



Consequences of the State Land Alienation Programme in Sri Lanka

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Abstract

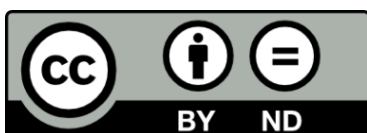
Land alienation programmes are famous worldwide as a strategy to distribute land among the landless people in a country. Sri Lanka also introduced this programme in history with the same objective. Since the programme now has come to the third generation of the inhabitants, negative consequences are arising. There is meager evidence of formal research findings covering the most important consequences of Sri Lanka's State Land Alienation Programme to date. Hence, the main intention of this research is to analyze the significant consequences of the State Land Alienation Programme in Sri Lanka from the perspectives of both professionals and inhabitants. Other than the social, economic, and environmental variables identified from scholarly research a new variable is also introduced as 'political concerns.' The research strategy incorporates both qualitative and quantitative approaches. Data was collected from 100 inhabitants and was used for the quantitative analysis, including descriptive analysis, correlation, and regression whereas the data collected through in-depth interviews from five (05) officials involved in the land alienation programme was used for the qualitative analysis under the content analysis. The results demonstrate that among the consequences, social issues are significant both in the quantitative and qualitative outcomes. The findings of this study will be useful to all key stakeholders and policymakers involved in land administration in the country, particularly in revisiting the land alienation process and revising some regulations to mitigate negative consequences.

Keywords: Consequences, Irrigation Settlement Scheme, State Land Alienation Programme, Social Issues, Sri Lanka

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INTRODUCTION

Land is regarded as one of the most essential basic resources used by humans. During the past, it has been the major source of revenue and prosperity for poor people all across the world, including Sri Lanka. Agriculture has become the primary source of income for 26.1 percent of the country's overall population (Athukorala P., 1993). Depending on ownership, lands in Sri Lanka are categorized as either governmental lands or privately owned lands. State lands are those to which the State has a legal claim, including all the rights, obligations, and advantages that come with them. The government owns more than 80% of the country's land, with the rest being owned by private citizens. In 1927, the first Land Commission was constituted, providing a modern legislative structure for land alienation. The land commission's findings prompted the introduction of LDO No. 19 of 1935, which began a comprehensive alienation of governmental lands in Sri Lanka (Bandara *et al.*, 2019). This new policy approach primarily concentrated on the expansion of government land while also addressing the State's landlessness problem. The peasantry, Sri Lanka's weakest social group, profited the most from land alienation. Therefore, government lands were taken over to protect this peasant group. Recently, educated young and middle-class people have been incorporated into

the LDO for land vesting (Chandrasiri, 2010). Various land alienation projects, such as extensive colonizing, village development, youth settling, and working-class settlement, have been conducted by succeeding administrations across history. These programmes benefited a vast number of individuals. The amount of land alienated to a single family fluctuated depending on the policy goals of the administrations in charge of the country's alienation programmes. In the beginning, a family was given eight acres, five acres in the plains for rice production and three acres in the hillsides for housing and upland crops (Ellman, 1976). This range has been lowered over time to a threshold of one acre for plains and eight perches for highlands because of the insufficiency of land resources to support the growing population. Furthermore, the first interim ownership type permission granted to a land recipient was eventually modified by a grant that is practically identical to a deed. The tenures were gained as license holders through the well-known land awarding schemes undertaken in Sri Lanka, such as "Swarnabhoomi, Jayabhoomi, Isurubhoomi, and Ranbima" (Fonseka, 2014). All Sri Lankan administrations that have come to power have shown tremendous interest in land management and associated issues.

Land alienation in Sri Lanka has developed over an 80-year span, with several administrations launching



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alienation projects under various plans (Marawila, 2010). Consequently, thousands of landless individuals have been given recourse to a piece of land, with the intention of enhancing the beneficiaries' living standards while also promoting state holdings (Obeyesekere, 2008). However, unsubstantiated data from Divisional Secretariat (DS) workers reveal that the existing rate of usage and improvement of granted lands is not as productive as envisaged. Furthermore, unlawful dwellings and unstructured and illegal trades run counter to planned aims, reducing the productivity of alienated lands. As a result, the important issue remains: to what degree have the land alienation outcomes been helpful, or what are the programme's consequences?

According to the preliminary discussion with officials from the project office attached to the land alienation programme in Anuradhapura, it was identified that there are several types of land issues emerging in the alienated lands which can be categorized as social, economic, political and environment issues. Approximately, there are about 60% of social issues, such as, insufficient land for the third generation, family conflicts due to the lack of privacy and due to the lack of space between houses, and problems arising from the absence of a family name in the transfer of land and some deeds not mentioning a later inheritance with caste division. Around 20% of the

issues have occurred politically due to political interference being obtained for acquiring protected lands for illegal actions. For instance, gravel cutting, the constructing of shops on both sides of canals and the unauthorized filling over of paddy lands. From an environmental perspective, there are about 5% of environmental issues. The streams became large when people dump sand, gravel cutting results in the loss of lands and farming in the lake reserves alongside with forest reservation. From an economic perspective, approximately 15% of issues have occurred. The lack of land to cultivate due to the increasing population, the improper use of land and the failure to pay taxes for the lands properly. Currently there are a lot of issues which have occurred in this Mahaweli irrigation settlement scheme. They could not achieve their expected goals and objectives. Seen as the main reason, this programme was given lands only for the first generation. They did not consider about the future generation. There are a lot of land issues emerging with the expansion of the population. Consequently, these issues contribute to reduce the productivity of the land.

