SOCIAL INNOVATION IN HEALTH INITIATIVE

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SCHISTOSOMIASIS CONTROL INITIATIVE

CONTINENT	Africa
COUNTRY	Ethiopia
HEALTH FOCUS	Neglected Tropical Diseases, Schistosomiasis
AREAS OF INTEREST	Health research, Disease control and elimination
HEALTH SYSTEM FOCUS	Service delivery, Leadership / governance

SCHISTOSOMIASIS CONTROL INITIATIVE, ETHIOPIA

A systematized capacity building approach established on rigorous data that seeks to achieve schistosomiasis control and elimination in high-endemic, low-income countries.

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This case study forms part of the Social Innovation in Health Initiative Case Collection.

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CONTENTS

ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DALY	Disability Adjusted Life Years
DFID	British Department for International Development
EPHI	Ethiopian Public Health Institute
FMOH	Federal Ministry of Health (Ethiopia)
HIV	Human Immunodeficiency Virus
M&E	Monitoring and evaluation
MDA	Mass Drug Administration
MDG	Millennium Development Goals
NTD	Neglected Tropical Diseases
SCI	Schistosomiasis Control Initiative
UK	United Kingdom
USAID	United States Agency for International Development
US$	United States Dollar
WHO	World Health Organization

CASE INTRODUCTION

The Schistosomiasis Control Initiative (SCI) is a systematized capacity building approach established on rigorous data that seeks to achieve schistosomiasis control and elimination in high-endemic, low-income countries. Founded in 2003, SCI is located within Imperial College London and has operated in 18 countries across Africa and the Middle East. This case study focuses on its work in Ethiopia, which began in 2013.

Schistosomiasis affects an estimated 252 million people globally, and 90% of this burden is found in sub-Saharan Africa. It is responsible for 300 000 deaths annually and 70 million disability adjusted live years (DALYs) (Hotez & Kamath 2009; Steinmann et al. 2006; Adenowo et al. 2015). Chronic infection causes caloric malnutrition, growth stunting, anaemia and ultimately organ damage, as well as impairing the response to childhood vaccines (Labeaud, 2009), suppressing the malaria antibody response (Semenya et al., 2012), and increasing the risk of mother-to-child HIV transmission (Secor, 2006). SCI's approach focuses on creating sustainable national programmes through strengthening country capacity. SCI's intervention begins with a national mapping exercise, which identifies at-risk populations in need of treatment. This is followed by mass drug administration campaigns, which are supported by teachers and community members who receive specific training. SCI leverages drug donations from private companies and coordinates donor funding to maximize impact and efficiency. In the initial stages, countries receive intensive support from SCI to help develop the training programmes; treatment strategies and budgets; governance, reporting, monitoring and evaluation structures; drug procurement and distribution channels; and community mobilisation efforts. After a country is able to execute and implement the programme independently, SCI reduces its support and starts engaging a new country. When SCI withdraws from a country, it ensures that there is sufficient funding and support for the programme to continue.

The SCI case study shows that developing countries can be successful in eliminating neglected tropical diseases if they receive comprehensive support and ongoing mentorship to strengthen their local research, technical and delivery capacity. It also illustrates how partnerships and collaboration with the private sector provide an opportunity to unlock scarce resources, especially essential medicines, which could support the public sector in fulfilling its delivery mandate.

SCI's role and ambition is to see anybody who is infected with schistosomiasis or at risk of schistosomiasis receiving a free drug, praziquantel, which will cure them. (Prof Alan Fenwick, Director, SCI)

1. INNOVATION PROFILE AT A GLANCE

Project Details

Organization name	Schistosomiasis Control Initiative (SCI)
Founding year	SCI was established in 2003; Ethiopia Country Programme was launched in 2013
Founder name	Prof Alan Fenwick (SCI Founder & Director); Dr Michael French (Ethiopia Programme Manager)
Founder nationality	British
Organizational structure	Located within Imperial College London
Team size	24

