

Introduction

Two most exciting developments have occurred during 2001. HDI succeeded, together with our partners, in the "Pipe Filters for Sudan Project" that led to production and distribution of personal-protection filters to more than 9 million people on both sides of the civil war's front lines in Sudan. And we received wonderful new support for our work!

On the guinea worm side, only three countries now have more than 1,000 cases (Sudan, Nigeria and Ghana), while five countries are reporting fewer than 100 cases for 2001 (e.g. Ethiopia 19, Uganda 51, Mauritania 65). We have just received a major grant from the Conrad N. Hilton Foundation (\$300,000 over 3 years), to help us interrupt transmission in countries that have almost eradicated the disease.

2001 saw HDI's most extraordinary project ever, the production and distribution of more than 9 million individual pipe filters to people on both sides of the lines of conflict in Sudan, enough for every person in the entire estimated at-risk population, in endemic parts of that enormous country! This project was originally sponsored by the workers, unions, and administration of Norsk Hydro's petrochemical division, Hydro Polymers. The partnership grew to include several additional companies, Norwegian Church Aid, Norway's Ministry of Foreign Affairs, The Carter Center, 1,300 refugees and other unemployed people in Nairobi who assembled the filters, the Federal Ministry of Health in Khartoum, and more than 40 organizations working under the umbrella of Operation Lifeline Sudan. These included groups like UNICEF, Physicians Without Borders (MSF), OXFAM, AMREF, and numerous others, both known and less known. As described below, it became an extraordinary project indeed. The project made it to the front page of Norway's largest non-tabloid newspaper, national Sudanese TV, BBC World Service and BBC African Service radio in several programs, The New York Times (Web issue), the United Nations Information Center, the Panafrican News Agency, among others.

A new supporter of lymphatic filariasis (LF) elimination activities in Togo also joined the HDI Team this past year. The Conservation, Food and Health Foundation of Boston, Massachusetts, made an important grant of \$25,000. Their support is all the more significant because, Togo was not selected for funding under a \$20 million 5-year grant to a consortium of partners by the Bill and Melinda Gates Foundation. Yet Togo is of major importance to the LF elimination effort, because it became the first country in Francophone Africa to join this effort, and it has a common border with Ghana. An endemic area lies on both sides of this border, and without good results in Togo, efforts in Ghana will be wasted. The Conservation, Food and Health Foundation grant will help the Togo program get properly established, and allow some time for that program to mobilize additional resources.

HDI's successful efforts to start broadening our donor base have been spearheaded by Ms. Pam Wuichet of Project Resource Group in Atlanta. Ms. Wuichet recently headed fundraising efforts for health programs at The Carter Center, and is still a valued friend there.

Our very first donor from 1990 chose to make a sizable unsolicited contribution to HDI's work this year, at a time when HDI was economically strained. His generosity, and that of new partners who joined us later in the year, is a tremendously heartening sign, as are some of the achievements we have witnessed, suspenseful though this past year has been.

Guinea Worm Eradication

9 Million Pipe Filters for Sudan

With the expert help of an HDI trustee, Dr. Harald Siem, we managed to interest Norsk Hydro's petrochemical division in a proposal that we believe has brought "the beginning of the end of guinea worm disease" to Sudan.

The civil war in Sudan has been a major impediment to guinea worm eradication efforts there, to the extent that over 79% of the world's reported cases (and arguably more than 99% of the world's existing cases) are to be found in Sudan. Until this project became reality, many felt little could be done to eradicate guinea worm from Sudan until peace returns.

Household guinea worm filters, designed for large clay pots, have serious limitations in a country where so many are displaced, and often not living in family units at all. We were inspired by many things, including reports of people in Sudan still trying to use pipe filters they had received several years earlier, but where the filter cloth had holes in it.

HDI set out to provide a personal filter to every individual on both sides of the front lines in Sudan, far beyond the lines which health workers cannot cross because of insecurity. We had tried once before but failed to find a sponsor.