The preceding discussions highlight the shortfall of up-to-date knowledge engendered by scientific evaluations to comprehend the ground reality of the land alienation procedure, its outcomes, and related consequences to determine whether beneficiaries use



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limited land resources for the desired motive. It is also critical to determine if people are content with the existing method of functioning and outcomes in alienation programmes. Accordingly, the main aim of this study is to identify the most significant consequences of the State Land Alienation Programme in Sri Lanka and special attention was given to the Nochchiyagama Mahaweli Irrigation Settlement Scheme, in the Anuradhapura District in the dry zone of the country. The previous assessments confirmed that the bulk of research focused on a single group, either professionals or users. A majority of these research at a global context introduced three variables such as social, economic, and environmental issues. The discussion revealed that in the context of Sri Lanka, political interference as an issue is also important. Thus, this research seeks to address the void by investigating the impacts of Sri Lanka's land alienation programme from both viewpoints of professionals' and inhabitant's using four variables and adopting both quantitative and qualitative research approaches.

The following research questions have guided this study.

1. How do professionals identify the land issues arising in the alienated lands in terms of social, political, environmental and economic aspects?
2. What is the perception of the inhabitants on the land issues

arising in the alienated lands in terms of social, political, environmental and economic aspects?

3. What is the most significant land issue, among the social, political, environmental and economic aspects from the professionals and inhabitants view in the alienated lands?

Subsequently the following objectives were formulated.

1. To analyze the social, political, environmental and economic issues related to land issues in the alienated lands from the point of professionals and inhabitants view in the Nochchiyagama Secretariat Division.
2. To compare the views of professionals and inhabitants to identify the most significant issue in the alienated lands in the Nochchiyagama Secretariat Division.

LITERATURE REVIEW

Land alienation programs

Alienation in property law refers to the voluntary decision of a property holder to deal with property, whereas alienability, or being alienable, refers to the potential of a piece of land or a property right to be purchased or otherwise moved from one person to the other. The majority of property is alienable, but some may be subjected to alienation restrictions (Cochrane,



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1974). Aronstam, (1985) claimed that the meaning of land alienation is a significant destruction of public land and agricultural commons; in a restricted sense, land alienation merely denotes detaching humans from their land ownership and employment. Several activists, as well as native tribes, have been speaking out regarding land alienation and fighting for justice for years (Malik, 2020). Land alienation takes place on two thresholds: individual and institutional. Wanigaratne and Samad, (1980) describe personal land alienation using four cross-sectional patterns. Land alienation in "urban and rural areas, tribal to non-tribal alienation, and tribal to tribal alienation" are all examples. Land alienation in urban places has been caused by outsiders for the intention of erecting houses, structures, industries, or other non-agricultural reasons. Such land alienation is typically seen as unlawful since the lands are snatched away from indigenous communities by manipulation or, in some cases, force. The other sort of land alienation that occurs in rural regions is mostly among destitute tribal people to fulfill their daily necessities. In this sort of alienation, the tribe members either sell their land directly at extremely cheap prices or are caught by illegal mortgagers (Dubey and Murdia, 1977). Land alienation by institutions is also common in various sections of the country. This sort of land alienation is performed for "public purposes,"

which may comprise a variety of large and medium-sized government initiatives such as industries, quarrying, reserves, dams, and so on (Negi *et al.*, 2010). Many tribal communities have protested land expropriation for public use, which contributes to a slew of additional difficulties such as rehabilitation, relocation, resettlement, insufficient remuneration, loss of cultural and identity, and so on. Recent land economic research has heavily emphasized global land alienation strategies and their implications in many contexts (Bordoloi, 1986; Bordoloi, 1991; Matondi and Mutopo, 2011; Boicheniuk, 2021).

Global land alienation programmes and its consequences

Land alienation was adopted in Malaysia to facilitate regional expansion by distributing land to the remote landless and boosting the rural economic system in general. Malaysia has just introduced a new land alienation mechanism known as public distribution (Dahlan, 2019). According to Manaf *et al.*, (2020), Malaysians are grappling with a serious land ownership issue. People were dissatisfied with the community grant alienation strategy. Hence, people believe that if the community grant process is abandoned, native customary landownership would be lost. As a societal problem, they were harmed by the land-handling system due to inefficient government service. Thus, landowners cannot develop



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their own property without the consent of the land authorities. However, they seek clearance for a lengthy period. Because of the lengthy approval process, they must wait for permission. According to Malik, (2020), in terms of land alienation in India, the government relocated residents from the forest area to HD kote blocks. In terms of social concerns, they have lost their whole culture because their culture is built on the forest, their settlement is known as "Jamma," and as a result of their isolation, they have lost their "Jmmas". From an economic standpoint, the alienation policy had a significant impact on their economy since the government did not offer land for agricultural activity. From an economic standpoint, the alienation policy had a significant impact on their economy since the government did not offer land for agricultural activity. As a result, people had no method of living. Some had purchased agricultural property in other locations. However, it is not ideal for agricultural operations since its soil is hard and it is difficult to carry out agricultural activities, and they do not have adequate bank loans for agricultural development and irrigation infrastructure. The primary difficulty is that they do not own the land. Therefore, they are unable to sell their property. Land alienation is permitted in African countries for institutions such as mining, factories, hydroelectric projects, irrigation and reservoirs, and educational and research

organizations (Potts, 2012). This continuous alienation not only has an impact on poverty, but it also threatens to recognize their own lands as societal concerns, since they have been affected by land alienation. These agreements are unjust and heartless. From an economic standpoint, they had not received adequate compensation for their home and property. Furthermore, the reports are being delayed due to compensation. They cannot mortgage the land in order to receive bank loans from either commercial or public sector financial organizations (Malik, 2020).

