

Mapping Key Populations for HIV Prevention in Sri Lanka



National STD/AIDS Control Programme
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THE RESEARCH TEAM

National STD/AIDS Control Programme

- Dr Nimal Edirisinghe
- Dr K A M Ariyaratne
- Dr Sujatha Samarakoon
- Dr D Ajith Karawita, (National Research Coordinator)

UN and Bilateral Agencies

- Dr Kumari Vinodhani Navaratne (World Bank), Coordinator
- Dr Dayanath Ranatunga (UNAIDS), Coordinator
- Mr David Bridger (UNAIDS)
- Ms Revati Chawla (UNFPA)
- Ms Mariam Claeson (World Bank)
- Dr Sundararajan Gopalan (World Bank)

Companions on a Journey (COJ)

- Mr Sherman De Ross
- Mr Sagara Palihawadana

Community Strength Development Foundation (CSDF)

- Ms Chandra Kanthi Abeykoon
- Mr H A Lakshman

University of Manitoba

- Dr Stephen Moses
- Dr Faran Emmanuel
- Dr Shajy Isac
- Dr B M Ramesh
- Dr James Blanchard

Project Steering Committee

- Dr Palitha Mahipala, Deputy Director-General (Public Health Services), Chair
- Mr David Bridger (UNAIDS)
- Ms Lene K. Christiansen (UNFPA)
- Dr Nimal Edirisinghe (NSACP)
- SSP M K D W. Amarasinghe (Department of Police)
- Mr H A Lakshman (CSDF)
- Ms Kanthi Abeykoon (CSDF)
- Dr K A M Ariyaratne (NSACP)
- Dr Dayanath Ranatunga (UNAIDS)
- Dr Kumari Navaratne (World Bank)
- Ms Revati Chawla (UNFPA)
- Dr Sundararajan Gopalan (World Bank)
- Mr Sagara Palihawadana (COJ)
- Mr Jude Fernando (COJ)
- Dr D. Ajith Karawita (NSACP), National Research Coordinator
- Dr Sherine Balasingham (MOHN), Observer

Mapping Team, Community Strength Development Foundation (CSDF)

- Ms A N Swarnalatha, Interviewer
- Mr Kapila Wijesinghe, Interviewer
- Ms Thushari Sanjeevani Fernando, Interviewer
- Mr Jayanga Viraj Gunathilleke, Interviewer
- Mr H M G Bandara, Interviewer
- Mr Dias Abeysekera, Interviewer
- Ms Bogahage Somawathi, Interviewer
- Mr Kamal Deshapriya Nanayakkara, Interviewer
- Ms Jasintha Ekanayake, Interviewer
- Mr Tiron Dissanayake, Interviewer
- Ms Nilanka Subhani Silva, Interviewer
- Ms Lalitha Sandya Kumari, Interviewer
- Mr Sudath Priyantha, Supervisor
- Mr Alexcender Perera, Supervisor
- Mr H A Lakshman, Supervisor
- Ms Gayani Kanchana Herath, Acct/ Admin
- Ms Chandra Kanthi Abeykoon, Coordinator

Mapping Team, Companions on a Journey (COJ)

- Mr Sagara Palihawasdana, Coordinator
- Mr Jude Fernando, field supervisor
- Mr Gamini Samarasiri, field supervisor
- Mr Brayan Gunarathna, field supervisor
- Mr Ranil Sampath, Interviewer
- Mr Saman Kumara, Interviewer
- Mr Ajith Chandana, Interviewer
- Mr Krishantha Perera, Interviewer
- Mr Buddhika Darshana, Interviewer
- Mr Vijitha De Silva, Interviewer
- Mr Arumanayagam Sashi Kumar, Interviewer
- Mr Asanka Perera, Interviewer
- Mr Pradeep Jeewana, Interviewer
- Mr Ananda C Irugalbanadara, Interviewer
- Mr Muthumuni Thilkarathna Silva, Interviewer
- Mr Niroshan Dhammika, Interviewer
- Mr A K Neel, Interviewer

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CBO	Community-based Organization
COJ	Companions on a Journey
CSDF	Community Strength Development Foundation
CSO	Civil Society Organizations
FSW	Female Sex Worker
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GIS	Geographical Information system
HASP	HIV/AIDS Surveillance Project
HIV	Human Immunodeficiency Virus
HRA	High Risk Activity
HRG	High Risk Group
IDU	Injecting Drug User
KI	Key Informant
KP	Key populations
L1	Level 1
L2	Level 2
LA	Lead Implementation Agency
LGBT	Lesbian, gay, bisexual, and transgender
MARPs	Most at risk populations
MOH	Medical Officer of Health
MoHN	Ministry of Healthcare and Nutrition
MSM	Men who have sex with men
MSW	Male Sex Worker
NGO	Non-Governmental Organization
NSACP	National STD/AIDS Control Programme
PSC	Project Steering Committee
SDP	Service Delivery Program/Package
SIM	Strategic information management
STD	Sexually transmitted diseases
STI	Sexually transmitted infection
SW	Sex Workers
UN	United Nations
UNAIDS	United Nations Joint Programme on HIV and AIDS
UNFPA	United Nations Fund for Population Activities
UoM	University of Manitoba
VCT	Voluntary Counselling and Testing
WB	The World Bank

EXECUTIVE SUMMARY

Mapping of most-at-risk populations in Sri Lanka, a precursor to effective prevention interventions, was conducted by the National STI/AIDS Control Programme (NSACP), Ministry of Healthcare and Nutrition (MoHN), Sri Lanka, through financial assistance from the World Bank, UNAIDS and UNFPA. Technical support for the work was provided by the Centre for Global Public Health, University of Manitoba.

A steering committee was formed which acted as the core decision-making body for this research, and consisted of members of NSACP, various UN bodies and civil society organizations (CSOs). The Deputy Director-General (Public Health Services), MoHN, chaired the Steering Committee, with other members from NSACP, UN agencies and CSOs as members.

The National Strategic Plan (2007-2011) for prevention of HIV infection in Sri Lanka had identified female sex workers and their clients, and men who have sex with men, as the most at risk groups for HIV infection. To undertake the mapping of these groups, the steering committee decided to use a methodology based on a geographic approach, which identifies locations where key population members are found and then quantified. Based on the availability of time and resources, two districts, Colombo and Anuradhapura, were selected to carry out the mapping exercise.

Field work was implemented by local implementation teams, with supportive supervision from the University of Manitoba (UoM) technical team. Community Strength Development Foundation (CSDF) was responsible for the mapping of FSWs, while Companions on a Journey (COJ) managed mapping of the men at risk. Each most-at-risk population (MARP) member was mapped by a set of three field teams, each team consisting of several field researchers (including members of the MARPs themselves), supported by field supervisors and an overall research coordinator. The field teams participated in a five-day training workshop from 8th – 12th September 2009 at the Chinthana Training Centre, Nainamadama. In addition to lectures and training sessions, actual field visits by the trainees were included in the workshop. Workshop participants included members of the data collection teams (including social mobilizers), data management personnel, field supervisors, representatives of the UN agencies and members of the National STI and AIDS Control Programme. The approach involved the target community individuals and peer group members at every stage of the study, thus gaining their support and endorsement.

The Medical Officer of Health (MOH) areas within each target district served as smaller data collection geographical units referred to as “zones”. Maps showing the demarcation of MOH areas were acquired from the MoHN. In addition to the physical maps, GIS maps were also obtained. Once the MOH maps were obtained, the entire “zones” were demarcated on the district maps for comprehension of the target areas and spot identification. A number of meetings were conducted with local officials and stakeholders, including law enforcement agencies, to inform them about the purpose and nature of the mapping study, and to garner their support. Level 1 was the first step of field data collection, and the team collected information from tertiary and secondary key informants in each zone to generate a list of spots where high risk activities (HRAs) could be found, with associated maximum and minimum estimates of the numbers of high risk group members at each spot. Level 1 key informant interviews produced lists of the names and locations of the hot spot(s) encoded by zone, city and district. Tables generated from the lists indicated the estimated maximum, minimum and mean number of FSWs or MSM mentioned at each spot, and the typology of the HRA, i.e. whether it was street-based, home-based, hotel-based, etc. The final step in data collection involved conducting key informant interviews and FGDs at the key identified hotspots within each zone. This process, called site profiling or L2 interviews, involved primary key informants (key population members and those closely related, such as FSWs, MSM, pimps, madams, brokers, etc.) and focused on validating the information collected and collated in the previous exercise. The details of the site profiling were recorded in L1 and L2 forms for FSWs and MSM (Annex 1).

The local partners managed the data entry, while the technical team supported the local partners in editing, cleaning and generating the estimates and lists of spots. To obtain the final estimate, the ranges of estimates of each site and location were rolled up for a zone and city to produce minimum and maximum estimates. To arrive at a single “best” estimate, the mid-point (“mean”) of the minimum and maximum estimates was used.

For female sex workers, a total of 1,884 interviews were conducted in Colombo District during the L1 process, while 725 interviews were conducted in Anuradhapura District. Based on the data collected during L1 and validated in L2, an estimated number of 6,726 (5,896 to 7,556) FSWs was calculated on a usual day in Colombo. This number increased to 10,396 (9,192 to 11,600) on a peak day, i.e. weekends or public holidays. Similarly, the estimated number of FSWs increased from 873 (730 to 1,015) on a typical day to 1,402 (1,222 to 1,583) on a peak day in Anuradhapura. Since some of the sex workers also solicited at more than one spot, the final estimates were adjusted to account for this duplication. The final estimates, after accounting for duplication, were 8,332 (7,367 to 9,297) FSWs in Colombo, and 1,138 (991 to 1,285) FSWs in Anuradhapura. The concentration of FSWs was higher in the MOH area of Dehiwala, as well as the metropolitan areas of Colombo city in the district of Colombo. While other two MOH areas,

particularly Kaduwela and Moratuwa also had relatively high numbers of FSWs, the lowest numbers of FSWs were estimated in Hanwellla. In Anuradhapura, the highest number of FSWs was estimated in the MOH area of Nuwaragampalatha-East (NPE), followed by Kekirawa, while the lowest number was reported in the MOH area of Thirappane. A total of 1,066 spots where FSWs gather were identified in Colombo district; only 311 such spots were identified in Anuradhapura district. The mean number of FSWs per spot was lower in Anuradhapura (4 FSWs per spot) compared to Colombo (8 FSWs per spot). Street-based sex work was the most common type of sex work in both Colombo (42.5%) and Anuradhapura (64.4%), where more than half of the FSWs were categorized as street-based FSWs. Home and “shanty” based FSWs was the second most common typology of FSWs. About 20% of FSWs in Anuradhapura and 25.6% of FSWs in Colombo operated from either their homes or in smaller squatter settlements called shanties. Lodge and hotel-based sex work was also reported from both the districts. A high proportion of FSWs in Colombo (15%) reported operating indirectly as sex workers at various entertainment-providing establishments, such as night clubs, karaoke bars, massage parlours etc. In comparison, very few FSWs in Anuradhapura belonged to this typology.

The total number of key informant interviews conducted for identifying geographical spots where MSM activity takes place, were 2,057 in Colombo district and 834 in Anuradhapura district respectively. A total of 9,569 (8,199 to 10,971) MSM were estimated from a total of 729 spots (pick-up points) in both Colombo and Anuradhapura districts. The estimated number of MSM also differed significantly on a usual day versus a peak day, e.g. weekends or public holidays. On average, the number of MSM on a peak day was approximately 50% higher than those on a usual day. Nearly half of the MSM were categorized as “gay men”, followed by *Nachchis* (32%) and male sex workers (16%). A small proportion of the MSM in Colombo were beach boys (2%). The highest concentrations of MSM in Colombo district were seen in all six MOH areas of Colombo city, as well as Kolonnawa and Moratuwa. In Anuradhapura, the highest number of MSM was reported from the MOH area of NPE, while the MOH areas of Medawachchiya, NPC, Thambuththegama and Thirappane also showed high numbers of MSM. A total of 729 hot spots or pick-up points were identified in both Colombo and Anuradhapura districts, where MSM solicit for clients, or where men meet to find other male sexual partners. While 77 spots were in Anuradhapura district, the rest (652) spots were in Colombo district. The mean number of MSM per spot in Anuradhapura district was lower than in Colombo district (9.5 MSM per spot vs. 13.2 MSM per spot respectively).

This study has identified a large number of FSWs and MSM in both districts, much higher than the numbers initially anticipated. The approach used has been shown to work exceedingly well in the cultural context of Sri Lanka, and should be utilized within other districts of the country with minor modifications to estimate population sizes, understand geographical distribution of MARPs, and recognize the various operational typologies and dynamics of these populations for

developing effective HIV prevention strategies. The HIV surveillance system in Sri Lanka needs to be strengthened to better track the state of the epidemic, as well as the delivery of prevention programs, and the effectiveness of targeted preventive interventions. The capacities of NGOs and CSOs for programme planning and implementation need to be strengthened, for to scale-up the current national HIV/AIDS response to be effectively undertaken. This process should begin early.

A. INTRODUCTION: HIV INFECTION IN SRI LANKA

Although classified as a middle- income country, with a population of almost 20 million, Sri Lanka has achieved remarkable social and health indicators, some of which are at par with those of developed nations. Sri Lanka is classified as a country with a low level epidemic of HIV in the Southeast Asia region, with an estimated HIV prevalence of less than 0.1% among adults (15-49 years).

Almost three decades since the detection of the first HIV infection in Sri Lanka, a cumulative total of 1,196 HIV infections have been reported to the National STD/AIDS Control Programme (NSACP) as of December 2009, out of which 326 have been reported as AIDS, and 202 individuals have been reported to have succumbed to the illness. Over the years a slow but gradual increase in the number of reported cases has been observed, in part due to the increase in testing facilities and availability of antiretroviral therapy, which has encouraged more people to come forward for HIV testing. Of the total number of HIV cases reported from 1987 to the end of 2009, the probable mode of transmission was known only in 67% of cases (n=802), reflecting the gaps in data collection and disclosure. Of cases with known modes of transmission, almost 82.8% of cases were due to unprotected sex among men and women. Vertical transmission accounted for 5.4% of the total reported cases. Surveys among antenatal mothers have shown very low levels of seropositivity in both 2008 and 2009. In 2008, there were three reported cases of mother to child transmission of HIV infection, and this increased to ten in 2009. HIV infection due to exposure to blood and blood products has been extremely low (0.4%), and only three cases of transfusion-related HIV infections have been reported, all of them prior to the year 2000.

In order to track the level of HIV infection in different sub-populations and to provide strategic information for policy and program development, the National STD/AIDS Control Programme has been conducting annual sentinel unlinked HIV serosurveillance (SS) since 1993. In the year 2008, a total of 389,786 HIV tests were carried out and reported to NSACP (this includes HIV testing carried out by government STD clinics, the national blood transfusion service and some of the private hospitals); the corresponding figure for 2009 was 387,557. During 2008 and 2009 a total of 102 and 137 HIV infections respectively were detected, giving a seropositivity rate of 0.03% for both years.