Innovation Value

Value proposition	A systematized capacity building approach established on rigorous data that seeks to achieve schistosomiasis control and elimination in high-endemic, low-income countries.
Beneficiaries	School-aged children, and adults living in schistosomiasis and soil-transmitted helminth-endemic areas
Key components	• The development and design of a clear delivery approach to control schistosomiasis on a national scale • Leveraging drug donations and fostering private sector support • Uniting stakeholders and developing integrated national strategies, implementable by country staff

Operational Details

Main income streams	Grant funding and private donations
Cost considerations	US$ 34 million will be required to implement the five year control strategy in Ethiopia

Scale and Transferability

Scope of operations	SCI has been operational across 19 countries in Africa and the Middle East. In Ethiopia, SCI works across 623 out of 839 woredas (districts)
Local engagement	Ethiopian Federal Ministry of Health; Ministry of Education; Ethiopian Public Health Institute, International collaborators and funders
Scalability	To scale to a new country, SCI requires: • commitment and involvement from the appropriate national bodies (such as the Ministry of Health and Ministry of Education) • sufficient donor funding and/or private donations (such as medication)
Sustainability	SCI's approach focuses on creating sustainable country programmes through strengthening country capacity. In the initial stages, countries receive intensive support from SCI, who helps develop the governance, reporting, monitoring and evaluation structures. As progress is made and the country is able to execute and implement independently, SCI is able to reduce its support and start engaging a new country. When SCI withdraws from a country, it ensures that there is sufficient funding and support for the programme to continue.

2. CHALLENGES

Over the past decade, an unprecedented amount of global funding has been invested to combat malaria, HIV and tuberculosis, and as a result, millions of people have received life-saving treatment. Another group of diseases in which promising progress has been made is Neglected Tropical Diseases (NTDs). Millions of people affected by two of the 17 diseases in this cluster, lymphatic filiarisis and onchocerciasis, have successfully received chemoprophylactic treatment (Hotez, 2009). However, other NTDs such as schistosomiasis still pose a key health challenge. Schistosomiasis affects an estimated 252 million people globally and 90% of this burden is found in Sub-Saharan Africa. Schistosomiasis is responsible for 300 000 deaths annually and 70 million disability adjusted live years (DALYs) (Hotez & Kamath, 2009; Steinmann et al., 2006; Adenowo et al., 2015). Originally considered a "disabler", rather than a "killer", the true burden of schistosomiasis has traditionally been underreported (Hotez et al., 2014).

Schistosomiasis is a parasitic disease carried by freshwater snails. Women and young children are at greatest risk of infection and are exposed primarily via swimming, bathing in rivers, washing clothes, fetching water, and poor sanitation and hygiene practices (Alebie et al., 2014; Adenowo et al., 2015). The larvae emerge from the snail and swim in water until they come into contact with human skin. After penetrating the skin, adult worms deposit parasitic eggs in blood vessels surrounding the bladder or intestines. Urogenital schistosomiasis results in scarring or tearing of the bladder, can lead to bladder cancer, and also affects the vagina and cervix resulting in vaginal bleeding and pain. Intestinal schistosomiasis causes abdominal bleeding and liver enlargement (World Health Organization, 2016). Chronic infection causes caloric malnutrition, growth stunting, anaemia and ultimately organ damage. Studies have also found chronic infection to be associated with impaired response to childhood vaccines (Labeaud, 2009), suppressed malaria antibody response (Semenya et al., 2012) and increased risk of mother-to-child HIV transmission (Secor, 2006).

Ethiopia, a federal democratic republic, is the second largest country in Sub-Saharan Africa with an estimated population over 90 million, 83% of whom live in rural areas (CSA, 2013). The health system is structured across 11 regions. These are further subdivided in 68 zones and 839 administrative woredas (districts), which are further subdivided into 16 253 kebeles, the smallest administrative unit. Each kebele comprises of approximately 5 000 people (Ministry of Health, Federal Democratic Republic of Ethiopia, 2013). To meet the needs of the rural population, the country has adopted a decentralized health system with a strong preventative primary care foundation. In support of this, public health expenditure has increased, new partnerships have been developed between private and nongovernmental institutions and community, a cadre of health extension workers have been trained and close to 3 million grassroots community volunteers have been mobilized to support households and families. As a result, Ethiopia has achieved outstanding performance in regards to the Millennium Development Goals (MDG). Under-five mortality and maternal mortality targets were achieved and a dramatic reduction in malaria and HIV/AIDS has occurred (Wamai, 2009; Haileamlak, 2015).

