Kiwanis International and UNICEF: Eliminating Iodine Deficiency Disorders Worldwide
In Kabul, Afghanistan, a girl participates in a special ceremony celebrating salt iodization.
A Message from the U.S. Fund for UNICEF

A lot of people talk about changing the world. Kiwanis International, in its partnership with UNICEF to eliminate iodine deficiency disorders (IDD), has actually done just that. Kiwanis’ steadfast commitment to this critical cause has helped transform the lives of millions of children around the globe.

The consequences of IDD can be life-shattering. An iodine-deficient diet can lead to severely impaired mental development and can rob a child of promise and potential. However, the prevention of IDD is accomplished with a simple and effective weapon: iodized salt. The collaboration between Kiwanis and UNICEF in promoting and facilitating salt iodization all over the world has yielded remarkable results. The proportion of the world population consuming adequately iodized salt climbed from less than 20 percent in 1990 to 70 percent one decade later. That is an astonishing achievement by any measure.

It’s important to note that IDD not only diminishes children’s futures but also threatens their survival and increases the risk of infant mortality. I want to acknowledge that the generous contribution of Kiwanians worldwide has also helped UNICEF save untold young lives.

With the commitment of devoted partners like Kiwanis, we have made incredible strides. Tragically, 25,000 children around the world still die every day from a range of preventable causes. UNICEF will take on any challenge — from pushing to eliminate IDD to combating malnutrition to delivering safe, clean water — until that number is zero.

Kiwanis has helped us get closer to this crucial goal and has immeasurably improved the lives of so many children around the world. We are grateful for the vision and dedication of this wonderful organization. On behalf of the world’s children, thank you.

Sincerely,

Caryl M. Stern
President and CEO
U.S. Fund for UNICEF
Children in Indonesia watch their teacher demonstrate how to test salt for iodine.
A Message from Kiwanis International

Throughout its history, Kiwanis International has been dedicated to helping children and communities. Adults and children alike, committed to living the ideals of Kiwanis service and leadership, have made significant progress every day in villages, towns, and cities around the world.

Nowhere has that commitment to caring been more evident, or effective, than in Kiwanis’ first-ever Worldwide Service Project: the effort to eliminate IDD and to protect all children from the threat of IDD. Through rigorous fundraising and support, Kiwanis ultimately leveraged and provided nearly $100 million to protect children from preventable mental and physical disabilities.

Many may not know that IDD was an issue of concern in the United States until the 1930s, when iodized salt became a staple of almost everyone’s diet. In 1990, before Kiwanis entered the global IDD project, less than 20 percent of people consumed iodized salt. Today, approximately 70 percent of household salt worldwide is iodized. The IDD campaign has successfully led to the elimination of the disease in many parts of the world, and efforts are ongoing to eradicate IDD entirely.

Kiwanians everywhere should be proud of this accomplishment. Working hand in hand with UNICEF and other partners, we helped provide iodized salt — something that so many of us take for granted — to people suffering from inadequate iodine intake. In doing so, we changed the world for the better. I want to thank you all for helping give millions of children you may never meet the chance to live healthy, happy, and productive lives.

In my travels, I have been fortunate to see the benefit of the Worldwide Service Project firsthand. I have seen the children and the families who are free from the scourge of IDD. I have seen the power of a nickel, which is all one needs to provide enough iodized salt to protect a child for one year.

The lives changed by the IDD project are legion, including those of the children and families protected by iodized salt, the Kiwanians who saw their donations save lives, and the young people of Kiwanis Service Leadership Programs who helped ensure that other youths could have the same opportunities for healthy futures. Through the IDD campaign, Kiwanis truly became a family committed to protecting children and families. We made a promise to the world’s children. Today, I am proud — and humbled — to say the promise has been kept.

Sincerely,

Donald Canaday
President
Kiwanis International
Although iodine deficiency was recognized early in the U.S. (during the World War I draft from 1917-1918) and iodized salt was made available in developed countries, the problem was largely overlooked in developing countries. With growing research findings on the neurological consequences of deficiency and evidence of its widespread prevalence, UNICEF highlighted elimination as a critical global goal. Early advocacy efforts by a growing number of partners, including Kiwanis, began to get salt iodization on the development agenda, with dramatic results.