Even among individuals considered at a higher risk of acquiring the infection on the basis of their behaviours and practices, including female sex workers (FSWs) and their clients, men who have sex with men (MSM) and injecting drug users (IDUs), HIV prevalence has consistently been

below 1%. The latest data from 2009 showed a seroprevalence of 0.2% among MSM and 0.15% among STD clinic attendees. Transmission through sharing of injecting syringes and needles among IDUs has only been reported among two persons, with one acquiring the infection outside the country. No significant changes in HIV prevalence over the years have been noted among the subpopulations included in the serosurveillance.

Although the surveillance data shows low prevalence, behavioural surveillance surveys have shown that female sex workers and men who have sex with men have high risk behaviours, exposing them to the risk of HIV infection. Not only the presence of sizeable populations of MARPs is evident, but the presence of overlapping and concurrent sexual relationships among them can be a facilitating factor in the spread of HIV.

HIV in Sri Lanka therefore presents a fairly complicated picture. Certain socio-economic, cultural, behavioural and health-related factors such as high literacy rate, accessibility to and availability of free health services, including STD services, high school enrolment rates, high levels of gender equality, the relatively high status of women, and low levels of injecting drug use, may be helping to keep HIV infection at low levels. On the other hand, there is a sizeable number of female sex workers and their clients, MSM and IDUs in the country. They consistently practice high risk behaviours such as low condom use and multiple partnerships, which are potential risk factors for the spread of HIV. As yet, evidence suggests that the HIV epidemic in Sri Lanka remains at a relatively low level. However, experience from other countries in South Asia have shown that concentrated HIV epidemics involving vulnerable key populations can expand quickly within those sub-populations, and can affect the wider population through “bridge populations” (usually men who have sexual partnerships with both members of higher risk key populations and lower risk partners). Therefore, to prevent the establishment and potential expansion of an HIV epidemic in Sri Lanka, a key strategy will be to reduce the potential for transmission in important networks of vulnerable key populations, particularly where such networks are large and dense, and therefore prone to rapid HIV transmission within and from these networks. To date, no information is available on the size of these populations; the first key step in developing targeted interventions for vulnerable key populations is assessing their location, size and basic operational characteristics. There was a need to establish a methodology for the mapping of most-at-risk populations in Sri Lanka and successfully apply it in a sample of urban and semi-urban settings within the country. Experience in diverse settings of South Asia has shown that structured mapping can provide accurate estimates of the size and location of key populations, and thereby provide guidance for the scoping and targeting of HIV prevention programs and services.

B. BACKGROUND AND RESEARCH OBJECTIVES

This research was conducted through the National STI/AIDS Control Programme to support the development of a methodology and conduct mapping of most-at-risk populations in Sri Lanka, a precursor to effective preventive interventions with most-at-risk populations. The proposed activity directly addresses Strategy 1.1 under the prevention pillar of the National HIV/AIDS Strategic Plan, 2007-2011. Furthermore, the proposed activity paves the way for and will support the government's Round 9 Global Fund proposal, with its principle focus on prevention for most-at-risk populations.

A design mission was organized by the World Bank and UNAIDS from 20th to 24th April 2009, with a technical resource team from the University of Manitoba. The design team held planning meetings with the National STI/AIDS Control programme, various NGOs and CBOs working with most at risk populations (MARPs), UN agencies, and other donor community members. In addition, the existing literature on the HIV risk situation in the country was reviewed. Field visits and meetings with various MARPs were also organized to get a sense of the prevailing risk situation. Based on this assessment, a strategic framework was designed to provide accurate information on the size and characteristics of MARPs in selected districts of Sri Lanka, through a comprehensive mapping study.

In addition to the mapping *per se*, the technical team of the University of Manitoba also proposed to initiate a process of capacity building for scaling up targeted interventions for KPs. The specific objectives of the research are provided in Box 1.

Box 1: Objectives of the mapping study

1. Complete a geographic mapping of the locations of key population (KP) members in Colombo District and one other district in Sri Lanka.
2. Estimate the population sizes of the risk populations, and describe the operational typologies and organizational structures of KPs in each location.
3. Disseminate the findings of the study to HIV program managers and NGOs.

C. The RESEARCH TEAM

The national response to HIV in Sri Lanka is spearheaded by the National STI/AIDS Control Programme, which plays a key role in coordinating the response to the challenge of HIV/AIDS among all stakeholders in the country, and is the MoHN focal point for the implementation of HIV/AIDS policy in Sri Lanka. The program also coordinates policy implementation through the National AIDS Committee. The national program is currently being assisted by various partners, including UNAIDS, the World Bank and the Global Fund for AIDS, TB and Malaria (GFATM), to strengthen its program for high risk group interventions in the prevention of HIV transmission, to strengthen multi-sectoral involvement, and to develop a program monitoring and evaluation framework and management information systems.

This research was conducted through the support of NSACP. Strong support for the project was expressed at all levels of the MoHN, as well as other government ministries and agencies, including those associated with the legal system. Financial support for the project was provided by UNAIDS, UNFPA and the World Bank. UNAIDS was also responsible for coordinating with other stakeholders and monitoring the mapping process.

C.1 University of Manitoba (UoM) – Technical lead

The University of Manitoba (UoM) has extensive experience in HIV/AIDS prevention programming with MARPs, and with the design and implementation of mapping and surveys involving MARPs in South Asia and Africa. Specifically, the UoM has been implementing a program of research and focused prevention programming with sex workers in Kenya since the early 1980s. Since 2001, the UoM has been implementing programs for sex workers in India. Currently, the programs reach more than 80,000 female sex workers and high risk MSM across 25 districts in two states. In this context, the UoM has implemented mapping and situation assessments for multiple MARPs (sex workers, MSM and IDUs) in more than 250 Indian towns and cities in the states of Karnataka, Maharashtra and Goa, in southern India. The UoM is also implementing integrated biological and behavioural surveys among FSWs, clients and MSM in five districts of Karnataka under the India AIDS Initiative (*Avahan*) of the Bill & Melinda Gates Foundation. The UoM is also a technical partner of the Canadian International Development Agency (CIDA)-funded HIV/AIDS Surveillance Project (HASP) in Pakistan. In that project, the UoM provides technical advice, methodological development and training, for the implementation of mapping and second generation HIV surveillance activities with a focus on sex workers, IDUs and MSM in several cities of Pakistan. To date under HASP, mapping and behavioural and biological surveys have been conducted in 32 cities. More recently, the UoM

has conducted a mapping study of MARPs in Afghanistan, and similar studies have been conducted in China (Sichuan Province).

C.2 Project Steering Committee (PSC)

A steering committee was formed which acted as the core decision making body for this research, and consisted of members of NSACP, various UN agencies and civil society organizations (CSOs). The Deputy Director-General (Public Health Services), MoHN, chaired the Steering Committee with other members from NSACP, UN agencies and CSOs. The steering committee oversaw all aspects of the mapping study. Along with coordinating the mapping, the PSC monitored and ensured the quality of data collected. The following was the specific role of the steering committee:

- Study the feasibility of mapping, and identify and approve the geographical coverage.
- Ensure that the mapping protocol is relevant to the country / community.
- Guide the Technical Resource Group on project issues, especially issues which would compromise the success of the project.
- Reconcile differences in opinion by different stakeholders.
- Review the progress and quality of the work.
- Guide the NSACP for effective utilization of mapping data and implementation of targeted interventions.

C.3 Lead Implementation Agencies (LAs)

Two lead implementing agencies were identified for conducting field work separately for collecting data on FSWs and MSM. The LAs identified and recruited the mapping teams and arranged for social mobilizers¹ for collection of mapping data in the field. The following were some of the key tasks undertaken by the LAs:

- Administration and management of field work.
- Assisting UoM in protocol/instrument development.
- Drawing the field staff from other partners representing different provinces/districts.
- Inputs for the training of field staff.
- Working closely with the other partners and NSACP.
- Conducting the field work and performing data entry and validation.

¹ Social mobilizers are community members from the MARPs. They worked with the data collection teams for identification of other community members, and helped in data collection.

C.3.1 Community Strength Development Foundation (CSDF)

CSDF was the lead agency identified for implementation of this study with FSWs. Community Strength Development Foundation is a non-profit making voluntary organization which works independently, irrespective of race, religion, caste and party politics. This NGO was formed in 2002 and registered under the national secretariat of NGO registration in 2003. CSDF has a rich experience of working for HIV/AIDS prevention among sex workers over the last 8-9 years. It is guided by a group of dedicated, educated and experienced governmental and non-governmental personnel, and operates through partner organizations for HIV prevention in sex work in Sri Lanka, in collaboration with the National STD/AIDS Control Programme and UN organizations. It recruits target community groups as field officers.

CSDF is the coordinating organization for the NGO network that is implementing HIV prevention services for FSWs in 9 out of 25 districts in Sri Lanka, and develops capacities of partner organizations. CSDF is currently conducting intervention programs for sex workers in Colombo and Gampaha districts, with the support by UNFPA, through its drop-in-centres and outreach preventive services.

C.3.2 Companions on a Journey (COJ)

Companions on a Journey is a voluntary social services organization registered with the Ministry of Social Services in Sri Lanka, and played the lead role in implementing the study with MSM. Founded in the year 1995, COJ is the pioneering organization for addressing issues related to the rights, sexual health and HIV/AIDS prevention aspects of the MSM community in Sri Lanka. Through the past 15 years of its advocacy efforts, COJ has strived to create and facilitate an environment where society will accept, respect and support people with alternative sexualities (gays, bisexuals, lesbians and transgendered individuals) to live with freedom and dignity.

While focusing on increasing the visibility of HIV/AIDS prevention and service delivery for MSM, COJ bases its interventions in three major areas: advocacy, networking and provision of community outreach services to the MSM community. It currently operates three drop-in centres in Colombo, Kandy and Anuradhapura. COJ is also a major stakeholder in Sri Lanka's HIV response, and provides a range of HIV prevention services which include peer counselling, community outreach and an information hotline on HIV/AIDS.

D. RESEARCH METHODOLOGY

D.1 The Basic Approach

Mapping was largely based on a geographic approach, which identified locations where key population members were found. Our rationale for this approach is based on programmatic experience in diverse settings in Asia, which has shown that most individuals with high risk sexual behaviour, including FSWs and MSM, congregate and/or meet sexual partners in definable geographic locations. Accordingly, our approach was to focus on identifying these locations, characterizing each location in terms of specific “spots” or “hot spots” within that location, and describing the operational characteristics of the sexual networks there (i.e. how and where FSWs and MSM meet clients/partners, and where sexual transactions occur).

BOX 2: MARPs selected for mapping

Female sex workers (FSWs):

The following are the various typologies of FSWs in Sri Lanka:

Street-based FSWs: solicit clients on the street or in public places such as parks, railway stations, bus stands, markets or cinema halls.

Lodge-based FSWs: reside in a lodge and receive clients at the lodge. These FSWs do not solicit publicly for the clients. Usually the lodge owner, manager or any other employee of the lodge brings in the clients. In some cases, lodge-based FSWs are also contracted by the lodge owners through agents who supply FSWs, and the FSWs may move from one lodge to the other.

Home and shanty-based FSWs: usually operate from their homes, contacting their clients on the phone or through word of mouth, or through network operators and pimps. These home-based sex workers can be further categorized as shanty-based or home-based FSWs in residential colonies, depending upon the community they live in. Shantis are also homes, but are mainly in non-organized squatter settlements.

Brothel home-based FSWs: are those who live in the brothel home – a place where a small group of FSWs is managed by a Madam (auntie) or an agent. These FSWs do not go out of the brothel to solicit their clients; instead the clients come to them at the brothel.

Karaoke bar/casino/nightclub/massage parlour-based FSWs: are those who are based at these settings. Not all, but a large proportion of these provide sexual services to clients.

Men who have sex with men (MSM) :

The term “men who have sex with men” is used to denote all men who have sex with other men as a matter of preference or practice, regardless of their sexual identity or sexual orientation, and irrespective of whether they also have sex with women or not. The term does not refer to those men who might have had sex with other men as part of sexual experimentation or very occasionally depending on special circumstances. Beach boys and men who sell sex for money or material benefits, were also included in the study.

D.2 Target Groups

The design team, after reviewing the risk situation along with NSACP, suggested that female sex workers and men who have sex with men in Sri Lanka were among the priority groups in the transmission of HIV. Thus it was decided that FSWs and MSM would be mapped for this study. The various typologies and categories of various types of FSWs and MSM are given in Box 2.

D.3 Target Area Selection

Sri Lanka is divided into 9 provinces, which are further sub-divided into second-level administrative divisions called districts. There are 25 districts. Each district is managed by a District Secretariat which is responsible for implementing and monitoring development projects at the district level and assisting lower-level subdivisions in their activities.

Based on time and resources available, it was decided that two districts should be mapped. Given the social and cultural differences in different regions, districts were selected from Western Province and North-central Province. After discussion with NSACP and other stakeholders, Colombo and Anuradhapura districts were selected. Colombo District, which includes, the large capital city, was expected to have large numbers of high risk group members. Anuradhapura was selected in part because it was a transit place for military personnel during the civil conflict. Once mapping in these two districts was completed, similar mapping began to be conducted in other districts proposed for coverage under the GFATM-round 9 grant. Table D.3.1, shows some key features of the two districts selected.