Land alienation programs in Sri Lanka

The primary intention of the land alienation programme in Sri Lanka has been to solve the difficulties associated with landlessness among the poor and to increase agricultural production. As the land is intimately tied to the country's rural agricultural fields, the idea of land alienation specifically promotes the social and economic wellbeing of the rural peasant population. Correspondingly, land alienation procedures have been implemented in Sri Lanka to enhance the rural peasants (Wanigaratne and Samad, 1980). With the arrival of colonial authorities, the land management policy in Sri Lanka started to alter (Moore, 1989). In terms of land administration, the Portuguese developed the most important administrative structure, called "Thombos." With the British invasion of Sri Lanka in the early nineteenth



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century, coffee farming pioneered by the Dutch was immensely prominent in the region. Following the collapse of coffee growth due to a fungal infection, British authorities focused their attention on plantation products like tea, rubber, and coconut, paving the way for commercial cultivation to replace the State's subsistence agricultural structure (Chandrasiri, 2010). Since the land demand was insufficient to extend the estates, British authorities chose to take more areas from the people through the legal legislation, the Crown Land Encroachment Ordinance (CLEO) No. 12 of 1840. This was Ceylon's first land legislation, essentially converting almost 90% of the country's entire land area into crown domain (Obeyesekere, 2008). The lands obtained by the British were sold or rented to European farmers and regional investors in order to advance the state's agricultural industry. According to Brow and Weeraamunda, (1992), low country rice cultivation was handed over to produce rubber and coconut, leaving landless rice growers with no means to stay, farm, or work. The Waste Land Ordinance (WLO) was put into the power of British monarchs in 1897, proclaiming all undeveloped, uninhabited, wild, and useless areas in the state as crown property (Melis *et al.*, 2006). In effect, the British authorities destroyed the Sinhalese communal administration framework by seizing settlements, woodlands,

and Chena farming activities and selling them to farmers.

By the end of the nineteenth century, the whole economy of Sri Lanka had taken a distinct route, paving the ground for a highly successful agriculture that earned more economic advantages while creating a landless peasant society that worked in their own fields as labour. In the early twentieth century, Sri Lanka grappled with a number of difficulties due to the damage to the agricultural infrastructure in the dry region (Obeyesekere, 2008). In 1927, the first Land Council was founded, and the undefined decided that the government should maintain public properties in confidence for the individuals and alienate the properties for their use. The panel recommended that all of the country's royal lands be mapped and distributed according to the needs of various groups of people. The Land Development Ordinance (LDO) No. 19 was created in 1935 to provide an appropriate procedure for property alienation in Sri Lanka, with the intention of ensuring the methodical progress of state properties in accordance with Land Commission suggestions (Ministry of Land and Land Development, 1985). The main goals of this decree were to minimize population stress in the wet zone while also increasing local food productivity by distributing state properties (Bandara *et al.*, 2019). Landforms and highlands were assigned to farmers during the LDO



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for paddy farming and other seasonal crops (OSCs) as well as dwelling reasons (Brow and Weeraamunda, 1992). The recipients were chosen using a well-defined procedure called "Kachcheri" (Wanigaratne and Samad, 1980). Landless individuals with big households were given precedence in the selection procedure, but later on, individuals with farmland know-how, farming knowledge, and physical condition were given attention. Despite the fact that the state had technically alienated crown properties, a huge number of families informally invaded and inhabited territories that were later authorized by the government (Marawila, 2010). The function of alienation of public lands within LDO is now given to the District Secretary of each DS with greater authority following the implementation of the Act of Transmission of Duties (Divisional Secretaries) No.58 of 1992, within the District and Divisional Management. When issuing land concessions to permission holders, the President's authority and consent are required. Presently, under the LDO, this authority of government land management is placed with the LCGD, who is overseen by the Land Commissioner Overall. Other entities in Sri Lanka, such as the Mahaweli Development Authority, the Land Reform Commission, and the Presidential Task Force, alienate public properties in accordance with the LDO's laws and procedures (Melis *et al.*, 2006).

The dry zone colonization program, established under the LDO to undertake the pioneer land alienation program in the dry zone, was Sri Lanka's first move towards land alienation (Chandrasiri, 2010). Lands were assigned solely to agricultural households under this arrangement, with no allowance for landless labor. As a result, the majority of landless labourers relocated by infringing on state properties around the projects (Ellman, 1976). The government offered major aid to the Colonists through the early stage of Colonization, such as the clearance of fields, the building of irrigation facilities, road, residences and latrines (Marawila, 2010). However, the dry zone colonization effort has led to an improvement in the national paddy output in Sri Lanka. In terms of the rice yield in Sri Lanka, the main habitation region, also known as the dry zone colonization area, remains number one. Between 1935 and 1953, this program was ready to create 29 habitation programs with a total of 13,571 people. The Accelerated Mahaweli Development Program, which commenced in 1979, was the biggest and one of the major colonization initiatives. This was possible to accommodate 128,658 inhabitants by supplying irrigated water from the Mahaweli River whilst also producing hydraulic steam (Bandara *et al.*, 2019). In addition to the previously described significant colonization, the government initiated a program termed as village extension



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in the wet area, which is more densely populated. People were given properties under the LDO for both residential and agricultural reasons (Ellman, 1976). While lands in wet zones were restricted, the government purchased a section of land from major farms and individually held lands via the Land Acquisition Act (LAA) 9 No 9 of 1950. Owners under this plan received fiscal assistance for the building of dwellings, wells, public toilets, and soil protection activities. The upland colonization project in tea, rubber, and coconut was initiated in 1956 by alienating public holdings in the wet area and giving subsidies for the creation of highland allocations. The Young Settlement Program began by allocating lands within LDO specifically for skilled youth to involve them into agricultural and land improvement operations (Chandrasiri, 2010). Later, successive administrations established many land alienation schemes such as Middle-Class Settlement, Co-operative Farms, and special tenancy to alienate a considerable portion of public lands for distribution among inhabitants. The State was able to maintain its monopoly on land ownership in this fashion. Various national schemes, such as 'Swarnabhoomi,' 'Jayabhoomi,' 'Isurubhoomi,' and now 'Ranbima,' were adopted by succeeding administrations, indicating consecutive milestones in the land alienation procedure (Fonseka, 2014).

