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Civil Society Organizations and Global Health: Rockefeller Philanthropy and Public Health in Sri Lanka

Organizações da Sociedade Civil e Saúde Global: Filantropia Rockefeller no Sri Lanka

Organizaciones de la Sociedad civil y salud global: Filantropía Rockefeller y salud pública en Sri Lanka

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Abstract: Civil society organizations are playing a vital role in capacity building at the grassroots level around the world. Rockefeller philanthropy pioneered this civic responsibility, both at home and abroad, in controlling epidemic disease and developing public health. Since its inception in 1913, the Rockefeller Foundation had been involved in a wide range of public health programs in Sri Lanka (previously known as Ceylon), which was regarded as the key to the Foundation's activities in Asia. Rockefeller philanthropy arrived in Sri Lanka during the European colonial rule in the early twentieth century and received a hostile reception from the colonial administration. The Foundation's officials acted cautiously and listened to local citizens in developing public health strategies. Such efforts succeeded not only in combating disease and promoting health, but also achieving sustained community support. This paper is a critical inquiry of the program and its role in the development of a modern public health network in Sri Lanka.
Keywords: Public health. Rockefeller Philanthropy. Sri Lanka.

Resumo: As organizações da sociedade civil estão desempenhando um papel vital na construção de capacitação em nível de base em todo o mundo. A filantropia da Fundação Rockefeller foi pioneira nessa respnsabilidade cívica, tanto em casa quanto no exterior, no controle de doenças epidêmicas e no desenvolvimento da saúde pública. Desde seu início, em 1913, a Fundação Rockefeller esteve envolvida em uma ampla gama de programas de saúde pública no Sri Lanka (anteriormente conhecido como Ceilão), que era considerado a chave para as atividades da Fundação na Ásia. A filantropia Rockefeller chegou ao Sri Lanka durante o domínio colonial europeu no início do século XX e recebeu uma recepção hostil da administração colonial. Os funccionarios da Fundação agiram com cautela e ouviram os cidadãos locais no desenvolvimento de estratégias de saúde pública. Esses esforços tiveram sucesso não apenas no combate a doenças e promoção da saúde, mas também, na obtenção de apoio comunitário sustentado. Este artigo é uma investigação crítica do programa e seu papel no desenvolvimento de uma rede de saúde pública moderna no Sri Lanka.
Palavras-chave: Saúde pública. Filantropia Rockefeller. Sri Lanka.

Resumen: Las organizaciones de la sociedad civil están desempeñando un papel fundamental en la creación de capacidad de base en todo el mundo. La filantropía de la Fundación Rockefeller fue pionera en esta responsabilidad cívica, tanto en el país como en el extranjero, en el control de enfermedades epidémicas y en el desarrollo de la salud pública. Desde su criación, en 1913, la Fundación Rockefeller ha estado involucrada en una amplia gama de programas de salud pública en Sri Lanka (antes conocida como Ceilán), que se consideraba la clave de las actividades de la Fundación en Asia. La filantropia de Rockefeller llegó a Sri Lanka durante el dominion colonial europeo a principios del siglo XX y recebió una acogida hostil por parte de la administración colonial. Los empleados de la Fundación actuaran con cautela y escucharan a los ciudadanos locales en el desarollo de estrategias de salud publica. Estos esfuerzos han tenido éxito no solo en la lucha contra las enfermedades y la promoción de la salud, sino también en la obtención de un apoyo comunitario sostenido. Este artículo es una investigación crítica del programa y su papel en el desarrollo de una red de salud pública moderna en Sri Lanka.
Palabras clave: Salud pública. Filantropia de la Fundación Rockefeller. Sri Lanka.