Table D.3.1 Salient features of the districts selected for the mapping study

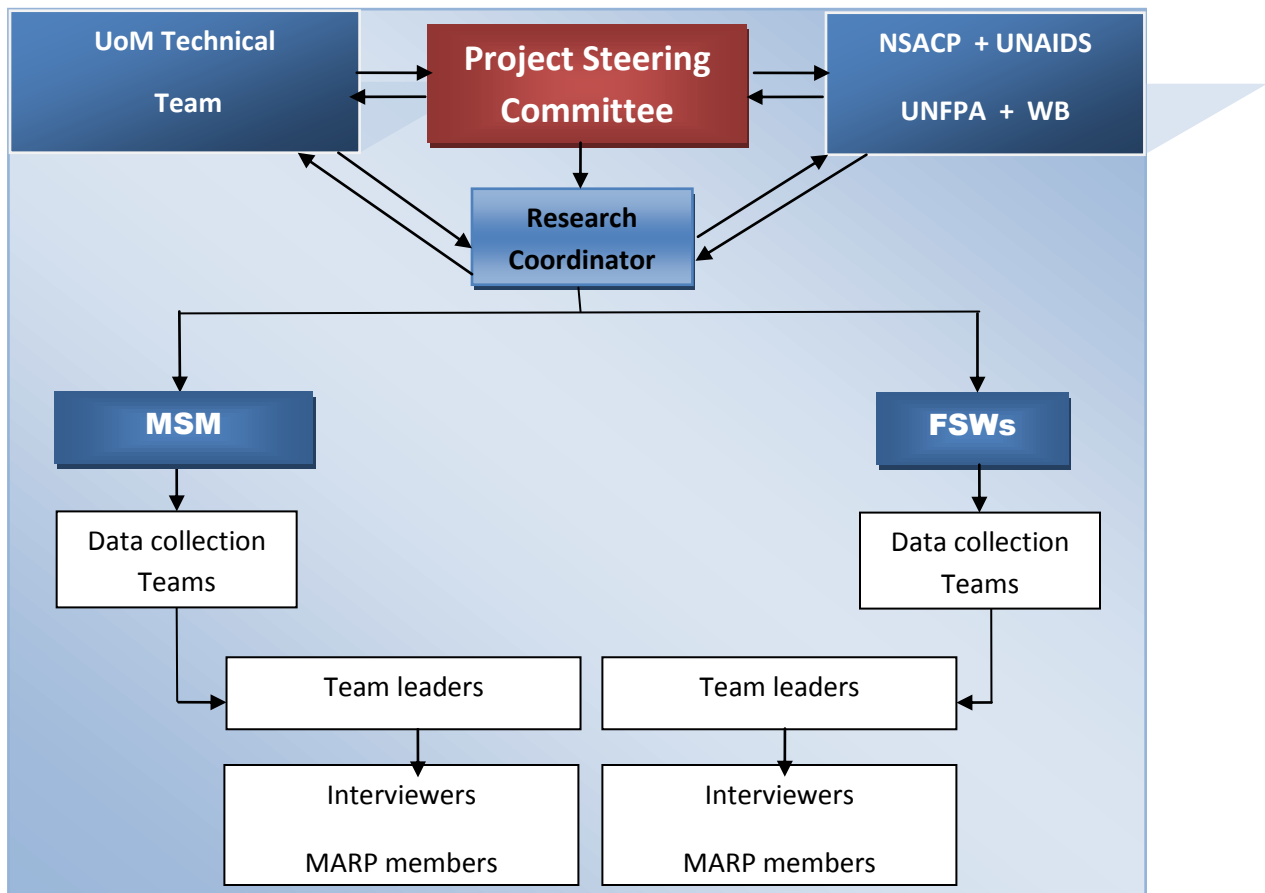
	Colombo District	Anuradhapura District
Location	Western Province	North-central Province
General Features	Smallest district in size	Largest district in size
Percent Land Area	1.08%	10.6%
Population	2,400,000	791,000
Population Density	3,581.4 p/km ²	118.7 p/km ²
MOH Areas	18	19
Important features	Sri Lanka's commercial capital, Colombo, and the political capital, Sri Jayewardene pura Kotte, are located in this district.	The main city is Anuradhapura, which was one of the ancient capitals of Sri Lanka, famous for its well-preserved ruins of ancient Sri Lankan civilization.

D.4 Project Implementation and Field Teams

As mentioned above, the National STI and AIDS Control Programme of the Ministry of Health and Nutrition was the chief implementing body for this study, in close collaboration with UNAIDS, UNFPA and the World Bank. The University of Manitoba provided technical support to the project, while field data collection was undertaken by local NGOs with experience working with key populations.

After the scoping mission, a research protocol for the mapping study was developed by the technical team of the UoM, in coordination with partners, including NSACP, UN agencies and the selected NGOs. The field teams were selected once the proposal was approved by the Project Steering Committee.

Figure D.4.1 Organization of the field team for Mapping in Sri Lanka



Field work was implemented by the local implementation teams, with supportive supervision from the UoM technical team. The organization of the field teams is shown in Figure D.4.1. Each MARP was mapped by a set of three field teams, each team consisting of 12 field researchers (including members of the MARPs themselves), supported by three field supervisors and an

overall research coordinator. The national research coordinator played a role of coordination between the various stakeholders of the study, and was responsible for the overall planning and implementation of field work. While CSDF was responsible for the mapping of FSWs, COJ managed mapping of the MSM.

D.5 Field Operations – “The Pre-mapping Stage”

The pre-mapping exercise served as a preparatory activity to establish the necessary logistical and conceptual foundations for the mapping data collection. The key aspects of the pre-mapping exercise included:

D.5.1 Training of the Field Teams

The field teams participated in a five day training workshop from 8th – 12th September 2009 at the Chinthana Training Centre, Nainamadama. The training was facilitated by the UoM technical team members and focused on providing information and points of clarification to the interviewers on issues such as:

- Understanding mapping and basic concepts of geographic mapping
- Mapping methodology and the concept of Level 1 and Level 2 mapping
- Data collation
- Basic interviewing skills with special emphases on interviewing about sensitive sexual issues
- HIV/AIDS: facts and myths
- Ethical issues
- Communication, values and attitudes
- Aspects of field work
 - accessing vulnerable groups
 - explaining the rationale and objectives of the study to the subjects
 - getting consent for being interviewed
 - the interviewing process
 - probing and translating information on formats
 - ethical issues, including confidentiality

In addition to lectures and training sessions, actual field visits by the trainees were included in the workshop. Workshop participants included members of the data collection teams (including social mobilizers), data management personnel, field supervisors, representatives of the UN agencies and members of the National STI and AIDS control programme.

D.5.2 Acquisition of Maps and Geographical Zoning of the Target Areas

The next step in the process was to divide the target area under study into smaller data collection geographical units referred to as “zones”. Choosing the demarcations for these zones was a fairly difficult decision. However, after detailed discussions, it was decided that MOH areas would be chosen as “zones” see Box 3.

Both district and town level maps were acquired for the purpose of planning. Maps which showed the demarcation of MOH areas were also acquired from the MoHN. In addition to the physical maps, GIS maps were also obtained. Once the MOH maps were obtained, entire “zones” were demarcated on the district maps for comprehension of the target areas and spot identification.

D.5.3 Involvement of Stakeholders

The populations under study are difficult to reach, and in order to get meaningful cooperation from them, it is crucial to develop strong rapport. This study focused on involvement of the target community individuals and peer group members at every stage, thus gaining their support and endorsement. A number of these individuals (peers) were hired for the research activities, and this helped to open doors to the more hidden segments of these populations.

Similarly, key persons in different governmental departments and other gatekeepers of information were identified, and were involved in the study from its initial phases. A number of meetings were conducted with local officials and stakeholders, including law enforcement agencies, to inform them about the purpose and nature of the mapping study, and to garner their support. Since we used each the MOH office as the sub-unit of our data collection, Medical Officers of Health were informed about the study through the office of the Deputy Director-General (Public Health Service). In addition, members of the research teams personally

BOX 3: Geographical zones: MOH areas

At the community level, primary health care services in Sri Lanka are delivered through the **Medical Officer of Health (MOH) System**. The MOH Office is the administrative and service delivery unit in an MOH area, and each MOH heads the team with public health midwives (PHMs) and public health inspectors (PHIs) as the primary health care workers. The main service focus of the PHM is maternal and child health (MCH); the focus of the PHI is water and food safety, sanitation, and control of communicable and non-communicable diseases. In addition, epidemiological disease surveillance at the grassroots level in Sri Lanka is carried out through the Medical Officer of Health system. At present there are 291 (Sri Lanka Annual Health Bulletin 2007) MOH offices in Sri Lanka.

met the MOH/senior staff member in each MOH office before commencing field work. Within most of the zones, MOH Staff helped the teams in demarcation of the geographical area of the MOH, and provided basic information of their working areas. In most instances, MOH/staff members acted as tertiary level informants for the study.

Other than these activities, preparation of job descriptions for the staff, development of a field monitoring process and a detailed work plan for field work were also key activities undertaken during the pre- mapping phase. The following were the dates of field activities in both districts.

Table D.5.3.1 Dates of field activity

Activity	Anuradhapura		Colombo	
	FSWs	MSM	FSWs	MSM
L1	21-30 Sep'09	22-29 Sep'09	21 Oct-1 Nov '09	22 Nov-10 Dec-09
L2	3-12 Oct'09	2-8 Oct'09	2-29 Nov'09	4-12 Feb 2010

D.6 Field Operations – Level One Activity

Level 1 was the first step of field data collection, and researchers collected information from tertiary and secondary key informants in each zone to generate a list of spots where HRA could be found, with associated maximum and minimum estimates of the numbers of high risk group members at each spot.

As already mentioned, interviewers teamed up with members of the high risk community to gather information on the various spots where high risk activities were conducted. The Level 1 interviews began as casual conversations with secondary key informant (KIs), to build rapport and later to discretely gather information on places where high risk activities took place. Verbal consent was obtained from the secondary KIs during these interviews. The information collected in Level 1 was recorded in separate L1 forms designed specifically for FSWs and MSM.

Secondary key informants included a broad range of individuals. The included rickshaw/taxi drivers, shopkeepers, telephone call operators, hawkers, police officers, labourers, students, and people belonging to various professions including tailors, barbers, music shop owners, property dealers and beggars. Where time allowed, snowball sampling methods were followed. In addition to collecting information on HRAs, lists of contact persons at various spots who could provide further information on these populations were also developed.

D.7 Collation of Level One Data

Level 1 key informant interviews produced lists of the names and locations of the hot spot(s) encoded by zone, city and district. Tables generated from the lists indicated the estimated maximum, minimum and mean number of FSWs or MSM mentioned at each spot, and the typology of HRA, i.e., whether it was street-based, home-based, hotel-based, etc.

Once these crude spot lists, along with estimated members associated with each spot, were developed, the team then discussed these results and reached consensus on the identified spot locations, and these were marked on a map. At the end of Level 1 data collation, the map of the zone included all data from secondary informants about HRA spots, using different colours for each high risk group. Finally, master lists of all spots, ranked by “frequency of mention” (FoM) and volume of HRA were assembled, which formed the basis for selection of places to visit for Level 2 interviews.

D.8 Field Operations – Level Two Activity

The final step in data collection involved conducting key informant interviews and FGDs at the key identified hotspots within each zone. This process, called site profiling or L2 interviews, involved primary key informants (key population members and those closely related, including FSWs, MSM, pimps, madams, brokers, etc.), and focused on validating the information collected and collated in the previous L1 exercise. L2 information was recorded in L2 forms (see Annex 1).

Field teams went to all of the identified hotspots to verify the location, describe the type of spot, and get specific information on the size of the key population associated with that spot. All spots identified at L1 were validated, and new spots identified were visited, and if found functional, were added to the final list of spots.

Some of the key information sought at each spot included:

- The typology and estimate of participants in high risk activity at that spot.
- Activities at the hotspot, namely, seeking risk (looking for partners), or taking risk (place where sexual activity occurs).
- Number of full-time and part-time sex workers.
- Peak timings and fluctuations in the numbers of participants at the hotspot.
- Key socio-demographic information.
- Number of sexual partners and timings.

In each identified spot, the field team mobilized a group of community members with the help of social mobilizers (SMs). These SMs were persons associated with and trusted by the targeted communities, and were generally current or former members of these key population groups. Where the SM's knowledge was limited to part of the city, they were asked to introduce to the team to another SM who could better cover the remaining areas. One community member (FSW/MSM) was randomly selected, and the individual characteristics discussed above were collected, while a group discussion was carried out with the group of community members who solicited in the spot, in order to obtain the spot-specific characteristics. In those spots where HRGs could not be identified, a secondary KI was interviewed to verify the L1 information and profile the spot. The focus in L2 was to collect more accurate information about the spot, and the community members were expected to provide more realistic information.

D.9 Data Management and Analysis

Pre-set data forms were edited by the field team on a daily basis and corrected for names of zones, missing KI typology, and any missing estimates of spots (i.e. spots without any estimates of key sub-population sizes). While manual data collation was done, the entire data set was also entered into Excel spreadsheets by the lead agencies. The computerized data were edited, cleaned and used for generating final estimates and lists of spots. The technical team supported the local team with data analysis to arrive at the final estimates, which were then shared with the Project Steering Committee as and when the data were ready. To obtain the final figures, the estimated ranges for each site and location were rolled up for a zone and city to produce minimum and maximum estimates. To arrive at a single "best" estimate, the mid-point ("mean") of the minimum and maximum estimates was used.

D.10 Ethical Considerations

This survey was designed to meet international ethical guidelines, specifically addressing the following ethical issues:

- **Safety of researchers:** Meetings were held with the police and law enforcement agencies in each district before the project started to inform them of the nature and the purpose of the survey, so that any queries from the local police during the project could be addressed. The Chief of Police participated as a member of the Project Steering Committee, and was provided updates at all times about the study.

- ***Informed consent and voluntary participation:*** Recruitment of participants was conducted only after describing the study procedures and obtaining informed consent. During the process of obtaining informed consent, prospective participants were clearly informed that participation was voluntary, and that non-participation would have no negative consequences in terms of access to programs or services.
- ***Confidentiality:*** Considerable effort was taken to maintain the confidentiality of participants. This included non-disclosure of participants' identity and the use of a non-identifying coding system to track study data. The electronic data was password-protected, and only authorized officials of NSACP and UoM had access to the data files. The final report does not contain information which can lead to identification of spots and places where MARPs congregate. These confidential data were provided only to the service providing organizations, and not to the NSACP.

E. RESULTS: FEMALE SEX WORKERS

Information regarding where FSWs congregate was collected through key informant interviews. The field teams identified persons who were likely to have information on high-risk activity (HRA) in a geographical setting (see Box 4). These interviews were referred to as Level 1 interviews. Members of the community (FSWs) were asked for specific details about a spot and numbers of FSWs at that spot, and these were referred to as Level 2 interviews.

E.1 Profile of Key Informants

A total number of 1,884 interviews were conducted in Colombo during the L1 process, while 725 interviews were conducted in Anuradhapura. At Level 1, a greater number of secondary and/or tertiary informants were interviewed. This was meant to provide direction to the field team about the various specific places where HRA existed.

The distribution of primary, secondary and tertiary KIs interviewed during L1, along with the gender of the, KIs is given in Table E.1.1, while Figure E.1.1 shows the total number of KI interviews conducted in various geographical zones/MOH areas.