This time, late in the autumn of 1999, Dr. Harald Siem offered to send a letter to Mr. Egil Myklebust, Harald's former boss in the national employers association, who had since become the CEO of Norsk Hydro. The petrochemical division, Hydro Polymers, had successfully collaborated with Norwegian Church Aid on a water project for Eritrea some years earlier. The indomitable team of Mr. John Øivind Selmer (union leader) and Mr. Mikkel Storm (a leader in the Hydro administration), were ready for a new humanitarian challenge. Informed of Hydro's interest, Norwegian Church Aid (NCA) rose to that challenge. We in HDI shall always admire Mr. Gaim Gebreab, then NCA's Regional Representative for East Africa, for the brave decision he made during a meeting in Oslo, that led the rest of his organization to join this momentous effort. The Carter Center sportily rose to the occasion too. Much more landed in their laps than they ever bargained for, in terms of work and financial commitments, for 2001 and beyond! Also, thanks to NCA, and the workers at Hydro Polymers with their astute political initiatives, HDI's original proposal, that lay unanswered in the Ministry of Foreign Affairs, was increased many fold to 5 million kroner, and received a positive response!

With Norsk Hydro and NCA on board by late autumn 2000, we went back to the alwayshelpful providers of precision-woven guinea worm filter cloth, Vestergaard Frandsen in Denmark, and announced our ability to take up their offer of 9 million pieces of filter cloth for roughly \$28,000. Norsk Hydro was to provide the 1,640 km of PVC piping. HDI was to provide the 9 million pieces of filter cloth and the 9 million meters of string so each filter could be hung around the neck like a charm or necklace. The Carter Center and NCA, each having offices in Khartoum (for working with the north) and Nairobi (for working with the south) had promised help with logistics, storage, transportation, assembly, etc. And The Carter Center would pay for design and production of 9 million instruction drawings, so illiterate persons could see how to use the filter properly to avoid getting guinea worm.

We were ready to go! Time was short. The filters had to be produced and distributed before the 2001 rainy season made travel impossible in most of the endemic areas. And we phoned to order the cloth. A mistake had been made! A misunderstanding somewhere, or a mistake on the back of the envelope during the meeting in Nairobi, where we first discussed the price. The price would be \$110,000, not \$28,000! Every 4.5 x 4.5 cm filter cloth weighs "half a feather". A thousand of them fit nicely into a tiny polyethelene ziplock bag. But 9 million of these tiny filter cloths weigh 1,000 kg, one ton, and had to be air-freighted from the factory in India to Nairobi. With so much hanging in the balance for so many, HDI "broke the bank" and went forward.

The great majority of the credit for the success of this enormous project belongs equally to Ms. Atnaf Gebreab of NCA-Nairobi and Ms. Kelly Callahan of Carter Center-Nairobi. Innumerable other individuals in both organizations and elsewhere also deserve credit. But there is no way to mention them all in an annual report. The full story will have to wait until the book gets written. Even for those mentioned, this Annual Report cannot do justice to the contributions of <u>any</u> individual or organization that partnered with us on The Sudan Pipe Filter Project.

Suffice it to say that the factory in India managed to deliver the filter cloth in spite of a flood disaster with mass-evacuations from districts surrounding the factory. The workers at the factories and in the offices of Hydro Polymers volunteered pay deductions of one or more salary-hours, 4 times during 2001, with 100% participation for the year as a whole! Hydro Polymers donated twice the amount they anticipated collecting from the employees, and even advanced all of the funds (1.75 million Norwegian kroner, about \$195,000)! Hydro also suggested we should just go ahead and buy the PVC piping in Nairobi, to save time and money rather than moving it from Norway, so we could get the filters distributed before the rainy season! Rainy season is peak transmission season for guinea worm in southern Sudan, and if we missed it we would loose an entire year. Metro Plastics, the only PVC manufacturer in eastern Africa, later became so impressed with the project that they too made a contribution, as did Vestergaard-Frandsen in Denmark. Metro Plastics rushed the purchase of extra machines they were considering anyway, got the PVC piping produced, and lent their land for the cutting and drilling groups free of charge. The 6-meter lengths of PVC piping were cut into pieces 15 cm. and 2 cm. long, more than 18 million in total. Then a hole was drilled to thread the string through before the tubing was sent to other groups for assembling with the other components.