### Household consumption of adequately iodized salt, worldwide, 2000–2006

- **90 per cent or more**
- **50–89 per cent**
- **Less than 50 per cent**
- **Data not available**

Kiwanis and UNICEF: Helping Achieve a Global Health Triumph

In towns across the U.S., people from all walks of life are making day-to-day contributions to their communities. Most would love to help children in need in other countries as well, but the problems of these children may seem too complex and difficult to envision really making a difference. Yet the story below illustrates how Kiwanis International — a community service and leadership organization — helped UNICEF achieve one of the most stunning international public health successes initiated in the 20th century. With its initial commitment to raise $50 million (later amended to $75 million), Kiwanis International took its place as one of the most significant players in the battle against iodine deficiency disorders (IDD). By 2008, Kiwanis’ efforts had raised and leveraged almost $100 million to support UNICEF and the global IDD campaign.

Many people may not be aware of this extraordinary accomplishment, but those who invested time, energy, or resources should know that their contributions have made a vast difference in the lives of millions.

The story is about iodine — a natural chemical element that many people don’t routinely think about. But this micronutrient is vital to human development. In most countries, the natural iodine content in soil is insufficient, and, as a result, large segments of the population may suffer from the absence of this micronutrient in their diet.

As the Keothaune family of Laos discovered, the consequences of iodine deficiency can be devastating.

Vanhdy and Soudsadi Keothaune’s oldest child Naly was different from her sister and two brothers. Small in stature, the girl also lacked her younger siblings’ curiosity, vigor, and eagerness to engage with the world around them.

“I noticed that her brain is slower compared to the second, third, and fourth children,” her father said. “She is also very timid and shy and doesn’t have a high level of cleverness.”

Naly was born nearly two decades ago in a remote village in this landlocked Southeast Asian country, where a mountainous terrain and a monsoon season depleted the soil of iodine.

IDD is the world’s leading cause of preventable mental retardation, increasing the risk of infant mortality, miscarriage, and stillbirth, as well as resulting in intelligence quotient (IQ) loss. In the mid-1990s, a survey of school-age children in Laos found that 95 percent were at risk of IDD. It was then that the government of Laos passed a law mandating universal salt iodization. Kiwanis International — as part of its first Worldwide Service Project and partnership with UNICEF and the U.S. Fund for UNICEF — began helping salt manufacturers ensure the distribution of high-quality iodized salt throughout the country. The organization also promoted this simple yet remarkable intervention in meetings with government officials.

The results of these efforts were striking: approximately 75 percent of households in Laos now consume iodized salt. Many Laotian children have been spared the fate that befell Naly Keothaune.

The Keothaune family, gathering for dinner, now understands the importance of iodized salt.
There has been a growing awareness of the catastrophic effects of iodine deficiency throughout the 20th century. Iodine-deficient diets can impede neonatal and child development and hobble the potential of individuals, communities, and, ultimately, nations. Adults and children with goiter, and severe neurological impairments of hearing, speech, and gait, were once common sights, especially in rural areas of developing countries.

The proportion of the world’s population consuming adequately iodized salt has grown dramatically within the last two decades, rising from less than 20 percent in 1990 to 70 percent a decade later. At that time, 90 countries were implementing programs that monitored salt iodization, ensured its distribution throughout the country, and promoted its benefits to families, teachers, and the local government. By 2006, approximately 120 countries had established such programs. Just two years later, UNICEF estimated that 34 countries had reached the goal of universal salt iodization — where at least 90 percent of households consume adequately iodized salt — with an additional 38 countries well on their way. Progress toward ameliorating this global health problem is the result of the coordinated efforts of organizations such as UNICEF, the U.N. World Health Organization (WHO), the International Council for the Control of Iodine Deficiency (ICCIDD), and the Micronutrient Initiative, as well as public policies and civic sector participation, with Kiwanis International taking a leadership role.