Although the health gains made are significant in Ethiopia, the country still has a long way to go to achieving the MDG target number 7, as the proportion of the population with access to safe running water and acceptable sanitation facilities is still low. Areas with poor sanitation coverage often experience a high burden of schistosomiasis and soil-transmitted helminths. In Ethiopia, there are an estimated 55,9 million people living in schistosomiasis endemic woredas (districts). Of these, 5 million are pre-school children; 17,7 million are school-aged children; and 30,5 million are adults (Ministry of Health, Federal Democratic Republic of Ethiopia, 2013; Deribe et al., 2012). The overall prevalence of schistosomiasis in school-aged children in Ethiopia is estimated at 16,5% (Lai et al., 2015).

After focusing on immediate public health issues such as malaria, tuberculosis and HIV, the full

momentum of the Government of Ethiopia swung behind NTDs in 2013. The launch of the first national NTD Master Plan in June 2013 was a clear indication of strong political commitment. The words of Kesetebirhan Admasu, Ethiopian Minister of Health, echoed this determination: *"The global effort to control and eliminate neglected tropical diseases must be led by the countries themselves. Through the Addis Commitment, and with the support of the international community, we will do whatever is necessary to see an end to these terrible diseases"* (Uniting to Combat Neglected Tropical Diseases, 2015). In 2015, the National Master Plan was revised to cover a range of planned interventions to combat NTDs including schistosomiasis during the period of 2016-2020. Ambitious targets have been set to eliminate schistosomiasis-related morbidity to less than 1% (World Health Organization, 2013).

In other African countries, the fight against schistosomiasis has been facilitated through strong partnerships and a co-ordinated approach. The pharmaceutical industry has supported these initiatives. Praziquantal is a drug found to be highly effective in eliminating schistosomiasis parasites from the body, improving child growth and development, and reversing anaemia and associated end-organ pathologies. The cost of a single tablet is US$ 0,08, equating to an average cost to treat a child of US$ 0,20 per person. In 2002, the Bill and Melinda Gates Foundation provided the starting capital to support endemic countries to control schistosomiasis. In 2008, partial pharmaceutical support was received for the donation of praziquantal (200 million tablets over 10 years). Merck KgaA (Germany) committed to this donation in partnership with the World Health Organization (WHO) and in 2012 the donation was increased so that from 2016, Merck donates 250 million tablets annually. In addition, bilateral agencies such as United States Agency for International Development (USAID) and the British Department for International Development (DFID) have also donated tablets and funding for the control of schistosomiasis (Hotez & Fenwick, 2009). However, if aspects of training and delivery are not adequately addressed, the drugs alone will not be enough to manage the disease.

3. INTERVENTION

SCI's role and ambition is to see anybody who is infected with schistosomiasis or at risk of schistosomiasis receiving a free drug praziquantel, which will cure them. (Prof Alan Fenwick, Director, SCI)

Founder and pioneer Prof Alan Fenwick established the Schistosomiasis Control Initiative in 2003. This initiative, based out of Imperial College London, was launched to serve African ministries of health in the goal to eliminate schistosomiasis and its negative impact on health.

Building on the success Prof Fenwick achieved prior to 2002 working in Tanzania, Sudan and Egypt to eliminate schistosomiasis, the establishment of SCI was to see this same approach replicated and scaled to other countries. In 2013, SCI partnered with the Federal Ministry of Health (FMOH) in Ethiopia to establish a locally-owned schistosomiasis control programme. The FMOH has put its full political commitment and support behind the programme and the country is a flagship project for the SCI team. To date (2016), the programme implemented two main activities towards eliminating schistosomiasis:

National mapping

The first step in SCI's approach for establishing a country-owned schistosomiasis control programme is to map the burden of the disease. In Ethiopia, the national mapping of schistosomiasis, soil transmitted helminths and school-based water and sanitation took place from 2013 to 2014. This effort was led by the Ethiopian Public Health Institute (EPHI) with the support of SCI. This research process assisted in identifying at-risk populations in need of treatment. A total of 116 042 children across 2 471 schools were tested, covering roughly 75% of the country. Some 134 trained laboratory technicians and health officers in each

region collected the data. Urine and stool samples from the children were tested for the presence of parasitic eggs. This national mapping exercise was co-conducted with a water and sanitation assessment survey, and identified schistosomiasis in 297 woredas (districts). In 2015, the remaining areas in the country were mapped.