Introduction

Long before the World Health Organization (WHO) came into being in the late 1940s, the Rockefeller Foundation pioneered an international campaign to control infectious disease, to promote health and medical education around the world. The Rockefeller Foundation represented a modern scientific concept of "progress" characteristic of the "Gilded Age" of the United States (FRIEDMAN; MCGARVIE, 2003, p. 157). The dominant values of this particular period were characterized by "public spiritedness," confidence in "science and scientific methods" and "innovative and professional solutions" to social problems (KOHLER, 1985, p. 75). The birth of the modern philanthropic foundation at the turn of the century brought together the unprecedented financial resources of wealthy industrialists and bourgeois pragmatism of intellectuals to create programs that would help improve people's lives. The Rockefeller Foundation, according to Frederick T. Gates (1977, p. 186), the key advisor to John D. Rockefeller, represented "scientific philanthropy" aimed to cure "evils at their source." In Rockefeller's own words, his philanthropy sought to reach "finalities," or "the cause of sickness" among humans (ROCKEFELLER, 1983, p. 112). From this perspective, Rockefeller and his advisors saw disease as the root cause of all social ills, and that modern medicine offered the greatest hope "with respect to what is needed and what can be and should be accomplished" (GATES, 1922, p. 2).

Although the establishment of the Rockefeller Foundation in 1913 marked the beginning of Rockefeller philanthropy's global reach, the prototype of the Foundation's public health strategy came from the Rockefeller Sanitary Commission (RSC) for the eradication of hookworm disease in the Southern United States. When the RSC was created in

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1909, over 40 percent of the population in impoverished Southern states had been infected with the disease, and an increasing number succumbed to death each year. After five years of treatment, combined with a host of public health measures, the RSC succeeded in bringing the hookworm infestation under control, and opened a new chapter in its battle against the disease.

In 1913, when the Sanitary Commission became part of the Rockefeller Foundation, it was renamed the International Health Board (IHB), the key objective of which was to extend its expertise on hookworm disease to other countries. Under Wickliffe Rose's leadership, the IHB investigated the extent to which hookworm disease was a public health problem around the world. The investigations revealed about one billion people were suffering from the hookworm infection across the globe. "A great part of the more heavily infected areas of the world," argued Gates (1977, p. 22) "belonged to the British Empire." The trustees of the Foundation recognized that the experience and knowledge acquired in controlling hookworm disease in the American South could be extended to this vast region of the world. As an initial entry point, the IHB decided to conduct a hookworm control campaign in a number of selected British colonies, where it could secure a strong presence and later expand further into those regions. Following negotiations with the Colonial Office in London, Rose decided to begin the campaign in the British West Indies, Egypt, Malaya and Sri Lanka (then Ceylon).

Although many critics have suggested economic reasons as the underlying motive of Rockefeller philanthropy (BROWN, 1979; BERLINER, 1985; HEWA, 1995), at the heart of the Foundation's international public health campaign was the concern for the threat of infectious disease, particularly from the European colonies. While the Foundation's officials were mindful of the long-term economic advantage of a healthy and more productive global population to industrial capitalism, their immediate goal was to keep the West free of infectious diseases. As one official bluntly put it:

> I had not overlooked the fact…that disease never stays at home in its natural breeding places of filth, but is ever and again breaking into the precincts of its more cleanly neighbors. As long as the Oriental was allowed to remain disease-ridden, he was a constant threat to the Occidental who clung to the idea that he could keep himself healthy in a small disease-ringed circle (HEISER, 1936, p. 37).

These fears were borne by the experience of global pandemics, such as Asiatic cholera in the previous decades that killed over one million people world-wide (ARNOLD, 1986; ILETO, 1988). This paper, drawing from archival and secondary sources gathered at the Rockefeller Archive Center (RAC), New York, and the Sri Lanka National Archives,

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Colombo (SLNA) will examine the Rockefeller Foundation's involvement in the Sri Lankan health sector, which began with a hookworm control campaign on the plantations among the South Indian immigrant workers in 1916. The hookworm control campaign evolved over a period of more than 40 years making a lasting impact on the development of primary health care in the country. The community-based primary care program, or what was then known as the "health unit system" was the pinnacle of this campaign that focused on disease prevention, health education, and maternal and child welfare services. The first health unit, established in 1926 at Kalutara, served as a model for primary health care infrastructure development and health education in Sri Lanka and, indeed, for the entire South and Southeast Asian region during that period. It grew over the years to become Sri Lanka's National Institute of Health Sciences, which today is the country's premier training center of health care workers required for primary health care services. The paper will critically examine these various stages of the development of the primary health care system in Sri Lanka.