Box 4: KEY INFORMANTS

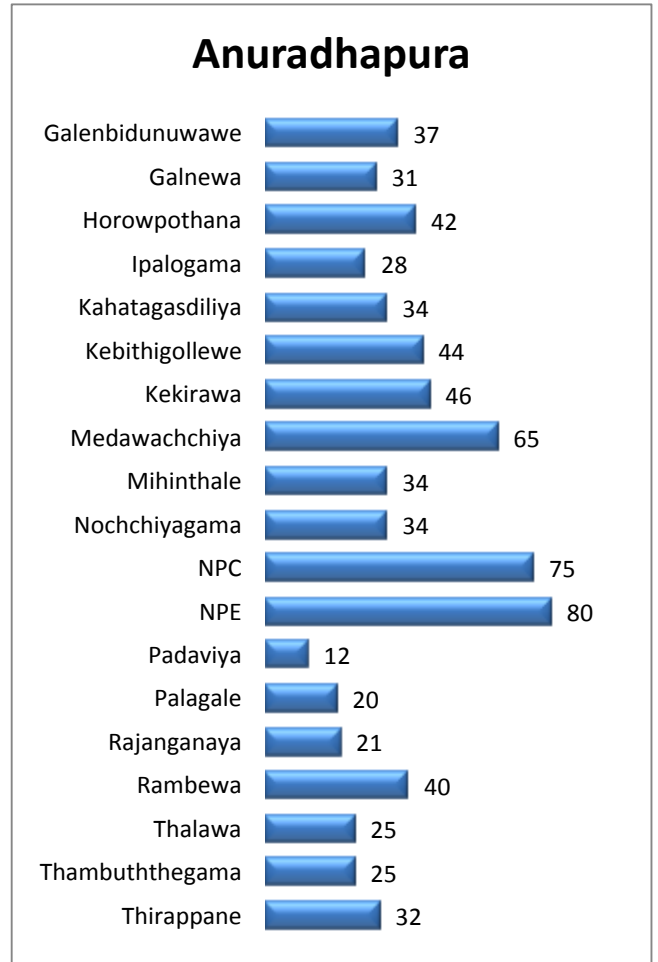
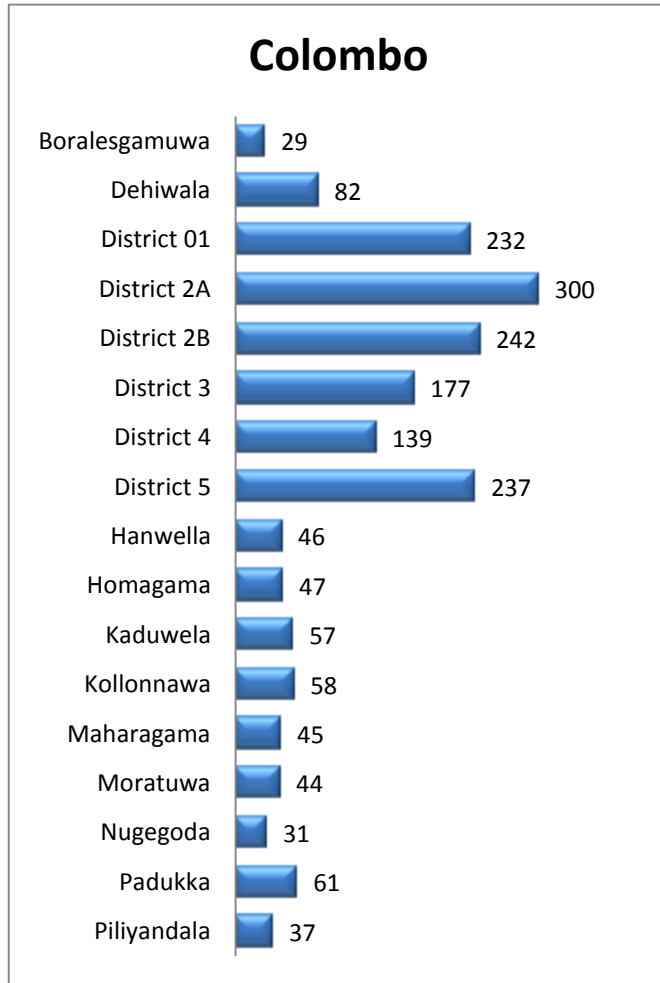
Key informants (KIs) are persons who are likely to have information on the profiles of the locations and estimates of the number of participants engaging in high risk activity. Based on their involvement with HRA and HRGs, KIs were classified into three types:

- **Primary key informants:** Persons engaged in HRA themselves, e.g. female sex workers, MSM, etc.
- **Secondary key informants:** Persons who are involved in the network of HRA or intimately acquainted with persons directly engaged in HRA, e.g. pimps, network operators, etc.
- **Tertiary key informants:** Persons involved with high risk activity in a professional capacity, e.g. police, STI service providers, and NGO workers.

Table E.1.1 Profile of KIs interviewed

		Colombo	Anuradhapura
No of Interviews	L1	1,884	725
	Type		
	Primary	3%	1%
	Secondary	93%	83%
	Tertiary	4%	14%
Gender	Male	85%	84%
	Female	14%	16%
	Transgender	1%	0.1%

Figure E.1.1. No. of Key Informant Interviews in Colombo and Anuradhapura districts



E.2 Total Estimates of FSWs

Based on the data collected during L1 and validated in L2, the mapping estimate for FSWs on a usual day in Colombo district was 6,726 (5,896 to 7,556). This number increased to 10,396 (9,192 to 11,600) on a peak day, i.e. weekends or public holidays. Likewise, the estimated number of FSWs increased from 873 (730 to 1,015) on a usual day to 1,402 (1,222 to 1,583) on a peak day in Anuradhapura district.

Table E.2.1 Estimated numbers of FSWs in Colombo and Anuradhapura districts

	Colombo	Anuradhapura	Total
Number of FSWs (on a usual day)	6,726 (5,896 to 7,556)	873 (730 to 1,015)	7,599 (6,620 to 8,571)
Number of FSWs (on a peak day)	10,396 (9,192 to 11,600)	1,402 (1,222 to 1,583)	11,798 (10,414 TO 13,183)
% FSWs who solicit at multiple spots	39.7%	37.7%	39.3%
FINAL ESTIMATES (adjusted)	8,332 (7,367 to 9,297)	1,138 (991 to 1,285)	9,470 (8,369 to 10,595)
No of spots	1,066	311	1,377
FSWs per spot	8	4	7

Nearly 39.7% of FSWs in Colombo District and 37.7% of FSWs in Anuradhapura District reported to operate from more than one spot. The final estimates were therefore arrived at after adjusting for this duplication in both the districts. Accounting for this duplication, the mapping estimates were 8,332 (7,367 to 9,297) FSWs in Colombo District and 1,138 (991 to 1,285) FSWs in Anuradhapura District, for a total of 9,470 in the two districts.

During L1, a total of 2,055 spots (1,429 in Colombo and 626 in Anuradhapura) were shared by the KIs. However, during the profiling of spots (L2), a number of spots identified at L1 were found to be either inactive or non-existent. It was found that 1,066 spots in Colombo and 311 spots in Anuradhapura were active, and primary KIs were interviewed from most of the active spots (1,048 in Colombo and 305 in Anuradhapura). Basic demographic information, estimated volume of clients, and engagement of sex workers in full-time sex work or other economic activities, were collected from each primary KI interviewed.

Table E.2.2 Spots identified during L1 and L2 interviews, Colombo and Anuradhapura

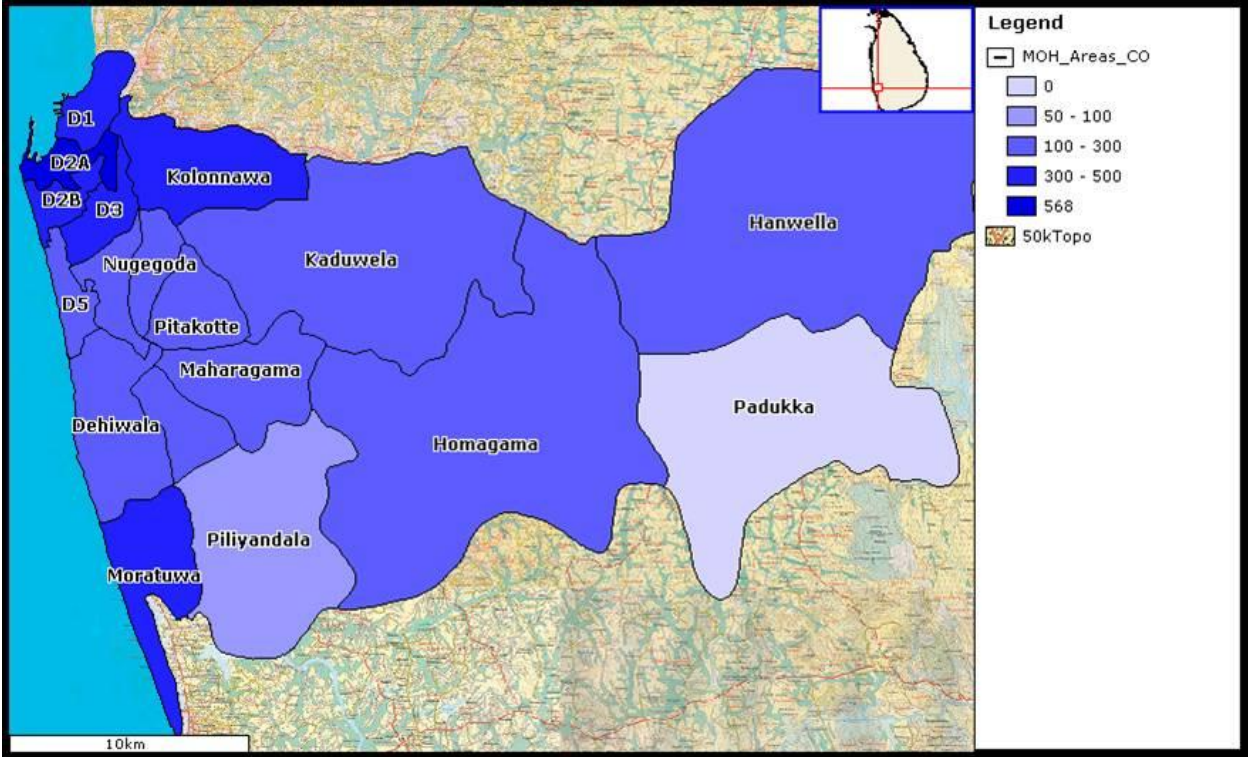
	Anuradhapura	Colombo	Total
Number of spots in L1	626	1,429	2,055
Number of active spots (L2)	311	1,066	1,377
Number of KIs in L2 (primary KIs)	305	1,048	1,353

E.3 Estimated Number of FSWs by MOH Areas

The number of FSWs in each MOH area was estimated, on order to identify areas of higher concentration of FSWs. The distribution of FSWs in Colombo and Anuradhapura districts are shown in Figure E.3.1A and Figure E.3.1B. Darker areas in these distribution maps show MOH areas with higher number of FSWs, lighter areas depict MOH areas with lesser number of FSWs.

As expected, the highest concentrations of FSWs in Colombo district were seen in the districts of Colombo city. The MOH areas of Kolonnawa, Moratuwa, Kaduwela and Dehiwala also had high numbers of FSWs; the lowest estimates were in Padukka and Piliyandala.

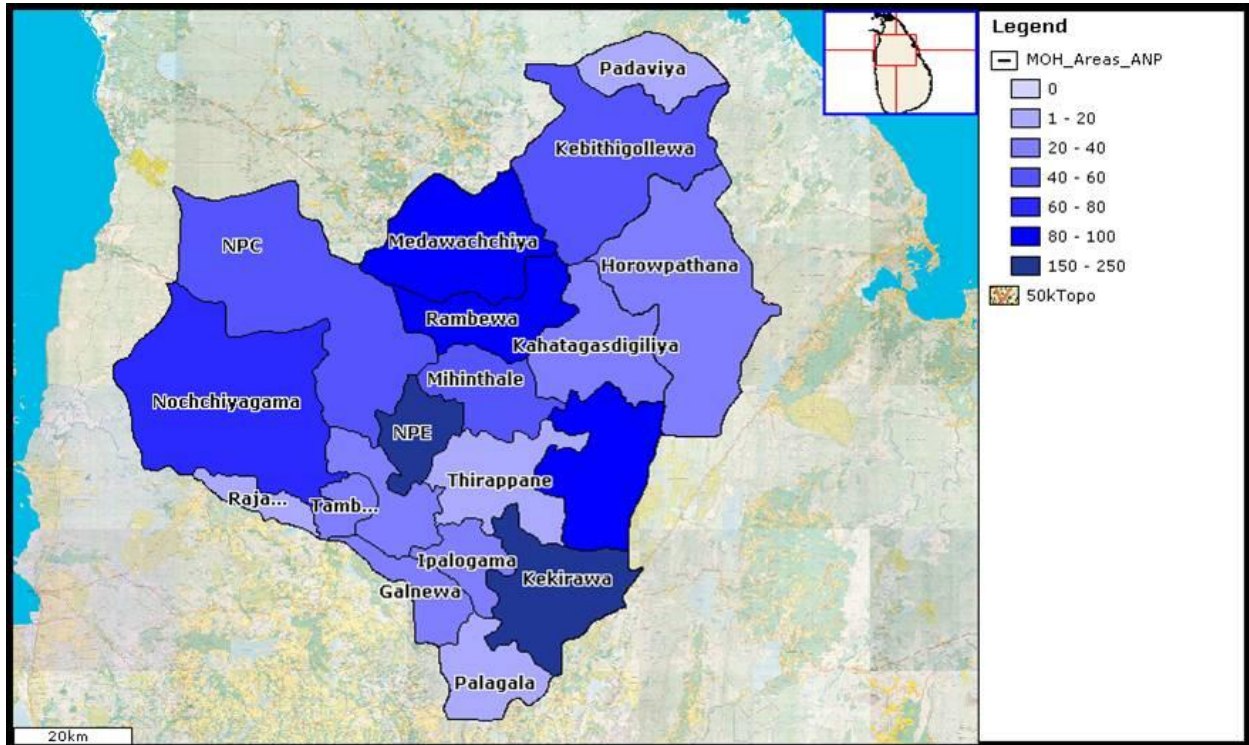
Figure E.3.1A Distribution of FSWs in MOH areas of Colombo District



In Anuradhapura, the concentration of FSWs was highest in the MOH area of Nuwaragampalatha-East (NPE), followed by Kekirawa. The lowest numbers were reported from

the MOH areas of Thirappane and Padaviya. Figure E.3.1B shows the distribution of FSWs in the MOH areas of Anuradhapura.

Figure E.3.1B Distribution of FSWs in MOH areas of Anuradhapura District



E.4 Cruising Sites or Hotspots of FSWs

Cruising sites or hotspots are either locations where FSWs solicit clients, or places where sexual activity takes place. Soliciting sites were mainly streets, market places, bus stops, parks, etc. In addition to these spots, solicitation and sexual activity also took place in establishments such as hotels, lodges, massage parlours, night clubs, etc. Various houses and shanties were also identified where sexual activity takes place.

As shown in Table E.2.1, there were 1,066 spots where FSWs solicit for client in Colombo district. In contrast, 311 such spots were identified in Anuradhapura district. The mean number of FSWs per spot was less in Anuradhapura district compared to Colombo district: while the mean number of FSWs per spot in Anuradhapura was 4, it was about 8 FSWs per spot in Colombo District. Figure E.4.1A and Figure E.4.1B show the distribution of various key spots in Colombo District and Colombo City respectively, while the spot distribution in Anuradhapura District is given in Figure E.4.2A.