Mass drug administration

In 2015, two mass drug administration (MDA) campaigns were organized in Ethiopia, which aimed to treat all children between 5 and 14 years in response to the results of the national mapping. The MDA approach, which was supported by teachers and community volunteers, allowed all children in the designated areas to be treated during a defined week in the school calendar year.

Everyone engaged in the MDA campaign, from ministry officials to teachers and community volunteers, received comprehensive training ahead of the MDA campaign. During the April 2015 campaign, praziquantel treatment was provided to 2.8 million children in 109 woredas across six regions. Limited drug supplies in the country constrained the treatment coverage. The November campaign was able to extend this further to provide treatment to 6,5 million children. An additional 16,5 million children also received treatment for soil-transmitted helminthiasis. Following the completion of the MDA campaign, the Ethiopia team will be performing a coverage validation survey as the MDA approach has become an internationally proposed model for controlling schistosomiasis morbidity by 2020 (WHO 2013).

4. IMPLEMENTATION

4.1. INNOVATION IN IMPLEMENTATION

We really want and feel very happy if the ministries of health and education embrace this as their programme. Yes, we facilitate it. We give them the money that's needed to deliver the drugs down the last mile to the schools in the remote areas. We provide them with technical assistance, educational material and the other materials that they need in order to deliver the drugs, but it's their programme. (Prof Alan Fenwick, Director, SCI)

SCI operates through a country-led approach and supports its country partners to establish schistosomiasis control programmes in four ways:

Leveraging drug donations

SCI has achieved marked success mobilizing private sector pharmaceutical companies to donate praziquantel. Over the past decade, millions of tablets have been donated to SCI-supported countries for distribution to populations living below US$ 2,0 per day. Prior to 2013, praziquantel was only available in private pharmacies or hospitals in Ethiopia and was not readily available to the millions of people residing in the rural schistosomiasis-endemic areas. To date, Ethiopia has received 24 million tablets of praziquantel through donations from Merck KgaA (Germany) and the WHO on the strength of SCI's promised support for delivery costs.

Uniting stakeholders and integrating activities

Within Ethiopia, the NTD Master Plan is supported by a variety of partners each contributing in to ensure maximum impact. Prior to 2014, stakeholders were operating using their own strategies, without a strategically coordinated approach. A key method of SCI is to not operate in isolation but to serve as an integrator and coordinator within the local eco-system. Through the action of SCI, stakeholders in Ethiopia were brought together. These include: the Federal Ministry of Health, the Ministry of Education, Ethiopian Institute of Public Health, and the Partnership for Child Development and Evidence Action. Additional regional and international partners such as Kenya Medical Research Institute, and the Vector Control Division of the Ugandan Ministry of Health are involved by offering support to evaluation activities. Funding resources, provided by SCI, Children's Investment Fund, the END Fund, and DFID, have been pooled to a central fund from which all activities are

supported. In addition, SCI has ensured the coordination and integration with other related schistosomiasis-control efforts and activities such as WASH (water, sanitation and hygiene), the child nutrition programme, and the Ministry of Education.

Building local delivery capacity

SCI recognizes that drugs, partners and funding alone are not sufficient to achieve disease control. Core to its approach is building local capacity within the FMOH and other local partner organizations to ensure that they are fully able to execute and sustain the programme until elimination is achieved. SCI's programme manager, Dr Michael French, resides in Ethiopia and works closely with colleagues at FMOH, as part of a five-year implementation plan. This is to support the FMOH in 1) implementing the training cascade prior to MDA campaigns; 2) setting the treatment strategy and appropriate budgets; 3) procuring drugs through WHO guidelines and establishing nation-wide distribution channels especially to the most remote and rural areas; and 4) educating and mobilizing local communities to provide their support. SCI participated in the development of the 2013 and 2016 National NTD Master Plan and also sits as part of the NTD Steering Committee and the respective technical working group.

