

UNIVERSAL COVERAGE

SENEGAL 2010-2013





networksmalaria.org

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ROUTINE



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Staying Protected

IntraHealth completed the final UC mass distributions in Thiès and Dakar with financial support from the Global Fund. By using the same guidelines, tools, and "Trois Toutes" campaign branding that had been successfully used in the rest of the country, the distributions were rapidly planned and executed.

Mass distributions don't come along every day. What should governments do to ensure that growing populations continue to have access to nets and high levels of net ownership are sustained? Establishing community and health facility-based distribution channels are critical to maintaining good access and use.

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ACRONYMS

CFA	“Communauté Financière Africaine” (currency for francophone Africa)
FAQ	frequently asked questions
IFRC	International Federation of the Red Cross
ITN	Insecticide-Treated Nets
JHU-CCP	Johns Hopkins University-Center for Communication Programs
LLIN	long-lasting insecticide-treated net
NMCP	National Malaria Control Program
PCV	Peace Corps Volunteers
PMI	President’s Malaria Initiative
UC	universal coverage
USAID	U.S. Agency for International Development
WHO	World Health Organization

INTRODUCTION



This report is a compendium of stories about how the rollout of universal coverage (UC) of long-lasting insecticide-treated nets (LLINs) unfolded in Senegal, with each phase presenting a unique set of challenges and opportunities. It was created to ensure that Senegal’s experiences and lessons learned are broadly disseminated within the global community. Senegal’s experience with national mass distribution campaigns is a public health success story about partnerships, local commitment and a common resolve to reduce the country’s malaria burden. We hope that other countries will be inspired to adapt the model to their own particular circumstances and will have equal success in achieving universal coverage.

Background: In 2007, the World Health Organization (WHO) made a bold position statement for malaria prevention which shifted emphasis from safeguarding only the most vulnerable populations to universal coverage, defined by WHO as the use of insecticide-treated nets by all household members.

From 2003 to 2009, the National Malaria Control Program (NMCP) focused net distributions on children under five and pregnant women. Subsidized routine distribution to the general population through community based organizations was also supported between 2006 and 2007, and 791,000 insecticide treated nets (ITN) provided by the Global Fund, UNICEF and the World Bank were distributed. Consistent with changes in global policy and based on a strategy pioneered by the Peace Corps, in 2010 the National Malaria Control Program (NMCP) decided to embark on an ambitious plan that would ensure universal coverage of LLINs in communities throughout the

NetWorks, with financial support from the U.S. Agency for International Development/President’s Malaria Initiative, played a leadership role in guiding the phase-by-phase rollout of the UC campaigns with partners in Senegal.

to ensure that Senegal’s experiences and lessons learned are broadly disseminated within the global community. Senegal’s experience with national mass distribution campaigns is a public health success story about partnerships, local commitment and a common resolve to reduce the country’s malaria burden. We hope that other countries will be inspired to adapt the model to their own particular circumstances and will have equal success in achieving universal coverage.

BACKGROUND

country through a dramatic scale-up of access and ownership of LLINs.

The Malaria Indicator Survey, conducted between 2008 and 2009 in Senegal, found that only 24.4% of the general population had slept under any treated net, 23% under an ITN, and 21.9% under an LLIN the previous night. Use by the general population had increased to 34%, which was still far below the 80% goal for net use set by the NMCP. By early 2013, when distribution had been completed in 12 of the 14 regions, nationally representative survey data showed that household ownership of at least one ITN surpassed 85% in regions where UC had been completed (north: 93%, center: 88%, and south: 86%). Year round use by the general population was 61% in the north, 48% in the center, and 40% in the south, where the UC campaign had been completed almost three years previously. Use by the general population during rainy season surpassed 70% in areas covered by UC.

Organization: An important first step in the UC rollout of LLINs was the creation of coordinating committees at the national, district and local levels, which provided oversight and ensured that all activities were accomplished as planned. Four subcommittees with specific roles were likewise set up: technical and operations, communications and social mobilization, monitoring and evaluation and logistics. Following macro- and microplanning at the national, regional, and district levels, a census was completed by community volunteers, called *relais*, who went from house to house to count the number of regular sleeping spaces, people living in the household, children under the age of 5, and the number of nets in good condition. The head of the household received a coupon indicating the date and location of the local distribution point and later, this coupon was exchanged for the number of nets the household was to receive. This allocation was determined by using the information collected by *relais* and verified by a community

committee. One week following the distribution, *relais* made home visits to ensure that nets were properly hung and also to reinforce messages about proper net care and repair. The *relais* also used this opportunity to stress the importance of net use by the whole family, all year long and every night.

The first mass distributions (UC Phase I) led by NetWorks took place in the southern belt of Senegal, including the regions of Kedougou, Kolda, Sedhiou and Tambacounda, areas known to have the highest levels of malaria transmission. After an assessment period, the phase-by-phase rollout of the mass distributions continued under NetWorks beginning with Kaolack and Kaffrine regions (UC Phase II), followed by Fatick and Diourbel regions (UC Phase III), St. Louis and Matam regions (UC Phase IV) and finally Louga and Ziguinchor regions (UC Phase V). This process took just over 25 months to complete. During this period, 1,175,434 existing nets in good condition were found and 4,070,986 LLINs

were distributed, to 8,880,256 individuals—an average of about one net per 1.69 people, which is in line with WHO guidelines. In 2013, IntraHealth International with support from the Global Fund Round 10 led the Phase VI mass distribution of LLINs in the last two regions of Dakar and Thies.



NetWorks & Peace Corps

*“When spider webs unite they can tie up a lion.”
Traditional West African saying*



Since the beginning of UC rollout in Senegal, NetWorks and Peace Corps have worked side by side. Both organizations rely on personnel who live and work with the communities they serve, and are particularly well placed to translate national policy into local action. NetWorks’ local facilitators, who were based in the regions throughout each UC phase, were key to ensuring that operations were

carried out according to plan and to resolving bottlenecks at the field level. Their presence ensured that day-to-day activities for the distributions and the transfer of skills to the local district staff were consistent and streamlined. Likewise, PCVs working side by side with the local facilitators field-tested communication tools in their communities, drove home key messages via community radio, and carried

out regular home visits with counterparts. Their integration into local communities and language skills helped people to understand and adopt new social norms of regular net use, care and repair.

Field support and supervision trips to resolve problems, answer questions and clarify roles and responsibilities were among the joint activities between NetWorks’ local facilitators

and PCVs. Their ability to work together throughout the process and keep people informed about community distributions, home visits and special communication events made the UC work especially dynamic and fulfilling for everyone involved.

TO COVER A NATION

Universal coverage (UC) is a term used here to describe the process of distributing free long-lasting insecticide-treated nets (LLINs) to the general population. The National Malaria Control Program's (NMCP's) goal of 80 percent LLIN coverage nationwide is an attempt to achieve the critical mass necessary to drastically cut malaria transmission. Though the overall vision of UC has been agreed upon globally, how it is defined can vary from country to country ranging from the use of one net per every two persons, to one net per every two persons within a household, or a flat number of nets per household, such as two nets per household.

Senegal was the first country to define universal coverage as one net for every sleeping space—an approach that generates high levels of ownership. Existing nets were counted as part of the sleeping space census and factored into the number of nets needed for each household. The approach of ensuring one net for every sleeping space was highly successful in Senegal and may help other countries to effectively cover their populations with nets.



THE PILOT

Peace Corps Volunteers were instrumental in getting universal coverage off to a good start in Senegal. The initial experience involved making sure that every sleeping space in one health district had an insecticide treated net. The distribution was later successfully replicated in a second, larger district. This set in motion what would become the universal coverage strategy for the country.

Prior to 2009, few countries in Africa had attempted large scale distribution campaigns aiming to cover 80% of their estimated population, based on the Roll Back Malaria recommendation of coverage. Rwanda, Zambia and Eritrea launched UC campaigns based on average family size calculations and distributed nets according to a minimum number per family, with impressive results. Two pilot campaigns in Senegal proved that not just large scale distribution, but universal coverage, defined as one net per habitual sleeping space, was achievable.

In the fall of 2009, Peace Corps partnered with the local health officials, Net Life, the Against Malaria Foundation, and Malaria No More to conduct the first pilot distribution in Saraya, a hard-to-reach area with a high malaria burden. In preparation for the pilot campaign, Peace Corps Volunteers (PCVs) spearheaded the planning and tried a new strategy, which set the stage for covering the nation with LLINs. They set out to accomplish the impressive goal of covering every sleeping space in a single health district with an insecticide-treated net.

Though it was done in close



collaboration with the local health district staff, the pilot distribution relied heavily on PCVs who collectively provided over 2,000 hours of support to the project. Building on this experience, in late 2009 and into 2010 the Peace Corps, NMCP, Malaria No More, Tostan and World Vision organized a second pilot in the much larger health district of Velingara. They attempted to determine whether the distribution methodology could be effectively managed without intensive PCV support in every community. The role of PCVs was scaled back to one of project leadership, central technical guidance and logistical and communication support in areas that had PCVs. After hearing about the successful distribution, the NMCP coordinator, President's

Malaria Initiative (PMI) adviser and NetWorks' technical adviser traveled to Velingara to learn first-hand about the approach. This event together with the demonstrated rapid coverage and results achieved convinced the NMCP that the approach should be replicated in every district of the country.