Land alienation is a basic idea that opens other dimensions over the society's socio-economic wellbeing. It is a well-known political weapon that numerous administrations have employed to entice loyal followers by offering land concessions. It is inextricably linked to political ideas like the government, country, ethnicity, and power. Land is one of the most valuable natural elements in the State and its conservation is critical throughout the ensuing development operations following alienation. When a set of individuals receives additional allotments remote from their present boundaries, they will eventually form a new society by delineating their own lands. As a result, the idea of land alienation is extremely relevant to the State's civilization, culture, politics, economy, and ecology. The programmes are currently matured to the third generation and several illegal transformations of lands has been taken place. Hence an obvious result is the insecure tenure (Wickramaarachchi and Weerahewa, 2018). Various study papers, regional assessments, legislative acts and organizations have been established at various levels to address the drawback of land alienation; however, the concerns still remain in their entirety. Thus, the current study attempts to comprehend the repercussions of the Sri Lankan State Land Alienation Program in terms of demographic, social, political, economic, and environmental concerns.



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METHODOLOGY

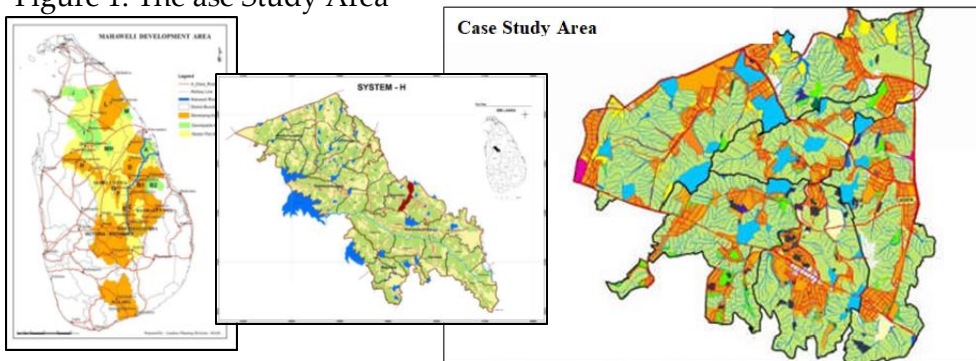
The case study area

The research selected the Nochchiyagama Mahaweli Irrigation settlement, which is in the Anuradhapura District in the North Central Province of Sri Lanka (Figure 1). The Nochchiyagama Mahaweli Block was initiated in 1979 as a pilot programme by the Mahaweli Authority and it is a part of the

Mahaweli H system. It covers an area of 189.35 km². The Nochchiyagama block is divided into four units as follows and comprises of several Grama Niladhari divisions (GN) (Figure 2).

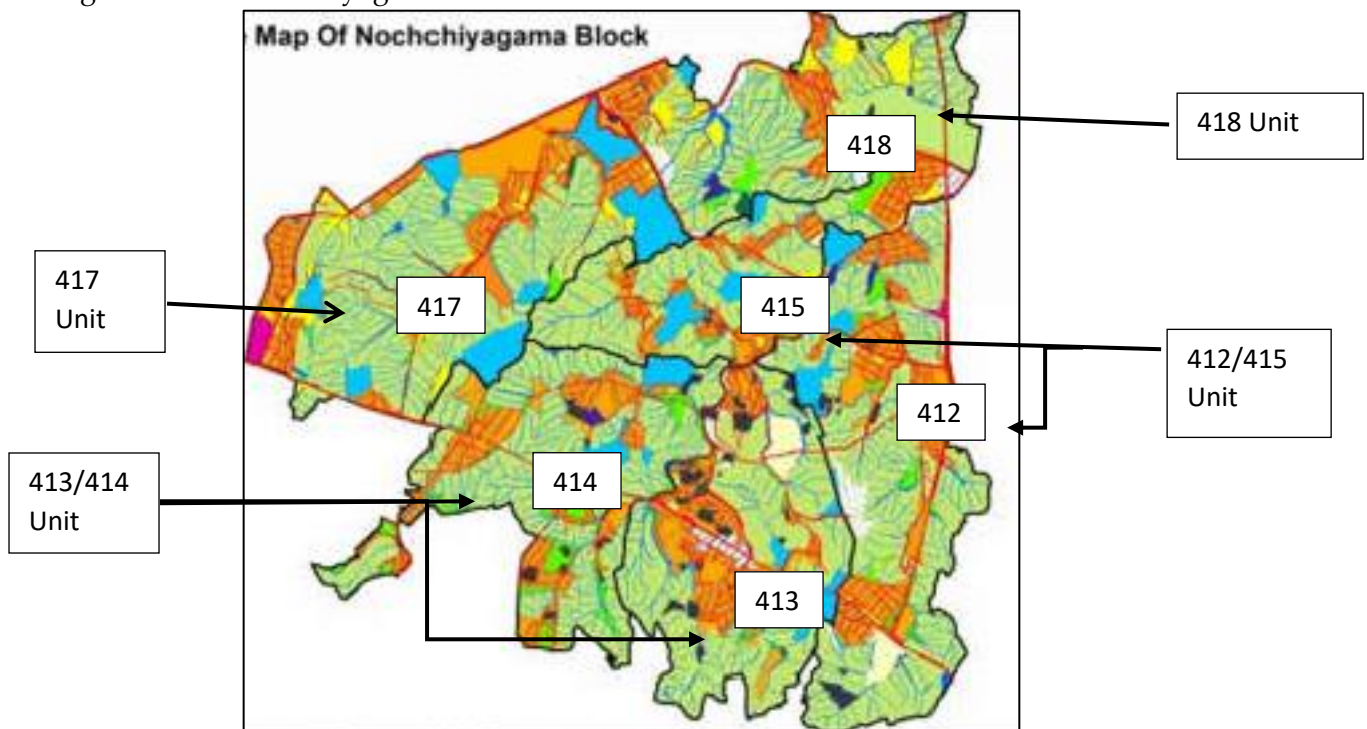
1. 417/418 unit
2. 412/415 unit
3. 413/414 unit
4. 417 City

Figure 1. The ase Study Area



Source: Mahaweli Authority of Sri Lanka, 2018

Figure 2. The Nochchiyagama Mahaweli block unit wise.



