Mahaweli System H: a Review

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1. Introduction

The main aim of this research was to study how all-inclusive development including expansion of settler families, distribution of settlements, growth of population, meeting basic needs, implementation of social infrastructure facilities and economic infrastructure facilities have been taking place in the Mahaweli system H from 2018 to 2022. The Mahaweli Development Project was one of the gigantic physical and human resources development programs executed in the country, and it has numerous objectives, giving a tremendous enhancement to the national economy of Sri Lanka (Mahaveli Authority of Sri Lanka, 2018). The contemporary Mahaweli area covers 15 administrative districts in Sri Lanka comprising 47 divisions and 223 units in 10 Mahaweli systems. The Mahaweli areas comprise Polonnaruwa, Batticaloa, Ampara, Badulla, Trincomalee, Matale, Anuradhapura, Kurunegala, Mullaitivu, Vavuniya, Ratnapura, Monaragala, Hambantota, Kandy and Nuwara Eliya districts. System H was the first area to be settled under the Accelerated Mahaweli Development Program, settling approximately 500 families in the area in 1975 and accelerated from 1978 (Mahaweli Statistic 2018-2022, (2022). System H consists of 43,500 ha (108,000 ac) of farm area in the Kala Oya River basin of the Mahaweli Project and is located in the low country dry zone approximately 125 m above sea level. Five major reservoirs: Kandalama, Dambulu-Oya, Kalawewa, Rajangana, and Angamuwa provide water storage facilities for different system sections (Jayawardene, 1983).

Mahweli H system mainly lies in two districts: Anuradhapura and Kurunegala. Thambuttegam, Rajanganaya, Thalawa, Nochchiyagama, Ehetuwewa, Galgamuwa, Nuwaragam Palatha Central, Palagala, Galnewa and Ipalogama are the divisional secretariat divisions belong to these two districts. According to the census in 2018, system H includes 7 blocks and 26 units. The gross area (ha) is 26 80,803 and Developed area (ha) is 48,140. The number of town centers is 5: Nochchiyagama, Thambuththegama, Thalawa, Galnewa, and Meegalawa and area centers are 3: Bulnewa, Mahailluppallama Eppawala. The total population available in this system H area is 51492. The male population in this area is 24010. The female population is 26150.

2. Materials and Methods

This research was conducted based on a literary survey and focused on the Mahaweli Development Project, a significant physical and human resources development program in Sri Lanka. The data was collected over five consecutive years from 2018 to 2022. The data was analyzed using the descriptive analysis method, which falls under the quantitative research approach, with the assistance of SPSS.

3. Results and Discussion

İn the data analysis process, it was illustrated the increase in settler families in the Mahaweli System H area from 2018 to 2022. The total number of settler families showed a significant rise, growing from 62,054 in 2018 to 77,914 in 2022, an increase of 15,860 families, approximately 25.6% over the five years. Breaking this down further, the number of farmer

families grew from 28,469 in 2018 to 33,619 in 2022, reflecting an increase of 5,150 families or around 18.1%. Conversely, the number of non-farmer families surged from 33,585 in 2018 to 44,295 in 2022, marking an increase of 10,710 families or about 31.9%. These annual growth rates revealed that while the number of farmer families grew relatively steadily with a slight acceleration in recent years, the growth rate of non-farmer families was more pronounced, especially between 2019 and 2022, indicating a faster expansion relative to farmers.

According to the research findings, the total population has increased from 228,432 in 2018 to 242,844 in 2022, representing a growth of 14,412 people, or approximately 6.3%, over the five years. Annual growth rates revealed a variable pattern. The population grew slightly by 354 people (0.15%) from 2018 to 2019, and it increased by 396 people (0.17%) from 2019 to 2020. The growth rate then accelerated from 2020 to 2021, with an increase of 2,158 people (0.94%). Finally, from 2021 to 2022, the population surged by 11,504 people (4.97%). This data has indicated a gradual increase in the growth rate over time, with a marked acceleration in the final year of the period under study.

Over these five years, the total number of houses increased from 56,494 in 2018 to 60,519 in 2022, marking a growth of 4,025 houses, or approximately 7.1%. The annual growth rates have exhibited a varied pattern. From 2018 to 2019, there was a decrease in the number of houses from 56,494 to 55,807, a drop of 687 houses or about 1.2%. This was followed by a significant increase from 2019 to 2020, with the number of houses rising to 57,599, an increase of 1,792 houses or approximately 3.2%. In the subsequent year, from 2020 to 2021, the growth was minimal, with the number of houses increasing slightly by just 19 houses to 57,618, reflecting a growth rate of only 0.03%. However, from 2021 to 2022, there was a significant rise in the number of houses, which surged to 60,519, an increase of 2,901 houses or about 5.0%. This data underscores a generally positive trend in housing development, with a significant increase in 2022.