The idea for determining a household's net need based on sleeping spaces came about when PCVs decided that rather than estimating the need for nets, which would be inaccurate and lead to insufficient coverage in some areas and oversupply in others, they would conduct a detailed household census. They found that if they counted every habitual sleeping space, their distributions would achieve better coverage. This census

“The first step was to determine what constituted a “sleeping space” and how many there were.... They found that if they counted every habitual sleeping space, their distributions would achieve better coverage.”

was time-consuming and possible only with the explicit support and participation of the communities involved, which was helped by reinforcing the message of malaria prevention. In addition, on the day of distribution, PCVs removed nets from their packaging and wrote on the nets in indelible marker the name of the recipient, the name of the village/neighborhood and the date of distribution. This approach was aimed at enhancing personal pride in net ownership and reducing the prospect of net resale. It was this PCV-driven approach, supported by the community, that influenced the way Senegal came to define UC, drawing the attention of important partners. In 2009, Peace Corps Senegal began advocating for this



“Community involvement makes UC possible.”

new approach of distributing nets based on sleeping spaces with important national and international partners. With the success of the pilots in Saraya and Velingara, the national policy moved to one of UC based on the sleeping space census methodology that Peace Corps and partners had

piloted. Lessons learned from the pilot that would need to be considered during planning for the national scale-up included:

- Net procurement based on population figures is necessary to estimate need: counting every habitual sleeping space assures more even coverage locally.

- Sleeping spaces are the most basic unit of measure in a net distribution. How you define that space matters—whether it is a bed, mattress or a simple mat on the floor.

- Community involvement makes UC possible. Without a strong relationship between the census workers (*relais* or PCVs) and community leaders or health officials, it would be impossible to gather information from every home.

THE RAINS

The NMCP officially decided on Senegal's UC distribution strategy—one net for every sleeping space—in March 2010. From that moment on, there was no time to spare as the rainy season was imminent in the southern belt of the country where malaria prevalence is the highest. Soon many communities would be completely cut off from public services and roads by the swelling rivers, making delivery of the nets impossible. The national coordinating committee, composed of the NMCP and partners, had to create the guidelines and tools for the technical operations, logistics, communications and monitoring and evaluation. UC was a new strategy for the country and very different from previous net distribution campaigns.

It was important that the new strategy and accompanying distribution modalities be very clear for all stakeholders.

Information from the 2009 mass campaign was used to estimate the net need for the first four regions. The NMCP rapidly circulated official letters advising the regions and districts about the UC operations and to prepare appropriate warehousing for the nets. Following a competitive bidding process, a transportation firm was identified and the trucks started rolling out to the regions. Nets purchased by the Islamic Development Bank and the the Senegal River Basin Development Authority were used for the Phase I mass distributions.

Meanwhile, NetWorks and the national coordinating committee were rapidly preparing the overarching plans for the mass distributions including the preparation of detailed budgets, training materials, checklists, a communication strategy and orientation sessions for regional and district level staff. NetWorks engaged four local facilitators who had extensive experience working with communities and nets as regional field agents. They also hired three field accountants to ensure that local funds were appropriately dispersed and accounted for. In late May 2010, the teams joined Peace Corps and partners working in the Kedougou region for the first UC orientations and start-up trainings.



LOGISTICS UC PHASE I

Phase I of Senegal's UC campaign began when the rains had just started. To cover every sleeping space, government officials, civil society and partners public and private, set out to prove they could achieve what many thought was impossible. It often required crossing nearly impassable roads, navigating through flash floods and over submerged bridges, and working outside cell phone range.



NETS READY FOR DELIVERY

Hundreds of thousands of nets just waiting to be delivered



MINING CAMPS

Mining camps and swelling populations



CROSSINGS

The final kilometer to the distribution site



ACCESSIBLE DISTRIBUTION SITES

1,567,821 people were covered during UC phase I



COMMITTED COORDINATION TEAMS

Coordinating teams created at the national, regional, and local levels

Delivery: When the rains had subsided and the distributions began, certain areas were already being hit hard by the rains. In some regions the health services team called upon the military to help deliver nets to areas where the container trucks had been stopped by deep, muddy rivers and rushing water. In Tambacounda, the military was obliged to cancel a mission to deliver nets to the community of Bohe Balladji after being marooned in the sludge for two days and with no end in sight for the rains. The nets were successfully delivered four months later, once the



Mining Camps: Gold mining is an important industry in Kedougou and although there are large firms working in the area, artisanal mining draws

fortune seekers from numerous countries including Mali, Guinea, Sierra Leone, Burkina Faso, Ghana and The Gambia. Often when a person strikes gold, word travels fast and in a matter of days a community can swell from a couple dozen families to thousands of individuals who may stay in an area from a week to several months and then leave. These populations are referred to as "virtual communities" posing important challenges for the district health teams tasked with the final allocation of bed nets. Without an accurate sleeping space count, it could not be

guaranteed that all sleeping spaces had been covered for the populations residing in these areas.

Supply: Knowing the true number of nets needed to cover all sleeping spaces in the first four regions was a major challenge because the original estimates were based on population data. Because a targeted campaign for children under 5 had taken place the previous year, the presence of these nets was also factored into the regional calculations. What was soon discovered, however, was that many families were

either not declaring these nets or the *relais* were not counting these nets if they were reported by households to have been washed with bleach or dried in the sun, thereby reducing the insecticide. The teams were not adequately prepared to deal with these issues and subsequently net quantities were short in some areas. Different regions addressed the issue of net shortages in various ways. In Sedhiou, for example, the region itself readjusted the number of nets allocated to individual households so that the total number of available nets was shared across

communities. Although almost all households received at least one or more nets, not all sleeping spaces were necessarily covered.

Appreciation: Interviews with people on the street were a common communications approach during the mass distributions.



Reporter:
"You have just received (8) nets valued at more than 20,000 CFA. What do you think about that?"

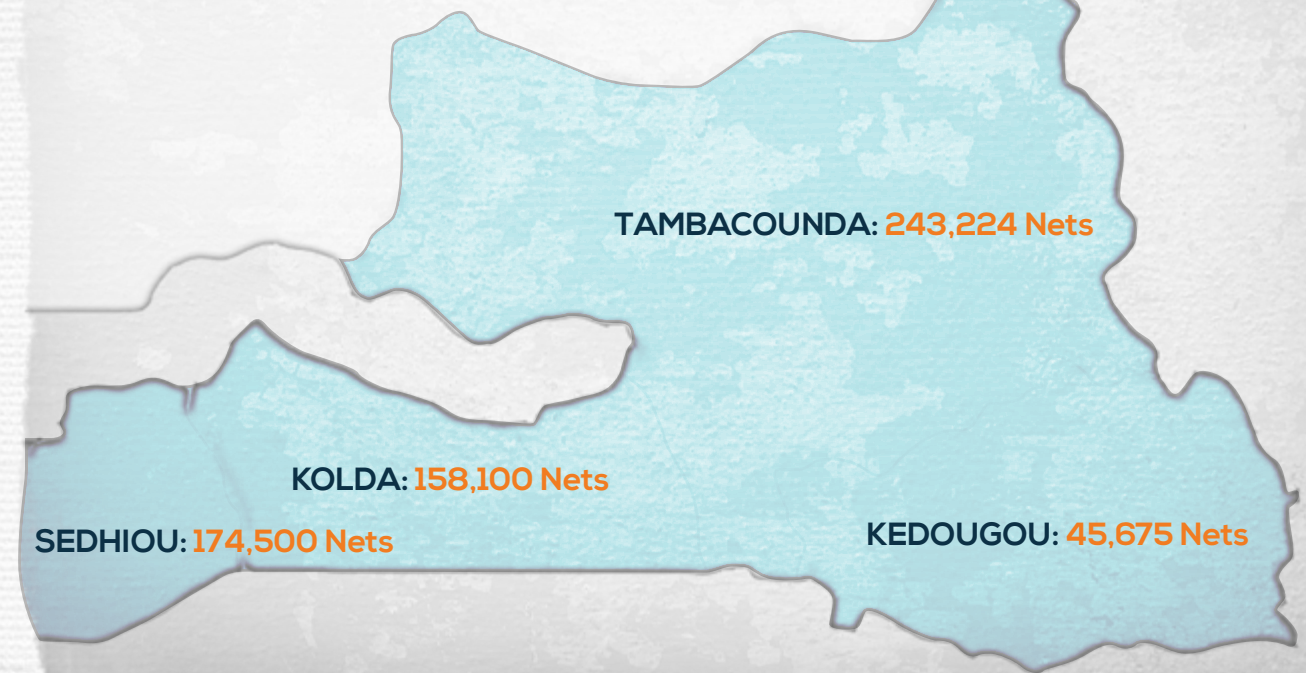
Sedhiou resident:
"They are worth at least ten times that much to me. My family will use these nets and we will not get sick this year."

-Personal testimony: Saliou Ndiaye

UNIVERSAL COVERAGE PROCESS CRITICAL STEPS



Phase I: Regional Coverage
621,481 nets distributed
93.8% sleeping spaces covered



POPULATION: 1,567,821
SLEEPING SPACES: 858,484
NETS DISTRIBUTED: 621,481
NUMBER OF LOCAL ACTORS INVOLVED: 3,651
183,584 EXISTING NETS FOUND IN GOOD CONDITION
OPERATIONAL COST OF DISTRIBUTION: \$430,342 CFA 215,171,046



■ NetWorks 70%* ■ All Other Partners 30%

- *IntraHealth
- *ChildFund
- Secours Islamique France
- *Peace Corps
- Net Life

PARTNER CONTRIBUTIONS AS A PERCENTAGE OF TOTAL OPERATIONAL BUDGET

CFA 500 - \$1US

* Financial support provided by PMI

IMPROVEMENTS UC PHASE II

Unlike UC Phase I, where nearly all operational costs for the mass distributions were assumed by NetWorks, Phase II welcomed the involvement of other partners, including IntraHealth, ChildFund, the Senegal Red Cross, Caritas, Peace Corps and Secours Islamique France. Communities were also more involved than in Phase I, providing financial and in-kind contributions to activities.