Evaluating impact

Monitoring and evaluation (M&E) is a core element of SCI activities and its partnership with different countries. In Ethiopia, SCI works closely with the EPHI to conduct all M&E activities, including the national mapping, sentinel site evaluations to monitor campaign effectiveness, and coverage validation surveys. SCI supports the technical capacity development in several areas, including data management and publication writing workshops. Furthermore, selected students are supported in their post-doctoral studies. SI also engages other academic institutions in Ethiopia (such as Arba Minch University) to support the independent monitoring surveys during the campaigns and are in the process of setting up an NTD national research network to maximize research outputs.

4.2. COST CONSIDERATIONS

SCI was established through the initial support of the Bill and Melinda Gates Foundation. Subsequently, it has been able to leverage significant funding through a variety of donor sources (DFID, USAID, the World Bank and the END Fund), as well as through private individual donations. A funding stream that has supported SCI in mobilizing unrestricted funding is the *GiveWell* and *Giving What We Can* platforms. In 2014/15, a total income of £ 7,69 million was received and expenditure totalled £ 5,32 million. Of this expenditure, 18% was allocated and spent in the UK for programme and implementation research; additional drug or equipment purchases; capacity building activities; advocacy and overall management and administration. All other expenditure was directly allocated to country expenses in operationalizing the programmes.

In 2014/15, the Ethiopia country programme received US$ 6 9774 402, which included a total of US$ 2 945 000 million pledged by SCI with support of DFID. Additional funding, to the value of US$ 4 029 402, was donated by the END Fund, and the Children's Investment Fund Foundation directly to the FMOH in Ethiopia. It is estimated that US$ 34 million will be required to fully implement the intended five-year strategy. Countries, in turn, also make a significant in-kind contribution through the provision of office space, vehicles, and personnel time, including that of the teachers and community health workers involved.

The estimated cost of delivering treatment to one child is US$ 0,45. Of delivery costs, a portion of the funds is sent directly to the country and the remainder is used by SCI to provide capacity strengthening for the country team. This offering alongside the strong evidence built over the years makes the work of SCI a very cost effective and attractive proposal to donors.

4.3. ORGANIZATION AND PEOPLE

Prof Alan Fenwick's journey is one that speaks of a lifetime dedication to eliminating schistosomiasis. Trained first in chemistry, Prof Fenwick proceeded to build his career in parasitology. On completion of his studies at Liverpool University, he soon left the UK to work in East Africa. Prof Fenwick spent

many years in Tanzania and then Sudan conducting research on a variety of tropical diseases, including schistosomiasis. In 1988, he moved to Egypt to support the Egyptian Ministry of Health's efforts to control schistosomiasis. At that time, schistosomiasis affected 30 to 40% of the population and was the most common cause of bladder cancer. Once the drug praziquantel became available, Egypt became the first country to provide treatment free to all school-aged children. Schistosomiasis reached elimination levels with reduction in prevalence to below 2%. This approach developed by Prof Fenwick and his colleagues in Egypt has since been replicated in 18 countries through the support of SCI.

By 2015, SCI comprised a team of 24 people based in London. This initiative has grown since its establishment in 2003. SCI is located at St Mary's Campus, within Imperial College London, through which is acquires for charity status. All individuals on the team hold a post-graduate degree, enabling them to build a strong research base. Team members include clinicians, parasitologists, biostatisticians and administrators. In addition, SCI has a strong advisory board that brings cross-cutting expertise from scientific, public health and industry domains.

SCI programme manager Dr Michael French relocated to Addis Ababa in 2013 to support the establishment of a local country team. The SCI Ethiopia team is comprised of three other members who support with technical advice, M&E and financial reporting. The team works in close partnership with the NTD case team leader within the FMOH and a full-time member of staff of Evidence Action.