The data analyzed here has illustrated a steady increase in the number of water seal latrines from 2018 to 2022, growing from 54,408 to 57,022. This reflected an overall rise of 2,614 latrines, or approximately 4.8%, over the five-year period. The growth was characterized by varying annual increments, with the highest annual increase occurring between 2018 and 2019 when the number of latrines rose by 1,089, or 2.0%. Subsequent years saw smaller increases, with annual growth rates fluctuating between 0.4% and 2.0%. Specifically, from 2019 to 2020, the increase was minimal at 0.4%, while the following year saw a slightly higher growth of 0.7%. The most recent year, 2021 to 2022, recorded an increase of 917 latrines, representing a 1.6% growth. Hence, it could be concluded that there was a gradual but consistent expansion in the availability of water seal latrines.

As shown in the analysis, the sources of drinking water in the Mahaweli System H area from 2018 to 2022, were 14,799 wells, 564 tube wells, and 5 reverse osmosis plants, alongside 124 other institutions constructed by MASL in 2022. The data from previous years has shown a general trend of increasing well and tube well installations, with some fluctuations in the numbers. For instance, in 2020, there were 17,611 wells and 659 tube wells, alongside 4 reverse osmosis plants and 92 other institutions. This data highlights a continued effort to improve access to clean drinking water through various sources, with an overall increase in the infrastructure provided over the years.

Social infrastructure facilities in System H from 2018 to 2022, highlighted several key trends. The number of schools remained consistently at 87 throughout the five years, indicating a stable educational infrastructure. Nursery schools saw a notable increase, growing from 153 in 2018 to 186 in 2022, reflecting expanded early childhood education resources despite some fluctuations in between. Post offices also maintained a steady count of 44, except for a minor increase to 45 in 2018, suggesting reliable postal services. The number of hospitals remained largely constant at 10, with a temporary rise to 11 in 2018, likely due to adjustments in healthcare infrastructure. Ayurvedic hospitals experienced a slight increase from 7 in 2018 to 8 in subsequent years, indicating a stable but growing presence of traditional medicine. Health centers initially increased from 35 in 2018 to 48 in 2020 but then there was a decline to 37 in 2022, reflecting potential shifts in healthcare demand, policy changes, or administrative decisions.

İn the final analysis which was conducted to find the detailed overview of the trends in economic infrastructure facilities, highlighting the dynamics within cooperatives, economic development centers, and banks. The data revealed a trend of growth and stability across these sectors from 2018 to 2022. Cooperatives exhibited a modest increase from 17 in 2021 to 18 in 2022, indicating a gradual expansion in cooperative activities. Economic development centers, initially stable at 1 from 2018 to 2020, doubled to 2 in 2021 and 2022, suggesting a concerted effort to bolster economic development infrastructure. Conversely, the banking sector experienced minor fluctuations, with a decrease from 54 to 52 banks between 2018 and 2020, followed by stabilization at 53 banks in the subsequent years. These trends collectively underscored incremental growth in cooperative efforts and economic development initiatives while reflecting a relatively stable banking environment which contributed to the sustainable development of the Mahaweli system H.

4. Conclusion

The annual growth rates of settler families revealed that while the number of farmer families grew relatively steadily with a slight acceleration in recent years, the growth rate of non-farmer families was more pronounced, especially between 2019 and 2022, indicating a faster expansion relative to farmers. Also, it has shown a gradual increase in the growth rate of the population over time, with a marked acceleration in the final year of the period under study. It was illustrated in this analysis that there was a positive trend in housing development, with a significant increase in 2022. There has been a gradual but consistent expansion in the availability of water seal latrines in Mahaveli system H. Continued efforts to improve access to clean drinking water through various sources, with an overall increase in the infrastructure provided over the years. Health centers initially increased from 35 in 2018 to 48 in 2020. However, there was a decline to 37 in 2022, reflecting potential shifts in healthcare demand, policy changes, or administrative decisions. Trends in economic infrastructure facilities, collectively underscored incremental growth in cooperative efforts and economic development initiatives while reflecting a relatively stable banking environment.

5. Acknowledgment

We would like to extend our gratitude to the Research and Publication Committee, Faculty of Social Sciences and Humanities, Rajarata University of Sri Lanka, Mihintale for extending the financial support to conduct this research relevant to Mahaweli system H.

6. Keywords

economic infrastructure facilities, Mahaweli System H, settler families, social infrastructure facilities.

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