Together the Norwegian Church Aid and Carter Center staff did an absolutely amazing job at organizing the logistics, storage, internal transportation of parts and finished product among more than 20 churches, sheds, home-owner's back yards, and other donated production locations in many parts of the traffic nightmare that constitutes Nairobi. The Carter Center recruited the more than 40 NGOs to distribute the filters in Sudan, and together the two organizations organized planning and shipping from Nairobi into Sudan. 1,300 refugees and other poor people in Nairobi took on the task of producing the filters, at a rate of about 800,000 filters/week. They were organized into groups and coordinated in large part by NCA. The Carter Center and Norwegian Church Aid worked with the Ministry of Health in Khartoum and other groups to coordinate distribution from the northern side.

In fact, the Carter Center and NCA worked together intimately. Their responsibilities and tasks overlapped so often that for many activities it is impossible to say that the one did this or the other did that without slighting the other, which was also intimately involved in the same activity. HDI also participated all along, as part of the team that did the backroom planning and coordinated the collaboration among companies and agencies.

Those who saw the first of two chartered DC-8 cargo planes arrive in Khartoum, fully loaded with 1,000-filter sacks, got an inkling concerning the size of this monumentally huge project. The entire 4-engine jet, packed from floor to ceiling, from front to back, contained just over 1 million of the 9 million pipe filters!

An unexpected secondary benefit emerged. Many of the 1,300 people who assembled the filters earned enough money to start micro-enterprises, pay tuition to put children in school, or engage in other activities to improve their self-sufficiency and quality of life in the short- and, in many cases, also the long-term. One refugee glowed with pride at being able to buy clothing with his own money, for the first time in 8 years.

Kelly Callahan and Atnaf Gebreab were more intensely immersed in this project than anyone, completely and every day. Other than these two remarkable ladies, I believe nobody will ever really comprehend the magnitude of what was accomplished as, within less than 5 months, more than 9 million guinea worm pipe filters were produced, and distributed by river-barge, plane, truck, bicycle, and on foot, to individuals on both sides of Sudan's front lines, as intended.

HDI's next step was to begin planning how to provide a replacement cloth for all of these filters before the 2002 rainy season, along with about a million new filters to replace any that may have been lost. Funding for this kind of activity turns out to be available from a grant to UNICEF, The Carter Center, and WHO from the Bill and Melinda Gates Foundation. The Carter Center is therefore taking on responsibility for this massive resupply effort.

Unposed photos taken months later show people drinking through these filters, far inside of southern Sudan. Even people without clothes on their backs, let alone with holes in their pockets, are avoiding guinea worm by drinking through pipe guinea worm filters which they wear like a necklace!

HDI's most sincere thanks go to every person involved, in all of the organizations that joined us in this endeavor, especially to the workers, unions and corporate leadership of Norsk Hydro's petrochemical division, Hydro Polymers, without whose bold support the Guinea Worm Pipe Filters for Sudan project never would have started!

Field Advisors for Benin, Ivory Coast and Togo

In the autumn of 1997, HDI saw the need to have technical field advisors support the programs of these three countries in particular, and managed to mobilize resources to begin providing that support from January 1998 in collaboration with The Carter Center. The Carter Center agreed to recruit individual advisors, provided administrative backup services, etc. These consultants were typically young people who had recently finished their US Peace Corps service in western Africa. Most had helped eradicate guinea worm while in Peace Corps, so they knew the issues well from first hand experience. Our field advisors have helped the programs uncover and deal with a wide variety of structural and

programmatic difficulties. They deserve a large part of the honor for progress that has been made in these countries since 1998. All three countries had previously experienced several years of meager results.

Because The Carter Center's guinea worm program had on the one hand achieved a much strengthened financial position, while HDI's dramatically weakened in early 2001 as a result of the cost over-run on the Sudan pipe filters project, and also because the advisors have performed so well, the Carter Center took over this activity in 2001. HDI honored all its commitments made in 2000, including support for several consultants in Benin and Togo through the first half of 2001.

One young lady was doing particularly brilliant work, and subsequent to an extensive field visit to many of Togo's endemic villages by HDI's executive director in March-April, we convinced her and The Carter Center that she should return to Togo for a full year beginning in August 2001. Togo continues to benefit enormously from her incorrigible efforts, and HDI is pleased to see this initiative continuing to bear fruits.

Guinea Worm Rewards

HDI's reward system continues to be an important tool in the final stages of guinea worm eradication efforts. An increasing number of countries are now implementing rewards.