“The beauty of the Kiwanis contribution was threefold,” explained Kul C. Gautam, former deputy executive director of UNICEF. “They were able to raise consciousness among ordinary citizens in their own communities; they have been very instrumental, as citizens and community leaders, in generating support from Congress; and they were able to mobilize members in developing countries to influence their ministers in support of eradicating IDD.”

**Latin America and the Caribbean**

This region is closest to achieving universal salt iodization, with 14 countries and 85 percent of households consuming adequately iodized salt. This is the result of efforts by national governments that began in the mid-1980s and accelerated during the 1990s.
Bolivia

One of the partnership’s earliest successes took place in Bolivia. In this Andean country of 7.8 million inhabitants, Kiwanis contributions from 1994-1995 pushed an 11-year elimination effort over the finish line in two years. Kiwanis funded a host of initiatives — including epidemiological surveillance, salt quality control, iodized salt production, education, and social communication — helping UNICEF and WHO build on efforts begun in 1984. As a result, by 1995, 92 percent of households were consuming adequate amounts of iodized salt.

“Since 1994, the contribution from Kiwanis through UNICEF has been the major funding source for IDD control in Bolivia,” Ernest Schoffelen, nutrition officer of micronutrients for UNICEF-Bolivia, wrote in a 1995 report.

Kiwanis support enabled:

• An IDD-awareness campaign that included production of 10,000 calendars for rural use; 20,000 booklets for schoolchildren; 10,000 demonstration bags for testing salt iodine content; 50,000 education leaflets; a radio message in Spanish, Quechua, and Aymara languages; rural fairs to disseminate messages; and puppet shows and street theater as alternative education techniques.

• The UNICEF-supported creation of Bolivia’s National Association of Salt Producers to guarantee the sustainability of the virtual elimination of IDD.

• The installation of 17 mills to iodize salt from saltwater springs; the salt is pressed by hand into blocks using wooden molds.

• Municipal-level cooperation to improve the salt quality control system and prohibit the sale of non-iodized common salt in the markets.

• The distribution of 3,000 test kits, to enforce the salt iodization law, to all iodization plants and all regional health secretariats, who shared them with municipal authorities.

Bolivia has addressed challenges to sustain universal salt iodization. Through reorganization of the universal salt iodization program in recent years, the country has regained universal salt iodization since 2003.
In his address to the first ICCIDD meeting in 1985 in Nepal, former UNICEF Executive Director James P. Grant defined the problem and posed the solution. “IDD is a good example of a major nutritional disorder for which the techniques of treatment, control, and prevention are easily available and affordable,” he said. “All it takes is a strong will, wider awareness, and cooperation among those who hold a key to the solution of the problem.” Why has progress not been broader and more effective? “The most probable answer is that the policy-making bodies in many countries were not fully aware of its health and development significance. The salt industry did not have sufficient incentives to cooperate, and the public did not know the root of the problem, its health hazards, and the ease of prevention.”

In 1990, the World Summit for Children brought together 71 heads of state and government and nearly 100 other leaders to generate the political will needed to address a range of threats to children’s health and survival. Among the goals set by the group: eliminate IDD as a global health problem by 2000. The summit led to the development of a worldwide partnership of governments, the U.N., bilateral agencies, technical institutions, and the salt industry and began the acceleration of salt iodization programs around the world.

It was also in 1990 that Dr. Wil Blechman, then-president of Kiwanis International, visited the Carter Center in Atlanta, Georgia, and met with Dr. William Foege, a pioneer in the field of global health and director of the nonprofit Task Force for Child Survival and Development. Dr. Blechman was already leading a Kiwanian initiative to address the needs of young children in the U.S. (Young Children: Priority One), but Dr. Foege wanted to know what Kiwanis was doing for the children of the world. This provocative question led Dr. Blechman, at Dr. Foege’s invitation, to attend a 1991 meeting of the ICCIDD, where he first spoke with officials at UNICEF about partnering on an international initiative.