5. OUTPUTS AND OUTCOMES

5.1. IMPACT ON HEALTH CARE DELIVERY

Since 2003, SCI reports having been effective in distributing 150 million doses of praziquantel to approximately 40 million people across 18 countries. In 2015, they successfully delivered 25 million treatments, and plan to double that number annually until 2020. They continue to play an active role in leveraging drug donations from pharmaceutical organizations.

By partnering with local ministries of health, SCI increases the country's capacity to deliver and maintain ongoing efforts in schistosomiasis elimination and control. All of the SCI partner countries have achieved reductions in schistosomiasis prevalence, but countries still have a way to go to achieve elimination.

Within Ethiopia, 85% of affected people were reached through the April and November 2015 campaigns. It is envisioned that with drug availability in subsequent rounds full coverage will be achieved, and repeated for several years to come.

5.2. BENEFICIARY EXPERIENCES

SCI place great importance on its partnership with the ministries of health and the sentiment is reciprocated. Through support from SCI, the FMOH in Ethiopia has received adequate financial support, and training and capacity resources to launch a national schistosomiasis control programme. SCI's presence is key in facilitating communication and co-ordination between different partner organizations that support the implementation programme.

Whatever their [SCI] input, it may be technical assistance, it may be financial assistance. So they may come one day or they may talk to you few moments, and if that contributes to your goal, I think that is good partnership. (NTD Technical Officer, FMOH)

5.3. ORGANIZATIONAL MILESTONES

SCI has contributed significantly to the global knowledge base on the control of neglected tropical diseases, with over 100 peer-reviewed research papers published over the past 13 years.

SCI also holds a presence on scientific committees, including in the WHO. In addition, Prof Fenwick has received public recognition for his work from several sources: the Mike Fisher Memorial Award for contribution to Global Health, Windref Foundation, 2014; Queens Anniversary Award for Research Excellence to SCI, Imperial College, 2008; Chevalier Order National, Burkina Faso, 2007; Gold Medal of Honour, Niger, Ministry of Health Niger, 2006; Donald MacKay Medal, Royal Society of Tropical Medicine and Hygiene, 2004; and Officer of the Order of the British Empire, The Queen, 1988.

However, beyond awards the SCI's greatest achievement has been an exponential increase in the total number of treatments and country partnerships. This has been possible by successfully convincing donors such as the Bill and Melinda Gates Foundation as well as the American and British governments to support the elimination effort.

6. SUSTAINABILITY AND SCALABILITY

SCI has been active in Liberia, Cote d'Ivoire, Burkina Faso, Niger, Mali, Burundi, Uganda, Tanzania, Zambia, Malawi, Mozambique and Yemen. In 2014/15, they expanded to Ethiopia, the Democratic Republic of Congo, Madagascar, Mauritania, Nigeria, Senegal and Sudan. If more funds are raised then Chad, Zimbabwe and Nigeria will be the next countries supported by SCI.

SCI has worked with dedication to ensure that the delivery of sustainable country programmes through strengthening country capacity is core to its approach. In the early stages, countries receive intensive support from SCI. As progress is made and the country is able to execute and implement independently, SCI is able to reduce its support. In this way, SCI is able to engage a new country. When SCI withdraws from a country, it takes all the steps necessary to ensure that a new funder is on board to support the programme.

SCI's presence in Ethiopia is closely aligned with the country's national NTD Master Plan that is operationalized through a five-year schistosomiasis and soil-transmitted helminth action plan. Starting in 2013, the first two years focussed on laying the foundations on which a sustainable control programme could be built. This involved putting in place the governance, reporting, and M&E structures to inform the programme development in an ongoing way, while at the same time working to achieve national drug coverage. From 2016 onwards, extensive efforts will be invested to strengthen local country technical capacity to maintain the programme on a long-term basis. The key players involved include the FMOH, EPHI, the regional health bureaux, the health offices at zonal and woredas levels, and the health extension workers and teachers. SCI and its in-country partner, Evidence Action, will progressively scale down technical support as the country capacity increases. A mixture of international and domestic grant funding will be secured in this period to ensure that programme delivery is maintained.