Indian Labor in Sri Lanka

The British captured the Kandyan Kingdom of Sri Lanka in 1815 following a protracted military onslaught. Dr. Henry Marshall, a senior medical officer of the 89th Regiment that led the war against the Kandyan Kingdom, wrote that "the incursions of our troops into the Kandyan territory . . . were calculated to fill the population with the most unfavorable opinions of our justice and humanity, and to confirm the worst prejudices against the European race" (MARSHALL, 1846, p. 131). As Marshall foretold, the resentment against the British rule persisted among the Kandyan Sinhalese for a long time. When the British established plantation industries in central Sri Lanka during the mid-nineteenth century, the Kandyans refused to work on the estates. To fill this deficit, laborers were brought from the southern Indian state of Tamil Nadu for the year-round work in the plantation industry. By the end of the nineteenth century, about 100,000 workers and their families arrived annually in Sri Lanka (HEISER, 1936; PHILIPS, 1955). The British planters were so callous to their laborers, who came predominantly from the lowest stratum of the Indian society, that they didn't provide even the most basic necessities such as latrines in the shabby and overcrowded housing on the estates, which led to appalling sanitary conditions (RAC, 1914; CHATTOPADHYAYA, 1976).

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Hookworm Epidemic on the Plantations

Hookworm infection was first reported in the administration report of the Principal Civil Medical Officer (PCMO) of Sri Lanka in 1888, when 31 cases were diagnosed at General Hospitals in Colombo, Badulla, and Kurunegala (SLNA, 1888). This number increased rapidly and by 1899, about 239 deaths from anchylostomiasis had been reported on the island. According to Allan Perry, PCMO, over 80 percent of the reported cases were immigrant workers, and the rest were people living in the neighboring villages of the plantation areas (SLNA, 1899). Although the authorities were fully aware of the cause of the disease, they were reluctant to interfere with the private economic decisions of the planters (SLNA, 1911-1912). Despite the fact that a large number of the immigrant laborers arriving in Sri Lanka each year seldom lived more than "a couple of monsoons," the planters were not bothered with the high death toll. According to K. M. de Silva (1965, p. 239), in the years from 1841 to 1848, about 70,000 (10,000 per year) or 25 percent of the immigrant workers died of various causes. These figures, according to de Silva, had been published by the Colombo Observer, a leading newspaper of the day, suggesting that the dire situation on the plantations was known to the public. By 1916, the hookworm infection had reached epidemic proportions; as Table 1 shows, more than 90 percent of the population on the plantations was infected with the disease.

Table 1 – Hookworm infection by age in major plantation areas
1916-1917.

	ALL ESTATES		DICKOYA ESTATE		BOGAWANTALAWA ESTATE		NORWOOD ESTATE		MATELE* ESTATE	
	EXAMINED	PERCENTAGE INFECTED	EXAMINED	PERCENTAGE INFECTED	EXAMINED	PERCENTAGE INFECTED	EXAMINED	PERCENTAGE INFECTED	EXAMINED	PERCENTAGE INFECTED
ALL AGES	46,705	97.2%	14,302	95.6%	10,271	98.5%	5,662	91.1%	16,470	98%
UNDER 6 YRS	4,821	88%	2,331	84.5%	347	83.3%	972	90.6%	1,171	94.1%
6 TO 18 YRS	13,108	97.5%	3,737	97.9%	2,746	98.2%	1,320	99.2%	5,305	96.4%
19 TO 40 YRS	21,711	98.7%	6,803	97.9%	5,903	99.3%	2,741	98.3%	6,264	99.1%
41 TO 60 YRS	6,373	98.7%	1,295	96.2%	1,197	99.4%	580	97.8%	3,301	99.6%
OVER 60 YRS	692	98.6%	136	96.3%	78	100%	49	93.9%	429	99.5%

*Includes villages and estates' schools

Source: RAC. *Report on work for the relief and control of hookworm disease in Ceylon*. n. 7388. RG 5, Series 2, Box 47, Folder 292. Sept. 7, 1918b.