UNICEF prepared a list of projects for potential Kiwanis participation. Through member surveys, focus groups, and interviews with members from its 8,000 clubs, UNICEF received input and feedback on proposed ideas. Then in June 1994, at the 79th annual Kiwanis International convention in New Orleans, Louisiana, the organization took a momentous step and approved its first-ever Worldwide Service Project — the virtual elimination of iodine deficiency disorders.

“When we were investigating a Worldwide Service Project, most of us had never heard of IDD before,” explained Robert Moore, a former Florida district governor and Kiwanis International president for 2003–2004, and member of the Board of the Micronutrient Initiative. “But it fit our criteria of eliminating a known health problem for a known cost within a limited period of time. And above all, the problem was one whose solution would permanently improve the futures of millions of children.”
At the beginning of the project, Kiwanis thought it would earmark the funds it raised to build salt-iodizing plants for small, local salt producers at a cost of $50,000 each. Before long, however, it became clear that the needs of national IDD-elimination programs vary. While data has shown that countries with legislation concerning salt iodization have made greater increases in household consumption than those without, it was also clear that the problem could not be legislated away. Progress toward the sustained elimination of IDD hinges on a complex chain of events that also requires the cooperation of a wide variety of players. These include local salt manufacturers, religious and governmental ministries, and non-governmental organizations that work together to develop distribution programs as well as education and awareness campaigns and ensure adequate salt inspection and enforcement.
Worldwide, 34 countries have achieved universal salt iodization, nearly eliminating the neurological deficits due to iodine deficiency. Thirty-eight more countries are on track toward eliminating IDD and 12 of those have coverage of 80 percent or more, suggesting that the majority of the population is protected. Approximately 24 countries, however, have stagnated or seen their coverage decline, often because of issues relating to production or importation. In another 12 countries, less than 20 percent of the population consumes adequately iodized salt. Difficulties establishing successful iodization programs are due to a range of problems, including internal and border conflicts and poorly developed or widely disseminated salt industries. Despite remarkable progress in many countries, approximately 38 million newborns annually in developing countries are still at risk of the lifelong consequences of impaired mental development associated with iodine deficiency.

**Distribution of infants born in developing countries annually who were unprotected against IDD, by region, 2000–2006**

- Latin America/Caribbean: 1 million
- South Asia: 18 million
- East Asia/Pacific: 5 million
- Middle East/North Africa: 3 million
- Eastern/Southern Africa: 6 million
- West/Central Africa: 4 million


Workers carry sacks of iodized salt on their heads at the Nabin Salt Factory in the city of Old Chandpur, Bangladesh.
Once Kiwanis International made the commitment to the Worldwide Service Project, its leadership faced the task of bringing the idea to the membership at large. As an 80-year-old organization with a membership of more than 250,000 adults and approximately 300,000 youths, Kiwanis International historically raised funds to respond to the needs of members’ local communities. Few Kiwanians knew what to make of a request for contributions to address an obscure disorder that affected remote populations in distant lands.

Robert Moore and Don Canaday, current president of Kiwanis International, traveled throughout the U.S. in an effort to educate club members about the value of the Worldwide Service Project. As IDD ambassadors, they also visited countries in Asia, Eastern Europe, and Latin America on UNICEF-coordinated trips and witnessed firsthand the role IDD played in human suffering and the obstacle it posed to social and economic development.

According to Moore, “We were then able to take our experiences back to the various clubs and try to create ownership. It took time because there was no cultural commitment. We had to sell the value of the project to people who’d never thought even in national terms, much less international terms.”

U.S. Fund representatives also helped spread the word to Kiwanians by attending conventions armed with informational displays, videos, pamphlets, and slideshows from site visits that illustrated the dramatic before-and-after effects of iodine. Perhaps most importantly, they were able to convey the extreme cost-effectiveness of this intervention. They told Kiwanians that two ounces of potassium iodate, necessary to treat a ton of salt, cost about $1.15, and that a nickel’s worth of iodized salt could protect a child for an entire year.

“There was resistance at first, but when we told them how many children they could put a safety net under, and for what cost, they understood that we were changing the world forever,” Canaday said.

Kiwanis’ fundraising efforts began slowly but picked up speed when the organization matched a major grant.