Source: Mahaweli Authority of Sri Lanka, 2018



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Population and sampling

This research population and sample are divided into two groups.

1. Population and sample from Professionals.
2. Population and sample from Inhabitants.

Population and sample from the professional's category

It is anticipated to interview officials involved in Sri Lanka's land alienation programme. There are a few professional organizations primarily working with alienation programmes, and for this purpose, professionals were selected from direct organizations that are dealing in the settlement. As the data collection and the analysis approach were qualitative, five (05) professionals were selected using the convenience sampling method as a non-probability sampling method. The selected practitioners of the study are as follows:

1. The Unit Officer of the Nochchiyagama Mahaweli Authority.
2. The Grama Niladari (village level administrative officer-GN) of the Nochchiyagama Grama Niladari Divisions.
3. The Land officer of the Nochchiyagama Divisional Secretariat Office.
4. The Agriculture Officer of the Agriculture Department.
5. The Agrarian Development Divisional Officer of the Agrarian Service Department.

Population and sample from the inhabitant's category

The other population group is the inhabitants in the Nochchiyagama Mahaweli irrigation settlement scheme. There are 18,232 families in Seventeen in Nochchiyagama Mahaweli irrigation settlement scheme (Nochchiyagama Divisional Secretariat office, 2021). Out of these 18,232 families, 100 families were selected as the sample of the the inhabitant's category by using multi-stage sampling technique. At the first stage, four (4) Grama Niladhari Divisions were selected from each unit based on the center of the Grama Niladhari Division in the Unit. Altogether four GN divisions were selected representing one GN each from the above-described unit.

1. 335 - Halmillakulama
2. 339 - Ralapanawa Janapadaya
3. 350 - Phalahalmillawa
4. 354 - Oththappuwa

The Halmillakulama Grama Niladhari Division, which belongs to the 417-city unit, the Ralapanawa Janapadaya Grama Niladhari Division is represented by the unit of 418, the Pahalahalmillawa Grama Niladhari Division is denoted by the 413/414 unit and the Oththappuwa Grama Niladhari Division is symbolized by the 412/415 unit in the Mahaweli area of Nochchiyagama.

Out of these four Grama Niladhari Divisions twenty – five (25) families



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from each Grama Niladhari Division were selected totaling to 100 families. The selection was done according to the systematic sampling method and every 4th family unit was selected based on the irrigated water supply system in this area.

Variables

According to the literature review, the following variables (Table 1) were identified as the issues contributing to the land issues in alienated settlements and for this research the same three types of variables namely social, economic and environment were used adding a new variable called political issues (Table 2).

Variables considered in Literature

Table 1. Summary of the Variables identified according to the literature review.

Main Issue	Sub Factors Considered	Author and Year
Social issues	Insufficient land extent	(Melis <i>et al.</i> , 2006)
Environmental issues	Deforestation and encroachment the forest and preservations	
Economic issues	Inadequate labour force	
Environmental issues	Environmental insecurity, encroachments	(Potts, 2012)
Social issues	Lost complete culture, land ownership issue, inadequate government services.	(Jyothi and Sw, 2016)
Economic issues	Government prohibited land sells	

Social issues	Land ownership issue, ethnic issues, inadequate land extent, inadequate government services.	(Silva, 2017)
Economic issues	Inadequate lands	
Environmental issues	Deforestation, cultivation in reservation, encroachment of environmental sensitive land, corrupt practices.	
Social issues	Insufficient land extent	(Dahlan, 2019)
Economic issues	Inadequate lands, inadequate labor force	
Social issues	Inadequate government services	(Bandara <i>et al.</i> , 2019)
Social issues	Land ownership issue, inadequate government services	(Manaf <i>et al.</i> , 2020)
Social issues	Ethnic issues, inadequate government services, land fragmentation	(Malik, 2020)
Social issues	Inadequate lands	(Boicheni uk, 2021)
Economic issues	Inadequate labour force	
Environmental issues	Environmental degradation, climate change	

Variables considered in this research

This research considers the following variables in the context of the



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Nochchiyagama Mahaweli Irrigation Settlement scheme. It consists of four basic criteria such as social, economic, environment and political issues. The new variable introduced here is the political issue. The sub issues that are discussed under each main variable is depicted in Table 2.

Table 2. Variables considered in research.

Main Issue	Sub Issues
Social Issues	<ol style="list-style-type: none"> 1. Insufficient land extent to share. 2. Land ownership issue. 3. Ethnic Issues. 4. Insufficient water supply. 5. Land fragmentation issues. 6. Land boundaries Issues. 7. Performing various illegal activities.
Economic Issues	<ol style="list-style-type: none"> 1. Inadequate extent of land to cultivate. 2. Low income is reported from the low extent of lands. 3. Government prohibited land sales. 4. Outmigration of labour force.
Environmental Issues	<ol style="list-style-type: none"> 1. Encroachments. 2. Deforestation and desertification issues. 3. Gravel cutting in Mahaweli lands without permission. 4. Dumping sand in Mahaweli lands without permission. 5. Dispose of waste to the paddy fields near the main roads. 6. There is water pollution due to the use of chemicals for cultivation. 7. Cultivating lake and

	forest reservation. 8. Reducing the fertility level of the soil.
Political Issues	<ol style="list-style-type: none"> 1. An unauthorized filling of paddy land. 2. Government prohibited land sales. 3. Unauthorized transfer of lands. 4. Supporting the encroachments. 5. Illegal tree felling. 6. Encroaching lands for (stonepit).