COMMUNITY RADIO



Prerecorded radio spots in multiple languages ensured message consistency about net use, care and repair on community radio stations nationwide

Strategy: During the first part of the year, the UC strategy was assessed and improved based on the results of an in-depth process review of Phase I with the Malaria Consortium. One of the most important improvements was the establishment of community coordinating committees that would “validate” local census numbers and calculate household net allocation, thus transferring this responsibility from the *relais* to the community. This helped limit fraud, as committee members had a good idea of how many sleeping spaces and nets their neighbors had and could spot

numbers that didn’t make sense. Once the community committee validated the census, the figures were passed up to the district coordinating committee, who reviewed each health post’s request in relation to the initial estimates and the number of nets available. If serious and legitimate gaps were seen, the district could request more nets from the NMCP, which happened in several cases. In addition a more structured approach for home visits was adopted, including the use of counseling cards and checklists.

Community Participation: Beginning with this phase, community engagement in the planning and rollout of the distributions was improved. Community members contributed personal time to serve on the coordinating committees, provided meals for their *relais* and some hired donkey carts or fishing boats to ensure the timely delivery of the LLINs from the area health post to local distribution sites.

Evaluation: The organization of district-level evaluations was an important new step added to the UC cycle at this point. Evaluations facilitated

PARTICIPATION



Communities actively engaged at every level

the analysis of key results, costs and lessons learned from the distributions in an open community forum organized by the district and attended by stakeholders from multiple levels and sectors. This initiative was consistently well received since it brought closure to an intensive period of work, allowed frank discussions about challenges and achievements and contributed to maintaining an accurate database that was made accessible to everyone involved. It also helped foster local commitment to ensure that nets were used on a regular basis and properly cared for over time.

COUNSELING CARDS & BOOKLETS



Home visits were accompanied by visual aids that facilitated guided conversations about net hanging, care, and use

Supervision: Regular, structured supervisions were likewise implemented starting with Phase II. Partners from the national level, including the PMI team, traveled to the field on a regular basis to supervise key UC steps such as the sleeping space census, validation of the census results, community distributions, home visits and the final district evaluations. This was especially important given the many adjustments and improvements that had been put into place since Phase I.

Communication: Beginning with Phase II, Senegal’s rallying

cry about the importance of using mosquito nets to prevent malaria was a simple slogan and logo. Appearing on T-shirts, caps and smocks, and coming from the mouths of community health workers, volunteers, town mayors, traditional communicators, students, musicians, artists and radio journalists, a single message was spread across the country: Mosquito nets must be used by: “*Toute la famille, Toute l’annee et Toutes les nuits parce que les moustiques sont toujours la!*” (The whole family, all year long and every night because mosquitoes are always there!).

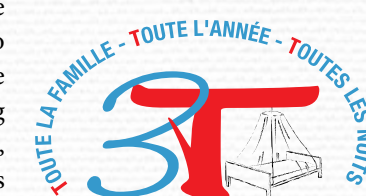
SUPERVISION VISITS



Ongoing supervision was an important feature of Phase II

This saying, called the “*Trois Toutes*,” or the “Three Alls,” reminds people that to end the cycle of malaria transmission, everyone—not only pregnant women and young children—must sleep under a mosquito net every night, all year long. The communication activities conveyed the message that if Senegalese families, given access to nets, adopt this critical behavior, the spread of malaria

in Senegal could be drastically reduced. The challenge was to persuade people to use their mosquito nets consistently and correctly, an objective tackled through community mobilization and locally tailored communication initiatives, hallmarks of the “*Trois Toutes*” national plan. Before, during and after the actual mass distribution, communication sub-committees in each region planned and executed a broad range of activities tailored to their areas. Whether a message was heard on the radio or from their village chief, from a traditional healer or from their school-aged child, the goal was



LOCAL FACILITATORS & DAILY JOURNALS



A special feature of UC Phases I-V was NetWorks' placement of experienced local facilitators at the district level. Local facilitators were individuals who were specially trained to ensure that the distribution operations ran smoothly and who managed and solved complex issues as they arose.

For a period of 45 to 60 days, these facilitators worked closely with the regional and district medical teams on all aspects of the UC field operations, ensuring that activities were carried out according to the national plan. Their essential duties included the oversight and coordination of training and supervision

activities; logistics management for nets, coupons and supplies; communication activities that involved community launches, parades and marches, community radio, home visits and reporting and documentation.

An especially important part of the local facilitators' work was the preparation of daily journals. The journals, which proved to be an invaluable management tool for the UC teams, documented the day-by-day unfolding of the UC mass distribution activities for each district. Compiled by NetWorks and broadly circulated via email on a bi-weekly basis, the journals allowed interested readers around the globe special insight into the rollout of UC in Senegal.

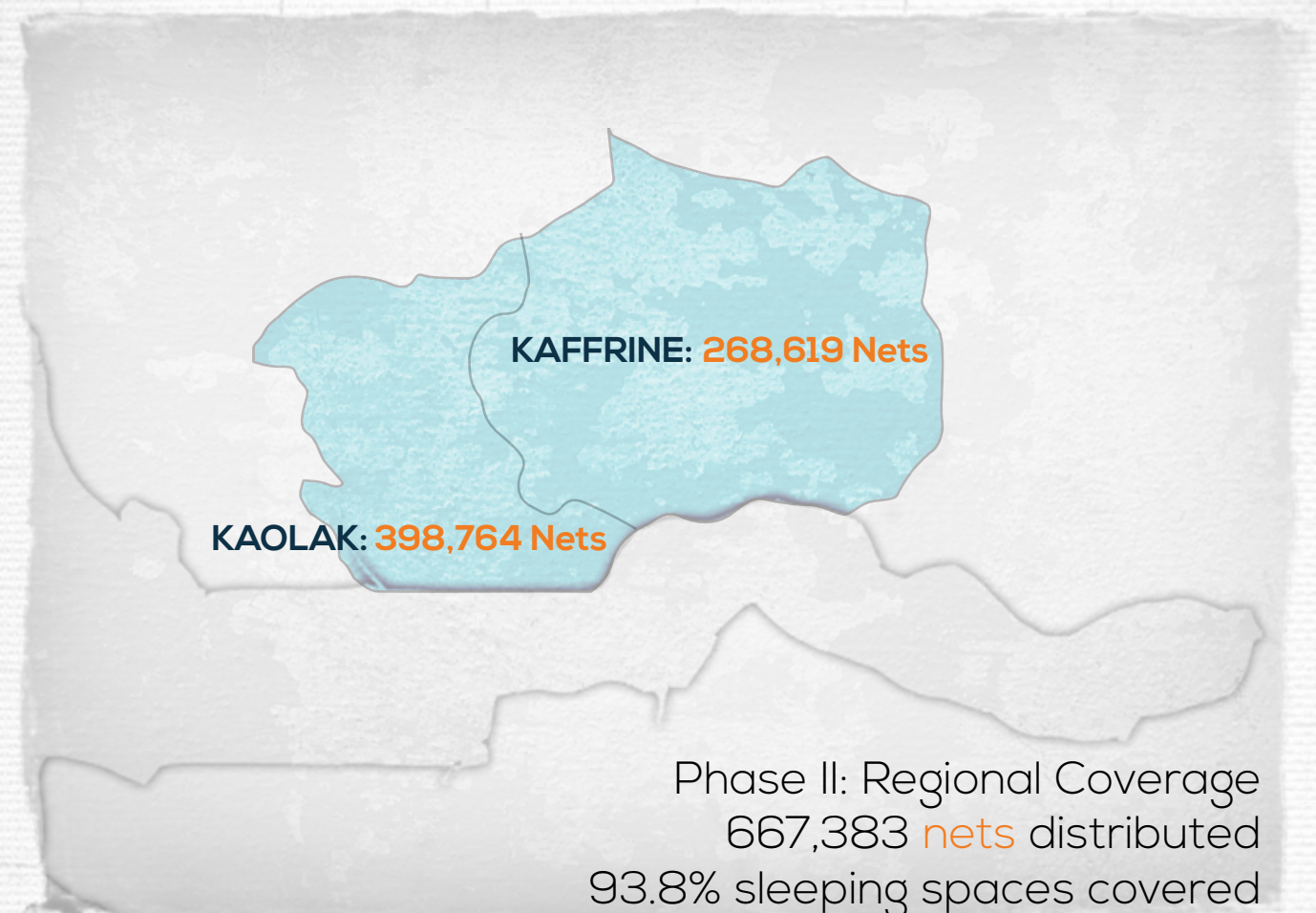
to surround every beneficiary with the "Trois Toutes."

The slogan was at the center of an overarching communications strategy, which featured the NMCP's key messages about net use, care and repair (to ensure consistency) but allowed all the districts to design and carry out locally tailored communication plans, taking into account their specific cultural and environmental contexts. A combination of

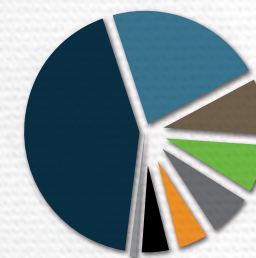
community launches, market and parade events, interactive radio programs and spots, home visits, health talks and demonstrations drove home key messages. *Relais* used newly designed counseling cards during almost 299,000 home visits, and thousands of frequently asked questions (FAQ) booklets were distributed through schools. During a hands-on six-day radio production workshop in 2010, participants representing the

NMCP, the regions and partners created ten radio spots in Wolof and French featuring the "Trois Toutes" and other important messages, which were pretested by participants in communities and recorded. Within weeks after the workshop, four of NetWorks' local facilitators traveled to the regions to work with district health education officers, radio animators and PCVs to translate, pre-test and produce the same radio spots in Pulaar, Bambara, Malinke,

Mandingue and Serere. In 2012 two more materials production workshops were organized on radio and print media and followed by a similar process for building capacity at the district level. Because of the emphasis on training and working closely with the districts and regions, a number of radio stations have continued to broadcast the UC spots free of charge during peak listening hours, thus ensuring optimal listener coverage of key messages.