While the number of households consuming adequately iodized salt has increased to some degree in every region of the world, large differences remain. Two regions, Latin America and the Caribbean and East Asia and the Pacific, are approaching universal salt iodization, while Central and Eastern Europe/Commonwealth of Independent States (CEE/CIS) and South Asia are furthest from attaining the goal.

### Household consumption of adequately iodized salt by region, 2000–2006

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<th>Region</th>
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Source: UNICEF global database.
from the U.N. Foundation. In 2000, the Bill & Melinda Gates Foundation awarded $15 million to the U.S. Fund for UNICEF towards its global efforts, in partnership with Kiwanis International, to eliminate IDD. These funds lent legitimacy to the new campaign, which went on to receive important support from the U.S. Agency for International Development (USAID) and other government programs.

Celebrities who attached their names and efforts to the virtual eradication of IDD also helped publicize the campaign and leverage funds. Actor Roger Moore, who was knighted in 2003 by Queen Elizabeth II for his work as a UNICEF Goodwill Ambassador advocating for the elimination of IDD, also served as honorary chair of the Kiwanis Worldwide Service Project. Hugh Downs, Chair Emeritus of the U.S. Fund for UNICEF and retired American broadcaster, television host, producer, and author, also publicly discussed IDD, visited IDD programs, and attended a Kiwanis International convention in the U.S. In addition, Dorothy Mengering, mother of comedian and late-night television show host David Letterman, whose husband was a member of a Kiwanis Club in Meridian Hills, Indiana, traveled widely at her own expense to raise funds by selling signed copies of her cookbook, *Home Cookin’ with Dave’s Mom*.

“Kiwanians were used to giving their time,” said Rob Parker, CEO of Kiwanis. “Despite a slow start, when folks realized that their money could go so far, they ‘gave until it felt good,’ and an unprecedented number became $1,000 and $2,000 givers. The Worldwide Service Project was the first time the organization began to operate as a family.”

As awareness of the Worldwide Service Project took hold, it filtered quickly down to Kiwanis’ youth groups: Circle K for college students, Key Club for high school students, and Builders Club for middle school students. Former Key Club International President Lauren Kapsky, who served as the first youth member of the board of the U.S. Fund for UNICEF in 2001-2002 and founded the Princeton (University) Fund for UNICEF, recalled how, during one back-to-school-night fundraising effort, middle school students descended upon parents.

“We were able to show them how their nickels and dimes would be spent and people were so willing to help out.”

When Kapsky took over as president of Key Club International in 2000, it was approximately $300,000 shy of its five-year, $2.5 million pledge to the Worldwide Service Project. Her efforts helped refocus the youth group’s commitment to the project and, in just one Halloween night during the 50th anniversary of Trick-or-Treat for UNICEF, Key Club closed the funding gap.

This was the first time Kiwanis asked its youth clubs to help with a project. “It worked because it was easy to quantify where their nickels, dimes, and quarters were going and it gave older students a reason to continue to trick-or-treat,” explained Mike Downs, director of Key Club.
Middle East and North Africa

In this region, where 64 percent of households consume adequately iodized salt, the Islamic Republic of Iran, Lebanon, and Tunisia have achieved universal salt iodization, while at least 50 percent of households in Algeria, Egypt, Jordan, Oman, the Occupied Palestinian Territory, and the Syrian Arab Republic consume adequately iodized salt. Iraq, Sudan, and Yemen lag behind.

![Graph showing progress in households consuming adequately iodized salt in the Middle East and North Africa]

**Note:** This figure includes only countries that have verified data for both time periods.

*Source: UNICEF global databases.*

Outside the northeastern port town of Massawa, Eritrea, men at a salt factory shovel salt from a large bin onto a conveyor belt where it is collected to be processed and iodized.
Nigeria

In 2007, Nigeria was the first African country to receive recognition from the Network for Sustained Elimination of Iodine Deficiency for meeting elimination goals. “With 98 percent of households having access to adequately iodized salt and 100 percent of factories producing only iodized salt, Nigeria has achieved a remarkable feat,” said Ayalew Abai, UNICEF representative in Nigeria. “Salt iodization is the most effective way to protect children from iodine deficiency, the world’s leading cause of preventable mental retardation and brain damage. So this recognition of Nigeria is a major milestone for the African continent.”