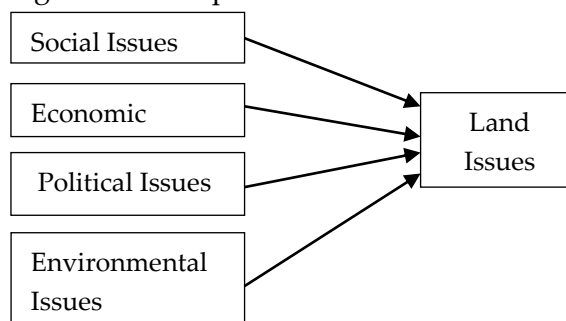
Conceptualization

There are two types of variables in this study.

1. Dependent variable
2. Independent variables

Concerns on the Land Issue variable is considered as the dependent variable in this study. In the quantitative data collection method, concerns on land issues variable is considered as the dependent variable and social, economic, environmental and political issues are considered as the independent variables.

Figure 3. Conceptualization.



Hypothesis

According to the conceptualized model, the following four hypotheses were developed.



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H1; There is a strong positive relationship between political issues and concerns in land issues.

H2; There is a strong positive relationship between environmental issues and concerns in land issues.

H3; There is a strong positive relationship between economic issues and concerns in land issues.

H4; There is a strong positive relationship between social issues and concerns in land issues.

Data collection method

The primary and secondary data was collected from both professionals and inhabitants for the quantitative and qualitative data analysis methods.

As the qualitative approach is used for the five professionals as the sample of the professionals in-depth interviews were conducted as the data collection method. In depth interviews were conducted to collect primary data through the virtual platform, over the phone and face to face interviews due to the guidelines of COVID-19. Before the interview, the demographic profile of the professionals was collected. The name of the officer, age, gender, the education level, the position of the officer, and the years of work experience related to the land alienation programmes were collected. A Guideline was prepared to guide the interviews matching the information collected from inhabitants. Hence, the data collected related on the four factors social, economic, environmental issues and political

issues separately from professionals to find the mostly reported issue in this area.

As the sample, 100 families were selected for the data collection. The Likert scale questionnaire was used as the quantitative data collection method for the inhabitants. The dependent variable and independent variables were made for the quantitative approach. 'Concerns on land issues' is the dependent variable and social, economic, environmental issues and political issues are considered as the independent variables. Consequently, the data for the dependent variable was also collected on the Likert scale basis naming the variable as 'concerns on land issues', whereas the independent variables included social, economic, environmental issues, identified through the literature review and the new variable introduced as 'political issues'. Each of these sub-headings were explored under at least five statements to avoid bias. All five substantial aspects were assessed using a 5-point Likert Scale ranging from 1 to 5.

1-strongly disagree, 2- disagree, 3- Neutral (No idea), 4- Agree, 5-strongly agree.

The data analysis method

Both quantitative and qualitative data analysis methods were used to examine the professionals' and inhabitants' view to enhance the validation of the final interpretation.



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The quantitative data analysis method

The quantitative data analysis method is used to analyse the inhabitants' view to find out the most significant issues. The maximum advanced level of correlation and regression analysis for this research was applied to find out the most significant issue in the Nochchiyagama Mahaweli Irrigation Settlement Scheme as the quantify approach.

The descriptive statistics were developed according to the demographic profile and characteristics of the land. Next, a mean value analysis was done for the Likert-scale questions. To identify the relationship, the correlation analysis was done, and the regression analysis was done to find out the contribution of each dependent variable on land issues.

The following regression equation was derived from the available data for predicting the concerns on land issues.

As the formula,

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

Where,

\hat{Y} = Dependent Variable (Concerns on Land Issue)

β = Coefficients

X_1 = Independent Variable (Social issues)

X_2 = Independent Variable (political Issue)

The qualitative data analysis method

The qualitative data analysis method was used to analyse professionals' views. A content analysis was done to analyze the professionals' views (Table 9).

RESULTS AND DISCUSSION

Quantitative analysis

Descriptive analysis was done for the two categories by using pie charts, bar charts, a frequency table and histograms.

The demographic profile

Table 3 reveals that the percentage of male and female participants (n=100) was roughly equal, with slightly more male (n= 52) participants than female (n=48) participants. Participants were classified into two age groups: 19- 60 years (n=61) and over 61 years (n=39). Most of the participants had married (n = 60) and most of them had a grade 6 to 10 year education level (n= 45), while a small number of respondents had a grade 5 and below education level (n= 10) and graduate (n=11). The employment structure was divided as n=36 for agriculture, n=26 for private sector, n= 20 for the government sector and others are unemployed (n=18). A majority of them had 6 to 15 years of experiences (n=27). Among the 100 respondents, 61% of the main income source was agriculture and the rest earned from the non-agriculture (n=9) source.



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Table 3. Demographic profile

Description	%	Description	%
Gender		Employment structure	
Male	52	Government sector	20
Female	48	Private sector	26
Age distribution		Years of experience	
19 - 60	61	Agriculture	36
Over 61	39	Unemployed	18
Marital status		Main income source	
Married	60	Below 5 years	12
Single	40	6 to 15 years	27
Education level		Occupied type	
Grade 5 and below	10	16 to 25 years	26
Grade 6 to 10	45	26 to 50 years	18
Ordinary level	19	Above 51 years	17
Advanced level	15	Agriculture	61
Graduate	11	Non-Agriculture	39

Source: Survey Data, 2021

Characteristics of land

The characteristics of the land are summarized in Table 4. Paddy land is the most common answer for the types of land. 60% of landowners are second owners. According to the survey results, the majority of individuals have inherited land (n=43). The majority of the people live on their own property, which accounts for 85 percent of the sample. When the survey data is examined, 50% of the respondents have deeds to prove ownership.