Figure E.4.1 A FSW spots in Colombo District

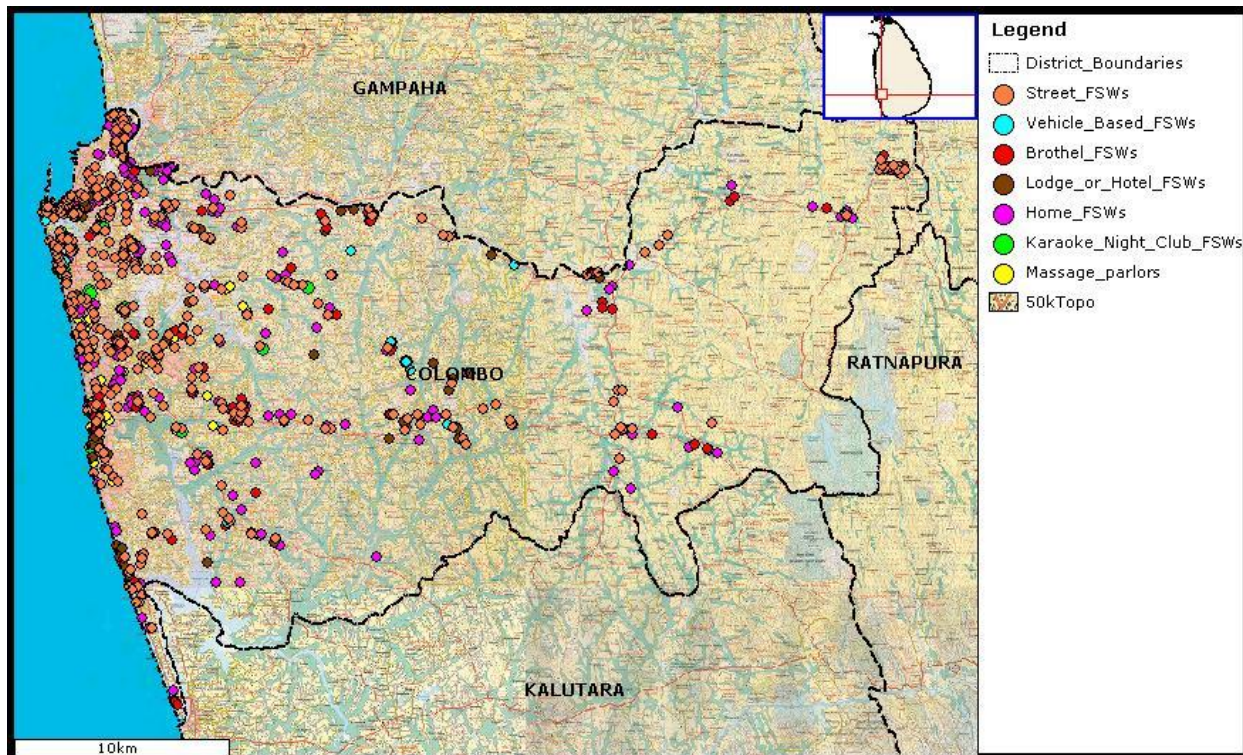


Figure E.4.1 A FSW spots in Colombo City

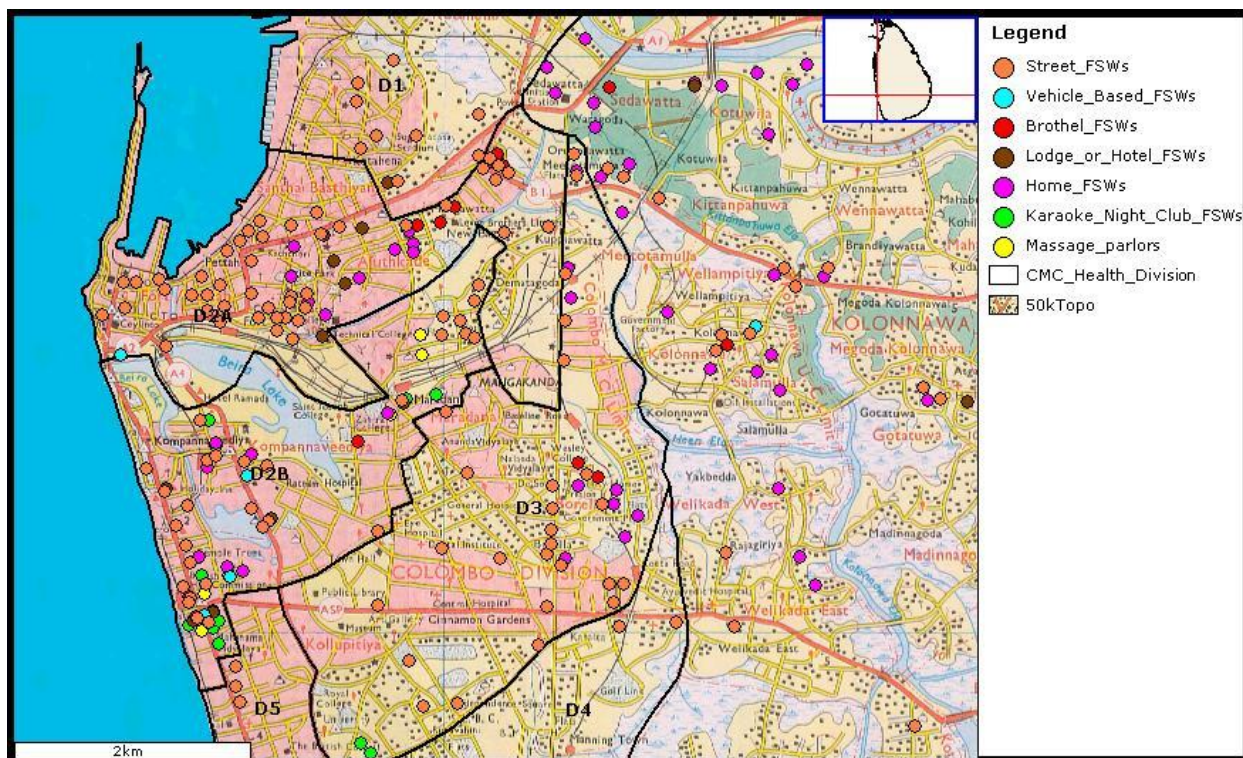
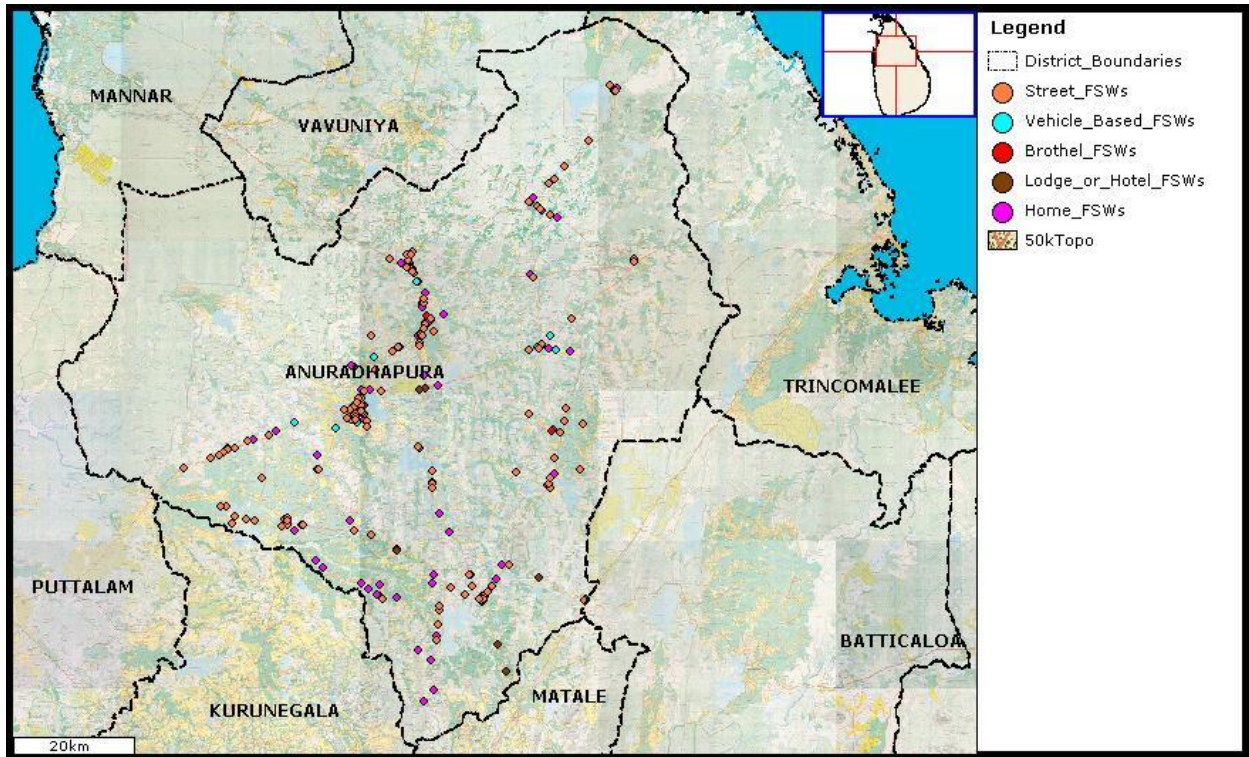
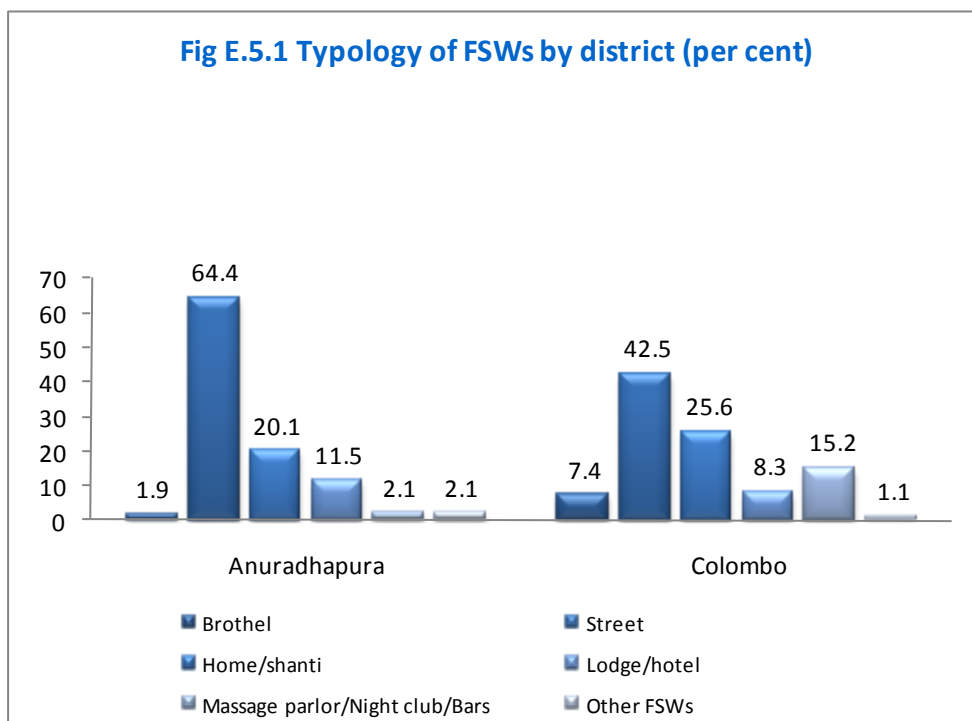


Figure E.4.2A. Key FSW Spots in Anuradhapura District



E.5 Typologies of FSWs

Figure E.5.1 provides information on the various typologies of FSWs² reported from the areas where the mapping was conducted. Street-based sex work was the most common type of sex work reported from both Colombo (42.5%) and Anuradhapura (64.4%) districts. Home and shanty-based FSWs formed the second most



common typology. About 20% of FSWs in Anuradhapura District and 25.6% in Colombo District operated from either their homes or in smaller squatter settlements called shanties. Lodge- and hotel- based sex work was also reported from both cities. A high proportion of FSWs in Colombo District (15%) reported to operate indirectly as sex workers at various entertainment providing establishments, such as night clubs, karaoke bars, massage parlours etc. In comparison, FSWs who belonged to this typology were very few in Anuradhapura.

E.6 Demographic Profiles of FSWs

Table E.6.1 shows the key socio-demographic characteristics of FSWs. A small proportion of FSWs in both districts was less than 25 years of age, while FSWs over 25 years of age formed the larger proportion, with no significant differences noted between the two districts. Similarly, a large proportion of FSWs were previously married, and another quarter were unmarried, indicating that nearly two-thirds of the FSWs were living alone, without marital partners.

The main pick-up points (soliciting points) were streets in both Colombo and Anuradhapura districts. Sources of clients included brothels, hotels, and network operators in homes/shanties.

² For definition of typologies of FSWs, see also Box 2 on Page 18 of this report.

In addition, nearly 10% of FSWs in Colombo reported establishments such as night clubs, casinos, bars and massage parlours to be a source of clients for them. Such establishments were not identified in Anuradhapura district.

Slightly more than half of the FSWs in Anuradhapura District and nearly 69% in Colombo District reported to have more than three clients in a day. For further details see Table E.6.1.

Table E.6.1 Key Socio-Demographic profile of FSWs in Colombo and Anuradhapura

	Variable	Total (%)	Anuradhapura (%)	Colombo (%)
Age groups	• <25 years	12.9	11.5	13.4
	• 25-34 years	43.8	44.9	43.5
	• 35+ years	43.2	43.6	43.1
Marital status	• Unmarried	24.6	26.9	23.9
	• Currently married	31.0	19.3	34.5
	• Previously married	44.4	53.8	41.6
Typology	• Brothel	6.5	1.3	8
	• Street	57.3	57.9	57.1
	• Home/Shanti	33.1	39.5	31.2
	• Lodge/hotel	11.7	8.6	12.7
	• Massage parlour/Bar/Night club	7.5	0	9.8
	• Others	53.4	50	54.4
No of clients/day	• One	1.8	3.6	1.3
	• Two	16.9	33.1	12.2
	• Three	20.1	27.9	17.8
	• four and above	61.1	35.4	68.6
	Mean No of clients	4.8	3.2	5.3

F. RESULTS: MEN WHO HAVE SEX WITH MEN

As indicated above, the term “men who have sex with men” denotes all men who have sex with other men as a matter of preference or practice, regardless of their sexual identity or sexual orientation. The term does not refer to those men who might have had sex with other men as part of sexual experimentations, or very occasionally depending on special circumstances. Just as information was collected through key informant interviews about FSWs, field teams identified persons who were likely to have information on high-risk activity (HRA) among MSM in a given geographical setting.