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Large European firms owned the plantations. In general, the business dealings of these firms were mostly conducted directly with the Colonial Office in London, which was sympathetic to these large firms. This allowed the firms and their estate companies to ignore the local policies of specific colonies, including those of Sri Lanka. The estate companies had very little knowledge of how their plantations were run by the management, which in turn had very little concern for their workers (DE SILVA, 1966). For a variety of ideological, political and economic reasons, both the colonial government and planters prevented effective control of the hookworm disease on the plantations. The official viewpoint was that the hookworm disease on the plantations was a problem for the planters to deal with in accordance with their own economic objectives. The planters, on the other hand, perceived no direct economic benefit from controlling and curing the hookworm disease. This stalemate persisted throughout the late nineteenth and early twentieth centuries, directly contributing to a great deal of suffering among the immigrant laborers. It was against this background that the IHB decided to conduct a hookworm treatment program on the plantation in Sri Lanka (HEWA, 1994).

Rockefeller Philanthropy in Sri Lanka

The IHB arrived in Sri Lanka in 1915, and began negotiating with both the colonial authorities and the management of the plantations on the possibility of setting up a hookworm treatment program on the estates. From the outset, both the colonial government and the planters opposed any outside interference in their work, arguing that it would ruin their business. The chairman of the powerful Planters' Association, Thomas Villiers, angrily told Dr. Victor Heiser, the director of the IHB operations in the East, "We are not going to have a lot of health fellows crashing into our affairs. ... If we ever let the Health Service get started on hookworm, all our laborers would run away, and we could not harvest our tea and rubber. No! No health business for us" (HEISER, 1936, p. 329). The response of the colonial government was equally negative and hostile. The governor, Sir Thomas Chalmers, told Dr. Heiser that he did not want "any Yankee men or Yankee methods introduced; Ceylon was capable of running its own affairs and paying for its own health." However, determined to convince both the planters and the colonial authorities of the vital importance of the treatment campaign for their business interests, he presented his case from an economic point of view. He argued: "a healthy laborer is an asset to an estate while an unhealthy laborer is a partial liability. It appears economical therefore to keep laborers healthy" (RAC, 1922, p. 4). Dr.

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Heiser further sweetened the offer by pointing out that the IHB was prepared to bear more than half the cost of the project, an incentive that neither the government nor the planters could refuse. In the end, he succeeded in persuading them to allow the IHB to begin the treatment campaign on the plantations.

With the approval of the colonial government and the Planters' Association, the IHB began a hookworm control program in 1916 in a selected group of estates. The representatives of the IHB, Drs. J. E. Snodgrass, W. C. Sweet and W. P. Jacocks, developed a working plan for Sri Lanka, which was to be supervised by American medical personnel appointed by the IHB. The equipment and salaries of the American personnel were provided by the IHB, while the salaries and other expenses of local staff were to be absorbed by the government and the plantation owners (RAC, 1916). Although we will later see that little came of it, at this point the planters finally agreed to take the crucial step of building latrines on the plantations. The government also promised to provide every legitimate assistance to the planters to improve sanitary services. This was an important change in government policy toward the plantation industry (RAC, 1922). An area of about 7 by 10 miles in the Matale district, comprising 24 estates with a population of approximately 15,000, was selected for the initial stages of the campaign. The program was gradually extended to other estates. Besides the treatment of those infected, the campaign consisted of a study of suitable types of latrines for the estates, and an information campaign of the cause and prevention of hookworm disease. This was done through lectures, distribution of pamphlets and demonstrations. In addition, the estate pharmacists were trained to diagnose the infection using microscopic and clinical techniques, and to administer proper doses of chenopodium oil as treatment.

By the end of 1917, the hookworm control campaign had treated about 40,000 people. Of these, 77.9 percent were pronounced cured upon microscopic re-examination. In addition, morbidity statistics were gathered from several estates, which showed the improvement in general health following the treatment for hookworm disease. The District Medical Officer of Matale reported that only 2,604 patients were admitted to hospitals in 1918, compared to 3,694 hospital admissions in 1916, a reduction of 27 percent (RAC, 1918a).

