control for each form of schistosomiasis vary and must be adapted to the epidemiological situation, available financial resources and the particular local culture.

Modern treatment of schistosomiasis is safe, prompt and cost-effective. Praziquantel is widely used to treat infection; the drug has virtually no adverse effects. Although reinfection may occur after initial treatment, the risk of serious disease is greatly reduced.

CONTROL MEASURES

- Access to diagnosis and treatment
- Availability of safe drinking-water and adequate sanitation
- Health education
- Strengthened health systems
- Control of intermediate hosts (freshwater snails)
COMMITMENT TO ACTION

► June to October 2008: More than one million school-aged children treated for schistosomiasis.


► Political commitment demonstrated at all levels.

► Targeted advocacy for control of neglected tropical diseases using all media channels.