F.1 Profile of Key Informants

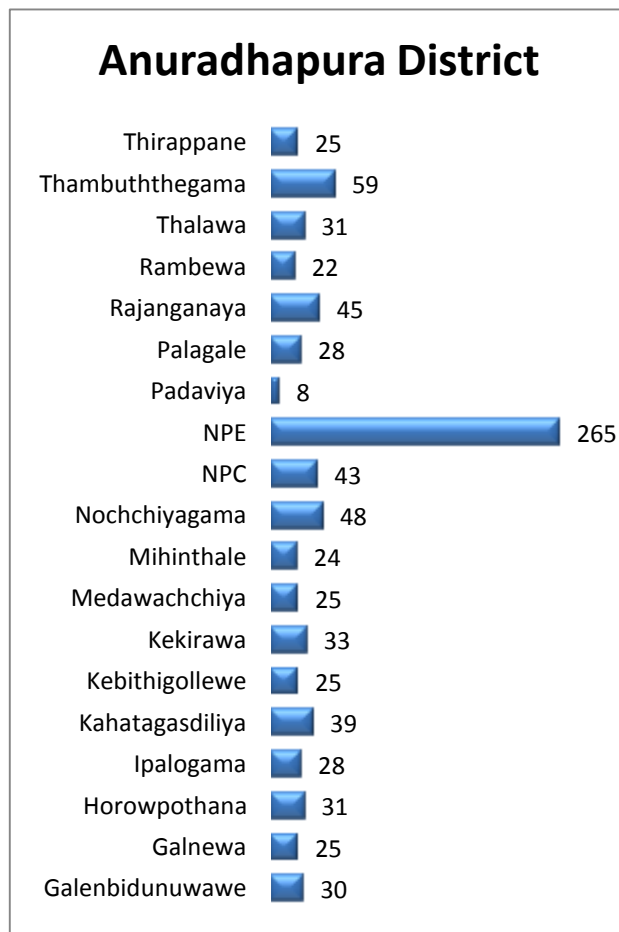
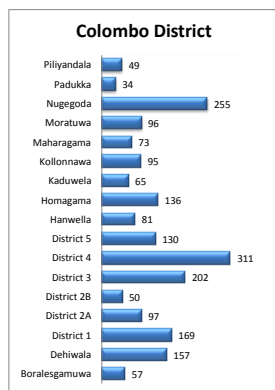
The total number of key informant interviews conducted for identifying geographical spots where MSM activity takes place were 2,057 and 834 in Colombo and Anuradhapura districts respectively. The numbers of L1 interviews conducted to obtain information in both Colombo and Anuradhapura districts are given in Table F.1.1, as well as the type and gender of the KIs.

Table F.1.1. No. of key informant interviews in Colombo and Anuradhapura districts

		Colombo	Anuradhapura
Number of Interviews	L1	2057	834
	Primary	6%	2%
Type	Secondary	92%	91%
	Tertiary	2%	7%
Gender	Male	95%	91%
	Female	5%	9%
	Transgender	0.1%	0%

The geographic distribution of the number of the KI interviews conducted during L1 in geographical zones/MOH areas in the two districts is shown in Figure F.1.1. Owing to the population density and higher number of spots, more interviews were conducted in Colombo than in Anuradhapura district.

Figure F.1.1. L1 KI Interviews conducted in Colombo and Anuradhapura by MOH area



During L1, a total number of 728 spots (653 in Colombo and 75 in Anuradhapura) were shared by the KIs. During the profiling of spots (L2), most of the spots identified were found to be active, and a few new spots were also profiled. During the profiling, 652 active spots in Colombo District and 77 active spots in Anuradhapura District were confirmed and profiled. Primary KIs were interviewed to profile the characteristics of the MSM and group discussions were conducted with MSM to arrive at an estimated number of MSM in the spots.

Table F.1.2. Spots identified during L1 and L2 Interviews in Anuradhapura and Colombo

	Anuradhapura	Colombo	Total
Number of spots in L1	75	653	728
Number of active spots (L2)	77	652	729
Number of KIs in L2	77	652	729

F.2 Total Estimates and Typologies of MSM

The mapping estimates gave a total of 9,569 (8,199 to 10,971) MSM from a total of 729 spots (pick-up points) in both Colombo and Anuradhapura districts. The estimated number of MSM also differed significantly on a usual day and on a peak day, e.g. weekends or public holidays. On average, the numbers of MSM on a peak day was approximately 50% higher than those on a usual day. About 78% of MSM in Colombo District and 72% in Anuradhapura District cruised in more than one spot for soliciting clients. The estimates were therefore adjusted for this duplication. The estimated numbers of MSM for both Colombo and Anuradhapura districts are shown in Table F.2.1, along with their basic typologies.

Table F.2.1 Estimated number of MSM in Colombo and Anuradhapura

Typology	Total	Colombo	Anuradhapura
Estimated Numbers (adjusted) on a USUAL Day			
MSW	1,096 (892 to 1,297)	952 (777 to 1,128)	144 (117 to 170)
Nachchis	2,178 (1,815 to 2,548)	2,019 (1,681 to 2,357)	159 (131 to 186)
Other MSM	3,301 (2,851 to 3,763)	3,058 (2,641 to 3,475)	243 (205 to 281)
Beach boys	148 (122 to 174)	148 (122 to 174)	0
Estimated Numbers (adjusted) on a PEAK Day			
MSW	1,585 (1,316 to 1,870)	1,401 (1,157 to 1,643)	184 (152 to 217)
Nachchis	3,174 (2,677 to 3,675)	2,970 (2,504 to 3,434)	204 (170 to 237)
Other MSM	4,810 (4,206 to 5,426)	4,498 (3,934 to 5,063)	312 (267 to 357)
Beach boys	216 (181 to 252)	216 (181 to 252)	None
All MSM	9,569 (8,199 to 10,971)	8,869 (7,595 to 10,141)	700 (589 to 811)

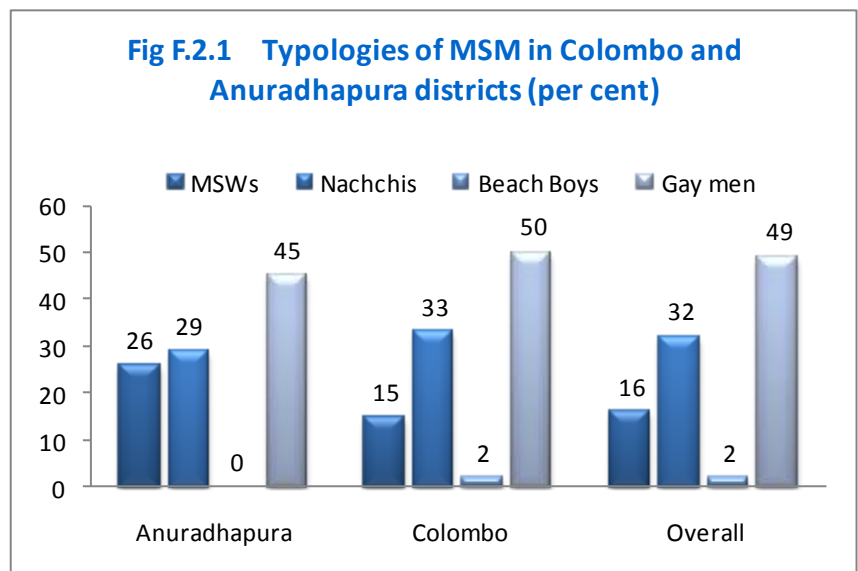
Male sex workers (MSWs) operate through various pick-up points and work in a similar fashion as female sex workers. They are usually receptive partners and provide anal sex to clients in exchange for money or some monetary benefit.

Nachchis are effeminate MSM. They may operate as MSWs, and pick up clients from various cruising points. In addition to who have clients though, they often have regular male sex partners with whom sexual activity takes place without financial compensation.

Gay men comprised the highest number reported among this most at risk population. Self-identified gay men were usually insertive clients or non-paying partners of MSWs and Nachchis. They were also seen at high risk cruising sites, where they looked for other MSM or receptive male sexual partners.

Beach boys form a sub-typology of MSM in Sri Lanka. They are generally young males who associate with tourists as guides or animators, and provide entertainment, including sexual services. They often provide insertive anal sex services to male tourists, but may identify as bisexual.

Figure F.2.1 provides information on the various



typologies of MSM reported from the areas where the mapping study was conducted. Nearly half of the MSM were categorized as gay men, followed by Nachchis (32%) and male sex workers (16%). A very small proportion (2%) of the MSM in Colombo were beach boys.

F.3 Estimated Number of MSM by MOH Areas

Figure F.3.1a and Figure F.3.1b show the distribution of MSM in Colombo and Anuradhapura respectively, by MOH area. The highest concentrations of MSM in Colombo were seen in all 6 MOH areas of Colombo city, plus the areas of Kolonnawa and Moratuwa. Unlike Anuradhapura, substantial numbers of MSM were reported from nearly all MOH areas within Colombo district.

Figure F.3.1A Distribution of MSM in MOH areas of Colombo District

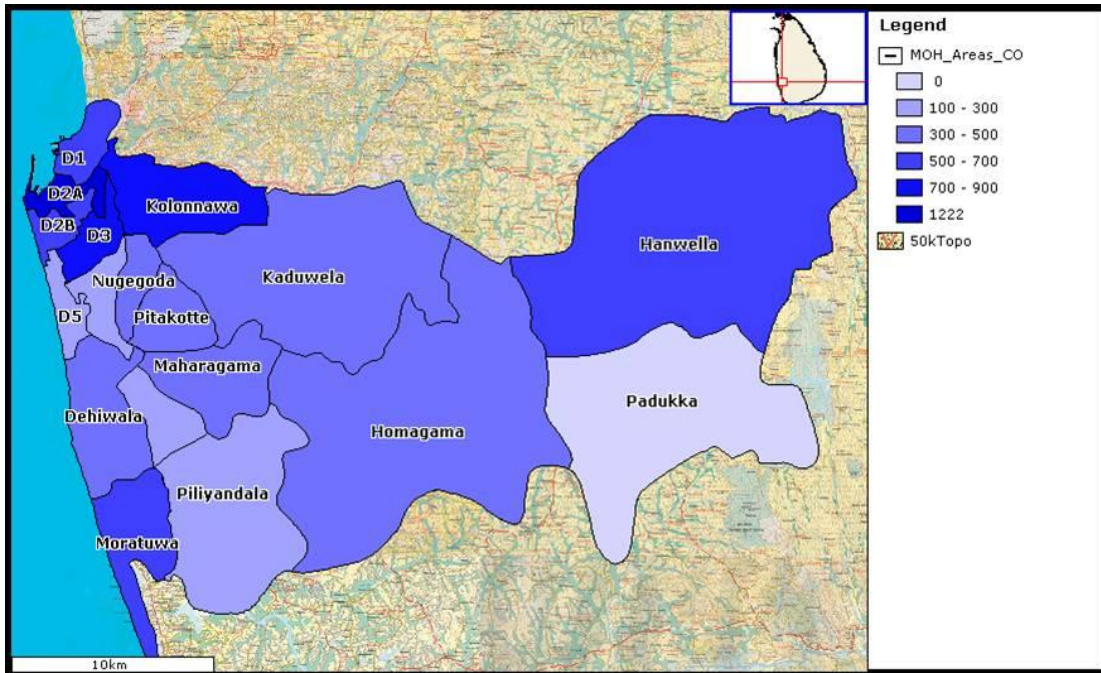
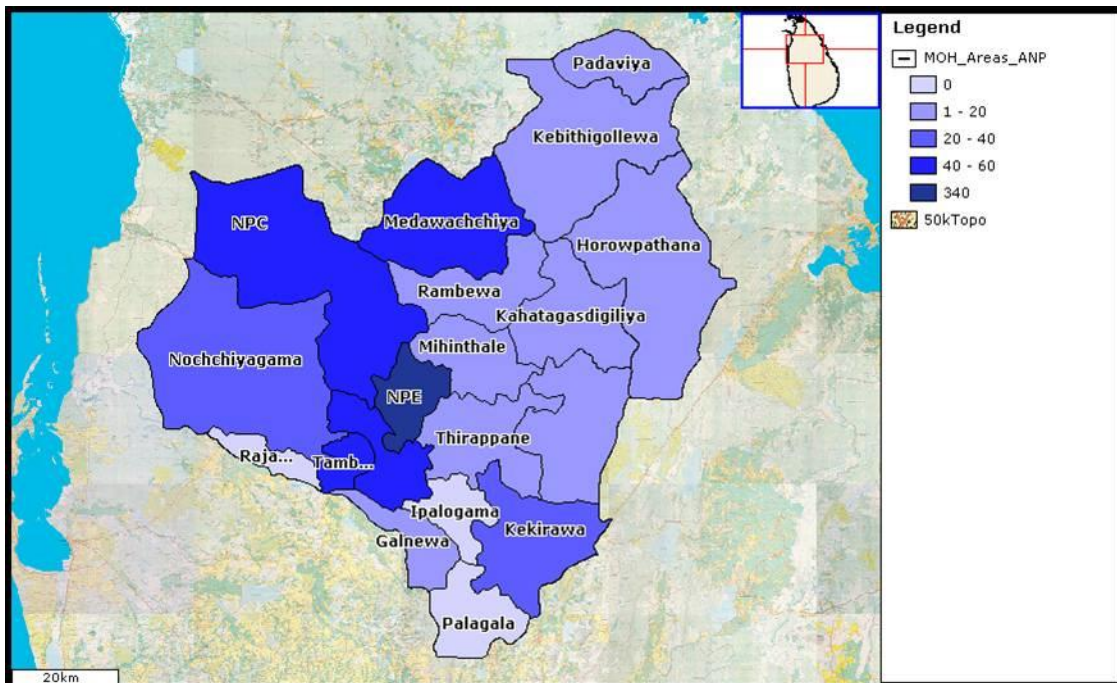


Figure F.3.1B Distribution of MSM in MOH areas of Anuradhapura District



The highest number of MSM in Anuradhapura was in the MOH area of Nuwaragampalatha-East (NPE). The MOH areas of Medawachchiya, Nuwaragampalatha-Central (NPC), Thambuththegama and Thirappane also showed high numbers of MSM.

F.4 Cruising Sites or Hotspots of MSM

Overall, 729 hot spots or pick-up points, where MSM solicit clients, or where men meet to find other male sexual partners, were identified in the two districts. While there were 77 spots with an average of 9.5 MSM per spot in Anuradhapura district, there were 652 spots with an average of 13.2 MSM per spot in Colombo district.