In the 1980s, iodine deficiency was a significant public health concern in Nigeria, which had a total goiter rate as high as 67 percent in 1988. IDD also contributed significantly to mental impairment among children and subsequent poor learning ability. To combat this public health problem, the government, with UNICEF’s support, launched the Universal Salt Iodization program in 1993.

When the program started, only 40 percent of salt consumed in the country was iodized. Over the next 10 years, the program achieved tremendous results, with household use of iodized salt reaching over 90 percent since 1998, and remaining at that level. The goiter rate has now decreased to 6 percent, and urinary iodine levels in the population, a measure of satisfactory iodine intake, have normalized.

Nigeria’s success in eliminating IDD can be attributed to the commitment of the salt industry, effective legislation, and strong enforcement — but there is another significant factor. Dr. Dora Akunyili, the head of Nigeria’s National Agency for Food, Drug Administration and Control, which runs the program in collaboration with the Standards Organization of Nigeria and the National Planning Commission, has been committed to salt iodization. Dr. Akunyili’s life has been threatened due to her efforts to block any “fake” food or drug that is not what it says it is or what it should be, including iodized salt. Establishing legitimacy for the agency she heads, she has publicly set truckloads of counterfeit products on fire and destroyed or intercepted any non-iodized salt shipments. Dr. Akunyili has been a strong advocate for protecting the children of Nigeria from the lifelong consequences of iodine deficiency. “Lack of enough iodine in the diet can negatively affect the health and functioning of the body and mind in many ways,” said Dr. Akunyili. Her leadership has helped the program sustain elimination efforts and receive the well-deserved certification of elimination.

West and Central Africa

Nigeria and the Democratic Republic of the Congo, which account for more than half the region’s population, are largely responsible for the overall average of 72 percent of households consuming adequately iodized salt in West and Central Africa. Government commitment, advocacy, promotion, and effective monitoring have been key to the success of the progress made in these two countries. In Sierra Leone, war and conflict disrupted local production of iodized salt and led to a decrease in household access.
Morton Salt Joins the Effort

Morton® Salt, a leading domestic supplier of salt since the late 19th century, first learned about the Kiwanis Worldwide Service Project when executives discovered that their saltboxes were being used as coin collection containers. Despite initial concerns that its participation in fundraising efforts might appear to be self-serving, the company joined forces with Kiwanis in the mid-1990s with in-kind donations. It placed ads with the Kiwanis logo on its boxes, and created point-of-sale displays and advertisements that explained the program and encouraged consumers to send contributions to Kiwanis. Morton representatives also began attending Kiwanis conventions, which Brian Weston, former vice president of marketing for Morton Salt, believes drew more Kiwanians into the program.

“We had helped eradicate IDD in the U.S. when we first began adding iodine to salt in 1924, and now we were helping to do it overseas,” he said.

A Global Success Story

Working with salt producers, various government ministries, national government officials, non-governmental organizations, schools, and others, UNICEF country offices — in coordination with individual governments — developed proposals and submitted them to Kiwanis for support. The proposals included detailed budgets and timetables and varied according to the needs of each country. Their overarching, collective goal, however, was to ensure that individual households, local communities, religious and ministerial leaders, and country governments each played their part in ensuring that the world’s children consume the necessary amount of iodized salt to create and sustain mental and physical health.

Kiwanis also worked with the U.S. Fund to help make the U.S. Congress aware of the needs of children facing IDD and of countries struggling to achieve universal salt iodization. Kiwanis advocacy with the United States Congress resulted in widespread support for the program. It also brought about an additional successful IDD partnership with the USAID. As a result, more than $35 million in U.S. funding has been provided for the Kiwanis/UNICEF IDD program.