Table 4. Characteristics of the land

Description	%	Description	%
Type of land owned		Occupied type	
Paddy Land	35	Individual	85

High Land	33	Owned by two or more	15
Both	32	Ownership Proving Documents	
Order of ownership		Deed (permanent)	50
1st Owner	4	Permit (temporary)	30
2nd Owner	60	Others (informal)	20
3rd Owner	31	The way of ownership was obtained	
Other	5	Inherited	43
The way of ownership was obtained		By sale	21
Inherited	43	Acquisition	5
By sale	21	Transfer	15
Acquisition	5	Encroachment	16
Transfer	15		
Encroachment	16		

Source: Survey Data, 2021

According to the Likert scale questionnaire, the following independent variables were identified for analysis,

Social issues, economic issues, environmental issues, and political issues. Concerns on land issues variable is considered as the dependent variable in the quantitative analysis and the Likert scale questionnaire was used to collect data from the dependent variable.

Reliability and validity

This research used the "Cronbach's Alpha" to determine the reliability and validity of data. According to the SPSS survival manual (Pallant, 2013), for the reliability and validity of a research



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tool and for better internal consistency of the research tool Cronbach’s Alpha is vital and the value is ≥ 0.7 . According to the survey data (Table 5), the Cronbach's alpha for all variables exceeds 0.7 and the data is satisfactory to be used for further analysis.

Table 5. Reliability test

Variables	Cronbach’s Alpha
Social issues (IV)	0.892
Economic issues (IV)	0.704
Environmental issues (IV)	0.740
Political issues (IV)	0.711
Concerns on Land issues (DV)	0.834

Source: Survey Data, 2021

Descriptive statistics on independent variables

Table 6 shows the descriptive statistics for each component of independent variables as well as dependent variables.

All four significant elements were evaluated using a 5-point Likert scale ranging from 1 to 5 (strongly disagree to strongly agree). The mean score ranges between 2.59 (± 0.955) and 3.8 (± 1.454). The mean values for two variables, i.e., social issues (3.8) and environmental issues (3.4), obtained a mean score above 3. Conversely, economic issue and political issue represented the mean value below threshold level 3, viz., 2.76 (± 0.8) and 2.59 (± 0.9) respectively. Accordingly, **social issues show the highest mean value**. The dependent variable of concerns on land issue obtained 4.5 mean value.

Table 6. Frequencies of descriptive statistics

No	Type of Issue	Mean value	Std. Value
1	Social Issue (IV)	3.898	1.4547
2	Economic Issue (IV)	2.766	0.8782
3	Environmental Issue (IV)	3.494	1.1033
4	Political Issue (IV)	2.59	0.9551
5	Concerns on land issues (DV)	4.5	0.5816

Source: Survey data, 2021

Correlation analysis

Table 7 represents the results of correlation analysis. Correlation Analysis demonstrates the relationship between the dependent (land issues) and independent variables.

Table 7. Correlation Analysis

		Concerns on Land Issues
Political Issues	Correlation coefficient	.339**
	Sig. (2-tailed)	.001
Economic Issues	Correlation coefficient	.223*
	Sig. (2-tailed)	.026
Environment Issues	Correlation coefficient	.308**
	Sig. (2-tailed)	.002
Social Issues	Correlation coefficient	.858**
	Sig. (2-tailed)	.000

**significant @1%

Source: Survey Data, 2021

According to the Spearman correlation results, the association between political issues and concerns on land issues was statistically significant at the $P < 0.05$ level, with a coefficient of



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+0.339. It demonstrates that there is a weak positive association between political concerns and land issues. The association between economic issues and land difficulties was statistically significant at the $P < 0.05$ level, with a coefficient of +0.223. It demonstrates that there is a weak positive association between economic concerns and land issues. The correlation between environmental concerns and land issues was statistically significant at the $P < 0.05$ level, with a coefficient of +0.308. It demonstrates that there is a moderate positive association between environmental issues and land issues. Finally, the correlation between Social Issues and Concerns on Land Issues was statistically significant at the $P < 0.05$ level, with a coefficient of +0.858. It demonstrates that there is a strong positive association between social difficulties and land issues. Hence the

alternate of the fourth hypothesis is accepted. Because four hypotheses have a positive relationship with the dependent variable of concerns on land issues. According to the above Table 7, it depicts those social issues have strong positive correlation with land issues. Finally, this analysis shows that social issues (IV) have a strong positive relationship with concerns on land issues (DV).

Regression analysis

Whilst the correlations results show the positive relationship between all the independent variables with the dependent variable, it is decided to analyze the level of impact of the two variables such as social issues and political issues that had moderate and a strong positive relationship. Table 8 reflects the results of the regression analysis.

Table 8. Regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.007	.682		-1.477	.143
Social	1.750	.110	.827	15.979	.000
Political	.045	.093	.027	.487	.627

a. Dependent Variable: Concerns on Land Issues

Source: Survey Data, 2021

Unstandardized coefficients show how much the dependent variable changes with an individual variable while all other independent variables are maintained constant. Table 8 shows that social issue is positive and significant at 1% level showing an increase in the social issues by 1% will

increase the concerns on land issues by 1.7%.

Qualitative data analysis

The data collected from the five professionals shows as follows and Table 9 represents the analysis.