POPULATION: 1,581,640
SLEEPING SPACES: 893,153
NETS DISTRIBUTED: 667,383
80% HUNG 1 WEEK AFTER DISTRIBUTION
NUMBER OF LOCAL ACTORS INVOLVED: 7,461
170,157 EXISTING NETS FOUND IN GOOD CONDITION
OPERATIONAL COST OF DISTRIBUTION: \$446,247 CFA 223,123,815



- *NetWorks 43.2%
- *Red Cross Senegal 22.1%
- *Caritas 9%
- *ChildFund 7.8%
- *IntraHealth 6.7%
- Community Participation 5.3%
- Secours Islamique France 5%
- *Peace Corps 0.8%

PARTNER CONTRIBUTIONS AS A PERCENTAGE OF TOTAL OPERATIONAL BUDGET

CFA 500 - \$1US

* Financial support provided by PMI

FLEXIBILITY & ADAPTATION UC PHASE III

The number of nets distributed in Senegal's UC Phase III was nearly double that of the first two phases combined. The Diourbel region is home to Touba, whose population is second only to Dakar.



COMMUNITY AUNTIES



KORANIC SCHOOLS



BOATS

Women's groups volunteered to monitor net use and care

Koranic school boarding rooms pose a challenge to counting and covering every sleeping space

Boats made it possible to access island communities

Flexible Phase III required a flexible approach that would accommodate varied communities. Although initially daunting, with its densely populated urban centers in Diourbel and sparsely settled fishing communities in Fatick, these regions turned out to be less complicated than anticipated. Due to the strong influence of religious leaders in Touba, Senegal's largest religious center with over 1

Logistics: million inhabitants, hundreds of distribution points around the city distributed hundreds of thousands of nets without any major difficulties. In-kind contributions by communities, such as meals and net transportation, demonstrated a strong sense of commitment to make the mass distribution work.

managers with other logistical challenges. Known for its fishing communities, the challenges encountered by UC operatives were resolved by utilizing their structures, including canoes for transportation.

The Fatick region, which is comprised of hundreds of islets and islands, presented program

Two years later, the NetWorks team returned to the area and spoke with a health post official.

"When the responsibility for the UC net distribution was assumed by the local population, who were trained, educated and directly involved in both receiving and distributing the nets, we saw that the results were very encouraging."

- Abdourahmane Ndiaye, Head of Darou Tanzil Health Post, Touba District

ENGAGED COMMUNITIES AND SOCIAL MOBILIZATION

Specialized training and tools were developed to ensure that messages about optimal net use, care and repair were able to reach diverse audiences.

Touba, in the Diourbel region, was one of the first districts to benefit from "special initiative" funding for communication activities through the NetWorks project. These communications initiatives were conceptualized, implemented and documented by the districts. Teams of *Bajenou Gox* (aunties for healthier communities) were at the core of a special initiative for Touba, which involved training almost 300 women on the basics of net use and care, including washing, drying and repair. With this training they were prepared to work closely with students and instructors from the *daaras* (Koranic boarding schools), so that nets were used regularly and well cared for. Communities contributed soap, thread and meals for the Volunteers.

NetWorks also trained the *daara* instructors on the importance of regular net use as the best way to prevent malaria. The "Trois Toutes" counseling cards featuring key UC messages were translated from French into Wolofol (the Wolof language written in Arabic script), so that messages could be easily incorporated into lessons. Many *daara* leaders noted that this was the first health communication campaign that had specifically addressed their needs and in their "language of work."



Daaras

Koranic Boarding Schools

Despite distributing nets to hundreds of *daaras*, most of the challenges in working with these institutions were found after the distribution. Without the proper follow-up, nets were not always used correctly. Many people needed instruction on care and repair strategies to ensure their nets lasted as long as possible. Follow-up visits were conducted by NetWorks' local facilitators to ensure that both students and teachers understood how to use the nets. The partnership with the *Bajenou Gox* was critical to both educating the students and teachers, but also to ensuring that nets were cared for. By working closely together as a team, religious leaders, health staff, Volunteers and other community members made the intervention at *daaras* a success.



STUDENTS

All these boys slept under a net the previous night



HANGING SOLUTIONS

Finding innovative ways to hang nets



RELIGIOUS INSTRUCTORS

Working with health staff to keep students healthy



COMMUNITY HELPERS

Volunteers work with *daaras* to repair torn nets

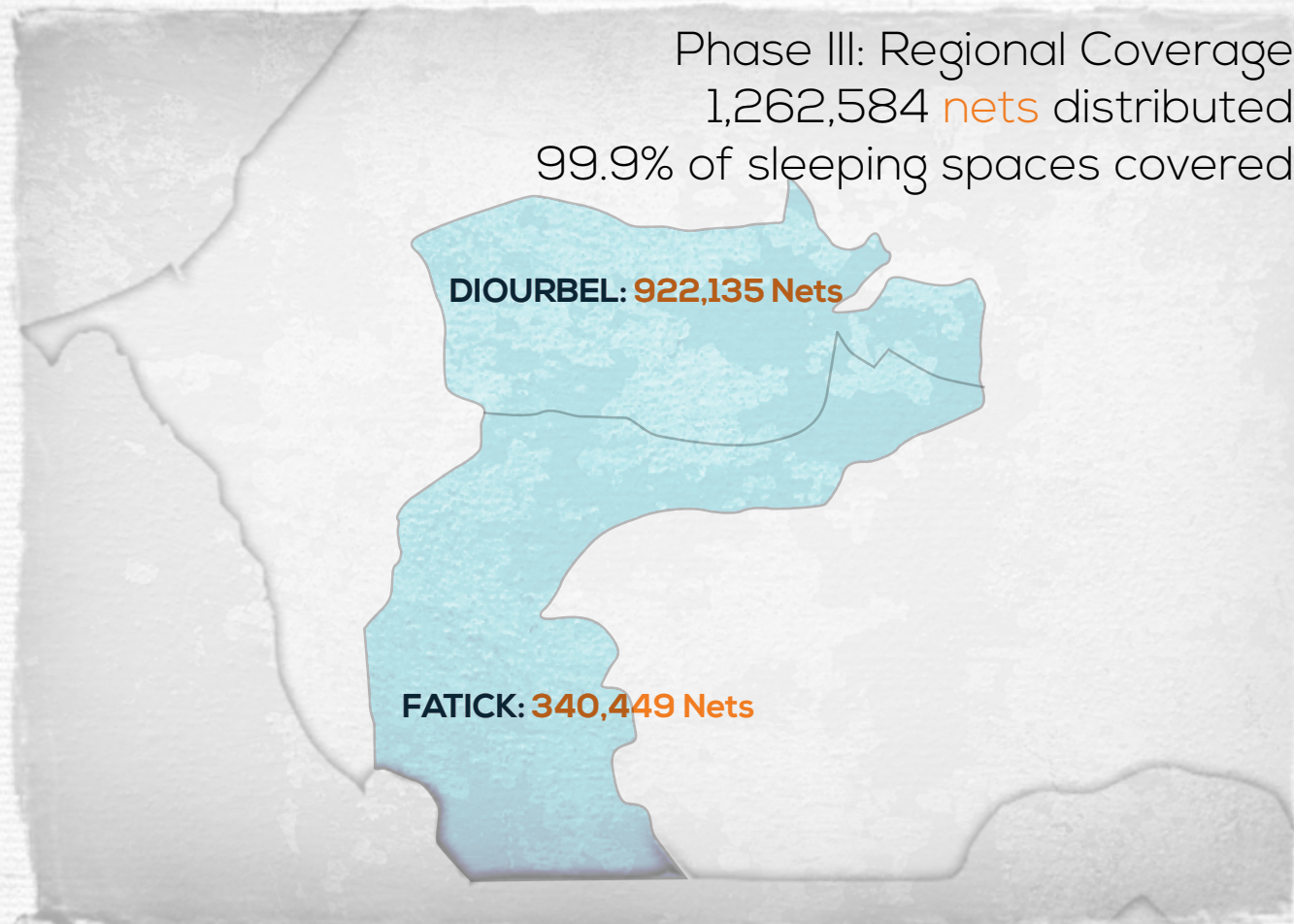


"This is one of the Koranic boarding schools (of 200 boys) where we distributed LLINs. The result was that rather than receiving 10 boys from daaras with malaria every day, we have a maximum of one case weekly. I'm so happy that now, two years later, I come back to the daara and see that children continue to sleep under their nets." -Abdourahmane Ndiaye, Head of Darou Tanzil Health Post, Touba District (top right)



Sometimes the only way to reach communities was with small fishing boats.

Phase III: Regional Coverage
 1,262,584 nets distributed
 99.9% of sleeping spaces covered



POPULATION: 2,467,007
 SLEEPING SPACES: 1,475,276
 NETS DISTRIBUTED: 1,262,584
 86% HUNG 1 WEEK AFTER DISTRIBUTION
 NUMBER OF LOCAL ACTORS INVOLVED: 6,337
 211,852 EXISTING NETS FOUND IN GOOD CONDITION
 OPERATIONAL COST OF DISTRIBUTION: \$668,313 CFA 334,156,776



- *NetWorks 66.8%
- *ChildFund Consortium 10.8%
- Community Contribution 8.6%
- *IntraHealth 5.9%
- *Caritas 5.8%
- Secours Islamique France 1.8%
- *Peace Corps 0.3%

PARTNER CONTRIBUTIONS AS A PERCENTAGE OF TOTAL OPERATIONAL BUDGET

CFA 500 - \$1US

* Financial support provided by PMI

LLIN

CHAMPIONS

GETTING YOUTH EXCITED ABOUT NETS
 AND HOW TO PREVENT MALARIA



In Mbacke, NetWorks engaged students, called “LLIN Champions,” to bring messages about good net use, care and repair back to their homes. The LLIN Champions program involved health and school staff in areas throughout the Diourbel region. Using the UC FAQ

booklets, students learned key information about net use and care and repair, which they were quizzed on during contests organized by each school.

