

conventions, as well as the sanitation of Cuba and Panama, have permitted the utilization of natural resources and the growth of population.

Mortality.—Another factor which must be taken into account is the general death rate. In 1865 the average annual mortality was 30 deaths per 1,000 inhabitants. Today, thanks to the degree of public health organization and its constant vigilance this average has dropped to 19 per 1,000. The typhoid fever mortality has decreased from 23.3 per 100,000 in 1930 to 6.7 in 1940, and the small-pox rate from 1.1 in 1931 to 0.22 in 1940.

Funds.—Appropriations for sanitation and public health have increased from an annual average of 4,267 *quetzales* during 1900–1909, and 3,621 in 1910–1919, to 33,975 in 1920–1929, 194,910 in 1930–1940, and 115,967.05 in 1940.

Health index.—The general basis for estimating the public health index is the disappearance of the pestilential diseases which were so devastating in the last century: hospital septicemias, smallpox in the villages and rural areas, typhus fever, and finally, malaria in the lowlands. Fortunately, many of these plagues have vanished forever, and smallpox, which was formerly a terrible enemy which no one escaped, today is responsible for but an insignificant mortality, and cases become more and more uncommon. This victory is the result of patient effort beginning May 12, 1824, when the Public Health department of Guatemala made vaccination compulsory. (Vaccination was practiced in the hospitals of the Kingdom of Guatemala in 1804, by the *protomédico* or royally appointed physician Dr. Narciso Esparragosa y Gallardo.) In 1840 more adequate regulations were established; these were confirmed in 1871 by the liberal laws, and reaffirmed by the present sanitary regulations.

National Vaccine Institute.—During the period from 1909 to 1940, the National Institute of Vaccine prepared a total of 18,021,307 doses of smallpox vaccine, which were widely distributed throughout the Republic. On more than one occasion, supplies have been sent to neighboring Republics.

Vital index.—The vital index (excess of births over deaths) of Guatemala has fluctuated, on the average, between 15 and 22, since 1871.

This brief sketch affords an idea of the biologic potentialities of Guatemala and is a testimony of the abilities of her native races to develop and grow toward greater progress and culture, when their health is protected and their vital needs are assured by preventive medicine and social hygiene.

THE NATIONAL HEALTH AND SOCIAL WELFARE SERVICE OF HAITI

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The National Service of Hygiene and Social Welfare of Haiti was re-organized in 1919 and has since come to be one of the most important administrative branches of the Government.

The Service has developed gradually and has become an organization which functions on a rational basis and which renders inestimable services to the urban and rural population.

The Service extends its activities throughout the Republic by means of 11 hospitals and 125 rural clinics, all of them housed in buildings constructed within the last twenty years.

One of the most important parts of the program is public assistance, given through the hospitals and rural clinics and constituting a campaign against the three principal diseases afflicting the population: malaria, treponematosiis and tuberculosis. These three conditions are responsible for the greatest number of deaths in Haitian hospitals. The sanitation service functions in accordance with legislation based on the principles of hygiene and undertakes extensive projects in different parts of the country. The maritime and domestic quarantine service is organized according to the precepts of the Pan American Sanitary Code, ratified by Haiti on June 21st 1928. Another function of the Service is the teaching of medicine, which was reorganized with the assistance of the Rockefeller Foundation.

Since 1919 the Haitian Government has opened a school of nursing which furnishes to the hospitals, whose importance increases daily, a corps of intelligent and devoted nurses. It has also created the maternal and child welfare services, the service of health education, which is carried on by the radio, schools, and press, and finally, the social assistance services which include a number of establishments for the shelter of the poor, the aged, and children.

The Haitian Public Health Service has always been characterized by its willingness to encourage the efforts of private initiative in behalf of suffering humanity. Thus it has recently facilitated the establishment of an institute of radio-therapy, a really important development in the annals of Haitian medicine. It is almost unnecessary to point out the service which this truly humanitarian center is giving to the people of Haiti, especially to the poorer ones whose means do not permit their seeking treatment abroad.

A recent development which should assist greatly in the control of malaria is the creation of a division entirely devoted to this work. This was made possible through the aid of the Rockefeller Foundation, an assistance for which I take this occasion to express our appreciation. The Foundation has been cooperating with the Service in malaria control for about one year.

During the period since its reorganization the Haitian Public Health Service has functioned to the height of its resources and done all that was in its power to improve the living conditions of Haitian citizens and to safeguard their moral and material well-being, in spite of a lack of sufficient funds.

There is much which still remains to be done and the Service has outlined a number of objectives to be attained as soon as possible, including: (a) revision of the narcotics control legislation, (b) isolation of lepers, (c) finding of tuberculosis cases and construction of sanatoria, (d) establishment of a social assistance fund, (e) further development of the Child Welfare Service, (f) improvements in rural hygiene, and (g) intensification of malaria control through sanitary engineering.

Budget.—1919-1920, 1,341,000 *gourdes*; 1924-1925, 1,845,882; 1929-1930, 3,903,-220.92; 1934-1935, 2,702,740.46; 1939-1940, 2,616,769.30; 1940-1941, 2,616,769.30.

Health education and the public.—"It is necessary to impose hygienic measures, for the good of the people as a whole, but it is equally necessary that they be made acceptable. Therefore, the work of health authorities, especially at the beginning of the establishment of public services, is particularly difficult: it is imperative that they gain the confidence of the public by demonstrating with undeniable proofs the value of health measures."—LUIS RAZETTI, at the First Venezuelan Medical Congress, Caracas, 1911, as quoted in *Rev. Educ. Sanitaria*, July 15, 1937, p. 1.