In spite of these improvements in the health of workers, they were not sufficient to convince the planters to undertake the major sanitary improvements suggested by the IHB. As has been noted, the crucial requirement for the control of hookworm disease was the supply of latrines for the estates' laborers. Although the planters had agreed to construct latrines at the beginning of the campaign, they did not honor their commitment. With pressure from the

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IHB, the government introduced legislation making it compulsory for all the estates to provide sufficient latrines for the workers' lines (RAC, 1918b). While many estates constructed latrines to comply with the law, they used temporary materials that lasted only a few weeks. The unabated soil pollution on the plantations combined with the arrival of infected new workers from India ensured a high rate of reinfection. At the end of 1919, three years after the completion of treatment, an examination of a sample of about 3,000 workers showed that the infection had not declined.

The hookworm control campaign on the plantations could not achieve its goal because the sanitary conditions did not improve while the treatments were being carried out (RAC, 1920). At this point, it became clear to the IHB that neither the government nor the Planters' Association were seriously concerned about the hookworm problem. Although sharing the cost of the program, the government was not fully committed to the objective of improving sanitary conditions on the estates. It did not want to antagonize the powerful Planters' Association by forcing them to construct latrines, nor did it want to take over the construction of latrines on the estates, as this might appear to be a change of the government's policy toward the plantations. The planters, for their part, believed that they could overcome the persistent complaints against them by letting the hookworm control campaign treat their laborers. However, anything that required capital spending was not something that they were willing to undertake. In April 1921, Dr. Heiser visited Sri Lanka and met with the government's officials, the Planters' Association, and the medical personnel of the project to discuss the future of the campaign. The project director, Dr. W. P. Jacocks pointed out that given the state of sanitation, it would be futile to continue treatment on the plantations, and informed the government the IHB's decision to end its work on the plantations after 1922 (RAC, 1921a).

After nearly six years of the hookworm treatment program on the plantations and spending almost $200,000 by 1922, the IHB could neither reduce nor eradicate the hookworm infection on the plantations because sanitary conditions were not improved. Under these circumstances, Dr. Jacocks advised that the IHB should shift its hookworm control campaign to selected villages and towns on the rest of the island. For an initial program, he recommended the Western province, given its relatively better infrastructure facilities at that time. He also proposed that in addition to carrying out treatment for hookworm infection in villages and towns, a survey should be taken to determine the prevalence of major health problems and their underlying causes on the island.

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Reorienting the Campaign

Although the hookworm control campaign on the plantation failed to achieve its intended goal, it provided a window of opportunity for the IHB officials to acquire first-hand knowledge about the socio-economic conditions in the country. In light of their better understanding the IHB officials became determined to reorient their activities, and to tackle broader public health problems through active collaboration of the local people, community leaders, and the colonial government. In many respects, the campaign in the towns and villages was organized to respond to the obstacles encountered on the plantations (HEWA, 1995).

The IHB officials now made a careful effort to utilize the established local level administrative apparatus, which had some advantages for the campaign. In the beginning, there was no immediate goal to show results of the treatment, as there had been on the plantations. This time, the programs and the treatments were modified as required by special circumstances, and the campaign was expanded as the people responded to the work. More time was taken for the general education of the public on health matters and for officials to acquaint themselves with the specific needs of the population. As a whole, the campaign organization and its activities in the Western province showed a marked improvement from how it was done on the plantations (RAC, 1923).

By the end of 1923, about 100,000 people of the Western province had been treated. The campaign was to continue periodic treatments until general sanitation reached such a level that the rate of reinfection became insignificant. To this end, it was recommended that the sanitary department of the country be expanded to include all sanitary requirements of the towns and villages on the island. The Rockefeller doctors' experience in villages and towns in the Western province in Sri Lanka and the results of the nationwide health survey had convinced the IHB officials of the futility of focusing solely on treatment for hookworm infection in the context of broad public health requirements across the country. The local people, who cooperated with the hookworm program voiced their criticisms of its limited scope in view of their wide-ranging health problems. Early on, the Rockefeller doctors were resentful of the cynical attitude of the villagers. The people of the villages and towns demanded attention to more immediate health problems. They questioned the rationale of giving treatment for hookworm infection in the context of numerous other diseases such as typhoid, smallpox, dysentery, and malaria, which were more serious and debilitating (RAC, 1921b).