Since Ethiopia pioneered the use of "guinea worm stations" as part of their reward system, this intervention too has been spreading to ever more countries. Providing locations where guinea worm patients can voluntarily be cared for and fed, away from all contact with stagnant water, has clearly been important to Ethiopia's successful reduction to just 10 cases and Uganda's reduction to 51 indigenous cases from 8 villages in 2001. While the Togoese are not ready to implement rewards, HDI and our field advisor stimulated them to begin admitting patients to health posts serving as guinea worm stations, beginning early in 2001. All reports indicate that this intervention is being well received in Togo too, and that it is effective in permitting the containment of a greatly increased proportion of cases.

Successful though it is, we feel HDI has not managed to follow up countries using or planning to use the reward system as well as we would have liked in the past year. Our executive director plans to rectifying that situation in 2002.

Lymphatic Filariasis Elimination (LF)

At the Global Level

The Gates Grant Review Committee

Beginning early in 2001, HDI became one of two representing NGOs on the Gates Grant Management Committee, that is to oversee the use of \$20 million donated by the Gates Foundation for LF elimination over the next 4 years. We were one of the organizations that prepared that successful grant application, and are pleased to serve on the Grant Committee, though it presents challenges beyond what we had originally envisioned.

As initial chair of the "NGO Node" (one of four such nodes) under the Gates LF grant, HDI was intimately involved in organizing the first gathering of NGOs. Generously hosted by Glaxo SmithKline at their offices in Philadelphia in October, this gathering aimed to inform new NGOs about LF elimination, and to recruit them particularly to the "disability alleviation pillar" of the LF Elimination program.

Alleviating Urogenital Disability for LF

HDI support made possible the first international training workshop anywhere in the world, on the surgical treatment of male urogenital disabilities caused by lymphatic filariasis. It was held in the Dominican Republic during May of 2001. Training in urogenital surgery for LF alleviation will now probably be taken over by an American NGO called "International Volunteers in Urology" that our board member David Addiss has recruited to the LF elimination effort. Another example of HDI getting the stone rolling, after which other, bigger actors take over.

A Handbook on Treatment of Lymphoedema and Elephantiasis

A book on treating lymphoedema and elephantiasis is in the final stages of preparation by Puritan Press in New Hampshire and the authors, Drs. Dreyer, Noroes, and Addiss. Puritan Press of The Hollis Publishing Company will be getting the book out as quickly as possible, so programs the world over can have state-of-the-art knowledge about how to treat people with lymhoedema and different degrees of elephantiasis. As soon as additional funding is secured, we would like to facilitate the book's publication in French translation.

Recruiting New Global Partners

HDI and Glaxo SmithKline* joined in sponsoring the publication of a very different kind of book already this past year. The author is the well respected medical journalist, Mr. Malcolm Dean, assistant editor of The Guardian in London, who for the last 12 years has written regular dispatches for The Lancet medical journal. "Lymphatic Filariasis – The Quest to Eliminate a 4000-Year-Old Disease", chronicles the start of the global effort to eliminate lymphatic filariasis.

We hope and believe this highly readable book will inspire political leaders in endemic and donor countries, corporate leaders, NGOs, and others, to bring their efforts to bear on this, the world's second largest but preventable cause of long-term and permanent disability.

Country Support for LF Elimination Ghana

During its second series of pilot-round mass drug administration, the first while receiving drug donations from Glaxo SmithKline and Merck for this purpose, Ghana completed distribution in 4 districts, reaching 21,835 people (of 31,499 eligible, for 69% coverage). Ghana is aiming to treat 1,914,352 people in the coming year.

One gets an impression of the rapid scale-up of the program in Ghana even at this early stage, by considering that as part of this pilot period, Merck shipped 5,318,025 tablets of Ivermectin (Mectizan) in July '01 to the Ghana program. HDI serves as the "501(c)(3) donee" for the ivermectin (Mectizan), to be donated by Merck to Ghana's LF program for LF elimination this coming year, valued at \$7.995 million.

^{*} Glaxo SmithKline (and SmihKline Beecham before their merger with Glaxo), donates and transports albendazol to all endemic countries wishing to eliminate lymphatic filariasis, that set up a national program to deal effectively with this disease. They have an entire factory in France that runs full time, producing nothing but this donated drug! In these early stages, they are also supporting LF Elimination in a number of additional ways, with significant cash donations.