Students who earned the most points became designated LLIN Champions and received

prizes for correct answers. Community members and local health committees were enthusiastic about the program and contributed prizes in the way of pens, notebooks and other school supplies to encourage participation. The program has since become popular in other schools and

regions and has launched the idea of youth Volunteers for health that are tasked with promoting good net use, care and repair behaviors in their communities.

REACHING THE NOMADS

A stone's throw from the edge of Paoskoto village in Senegal's interior, mud huts sit dotted among a field of old peanut plants.

A small gathering of nomadic Fulani have settled here briefly to trade with local farmers and find pasture for their cattle. In this culture, milk and meat are exchanged for grain and mobile phone credit.

Inside their domed huts, metal-frame beds and well-stowed kitchenware give the impression of settlement. But these people are always on the move and thus are some of the hardest to reach in the UC campaigns.

Haji Dia and his wife, Feincoura, have six children, ranging from toddler to teenager. Mr. Dia feels he has been successful in life.

"I have 150 cows now," he says, proudly. But despite his family's success, he admits that malaria has always been a serious problem.

"Before [these nets came] we didn't use any at all and the mosquitoes were really bothering us! Our children were constantly falling ill with malaria. This was very difficult for us."

The Dia family and three other Fulani families travel together.

During the rainy season they stay in their village. When pastures run dry at home, they travel in search of water and food for their livestock.

Mr. Dia says, "We nomads often live out in the open bush where there are many mosquitoes. We have nothing to protect us. The mosquitoes really attack us." According to him, several members of their group have died from malaria in the past few years.

"Often we camp in remote areas, far from hospitals. So by the time it takes to bring someone to a health center, they are almost too far gone to be saved."

He says he first heard about the net distribution campaign over the radio. Aside from his battered mobile phone, his radio is the only other sign of modernity in the camp. NetWorks and Peace Corps use a vast network of community radio stations across the country to make sure they reach the most remote corners of Senegal with the "Trois Toutes" message. Radio is often the best, and sometimes the only, means of communicating with mobile communities like Dia's.

Dr. Mamadou Doucouré, Chief Medical Officer of Niore District, has been very involved in UC activities for nomads living in his area. He says



communication is an essential part of the job. Dr. Doucouré believes that the success of this UC campaign is largely due to the strong partnership between Senegal's Ministry of Health and NetWorks, especially at the local level where communication initiatives reinforce best use and care and repair practices.

Inside Mr. Dia's round hut, three metal-frame beds circle an open sandy space in the center. Each bed has a rectangular white net, its four corners tied to branches poking down from the ceiling, the bulk of the net wrapped neatly over itself.

It seems he got the message. He smiles and hugs his youngest daughter.

"With these nets," he says, "we are much better protected. The mosquitoes cannot get through the nets and neither can the flies. Our children are protected and so are we."

As the sun sets on the camp, a herd of long-horned cows saunter into the clearing from a day's munching.

"As nomads, we are often on the move to find pastures for our cows," says Mr. Dia. "We don't carry many possessions. We can travel far into the bush where there are no houses or huts, where there is nothing, and put our mattresses on the ground to sleep. Now we hang

the mosquito net from a tree and we are protected. For us these nets are very important."

- Story by Fid Thompson

"With these nets," he says, "we are much better protected. The mosquitoes cannot get through the nets and neither can the flies. Our children are protected and so are we."



TRADITION & DIVERSITY PHASE IV

Phase IV was marked by developing creative ways to spread the “Trois Toutes” message with communities that had very different cultures and lifestyles.

LOCAL LEADERS



Chief Medical Officer, Saint Louis

ITINERANT HOUSEHOLDS



All households were visited and sleeping spaces counted

WORD OF MOUTH



Caravan messengers

Lifestyles in the Saint Louis and Matam regions of Senegal are vastly different. From the cool, seaside colonial city of Saint Louis, to the hot, expansive desert plains of Matam, a number of divergent lifestyles exist. Fishing villages, seasonal laborers, university students, military camps, border communities and nomadic populations have varying sleeping preferences.

In 2011, NetWorks worked with local health officials to organize a mass communication caravan in the city of Saint Louis, targeting urban residents. Key information for this population included the “Trois Toutes” core messages as well as tips on how regular net use

could help families to save money through fewer medical expenses. The Saint Louis caravan involved hundreds of individuals including local leaders and health staff, radio DJs, traditional communicators and drummers, *relais*, and rollerblading youth who were all focused on driving home key messages about nets.

During the 2012 mass campaigns, Matam organized surprise evening visits to nomadic communities to see whether nets had been hung. Those with good compliance were “awarded” with prizes such as buckets, soap and T-shirts as well as congratulatory radio announcements making the visits festive and fun.

Health workers in Matam were accustomed to going from hamlet to hamlet to provide basic health services like vaccinations and wanted to do the same with the distribution of the LLINs. NetWorks challenged the region to think differently about how to organize their mass distribution to ensure that operations would be more cost and time efficient. As was done in other regions, following the household census and validation, the population was called to a common distribution point to exchange their coupons for nets rather than the health team going from hamlet to hamlet which would have added important costs to the campaign in terms of fuel, daily allowances and time.

During Phase IV, peer-to-peer supervision visits were introduced whereby senior health staff from bordering regions supervised key mass distribution activities and provide technical support on behalf of the national level. Supervisors were selected based on their successful experience conducting and evaluating LLIN mass distributions in their areas. This work, which was monitored by the NMCP with NetWorks, proved to be very popular as it created camaraderie between regions and promoted local ownership of the program.

URBAN CHALLENGES

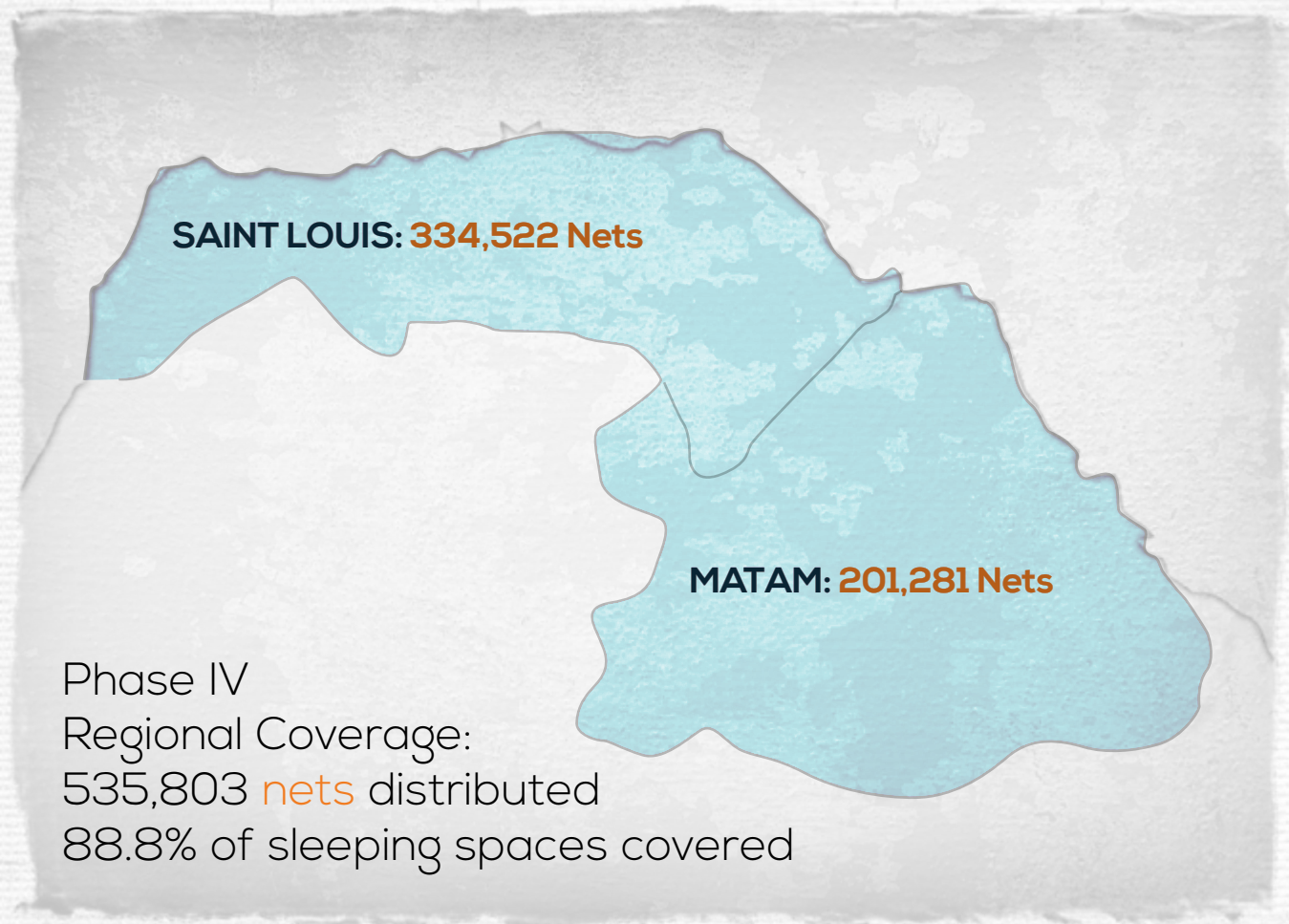
ACCOMODATING CHANGING LIFESTYLES

Conducting mass distributions in urban areas can be a complex process. Critical to its success is solid planning and quality supervision.