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A decade of public health activities in Sri Lanka convinced the Rockefeller doctors that no effective public health program could be developed overnight. The success of such a program the active involvement of the local communities and leadership must be a vital component (RAC, 1926a). The fundamental objectives were to provide basic sanitary services, vaccination for communicable disease, the promotion of public health education and training. The outstanding health problems in each community should be attacked in the order of their importance for morbidity and mortality. If successful, results could be achieved in developing an effective sanitary program in one district, it should be used as a model for others. An integrated public health campaign of such magnitude would inevitably take time (RAC, 1926a).

An equally important development was the government's about-face, following decades of indifference to issues related to the health needs of those beyond the urban centers and the European enclaves. The government was itself responding to a variety of conditions, including growing concern for public health in the Western world generally, and the increasing agitation of Sri Lankan intellectuals – part of a growing middle class – who were making known the need for education and health in the countryside. As a result of the government's reorientation toward public health, the IHB was able to develop a primary health care program in such a way that it was embedded within the governmental administrative apparatus. Positions were added to this existing apparatus, and their mandates were extended and animated to carry out new duties related to public health. The IHB, together with local health officials, developed a complex plan that became known as the health unit system, which they directed for many years. This program became the framework and impetus for the remarkable achievements in the field of public health in Sri Lanka (HEWA, 2007).

Establishment of Health Units

The first health unit established in 1926 at Kalutara, a suburb of Colombo, was a landmark event in the history of public health in the country (RAC, 1926b). A "health unit" referred to a geographical area comprising up to 100,000 inhabitants. According to the program, it was expected that Sri Lanka would eventually be demarcated into approximately 63 health units (CHELLAPPAH; JACOCKS, 1936).

The organization of the health unit system clearly marked a new beginning for local medical and sanitary services of the country. It established, for the first time, direct

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administrative and fiscal responsibilities for the central government on medical and sanitary matters outside the major metropolitan areas. The health unit program was placed under the Department of Medical and Sanitary Services. The District Medical Officer (DMO) was responsible for the organization of health units in the district; each health unit was headed by a Medical Officer of Health (MOH). The activities of a health unit were divided into several branches: (1) The collection and study of vital statistics, (2) Health education, (3) The control of acute communicable disease, (4) Hookworm treatment, (5) Immunization against smallpox and typhoid, (6) Anti-malaria work, (7) Maternity and child welfare work, (8) School hygiene work, (9) Sanitation of households, (10) Water supply, (11) Disposal of garbage and other wastes, and 12) Control of food handling establishments. These specific tasks were under three sanitary and public health officers (RAC, 1929a).

The annual reports of the IHB provide detailed accounts of the activities of each health unit. By the end of 1929, just 3 years after its inception, there were five health units serving approximately 225,000 people, 5 percent of the total population of the country. Of these, about 18 percent lived in urban areas. The priority of public health needs was established based on vital statistics gathered by the health units. The number of deaths, births, and the causes of deaths were registered in each health unit area enabling the evidence-based population health strategies. The infant mortality rates varied from the lowest in the Western province to the highest in the North-Western province. The report attributed the higher death rates in the North-Western province to malaria, which was endemic in the region (RAC, 1929b). In 1929, the Kalutara health unit reported the highest incidence of typhoid, chicken pox, dysentery and measles. In addition, all the health units reported the cases of hookworm infection.

In light of these infectious diseases, the health units launched major sanitary reforms and health education campaigns. A series of lectures were delivered at market places and schools to educate the public. Saturday conferences with the health unit staff were regular features of all the health units. These conferences were attended by the officials of the local administration, Headmen, Ayurvedic doctors (native physicians), teachers, parents and many others. The conferences proved to be highly effective in providing basic health education to local residents whose cooperation in sanitary reforms was essential. In providing sanitary information, locally appointed nurses, midwives, and sanitary inspectors played a key role (RAC, 1928a).