Figure F.4.1A Key MSM Spots in Colombo District

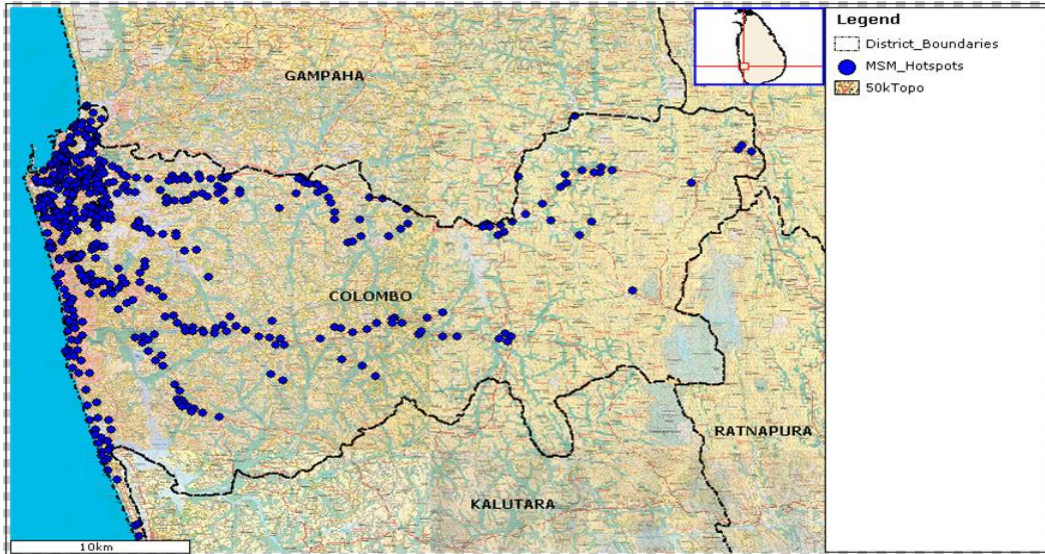
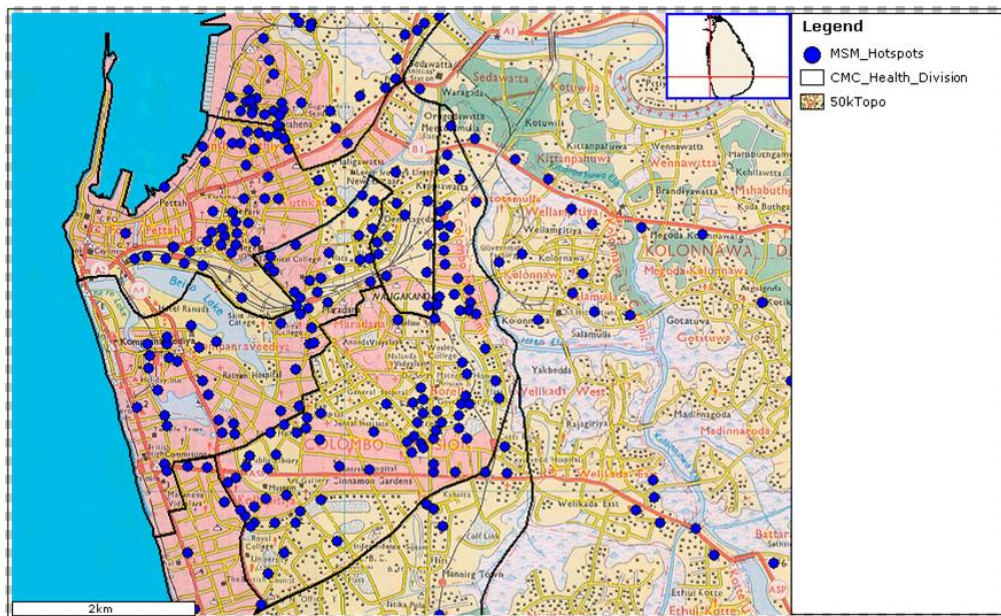
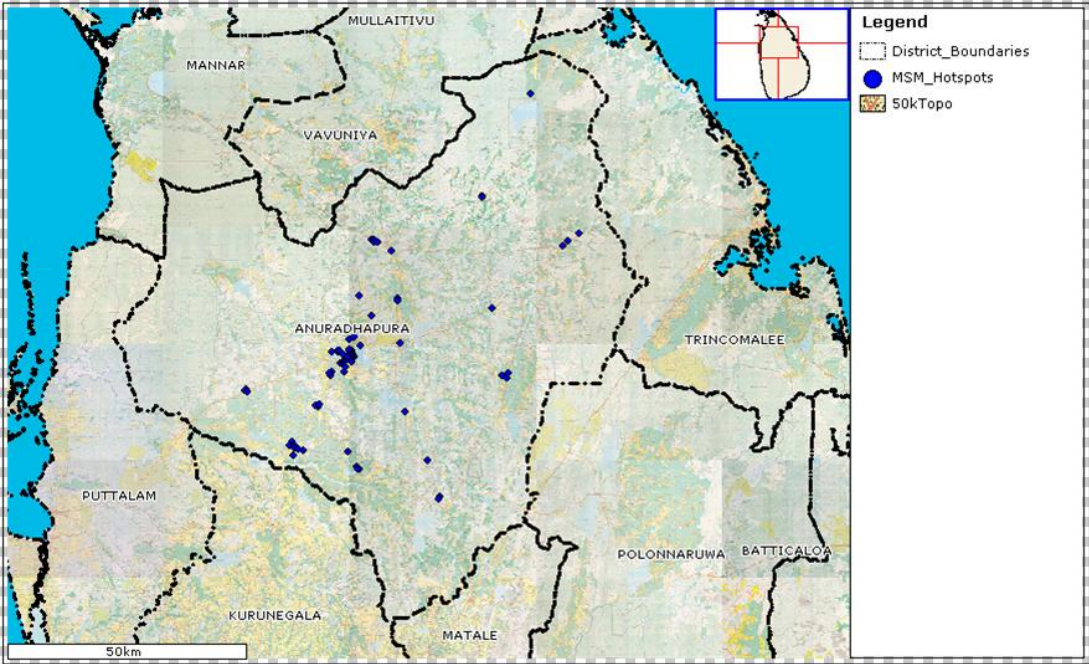


Figure F.4.1B Key MSM Spots in Colombo city



Figures F.4.1A and F.4.1B show the various high risk spots for MSM in Colombo district and in the city of Colombo. Similarly, Figure F.4.2A shows the hotspots for MSM in Anuradhapura district.

Figure F.4.2A Key MSM Spots in Anuradhapura District



F.5 Demographic Profiles of MSM

The demographic profile of MSM contacted during the L2 activity is shown in Table F.5.1. Nearly 58% of the MSM contacted in Colombo District were between 25 and 34 years of age, while in Anuradhapura, only 44% were in this age category. Although the age distribution varied between the districts, the mean ages were similar.

Table F.5.1 Key socio-demographic profile of MSM in Colombo and Anuradhapura

Variable		Colombo District	Anuradhapura District
Age groups	• <25 years	16.3	15.5
	• 25-34 years	57.6	43.7
	• 35+ years	26.1	40.8
	• Mean age	31 yrs	32.7 yrs
Marital status	• Unmarried	67.3	60.0
	• Currently married	16.7	17.1
	• Previously married	10.4	15.7
	• Living with male partner	5.6	7.1
Education	• Primary up to 5 th	7.1	2.8
	• 6-9 yrs of schooling	30.2	40.8
	• 10+ yrs of schooling	62.7	56.3
No of clients/day	• One	14.7	5.6
	• Two	34.9	35.2
	• Three	25.1	35.2
	• four and above	25.3	23.9
	• Mean number of partners	2.9	2.9

The majority of the MSM interviewed in both of the districts were unmarried (67% in Colombo and 60% in Anuradhapura). A large proportion of MSM reported having more than 10 years of schooling in both Colombo (63%) and Anuradhapura (56%) districts. The mean number of clients per day was 2.9 in both districts (see Table F.5.1 for further details).

G. CONCLUSIONS AND PROGRAMMATIC IMPLICATIONS

Because of the clandestine nature of the sex industry, and also because of the wide varieties and geographical distribution of sex workers, it is extremely difficult to obtain an accurate estimate of their numbers. The same holds true for men who have sex with men. This mapping project has significantly enhanced our understanding of most at risk populations, including female sex workers and MSM in Sri Lanka. It has helped us to produce estimates of most at risk populations within the two districts studied, based on primary data collected in the field, validated and triangulated against multiple, independent sources of information. We followed a simple and straightforward community-based approach, ensuring active involvement of the high risk groups themselves in validating estimates. Not only has the study helped estimate population sizes, it also led to a better understanding of the geographical distribution of MARPs, and recognition of the various operational typologies and dynamics of these populations, which is the key first step in developing effective HIV prevention strategies.

This project has estimated a high number of FSWs in both target districts in Sri Lanka, much higher than the numbers anticipated earlier. Female sex work in Sri Lanka is extremely diverse, and highly secretive. There are a number of typologies involved, each having its own operational dynamics and prevention needs. Street-based sex workers mainly operate independently and have less reliance on other mediators, such as network operators or pimps. On the other hand, sex workers operating through homes, shanties, brothels, hotels and lodges mainly rely on network operators. These FSWs have two major sources of clients: those directly referred by other clients and those acquired through network operators/madams. The latter keep in touch with these FSWs and call for them when needed. Another typology, mostly restricted to larger cities like Colombo, involve indirect sex workers who operate out of massage parlours, bars and night clubs. These entertainment sites indirectly provide sexual services in a discrete and hidden manner.

Unlike FSWs, the MSM networks were less discrete, and some typologies e.g. Nachchis, are quite visible and openly solicit for sexual services. Likewise, beach boys are quite noticeable, but are only seen in Colombo District. Male sex workers operate more discretely than the rest of the categories, and work mainly through specific high risk spots. Unlike some types of FSWs who rely a great deal on network operators for clients, the MSM tend to work independently and solicit other partners independently. This study was also able to highlight a number of other MSM who identify as “gay men”; they do not provide sexual services like MSWs and Nachchis, but buy sex from these sub-groups and can thus be viewed as clients. Many of these MSM also have non-paid partners, and represent a much larger network than MSWs, but are likely at lower risk of HIV because they have fewer partners.

G.1 Rates of FSWs and MSM per 1000 Population

After producing district-wide estimates for both FSWs and MSM, additional analysis was undertaken to calculate the rates of FSWs per 1000 adult females, and number of MSM per 1000 adult males, for each MOH area. The adult male population of each MOH area was used as a denominator, while the estimated total number of FSWs or MSM within that MOH area was used as the numerator. The MOH estimate produced a rate developed for each group for that MOH area. Estimates from all MOH areas were finally rolled up to produce a district rate for each most at risk population. The overall population rates for Colombo and Anuradhapura districts are given in Table G.1.1

Table G.1.1 MARP rates for Anuradhapura and Colombo districts

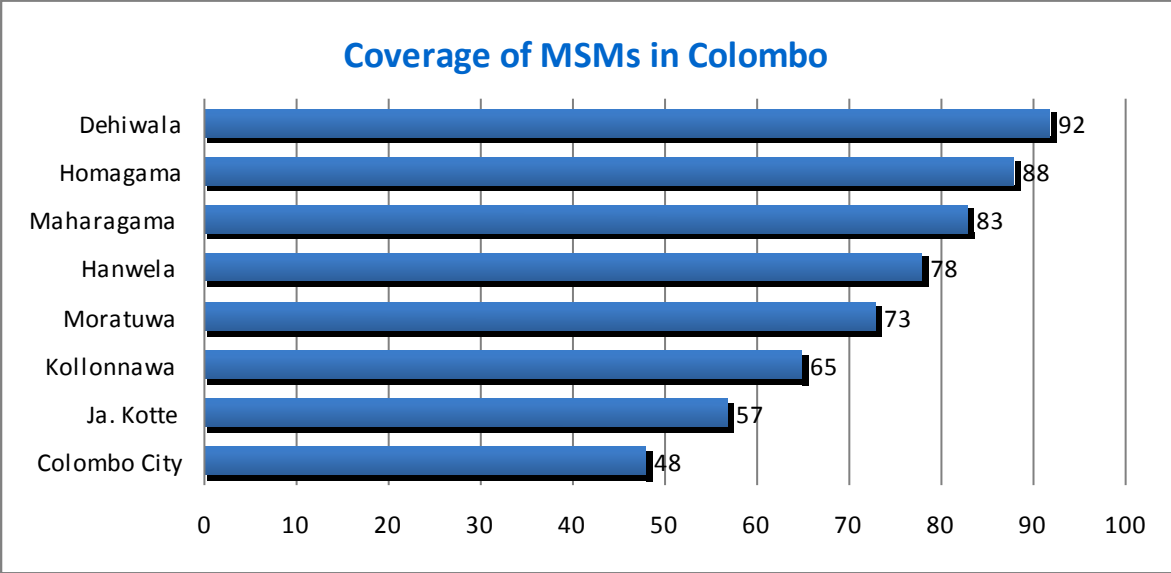
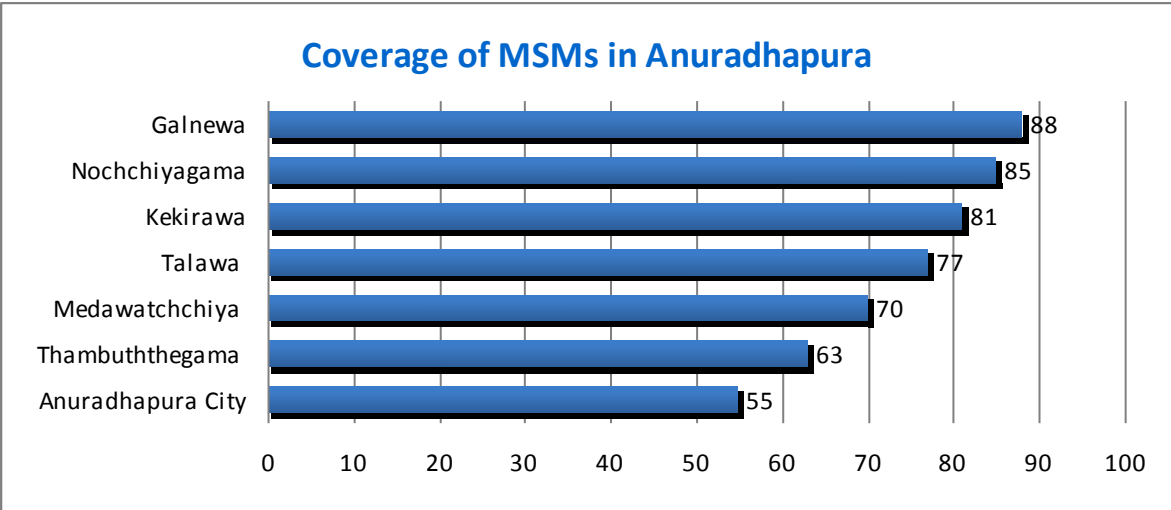
District	Population	Number of FSWs	Number of MSM	FSWs per 1000 adult females	MSM per 1000 adult males
Anuradhapura	800,000	1,138	700	4.9	3.1
Colombo	2,456,000	8,332	8,869	11.9	12.7

As expected, the rates for both MSM and FSWs were higher in Colombo District than in Anuradhapura. The higher estimates for Colombo District are because of the high density urban population in that district, as well as presence of Sri Lanka's commercial capital, Colombo City, where much higher numbers of MARPs live. On the other hand, Anuradhapura has more semi-urban and rural populations. These results are consistent with similar data from other countries in South Asia, which show similar population rates for MSM and FSWs, and higher numbers observed in urban settlements.