Counting people, sleeping spaces, and existing nets in urban households brought up a number of questions: How do you conduct a census if people are away at work when the health workers and *relais* make their rounds? Should tenants or visitors be counted as part of a household? How should busy schedules without keeping them waiting all day? How should boarding schools and military camps be managed? Beyond the challenges of the census and the net tally, there is the additional issue of crowd management at distribution sites: How do you distribute nets to people with busy schedules without keeping them waiting all day? It was quickly discovered that evenings and weekends were the best times to do the census and reach people at home. To minimize crowds, it was recommended that no more than 1,000 nets be given out at a time at any distribution point.



DISTRIBUTION POINT: PHASE IV



POPULATION: 1,620,933
SLEEPING SPACES: 843,045
NETS DISTRIBUTED: 535,803

86% HUNG 1 WEEK AFTER DISTRIBUTION
 NUMBER OF LOCAL ACTORS INVOLVED: 5,802
 213,194 EXISTING NETS FOUND IN GOOD CONDITION
 OPERATIONAL COST OF DISTRIBUTION: \$536,564 CFA 268,282,128



- *NetWorks 73%
- Red Cross Senegal 7%
- MACEPA 8%
- Community Contribution 6%
- UNICEF 5%

PARTNER CONTRIBUTIONS AS A PERCENTAGE OF TOTAL OPERATIONAL BUDGET

CFA 500 - \$1US

* Financial support provided by PMI

SAME NET: DIFFERENT OPTIONS

Several months following the UC mass distributions, NetWorks returned to Saint Louis in order to work with the district health management team to train the *relais* on how to do simple net transformations so that the rectangular nets distributed during the mass distributions could accommodate different needs and preferences.

the mattress was proposed. For those who preferred conical nets, they learned how to reinforce the top so that it could be hung from a central point. Following the trainings, the *relais* conducted hundreds of home visits to promote options for customizing nets to accommodate different style preferences and housing, from large urban homes at the heart of the city to small huts in fishing communities.

For those who liked the rectangular net shape but found it too short, adding fabric to the bottom to make it easier to tuck under



OBSTACLES & SOLUTIONS UC PHASE V

The Louga and Ziguinchor districts were implemented nearly two years after UC began, and once again a sense of urgency was felt. Funding from Global Fund Round 10 had been delayed, and the rains were imminent.



Nomadic populations

Distributions in Louga and Ziguinchor were carried out roughly two years after the original Phase I distributions, and due to the imminent rains, once again there was a sense of urgency. Also, in a major change during planning for UC Phase V, the national coordinating committee made the critical decision to no longer take into account existing nets when determining net allocations per household. Since three years had passed since the 2009 mass distribution, logically those nets were no longer viable and needed to be replaced. Although

Nets for every household

nets had already been stocked and stored in the regions based on population estimates calculated the previous year, this change significantly increased the number of nets required for the Phase V campaigns. Fortunately, sufficient quantities of PMI nets were available in Dakar to accommodate the quantities needed.

Louga is a region characterized by wide plains, deep sand and sparse populations. In recent years, borders for certain zones were redefined to create new health districts and management teams. Some zones, however,

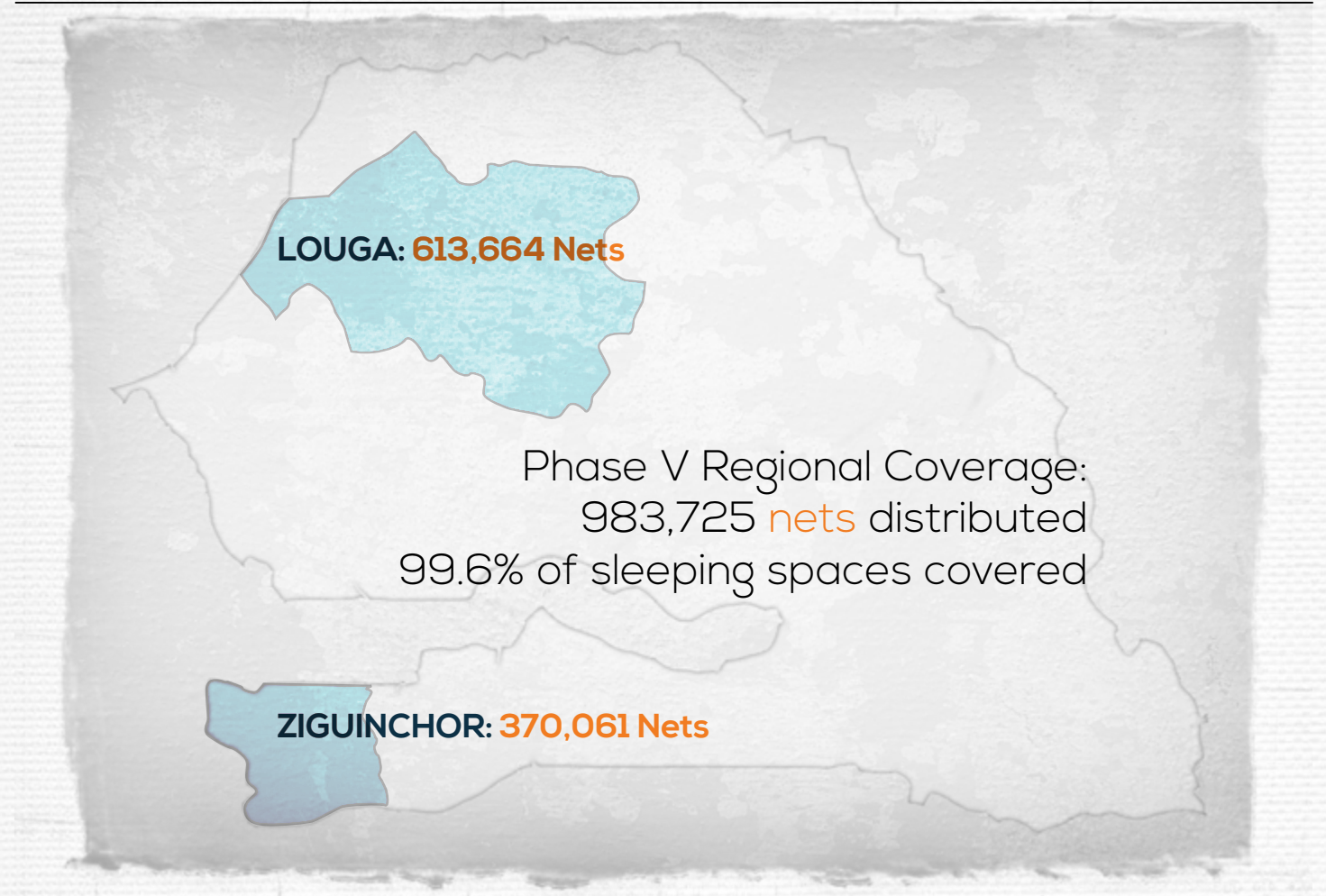
All existing nets replaced

particularly those with a strong union presence and a history of strikes by nurses, were initially reluctant to recognize the new districts, and were therefore preventing UC planning from going forward. Frequent advocacy visits were made by NetWorks and the NMCP in order to discuss problems and find solutions.

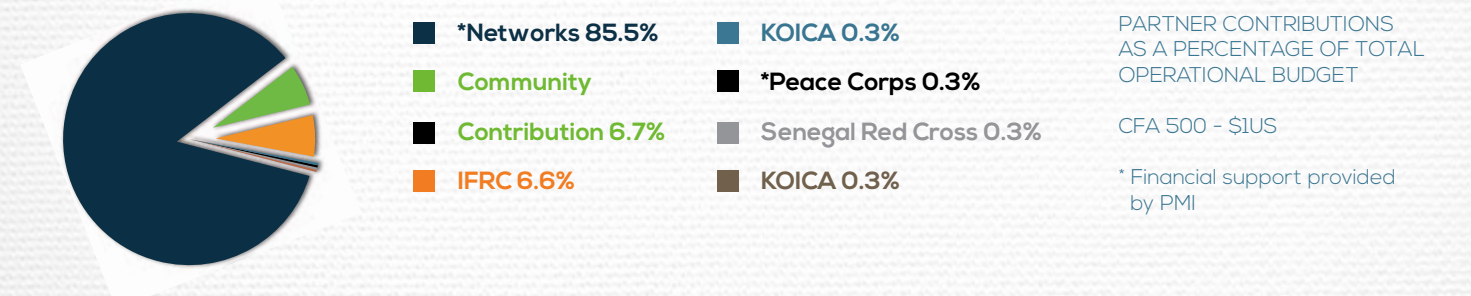
The International Committee of the Red Cross was an important partner in Ziguinchor, a region that has been in varying levels of conflict for more than 20 years. It is known as a neutral entity and has good relationships with

Ensure good communication

all actors in the conflict, and was able to use these relationships to ensure the smooth rollout of activities. Another feature of the UC activities in Ziguinchor was the hiring and training of Diola-speaking facilitators from the region who were able to communicate directly with communities and guide the UC operations for their areas. The local facilitators were trained and supervised by two senior NetWorks staff based in the town of Ziguinchor.



POPULATION: 1,642,855
SLEEPING SPACES: 987,265
NETS DISTRIBUTED: 983,725
87% HUNG 1 WEEK AFTER DISTRIBUTION
NUMBER OF LOCAL ACTORS INVOLVED: 3,902
279,036 EXISTING NETS FOUND AND REPLACED
OPERATIONAL COST OF DISTRIBUTION: \$601,107 CFA 300,553,614



Net Transformation

The following are a series of net transformation possibilities, including using a circular frame, bucket lid or simply adding additional fabric to the bottom of one's net.



CIRCULAR FRAME

Locate the center of a rectangular net and place a circular frame over it.