Several steps were taken to improve sanitary conditions during the late 1920s. The construction of hundreds of private and public latrines in four of the health unit areas was one

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of the most important steps toward the development of public health (RAC, 1929c). The construction of latrines and water supplies was considered the priority of all health units. In most of the rural areas of all five provinces, the water supply was mainly through wells. The sanitary condition of these wells was regularly examined by the sanitary inspectors. Further, to improve the sanitary conditions in the towns and villages, specific regulations had been introduced in 1926. These regulations were mainly related to sanitary conditions of restaurants, bakeries, butcher's shops, fish and vegetable markets, dairy farms, and laundries. All trade premises were regularly inspected by sanitary inspectors to ensure that the owners complied with regulations. These sanitary activities clearly show the serious commitment of the health unit program to deal with basic sanitary problems throughout the country (RAC, 1929c).

Sanitary reforms were followed by a mass immunization campaign for typhoid and smallpox in a number of health unit areas. The recurring epidemics of typhoid and smallpox had killed thousands of inhabitants in many parts of the country. Referring to the successful control of smallpox, C. G. Uragoda (1987, p. 231), maintains that the "extensive vaccination, helped by legislation, was largely responsible for this happy situation. Whenever cases of smallpox occurred, energetic vaccination in the area was carried out, thereby preventing further spread." However, the immunization program at the beginning relied heavily on private donations and charities. The campaign was largely concentrated in the Kalutara health unit area, due to the financial assistance received from private individuals in the province. It should be noted that a large number of Europeans and mixed descendants (Burghers) were living in the Western province. Further, it can be suggested that the concentration of a fairly large European population in the province may have attracted the attention of the government as well. One of the most important activities of the health units was the "child welfare" works, which included immunization and treatments for various childhood diseases (BRIDGER, 1927). The public health nurses of the health units mainly carried out these activities. Each health unit held weekly clinics, public health nurses visited schools in the province to provide information to teachers on sanitary matters and they made regular home visits to advise mothers on childcare. Maternal and child welfare work was the most demanding of all activities of the health units because of the lack of trained personnel.

As a result, a special program of recruiting and training of public health nurses and midwives was introduced by the Department of Medical and Sanitary Services in the latter part of 1929. The response of the people with regard to maternal and child welfare work was more positive than to any other service provided in most health unit areas (RAC, 1930a).

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With the growing demand for maternity and child welfare services, the health units decided to utilize the assistance of community organizations such as Social Service Leagues. To this end, health units launched a campaign to promote health volunteers, a program that became popular among educated women during the post-colonial period. It should be noted that many of these Leagues across the country were directly responsible for organizing child welfare clinics, vaccination and educational exhibitions. Further, the Social Service Leagues played a key role in constructing latrines and wells in many parts of the island. These activities, sponsored by the health units, were largely responsible for reducing the maternal and infant mortality rates in the country (PERERA, 1987).

Analysis and Conclusion

In the preceding sections, we examined the IHB's involvement in Sri Lanka, which began in 1916 and continued until the post-Independence period. The long and innovative engagement of the IHB in capacity building in Sri Lanka evolved through many phases, interacting with colonial and postcolonial governments. The IHB's actual contribution to the development of primary health care in Sri Lanka was much more than what we could possibly incorporate into the current discussion. For example, the IHB's role in the development of the nursing profession that began in the late 1940s to supply trained health care personnel for the expanding services during the post-colonial period has not even been mentioned. What is critically important to note here is that the IHB's involvement in such a vast program of promoting primary health care in Sri Lanka took place long before the WHO began to discuss primary health care for developing countries (WHO, 1978). Unlike the rather idealistic formula envisaged by the Alma-Ata Declaration of the WHO in the 1970s, the health unit program that was developed by the IHB in partnership with the people of Sri Lanka was practical, and designed to meet the specific needs of the local communities. It was, by any measure, an extensive program that evolved gradually in view of local conditions, resources and administrative mechanisms. In the process, people became stakeholders of the health unit system.