“Washington decision-makers took to heart the desire of Kiwanians to have their concern and compassion for children reflected in our international funding priorities,” said Martin Rendón, vice president of Public Policy and Advocacy at the U.S. Fund for UNICEF. “When Kiwanians opened their wallets for children

Members of the Kiwanis Club of Nima-Maamobi discuss the community’s role in the prevention of IDD in Ghana.
everywhere, hearts also opened to make salt iodization a priority for children around the world.”

As Kiwanis-funded UNICEF programs began to make inroads into IDD, many Kiwanians traveled to the targeted countries to see the progress up close. Visiting and local Kiwanis Club members, along with UNICEF staff members, met with government ministries to discuss program oversight as well as public education and awareness campaigns, salt production, packaging, distribution, and marketing, and the important role salt producers and importers play in eliminating IDD.

School girls in Indonesia test salt for iodine content with a UNICEF-supplied testing kit. The girls sprinkle the salt with a solution, and if the white granules turn purple, the salt is properly iodized.

“Kiwanis wanted to show its face more, especially in countries where there was already a Kiwanis presence,” explained Dr. Juan F. Torres, Jr., who was international president from 2002–2003.

In the Philippines, where the iodization of salt has been mandated since 1986, educating parents and children about its benefits and the problems caused by deficiencies has lagged, especially in many rural areas of the country. In a recent effort spearheaded by the mayor of Davao, the Philippines, the local Kiwanis club, supported by the Kiwanis Club of Seattle, Washington, began to work closely with customs officials, politicians, and health authorities to monitor the entry and use of iodized salt in the Philippines. In addition to repackaging sacks of salt into half-pound bags for distribution to markets in small villages, club members helped develop education and advocacy campaigns.

Since the United Nations Special Session on Children in 2002, many countries have reported continued progress toward the elimination of IDD. By 2006, around 120 countries were implementing salt iodization programs — an increase of one-third in just six years over the 90 countries. Today, at least 34 countries have eliminated iodine deficiency through universal salt iodization, up from 21 reported in 2001, and an additional 38 countries are on track to achieve the goal. In 2006, UNICEF refocused its efforts to sustain the elimination of iodine deficiency in the 16 countries in Asia and Africa that are home to the highest numbers of infants still unprotected from IDD. Today, it continues to push for the political commitments necessary to ensure the availability of adequately iodized salt, strengthen monitoring systems, and develop effective education and communications program.

“In committing to the partnership with the U.S. Fund for UNICEF, Kiwanis International made a promise to the world’s children,” said William Brown, coordinator of the Worldwide Service Project from 1996-2001, and Kiwanis International Foundation director. “Although much has already been accomplished, there is still work to do, and Kiwanis is proud to be able to continue in this effort and help sustain the gains that have already been achieved.”

This report does not, of course, include details on all the different organizations and individuals that helped or on the many struggles and setbacks that have occurred along the way. Nor does it spell out the challenges ahead.

But it does show that, with a clear sense of direction and a great deal of excitement about the goal, orga-
nizations and communities can build momentum to overcome a common enemy — in this case, iodine deficiency. The success of this effort has added billions of IQ points to the world’s population and will help transform the lives of children for generations to come. Furthermore, with education so inextricably linked to health and poverty reduction, the impact goes well beyond the immediate effects of iodine deficiency. The fact that nearly three-quarters of the global population uses iodized salt and, thus, no longer remains at risk of iodine deficiency, is an accomplishment that the entire world should celebrate. And Kiwanis members, representing the communities they energized, should feel particularly proud.

**East Asia and the Pacific**

Coverage continues to improve in East Asia and the Pacific, where 84 percent of households consume adequately iodized salt. The picture is steadily improving due to increases in almost every country. Also encouraging is the fact that disparities between countries within the East Asia and Pacific region are falling. In the mid-1990s, some countries had coverage lower than 20 percent, but all are now well above this level. By the mid-2000s, at least seven countries have above 60 percent coverage, and two of these, China and Viet Nam, have achieved universal salt iodization.