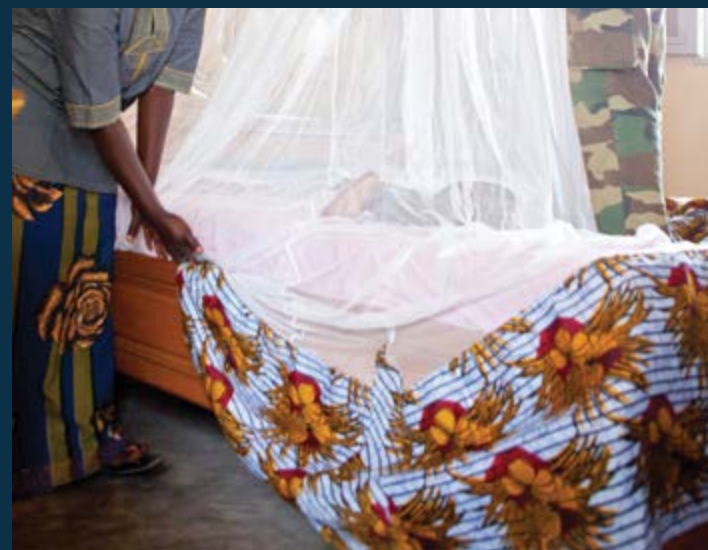
ATTACH & REINFORCE

Attach the frame using string or heavy thread.



BUCKET LID

The lid to a bucket can be used if no circular frame can be found.



NET SKIRT

Adding fabric to the bottom of the net can add length and reduce the wear and tear caused by tucking.



Dr. Bakary Sambou

IMPRESSIONS OF UNIVERSAL COVERAGE IN SENEGAL

Dr. Bakary Sambou is the Malaria adviser to the World Health Organization in Senegal and a pioneer in the country's fight against malaria.

What do you think of universal coverage and its impact in Senegal?

I recall the huge amount of skepticism and doubt that people had in the beginning about the feasibility and relevance of UC. However, at an important meeting attended by a WHO emissary from Geneva in February 2010, Peace Corps Volunteers described their experiences doing UC campaigns in the south to a large group of stakeholders. Their accounts confirmed that the process was adaptable and feasible.

Since NetWorks took the lead on the UC mass distributions, they have proved that this is the best strategy for distributing nets, as it respects both equity and the real needs of the population. As I have mentioned, in the beginning no one believed in the approach. Even WHO and Roll Back Malaria, who had

written about UC, had not yet explained how it could be done. Before the strategy was introduced, pregnant women and children under 5 were the key targets, as they are the most vulnerable and in most need of protection. However, once it was understood that UC still covered these populations, as well as everyone else, Senegal was encouraged to move forward and try it.

The NMCP, in collaboration with NetWorks and other partners, carried out a spectacular job in the 12 regions where UC was first implemented; this legacy will continue under IntraHealth, who will continue the strategy in Thies and Dakar. Not only will they cover Thies and Dakar, but they will also do follow-up mass distributions in the pioneering regions for UC where the first mass distributions were carried out three years ago.

How can we better share information about universal coverage?

First, it's important to document the process as you go along. Senegal's documentation of the UC rollout is incredibly thorough, and we have seen many successes. Documentation is important to ensure that everyone knows about the strengths and the challenges involved in carrying out such an enormous program.

The next step is to analyze what was done: which of these challenges were real bottlenecks? Based on our knowledge, what can we do in the future so that we do an even better job? This strategy won't stop with a single mass distribution; the UC activities will continue through 2016 and the NMCP needs to reflect on how best to do that, particularly in the regions where the first distributions

were done in 2010, since after three years LLINs need to be replaced. The documentation and recollection of experiences should definitely help in the planning of future distributions, including identifying ways to streamline costs. Preparing ourselves for the future of universal coverage in Senegal is necessary and this documentation is a critical part of that process.

“What people need to understand is what we gained in social and health benefits outweigh the money spent on universal coverage.”

PASSING THE BATON

UC PHASE VI

While NetWorks orchestrated the UC distributions in 12 of the country's 14 regions with the NMCP, IntraHealth led the distributions in Thies and Dakar with Global Fund support. Technical guidelines, tools, and communication materials used for the earlier distributions were employed and once the nets were ready, operations moved full speed ahead.

JOINT PLANNING



Sharing resources to ensure continuity

FIELDWORK



Accounting for almost 684,000 households

DISTRIBUTION



The long awaited nets arrive

PROTECTED



Sleeping soundly under the comfort of the net

After leading implementation on UC Phases I through V, responsibility for the rollout of Phase VI operations was passed from NetWorks to IntraHealth International. With funding secured through the Global Fund, and working hand in hand with the NMCP, the mass distributions for the regions of Thies and Dakar were successfully completed.

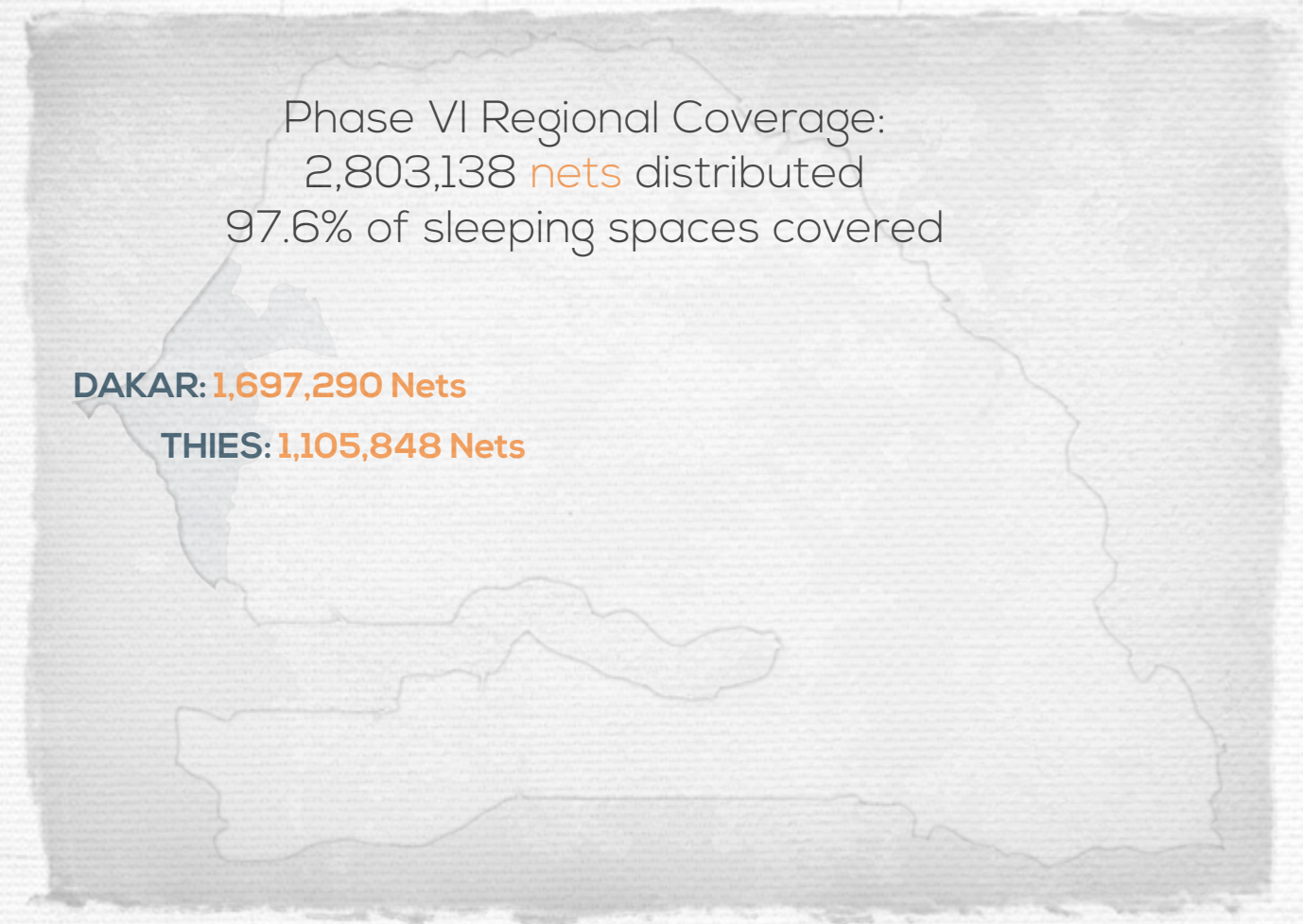
To ensure continuity with the previous phases, NetWorks worked closely with IntraHealth to share resources

and materials, including technical guidelines, checklists, communication materials and templates for the household surveys. Additionally, technical staff from the NetWorks office participated in regional planning sessions for both Thies and Dakar where they were able to share experiences and lessons learned from earlier distributions. Several of the local facilitators who had worked short term for NetWorks in the regions were also hired by IntraHealth to work with the district health management teams due to their

experience and on-the-ground knowledge of the distributions.

With the completion of the UC Phase VI campaign in Thies and Dakar, the entire country is now covered with nets. However, the work is not done. Because the first UC campaigns were completed in 2010 before any alternative channels for accessing nets had been put in place, a second round of mass campaigns have been started beginning with Kedougou and Kolda. Support for these mass distributions is coming from the Global Fund and planning

and management of field operations is being ensured by IntraHealth. At the same time, national focus for preserving universal coverage has now evolved to include health facility, community-based, and private sector models so that households have easy and affordable access to nets through a range of continuous distribution channels.