Viewed against this background, the underlying philosophy of, and the cooperation between, the government, the people of Sri Lanka and the IHB, the health unit program demonstrated a radical departure from the manner in which the hookworm campaign was conducted on the plantation. That in itself contributed immensely to the success of the project. As Uragoda (1987) has pointed out, the health unit work of the IHB in Sri Lanka differed

markedly from that of other countries, where health unit work combined both curative and preventive medicine. In Sri Lanka, curative medicine was seldom employed. Rather its health units undertook the usual duties of a public health department in a tropical country, including health education, general sanitation, collection of vital statistics, study and control of preventable disease, vaccination, maternal and child welfare, and school inspection. The main objective of the health unit program in Sri Lanka was to prevent infectious disease or, more specifically, to deal with the most basic sanitary problems in the country. The only curative work undertaken by the health units were the treatment for hookworm infection and malaria through local dispensaries.

In notable contrast to the policy of recruiting British medical personnel as field doctors and project directors in the hookworm campaign, the medical officers in charge of health units were mainly native Sri Lankans, or other South Asians. It was believed that local medical personnel would better understand the customs and values of the people and that the people would be more receptive to their recommendations (RAC, 1926a). The aim was to gain as much community support as possible for the health unit work. At the same time, the IHB representatives exercised considerable freedom in organizing specific projects and implementing them with the full participation of health care personnel and communities. As the health unit program was geared to address the pressing sanitary and health care needs of the community, people themselves organized to lend support to these programs. In 1931, there were 24 voluntary organizations such as the Social Service Leagues, Health Leagues, and Child Welfare Leagues actively supporting health units (RAC, 1933). During that year, these community organizations had contributed Rs. 16,802 (about $6000) to health units across the country (RAC, 1932). At the individual level, private citizens donated buildings and lands to set up dispensaries and clinics, and provided water pumps and other equipment for such facilities. The health unit program received generous support from the people across the country (RAC, 1928b; 1930b).

One of the most important special projects that the IHB financed was the training of public health workers for Sri Lanka and other South and Southeast Asian countries. In 1928 the Kalutara health unit was chosen as the training center of public health personnel – nurses, midwives and sanitary inspectors. As the IHB had established various public health programs in India, Burma, and Malaya, it began to use the Kalutara facilities to train personnel for these other countries (RAC, 1934). Foreign public health workers were given training of between two weeks and six months on various aspects of disease prevention and health education at the expense of the IHB. The importance of the Kalutara health unit as a training center of

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public health personnel in Sri Lanka grew rapidly (RAC, 1935). It was expanded and renamed the Institute of Hygiene in 1966, and grew in size and responsibilities in the 1980s, when it became the National Institute of Health Sciences and the premier public health training facility in the country (GOVERNMENT OF SRI LANKA, 1993).

The health unit work must also be understood in terms of Sri Lanka's long-term public health achievements. Although it ranks today among the world's middle-income countries, Sri Lanka's record of public health achievements has often been compared to that of industrialized Western nations (WORLD BANK, 2010). High life expectancy at birth (77 years in 2018), low mortality (6.7 per 1,000), and infant mortality (6.4 per 1,000 live-births) rates on the island approach the levels of high-income countries. These achievements, no doubt, are the result of a host of public health and social programs introduced during the last 75 years. In 1952, commenting on Sri Lanka's development achievements, for example, the International Bank of Reconstruction and Development (later World Bank) argued that insofar as it marked the beginning of the IHB's involvement in public health in Sri Lanka, the inauguration of the hookworm campaign in 1916 was "an important landmark in the public health services of the country" (INTERNATIONAL BANK OF RECONSTRUCTION AND DEVELOPMENT, 1952).

Today, every Sri Lankan has access to a primary health care hospital within a radius of two miles. Unlike in most other developing countries, the problem of access to basic health care "virtually does not exist in Sri Lanka" (WHO, 1989, p. 191). A recent report by the WHO points out that Sri Lanka's success story of health achievements is, in large measure, due to its early start with a solid foundation for "equitable" and "community-based" approach to primary health care. The report specifically acknowledged the "equality of access" to health and education at all levels for both men and women that has been one of the core principles of national health priorities, and development policies in Sri Lanka as key contributing factors to outstanding health indicators (WHO, 2008). Undoubtedly, the health unit system, which was the forerunner to Sri Lanka's continuing commitment to progressive health policies and development strategies, could easily be implemented as the primary health care system in other developing countries.

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