G.2 Program Coverage

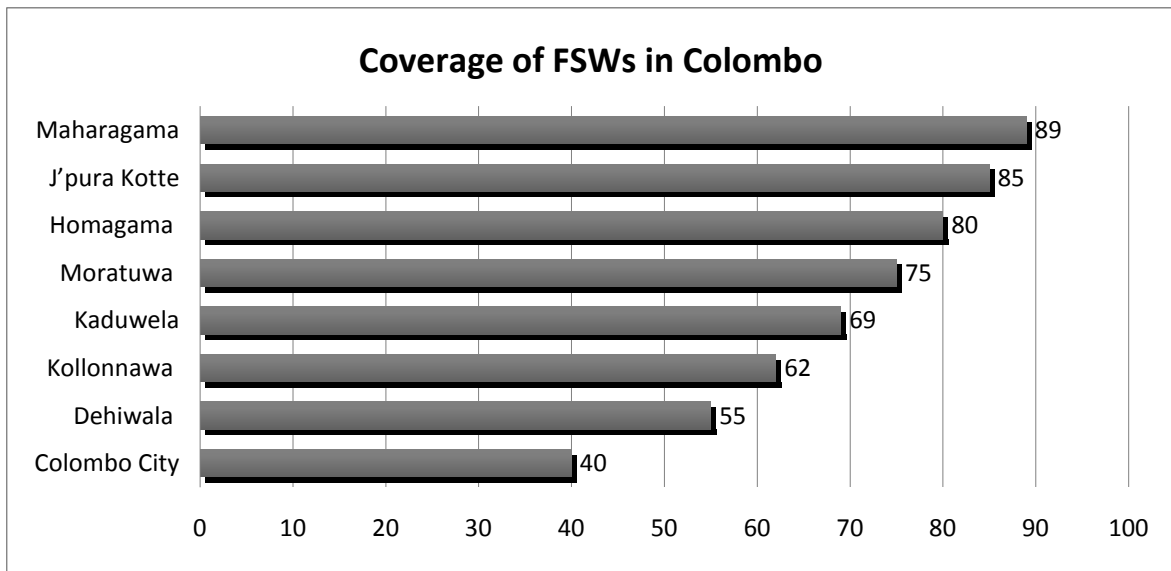
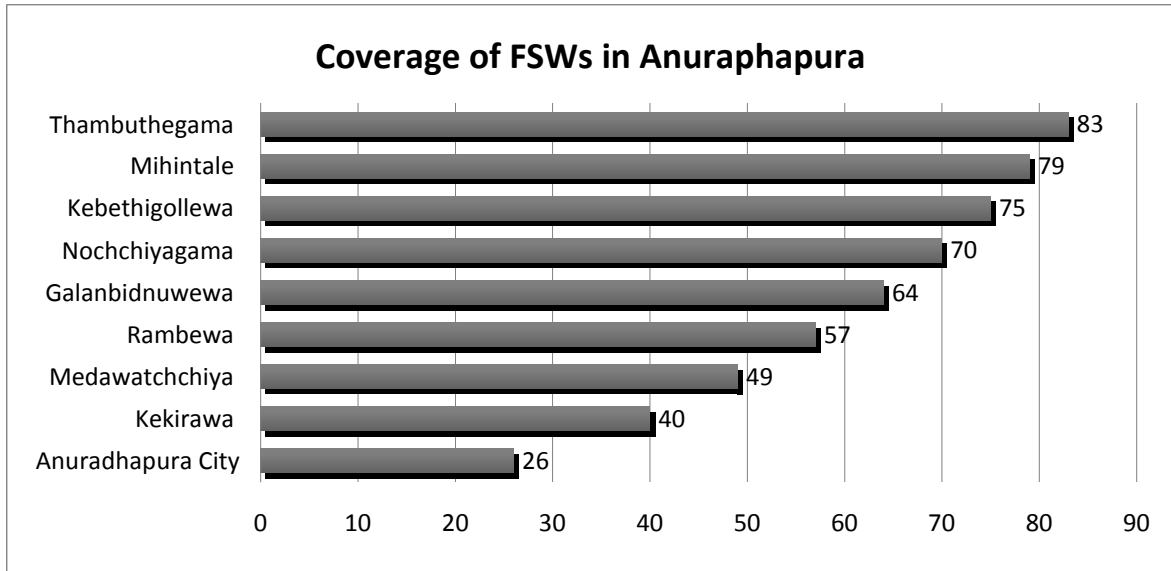
It is difficult to fully appreciate the extent and organizational dimensions of sex work without a long engagement and trust-building period with sex workers. With such high numbers of MARPs reported, there is an urgent need to implement focused HIV prevention programs for FSWs and their clients. These MARPs in Sri Lanka are highly vulnerable, and without focused programs of outreach and service delivery, they will remain without the resources to protect themselves and their partners from HIV infection. They can also play a key role in the expansion of the HIV epidemic, because of very high rates of partner change in both groups. Looking at the geographical distribution of these MARPs, it is interesting to note that by implementing HIV outreach and service delivery programs in the city of Anuradhapura alone, we would be able to

cover nearly 55% of MSM in Anuradhapura District. Expanding these services to six more MOH areas would improve coverage to nearly 90% of the MSM population. Similarly, setting up services in the metropolitan area of Colombo City would provide coverage to 48% of the MSM population in Colombo District, and extending services to another 7 MOH areas would cover up to 92% of the MSM in the district.



FSWs, on the other hand, are more widely distributed, especially in Anuradhapura, and much more MOH areas would need to be covered to reach overall coverage of at least 80%. Colombo

District on the other hand has a more concentrated geographical distribution of FSWs, and covering six MOH areas would cover 80% of the FSWs in the district.



G.3 Study Limitations

Some limitations of this study should be noted. Given the relatively short time available for the study, there is a possibility that we could have underestimated the full extent of sex work, especially within the typology of home and shanty-based FSWs. We have, however, supplemented information regarding these groups by mapping specific networks, and involving

group members in the data collection, which we believe has somewhat addressed the issue of population size under-estimation. In a study of this nature, there is also the possibility of double-counting because of the movement of the participants. We have, however, tried to limit this duplication by adjusting the overall figures for the number of participants who solicit clients at more than one spot, and we are confident that the element of duplication was minimal in our final estimations.

G.4 National Estimates of High Risk Group Numbers

Earlier estimates of FSWs and MSM used for the national program strategy in Sri Lanka were based on a number of assumptions. The FSWs were estimated using the workbook method and a consensus approach, while the MSM were estimated using the overall adult population and an estimated proportion of adults who are MSM. This study has allowed us to make more robust estimates of HRG numbers, using the actual estimates from the two districts discussed in this report (Colombo and Anuradhapura districts), as well as from Batticalao districts, which has also been recently mapped. These three districts comprise 48 of the approximately 300 MOH areas in the country, and account for about 37 per cent of the total population of Sri Lanka. Two different approaches were used to estimate the HRG numbers in the country, with the help of statistical models: a regression model approach and a percentile approach. Details of the two approaches will not be provided here, but are available upon request.

Using the regression model approach, a mean number of 40,791 FSWs was estimated for the country (range 34,547 to 47,035), and a mean of 30,554 MSM (range 23,699 to 37,410). Using the percentile approach, the medium estimate for FSWs for the country was 47,739 (range 28,542 to 54,564), and the medium estimate for MSM was 22,652 (range 12,549 to 30,475). These estimates can be used for planning purposes, until such time as all districts are mapped and the actual numbers can be used; or at least until additional districts are mapped, and national estimates can then be re-calculated with more accuracy. In any event, as noted previously, these estimates are much higher than previous ones.

G.5 The Way Forward

To conclude, this study has identified a large number of FSWs and MSM within the two districts studied, and has provided valuable information on high-risk activities in those locations. It is important to note that there is still much left to learn about other geographical settings, and to extend this research to other districts in the country. The approach used has been shown to work exceedingly well in the cultural context of Sri Lanka, and should be utilized within other districts of the country with minor modifications to estimate population sizes, understand the geographical distribution of MARPs, and recognize the various operational typologies and dynamics of these populations for developing effective HIV prevention strategies.

Lack of systematic and strategic information is a barrier to a successful HIV prevention and control response. Sri Lanka requires a strong HIV surveillance system, designed particularly to track the state of the epidemic, as well as the delivery of effective prevention programs. This system will make sure that activities such as mapping and size estimation are not conducted in a one-off manner, but are a regular feature of ongoing surveillance activities.

While efforts need to be focused on learning more about the epidemic and its driving forces, scaling-up of the current national HIV/AIDS response should be the key objective to contain HIV at its present level. Experience has shown that in countries with low-level and concentrated epidemics, well-designed and adequately funded HIV prevention programs among key populations have proven decisive in slowing or even stopping the epidemic in its tracks. Non-governmental organizations and community-based organizations are best suited to reach out to these populations. They would have to be reached with high coverage, and provided with services specific enough to meet their requirements, in order to reduce transmission of HIV to and from other key population members and the general population. Over the past few years, a number of NGOs and CBOs have done commendable work with high-risk groups, but the capacity required for the fully scaled-up design and delivery of appropriate HIV prevention services is far from adequate. Scaling-up HIV prevention programming will not only require an expansion in NGO and CBO capacity, but a more refined and focused approach. A sufficient number of suitably qualified, trained and experienced personnel will be required, as well as strong organizational structures which could take up the responsibility for targeted HIV preventive interventions on a long term basis. Understanding the extent and organizational dimensions of sex work requires a long period of engagement and trust-building with vulnerable communities. To fully respond to the needs of these populations and to curtail the epidemic during this important window of opportunity, civil society organizations will require extensive support and capacity building. This process should begin early, to ensure that a scaled-up response is not delayed due to lack of implementation capacity.

H. ANNEX 1



Mapping MARPs in Sri Lanka 2009-2010

Form No:

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City/Town MOH area Sub zone SI No

Level 1 Form: Female Sex Workers

<p>DATE: <input style="width: 20px; height: 20px;" type="text"/> / <input style="width: 20px; height: 20px;" type="text"/> / <input style="width: 40px; height: 20px;" type="text"/></p> <p>Time Start: <input style="width: 30px; height: 20px;" type="text"/> Hrs <input style="width: 30px; height: 20px;" type="text"/> Min</p> <p>Time Completion: <input style="width: 30px; height: 20px;" type="text"/> Hrs <input style="width: 30px; height: 20px;" type="text"/> Min</p> <p>City/Town Name: _____ MOH area Name: _____</p> <p>Sub zone Name: _____</p> <p>FW ID : _____ FW Name : _____</p> <p>FS ID : _____ FS Name : _____</p>	<p>KI No: _____</p> <p>KI Name: _____</p> <p>Contact Information: _____</p> <p>Type: 1=Primary 2=Secondary 3= Tertiary</p> <p>Gender: 1=Male 2=Female 3=Transgender</p> <p>Profession: _____</p>
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S. N	Name of the Spot	Type	FSWs	
			Contact for that spot	Number <i>(min – max)</i>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

* FSW TYPES: 1=Brothel 2=Street 3=Home/Shanty 4=Lodge/Hotel

5=Massage parlour 6=Bar

7=Night club

8= Vehicle based



The World Bank



Form No:

Mapping MARPs in Sri Lanka 2009-2010

City/Town MOH area Sub zone SI No

Level 1 Form: Men Who have Sex with Men

<p>DATE: <input type="text"/> / <input type="text"/> / <input type="text"/></p> <p>Time Start: <input type="text"/> Hrs <input type="text"/> Min</p> <p>Time Completion: <input type="text"/> Hrs <input type="text"/> Min</p> <p>City/Town Name: _____ MOH area Name: _____</p> <p>Sub zone Name: _____</p> <p>FW ID : _____ FW Name : _____</p> <p>FS ID : _____ FS Name : _____</p>	<p>KI No: _____</p> <p>KI Name: _____</p> <p>Contact Information: _____</p> <p>Type: 1=Primary 2=Secondary 3= Tertiary</p> <p>Gender: 1=Male 2=Female 3=Transgender</p> <p>Profession: _____</p>
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S. N	Name of the Spot	MSM		
		Type	Contact for that spot	Number (min – max)
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

** MSM TYPES: 1= MSWs 2=Nachchi 3=Gays 4=Beach boys



Mapping MARPs in Sri Lanka 2009-2010

Level 2 Form: Female Sex Workers (Street, Hotel, Lodge, Karaoke Bar, Night Club, Massage Parlour, Brothel, Vehicle)

FORM No:

City/Town MOH area Sub zone serial No

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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DATE :

<input type="text"/>	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	-	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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City/Town Name: _____ MOH Area Name: _____

Sub zone Name: _____

Spot Code: _____ Spot Type: _____ Spot Name _____

Spot Currently Active: 1 = Yes 2 = No

FW ID : _____ FW Name : _____

FS ID : _____ FS Name : _____

INFO ABOUT THE KI	
What is your age ?	
How many years of education have you completed ?	
What is your marital status ?	1=Unmarried 2= Currently Married 3=Previously married
How many clients do you usually have in a day ?	
Do you do any work other than sex work ?	1=Yes 2=No
If yes, what work you do?	
What is the usual way you get your client ? <i>Instruction: Select one only from the code list given below</i>	_____
What are the various other ways that you get your clients? <i>Instruction: Maybe more than one, Select from the code list given below</i>	_____, _____ _____, _____
Do you work only at this spot, or at other places?	1=Yes 2=No

1=Brothel 2=Street 3=Home/Shanti 4=Lodge/Hotel 5=Massage parlour 6=Bar/karaoke bar/Night club 7= Vehicle

SPOT PROFILE	
On a usual day, how many FSWs work here (min - max)	
On a peak day, how many FSWs work here (min - max)	
What is the peak working day in a week ?	
What are the peak working hours in a day ?	
Seeking risk (Please Tick)	1=Yes 2=No
Taking risk (Please Tick)	1=Yes 2=No



Mapping MARPS in Sri Lanka 2009-2010

Form No:

City MOH. Sub zone Serial No.

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Date:

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Level 2 Form: Men Who Have Sex with Men

City Name : _____ MOH area : _____

Sub Zone : _____

Spot Code: _____ Informant Type: _____ 1=primary, 2= secondary, 3= tertiary

Spot Name _____

Spot Currently Active: 1 = Yes 2 = No

Field Worker ID : _____ Field worker Name: _____

Field Supervisor ID : _____ Field Supervisor Name: _____

Key Informant Information	
How do you identify yourself? Instructions – Please select one category from below	
Age in years	
No of years of school education	
Your current relationship status	1 Unmarried 2 Married to a woman 3 married previously 4 Living with a male partner
DO you charge money to have sex?	1=Yes 2=No
How many No of partners/clients with whom you have sex per day?	
What is your main mode of income(profession)	1 sex work 2 No fixed mode of income 3 other occupation
Do you only find a client/sexual partner only from this spot?	1= yes 2= No

1- Male sex worker, 2- Nachchi 3- Beach Boy 4- other MSM

SPOT INFORMATION	
On an average day How many MSM visit this spot? (Min. – Max.)	
On an average day How many Male sex workers visit this spot? (Min. – Max.)	
On an average day How many Nachchi visit this spot? (Min. – Max.)	
On an average day How many other MSM visit this spot? (Min. – Max.)	
On an average day How many Beach boys visit this spot? (Min. – Max.)	
How many number of MSM visit this spot on a peak day?	
What is the peak month for MSM to visit this spot in a year?	
What is the peak day for MSM to visit this spot in a week?	
What is the peak time for MSM to visit this spot in a day?	
Only seeking risk at this spot	1= Yes 2= No
Only taking risk at this spot	1= Yes 2= No