Res1#: "There are many encroachments. Farmers cultivate on reservations. Due to



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the inadequate extent of people farming the reservation areas, they encroached on lands which were saved for future developments. Because the current generation has no land to even live on or build a house....."

Res 2#: "There are many people who do not have deeds. Because the process of issuing deeds is a very complicated process and it takes a lot of time. Also, there are reports of disputes between the owners of the deeds that have been given as they have not indicated any inheritance after their death. They cannot get any loans without a deed. So, people who have not, they suffered from that....."

Res 3#: "There is no adequate land extent to second and third generations. Because Mahaweli Authority of Sri Lanka has given lands only to the first generation. Large number of people who do not have deeds then, they cannot get any loan without deed. The younger generation is leaving for other areas for employment as there is not enough land for cultivation. And encroach forest areas and reservation areas to carry out the Chena cultivation....."

Res 4#: "There are Problems due to insufficient water supply to paddy fields and inadequate land extent is the major problems in currently. Non availability of formal drainages because cultivator's do not maintain their drainages. As the result of that, there was water wastage and cannot get sufficient water. Because drainages are blocked with various barriers due to improper maintenance...."

Res5#: "There are problems are occurred due to the negligence of the second generation in allocating lands by the Mahaweli Authority, currently second generation have not enough land extent. The people living now have no title or deed to the land. Meantime, they have not been able to get any loans. Insufficient water supply is the main issue in paddy land due to lack of maintenance. There are many unauthorized lands selling and Paddy land filling occur frequently..."

Table 9. Content Analysis

Factor	RE 01	RE 02	RE 03	RE 04	RE 05
Social Issues - 17					
Fragmentation lands and no separate deeds	√	√	√	√	√
Issues of land boundary	√		√	√	√
Quarrels between family members	√	√	√		√
The non availability of formal drainage and insufficient water supply		√	√	√	√
Economic Issues - 13					
Inadequate land extent	√	√	√		√
Inadequate labour force	√				√
Difficult to obtain loans		√	√		√
No stable prices for paddy	√	√	√	√	
Environmental Issues - 14					
Reducing fertility		√	√	√	√
Cultivation on forest reservation	√		√	√	√
Deforestation		√	√		√
Encroachment	√	√		√	
Political issues - 6					
Unauthorized paddy land filling		√			√
Unauthorized land			√		



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selling		
Granting	√	√
unauthorized		
ownership		
Unauthorized	√	
seizure		
of		
government lands		

Source: Survey data, 2021

According to the above Table 9, social issues have seventeen “√” marks, economic issues have obtained thirteen “√” marks, environmental issue have fourteen “√” marks and political issues have six “√” marks. As per the above √ mark shows that many responses have declared that there are more social issues.

According to the interview data, one of the most problematic societal concerns in this study is a lack of deeds. Most of the inhabitants suffered from this issue.

Furthermore, global and local researchers have mentioned that social issues are the main issues after the land alienation programme. The outcomes of this research tally with the following studies. In the global context, in the Indian context, lost entire culture, ownership concerns, and issues relating to agricultural land operations are all social issues (Malik, 2020). The government did not provide proper training or right information for people and there was no irrigation facility. A major issue is that they have no ownership of the land, and they cannot sell their land and cannot obtain loans (Jyothi and Sw, 2016). They cannot mortgage those lands to obtain bank loans from even

public sector financial institutions (Sharan, 2005). The main issues are social marginalization and a high level of destitution by tribes (Haseena, 2014). In the local context, according to (Silva, 2017), in his research has identified for the social issues as land tenure issues and ethnic issues. Samarasingha and Aheewar (2013) recognize informal and formal fragmentation. The direct effect of land fragmentation is reduced land productivity, deforestation and cultivation in reservation (Silva, 2017). According to Bastian (1997), colonization schemes contribute to ethnic issues. A high level of population growth of settlement they have not enough lands for cultivation in Rajanganaya settlement scheme. Landlessness is major social problem in settlement areas. As a result, mitigation is one of the issues in these settlements (Ranbara Senaka-Arachchi, 1995). Population growth rate and land fragmentation issues are coursed to move encroachments, and these are the main challenges that communities faced (Köpke, 2019). Land alienation has been a novel concept in the regional development literature that has attracted a lot of interest. These are some of the social issues in alienation programmes locally and globally.

CONCLUSION AND RECOMMENDATIONS

Both qualitative and quantitative analytical methodologies agree with



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each other's findings, indicating that the consequences of the State Land Alienation Programme in Sri Lanka are primarily a matter with social challenges. According to the above, it is mainly reviewed that social issues are the most significant issue. The quantitative analysis shows the highest significant value for social issues and at the same time, qualitative analysis findings happen to be almost the same.

According to the descriptive analysis under the quantitative analysis, the demographic profile, of the inhabitants shows that the majority were females; 19 – 60 age category; educated pass Advanced level and grade 6-10 educated category; 16 to 25 years' experience in living & cultivating in the Nochchiyagama area with the main income source as being agriculture. As per the land characteristics a majority of responses have paddy land; owners are 2nd owner of the lands; have land through inheritance; half of the responses have deeds to ensure the ownership. Furthermore, according to the mean value analysis, the independent variable of social issue was obtained as the highest mean value among the other independent variables. According to the correlation analysis, all four hypotheses are accepted. Results of the correlation analysis show that, there is a strong positive relationship between social issues and concerns on land issues. According to the regression analysis, social issues

have a strong contribution to the dependent variable.

The findings of this study indicate the immediate actions needed from the government to mitigate such social issues, as perhaps the issues dominating to effect on the productivity of lands too. In the future studies can more attention on climatological variation such as dry, intermediate and wet zones of land alienation programmes in Sri Lanka. According to the above findings, the government should pay more attention for the highlighted issues especially on social issues. To overcome these issues, more attention should be paid by the authority on social issues.

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