So it's my vision that within five years they get to a place where there is a sufficient increase in the capacity, not only the Government of Ethiopia, but in people, scientists working on research and work on NTDs generally that puts them in a very healthy position for the next five years and the next 10 years. (Dr Michael French, SCI Ethiopia Programme Manager)

7. KEY LESSONS

7.1. IMPLEMENTATION LESSONS

Getting started

SCI was started by the passion and tenacity of Prof Fenwick. According to him, the opportunity to start SCI was marked by a degree of luck in being in the right place at the right time. In a serendipitous way he was able to connect with the Bill and Melinda Gates Foundation and present a compelling argument for the need of schistosomiasis control.

When SCI was first set up in 2003, for the first four or five years it was really proving the concept that schistosomiasis and STH could be treated at national scale with countries owning the programmes. I think that's been really innovative. (Dr Michael French, SCI Ethiopia Programme Manager)

The sheer geographical and population size of over 90 million makes Ethiopia a daunting country to many implementers and funders. In keeping with the pioneering spirit of SCI's legacy, Dr French and his team were not intimidated to launch efforts in the country. The substantial political will and engagement of the FMOH served as strong risk mitigation and a signal of a robust partnership for SCI.

SCI, through the support of its private donors and undesignated funds, was able to be the first to invest in a national schistosomiasis-control programme. Initial funding was used to conduct the extensive national mapping exercise that demonstrated high endemicity of schistosomiasis. Additionally, 3,5 million tablets were distributed in 2013, highlighting the capability and willingness of the country to engage in such efforts. Although SCI alone would never be able to implement the programme on a full national level, its willingness to assume the initial risk and build evidence was an important lever to encourage other funders and partners to join SCI and the FMOH in working towards schistosomiasis control in Ethiopia.

Overcoming challenges

Building relationships with country governments has been a main factor when SCI makes a decision as to which country to partner with. One of the biggest challenges the team has experienced is the prescriptive nature of donor funding as to which country qualifies for funding based on donor priorities. Although SCI cannot conduct its activities without donor support, donors sometimes fail to recognize the importance of the pre-established relationship with a government partner to ensure successful implementation.

The Ethiopia country programme has been successful in receiving strong support from multiple donors and establishing a pooled fund aligned to a unified strategic implementation plan. One of the funding challenges the country team however experienced is the lack of alignment in the donor's reporting structures. Each of the donor agencies has their own preferred reporting structure and complying with each of these becomes an intensive time investment for the SCI and FMOH teams.

7.2. PERSONAL LESSONS

The journey towards addressing the challenge of schistosomiasis started for Prof Fenwick with a personal conversation with a colleague working in the Ugandan Ministry of Health many years ago. He was moved by his colleague's expression of their inability to control schistosomiasis despite treatment being available in the marketplace. The quest to help his colleague became Prof Fenwick's inspiration. As soon as he succeeded in receiving donor funding, he returned to Uganda to launch the first SCI programme.

An ambitious effort like SCI is marked by great personal reward in being able to help millions of people but it is not without sacrifice. At 74 years of age, Prof Fenwick is still active as the Director of SCI. Although he finds great pleasure in his work, it remains difficult being away from his family and not being able to spend as much time as he would like with his grandchildren. The journey has also not been without moments of

disappointment, especially when people along the way do not always place the same value on trust and generosity. It is however his passionate and capable staff members who refresh and motivate him on a daily basis to continue the good work he started. *"Most people say to me, 'Why the hell have you not retired?' It's because I love what I do."* (Prof Alan Fenwick, Director SCI)

CASE INSIGHTS

1. Ensuring the adequate supply of drugs alone is not a successful strategy in the control of neglected tropical diseases. More comprehensive strategies are required to bridge the delivery gap so that people in remote locations can access essential medicines.

2. Developing countries can be successful in eliminating neglected tropical diseases if they receive comprehensive support and ongoing mentorship to strengthen their local research, technical and delivery capacity.

3. Pooled and co-ordinated donor funding is an effective mechanism for national programmes to achieve their intended impact. A single aligned financial reporting structure increases the efficiency of spending allocation and reporting.

4. Partnerships and collaboration with the private sector have the opportunity to unlock scarce resources, especially essential medicines, which could support the public sector in fulfilling their delivery mandate.

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