![Progress in households consuming adequately iodized salt in East Asia and the Pacific](image)

*Note: This figure includes only countries that have verified data for both time periods.*

*Source: UNICEF global databases.*

Lat, a nine-year-old boy from Piat village, Laos, reads a leaflet distributed by provincial health officials working on testing salt for iodine content.
Central and Eastern Europe and the Commonwealth of Independent States

The lowest regional coverage is in CEE/CIS, with only half of all households consuming adequately iodized salt, despite the fact that six countries have exceeded 90 percent coverage. Only 35 percent of households in the most populous country in the region, the Russian Federation, consume adequately iodized salt. For many countries in this region, this relates to the changes that occurred with the dissolution of the Soviet Union, which had a more centralized mechanism for salt iodization. Republics have struggled to develop the industry or import systems to ensure availability of iodized salt.

Selected Countries in Central and Eastern Europe and the Commonwealth of Independent States

Note: This figure includes only countries that have verified data for both time periods.
Source: UNICEF global databases.
In the rural province of Xinjiang in northwestern China, the very low iodine content of the soil and water caused what was commonly referred to as “big neck disease.” Even as late as 1995, the occurrence of goiter among Xinjiang children, aged 8 to 10, was above 43 percent. Out of a population of 19 million, 1.28 million people suffered goiter in the 1980s and 12,000 were victims of cretinism. But when William Brown, coordinator of the Kiwanis Worldwide Service Project from 1996-2001, visited Xinjiang in 2000, he found little evidence of a condition that was once ordinary and unavoidable.

The IDD program in China represents a major triumph. China enacted legislation mandating iodization of salt in 1995 and has achieved and sustained elimination of iodine deficiency through universal salt iodization since 2002. The government renewed its commitment during the 2002 International Meeting for the Sustained Elimination of IDD with the goal of ensuring elimination in all 300-plus counties in the nation by 2010. A key measure was the enforcement of legislation for universal salt iodization to prevent non-iodized salt from entering the market. In addition, China initiated a number of efforts to build awareness and increase demand. The government developed a national IDD day to spread messages on the importance of using iodized salt. This national event also made it possible to disseminate messages among hard-to-reach social groups on the public’s right to iodized salt. The government also used “900 Million Farmers,” a health-promotion project supported by UNICEF, as part of a nationwide campaign to promote the consumption of iodized salt. This campaign developed and aired key messages through the national television station to a thousand county stations. Initial feedback indicated that these programs enabled wide dissemination of messages to the most critical target audiences.

These and other efforts, with the cooperation of the salt producers, set the stage for success. National estimates for household use increased dramatically, from an estimated 60 percent in 1995 to an estimated 94 percent in 2006.

In Fujian Province, China, women work on packaging and weighing salt at a salt iodization plant.
Eastern and Southern Africa

Even though they face daunting challenges, including malaria, the AIDS pandemic, widespread poverty, and persistent food insecurity, Burundi, Kenya, Lesotho, Uganda, and Zimbabwe have each achieved universal salt iodization. Other countries, struggling with the same issues, have lost some ground, bringing the region’s overall proportion of households consuming adequately iodized salt to 54 percent.

Cretinism: The Extreme Manifestation of IDD

Cretinism, the extreme form of iodine deficiency that causes severe physical and mental retardation, was once prevalent in many communities. However, it has now disappeared in many parts of the world. The term “cretin,” meaning a stupid, obtuse, or boorish person, was once commonly used. Cretinism dwindled in Europe with the introduction of iodized salt, but in some countries, cretinism remained common until the mid-1990s. In some villages in Nepal, for example, 3 to 5 percent of a village population could possibly be afflicted by cretinism. Once affected, individuals with cretinism can no longer be cured by iodized salt. However, even small amounts of iodine can prevent cretinism.

A girl (right) suffering from cretinism sits with another girl in a home for the disabled in the remote village of Heu-Ba, China.
## Countries and Territories Receiving Kiwanis-Raised and Leveraged Funds for the IDD program

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No child should die of a preventable cause. Every day 25,000 do.
Believe in zero.

25,000

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U.S. Fund for UNICEF
125 Maiden Lane, New York, NY 10038
1.800.FOR.KIDS
www.unicefusa.org

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