POPULATION: 5,315,027
 SLEEPING SPACES: 2,991,270
 NETS DISTRIBUTED: 2,803,138
 79% HUNG 1 WEEK AFTER DISTRIBUTION
 NUMBER OF LOCAL ACTORS INVOLVED: 13,362
 117,611 EXISTING NETS FOUND IN GOOD CONDITION
 OPERATIONAL COST OF DISTRIBUTION: \$1,375,557 CFA 687,778,989



- *IntraHealth 94.2%
- Health Committees 2.4%
- NGOs 1.2%
- Community Contribution 0.3%

PARTNER CONTRIBUTIONS AS A PERCENTAGE OF TOTAL OPERATIONAL BUDGET

CFA 500 - \$1US

* Financial support provided by Global Fund Round 10

CONTINUOUS DISTRIBUTION

Continuous distribution channels are a way to help maintain universal coverage levels



Births, deaths, marriages, visitors and shifting family dynamics can change the number of household sleeping spaces and subsequently the number of LLINs needed from one year to the next. In addition, even under the best conditions, nets eventually become worn out. While the UC campaigns were successful in getting large numbers of nets into communities over a relatively short period of time, mass distributions are expensive and not intended to be annual events. Because of this, it is

important that nets are available to communities on a continuous basis so that those who want or need new nets have access and to ensure that the high levels of net coverage achieved through the mass distributions are maintained.

Recognizing this reality, the NMCP and NetWorks established a system of continuous net distribution through health facilities in June 2012 which is currently functioning nationwide. Free LLINs are provided to pregnant women during antenatal care

visits and subsidized nets (500 CFA, equal to about \$1US) are available to all others seeking health services.

In addition, community-based and school-based distribution channels were piloted and assessed in two regions, Louga and Ziguinchor, starting in early 2013. Community-based organizations sold subsidized nets for 500 CFA and free distributions were organized in primary schools for students enrolled in first and fourth grade. It is expected that these channels will be

refined and scaled up over the next year by the NMCP. In addition, a social marketing program has been launched to ensure the availability of subsidized nets through the private sector. Together with ongoing communication and community mobilization, continuous distribution channels are expected to expand and evolve in what has clearly become a vibrant culture of net use in Senegal.

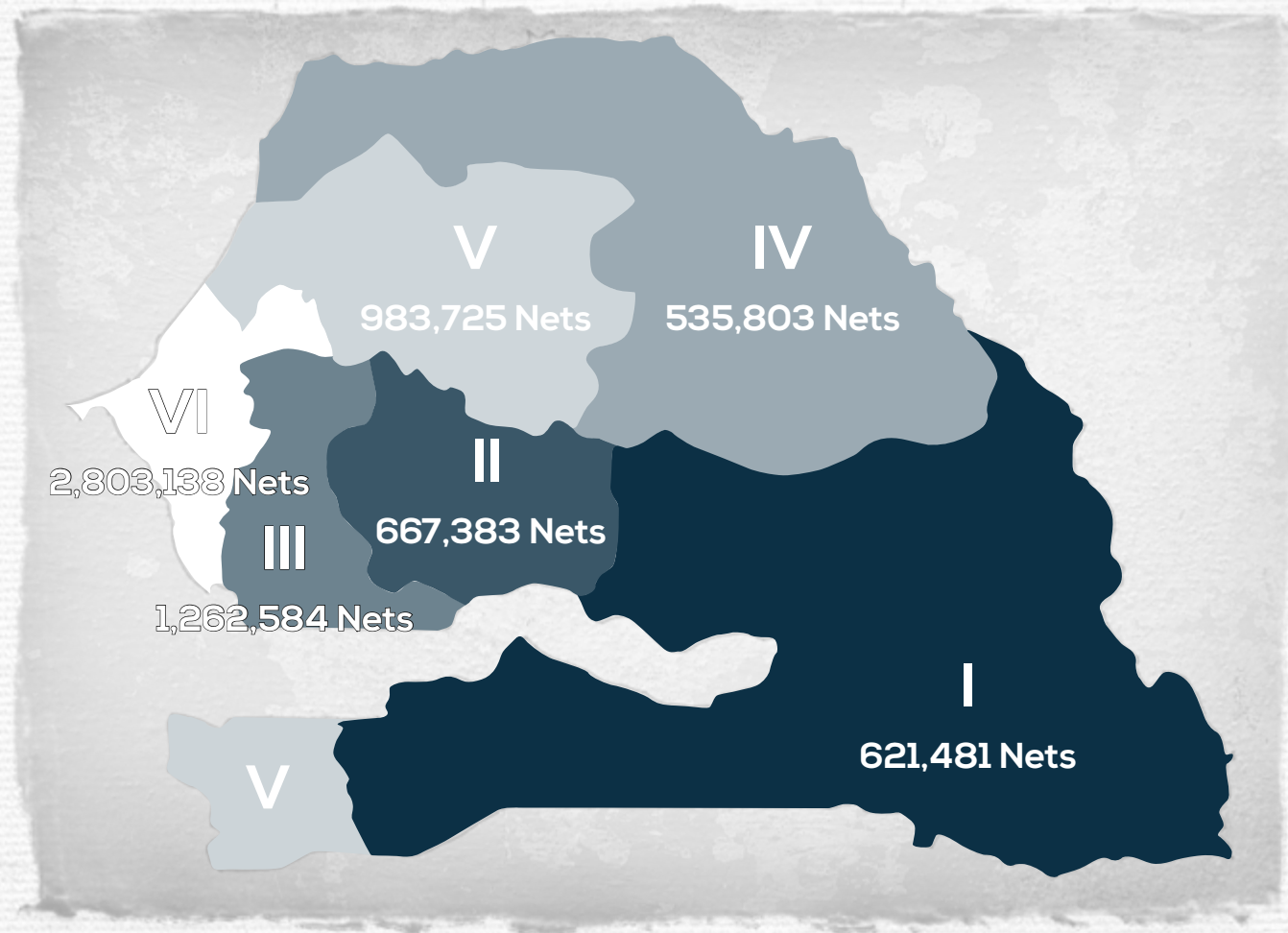
SUMMARY TABLE

Region	Census Population	Sleeping Spaces	Existing Nets in Good Condition	Nets Distributed
Sedhiou	442,380	233,217	48,202	174,500
Kolda	364,268	197,611	28,756	158,100
Kedougou	107,635	69,240	14,432	45,657
Tamba	653,538	358,416	92,194	243,224
Phase I	1,567,821	858,484	183,584	621,481
Kaffrine	604,445	549,236	55,792	268,619
Kaolak	977,195	343,917	114,365	398,764
Phase II	1,581,640	893,153	170,157	667,383
Diourbel	1,715,911	1,045,810	122,835	922,135
Fatick	751,096	429,466	89,017	340,449
Phase III	2,467,007	1,475,276	211,852	1,262,584
Saint Louis	1,002,550	529,234	146,390	334,522
Matam	618,383	313,811	66,804	201,281
Phase IV	1,620,933	843,045	213,194	535,803
Ziguinchor	622,827	371,014	133,121	370,061
Louga	1,020,028	616,251	145,915	613,664
Phase V	1,642,855	987,265	279,036	983,725
Thies	2,084,213	1,153,544	47,309	1,105,848
Dakar	3,234,430	1,837,726	70,302	1,697,290
Phase VI	5,318,643	2,991,270	117,611	2,803,138
Grand Total	14,198,899	8,048,493	1,175,434	6,874,114

PHASES I-VI

6,874,114 nets distributed

5/19/2010 - 6/1/2013



- PHASE I: 5/19/2010-10/13/2010
- PHASE II: 12/6/2010-3/17/2011
- PHASE III: 4/12/2011-7/15/2011

- PHASE IV: 9/7/2011-1/3/2012
- PHASE V: 4/17/2012-6/30/2012
- PHASE VI: 2/1/2013-6/1/2013

ACKNOWLEDGMENTS

Tens of thousands of people across the country were actively involved in the design, planning, implementation and evaluation of the universal coverage mass campaigns in Senegal. Because of their hard work and determination, nets are now hanging and being used in homes throughout the country.

Special recognition is given to the PMI Senegal team. Without their technical wisdom, financial support and flexibility, Senegal would never have been able to successfully complete the mass campaigns and launch continuous distribution.

Additionally, the NMCP was an impressive leader and ally throughout the design and rollout of the UC mass distributions. WHO provided ongoing encouragement and motivation to the UC teams based both in Dakar and the field.

The National Medical Store (*Pharmacie Nationale d'Approvisionnement* or PNA) is acknowledged for the important services they provided by warehousing hundreds of thousands of nets in Thies, Tivaouane and Bambeby.

Partners that made important contributions to the UC campaign at the national and district levels include the Islamic Development Bank, Africare, Caritas Senegal, Catholic Relief Services, ChildFund, IFRC, IntraHealth International, Malaria Control and Evaluation Partnership in Africa, the Senegal River Basin Development Authority, Red Cross Senegal, *Secours Islamique France*, Speak Up Africa, Tostan, World Vision and United Nations Children's Fund.

A special tribute goes out to the regional and district health management teams from Kedougou, Sedhiou, Kolda, Tambacounda, Kaffrine, Kaolack, Fatick, Diourbel, Matam, St. Louis, Louga, Ziguinchor, Dakar, Thies and the hundreds of community coordination committees, *relais* and supervisors who put in long and tireless hours throughout the mass distributions

and who continue to encourage people to use their nets regularly and care for them.

And finally, this work could not have been completed without the tireless work of all the Peace Corps Volunteers and NetWorks' technical, administrative and financial staff for their dedication and help in making universal coverage a reality for Senegal.

Layout and design: Michael Toso

Stories, text, technical reports and edits: Ousman Ba, Insa Badji, Sara Berthe, Mohamadou Diop, Andrea Brown, Ardo Faye, Aliou Fall, Lamine Gaye, Ababacar Gueye, Debbie Gueye, Chris Hedrick, Aida Kane, Maxime Lambert, Youssoufa Lo, Aziz Mbaye, Matt McLaughlin, Male Ismael Moulay, Saliou Ndiaye, Joan Schubert, Julie Thwing and Michael Toso.

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UNIVERSAL COVERAGE SENEGAL 2010-2013



JOHNS HOPKINS

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