During the next 5 years the Ghana program aims to treat approximately 12,000 communities in all: 4,000 urban and 8,000 rural. Approximately 7,000,000 people who are more than 2 years of age will be treated in these communities.

During a field visit in Ghana, low coverage of drug distribution in some towns was one key issue that HDI and the program looked at together. It turns out that some towns have two sub-populations, the one being more traditional "indigenous" inhabitants (e.g. groups of fishermen and their families) with traditional channels of communication still in tact within their communities. On the other hand, employees of companies and government agencies live in other sections of town and often have as little contact with each other as many Europeans and Americans have within their own neighborhoods. People in these parts of the towns have no channels of internal communication that can spread messages within whole neighborhoods. Therefore, new methods need to be adopted, to reach these people with the drugs against LF. The Ghana program is led by one of the world's leading LF experts, Dr. John Gyapong. By identifying and dealing with this situation in a country moving from tradition to modernity, their program will surely help solve this challenging problem, for the benefit of themselves and other countries facing a similar situation.

Early in 2001, Ghana was selected as one of 10 countries to receive support under the \$20 million grant over 4 years from the Bill and Melinda Gates Foundation. Ghana was allocated \$100,000 for 2001, but the first tranche of this money was not disbursed until November. Also, the Catholic Medical Mission Board, in New York City, agreed to support Ghana's LF alleviation activities as these expand throughout the north. We at HDI continue providing direct support for Ghana's national LF Elimination secretariat.

Togo

Our executive director's visit to Togo in March, for the 2001 guinea worm program managers meeting, was utilized for all it was worth, to advance both guinea worm eradication and lymphatic filariasis (LF) elimination. He made useful trips to the field with first the guinea worm team and then the Togolese LF team.

Dr. Yankum Dadzie continued to provide tremendously valuable support during his intermittent visits to Togo for HDI and others. Dr. Dadzie is a fully energetic retiree from a position in WHO, where he led the highly successful campaign against river blindness in Africa. With his extensive experience leading large numbers of people in a wide variety of countries, and his complete linguistic and cultural fluency in both English and French, we are highly fortunate to have Dr. Dadzie lending his efforts to support LF elimination in Togo through HDI.

Togo surprised us all by training medical staff from <u>all</u> parts of the country, in alleviation of the suffering caused by LF, thus becoming the first country in Africa to have done so!

Togo completed initial rounds of mass drug administration aimed at 72, 838 people in the first year, and the program there is aiming to provide an annual drug dose to 637,500 people in the coming year.

Dominican Republic

HDI's support of \$10,000 made possible the first training workshop anywhere in the world on the alleviation of male urogenital disabilities caused by lymphatic filariasis! In addition to urologists and general surgeons from the Dominican Republic itself, where the course

was held, participants also traveled from neighboring Haiti - another example of HDI's emphasis on south-south collaboration.

Brazilian urologist Dr. Joaquim Noroes and Dr. Gerusa Dreyer gave the course in June of 2001. Together they have developed the improved techniques for alleviating urogenital LF disability. During this theoretical and hands-on course 11 patients were operated on, by Dr. Noroes as the others watched, or by local surgeons as Dr. Noroes supervised them.

The Dominicans and Haitians reported back that the training session was highly successful, and a follow-up course is planned for 2002 in Haiti, this time without the need for HDI involvement.

Fundraising

Just before Christmas HDI received wonderful news. The Conrad N. Hilton Foundation has decided to support our guinea worm eradication efforts for the least endemic countries, to the tune of \$300,000 spread equally over three years!

In early autumn, the Conservation, Food and Health Foundation in Boston made a \$25,000 grant in support of our LF elimination efforts in Togo. Because Togo is not benefiting from the Gates LF Elimination grant discussed above, and because it comes at a critical time, this support will be of great importance for our ability to help Togo build the mass drug administration and the alleviation of suffering components of its national LF program.

The proposals leading to both of these donations were prepared by Project Resource Group in Atlanta, particularly Ms. Pam Wuichet and Ms. Becky Castle. They stepped in at a time when HDI was in a precarious financial situation. The fundamental problem was presented in last year's annual report. Our main patron through many years had become ill and no longer able to support HDI's work, and we were looking for ways to broaden our support base even then. The problem became acute with the Sudan project suddenly costing us \$138,000 for the filter material and string, as described above. We had almost "emptied the bank" on the premise that the best argument for supporting our work is success, yet had no firm prospects for further funding. Even after putting on the brakes everywhere we could, HDI was looking at the prospect of running out of funds within about twelve months.

Just before Christmas, we also received a donation from the Josephine Bay Paul and C. Michael Paul Foundation in New York, at the kind suggestion of one of their board members. HDI takes this too as a sign that we are beginning to succeed in our work to broaden the support-base behind HDI and our work.

Mr. Tom Johansen, formerly on the finance side of the SAS Radisson hotel chain's top Norwegian management, has kindly volunteered his time and expertise to help us further strengthen financial control of HDI's resources. That was tremendously important to successfully managing HDI's stretched position during 2001.

Thanks to the expert efforts of Project Resource Group, we managed to prepare the successful proposals to The Conservation, Food and Health, and The Conrad N. Hilton foundations, and still concentrate on the operational activities for which HDI was established. We believe we are on a much less steep portion of the fundraising hill now, and that HDI will successfully be able to continue broadening our funding base.

On November 26, we received the first disbursement of support under the Gates Grant for LF elimination, in the amount of \$31,000. The Gates filariasis grant contains an "NGO-Strengthening" component, which HDI is fortunate to be a recipient of for the next 4 years.

Most heartening of all during 2001, was an unsolicited contribution of 100,000 Norwegian kroner from FRITAS A/S, a company led by HDI's very first donor, who co-sponsored the legal bills to get HDI established in 1990, together with a friend of his. In June 2001, this gentleman perceived the dire straits that HDI was in, and sent the check!

HDI-trustees are also supporters of our work, not just by offering their time and expertise, but by kindly making personal contributions of monetary support to our work. All of our trustees are current or former civil servants, or persons who otherwise have modest incomes. Their willingness to support HDI monitarily is therefore all the more impressive!

HDI's Board of Trustees has for some time now been considering how we might strengthen the board from the fundraising side. HDI's board represents a broad gathering of talented individuals**, yet in our own estimation, the board needs expanding in terms of our ability to mobilize resources in support of HDI's work, for the benefit of all those still suffering from guinea worm disease or lymphatic filariasis. The board and the executive director will be striving to further broaden HDI's donor base, and strengthen our board's fundraising abilities during 2002.

Nominated for the Conrad N. Hilton Humanitarian Prize for 2002

Late in 2001, HDI was nominated for the Conrad N. Hilton Humanitarian Prize for 2002, by the former Secretary General of the International Federation of Red Cross and Red Crescent Societies, and now head of A Better Life Foundation in Geneva. The Hilton Prize is the world's largest humanitarian prize (with a monetary value of USD \$1 million). Should we, contrary to what we can allow ourselves to believe, be chosen for this prestigious award, it would bring us an amazing windfall in itself. It would surely also make fundraising for HDI's efforts on behalf of those suffering guinea worm disease and lymphatic filariasis a great deal easier. In any case, we at HDI feel humbled and deeply honored by the nomination itself.

Plans and Commitments

We will continue to apply our resources to accelerate interruption of guinea worm transmission, especially in the middle- to low-endemic countries.

Our efforts to stimulate lymphatic filariasis elimination through initiatives at the regional and global levels, as well as at the national level in a small number of selected countries, seems to have paid off nicely again in 2001. HDI therefore plans to continue along these same avenues.

Budget and Audited Accounts

HDI's budget for the year 2002, and our audited accounts, are available separately.

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^{**} In addition to its founder, HDI is guided by a former UN Assistant Secretary General, an education and development specialist, the Carter Center's Associate Director in charge of health programs, the former head of the City of Boston's legal department, Co-Director of the WHO Collaborating Center for Lymphatic Filariasis Elinination in the Americas at the Centers for Disease Control and Prevention (CDC), the retired V.P. in charge of finances from a multinational shipping company, and a Norwegian public health specialist who had senior posts in WHO and another UN agency, the International Organization for Migration.