



NINTAVUR

DEVELOPMENT PLAN

(2021-2030)



Urban Development Authority
Ministry of Urban Development & Housing





Nintavur Development Plan 2021 - 2030

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Nintavur Development Plan 2021 – 2030 mainly consists of three parts as Part I, II and III. The Part I consists of the background study, preliminary studies, the need of the plan, the planning framework, the SWOT analysis and the plan. The Part II consists of the Planning and Building Regulations and Zoning Regulations pertaining to the planning boundary for the period of 2021 – 2030. The part III consist of the zoning boundaries with the coordinates and all the annexures.

Nintavur Development Plan 2021 – 2030 has been prepared by the Eastern Province Ampara District Office.

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ACKNOWLEDGEMENT

The Ampara District Office of Eastern Province has taken the lead to provide the supervision for the preparation of the Nintavur Development Plan 2021–2030. The vision of the **“Brimming Agro Hub”** is in line with the **‘Vistas of Prosperity and splendour’** the government policy direction of the His Excellency the President Gotabaya Rajapaksa.

It is our proud privilege to Honourable Mahinda Rajapaksa subject Minister of Urban Development & Housing for approving the Nintavur Development Plan 2021 – 2030 under the provision of Urban Development Authority Act No. 41 of 1978 as amended by the Act No. 04 of 1982. Further, it is our privilege to Dr. Nalaka Godahewa, State Minister of Urban Development, Coast Conservation, Waste Disposal and Community Cleanliness and Mr. Sirinimal Perera, Secretary to Ministry of Urban Development & Housing for their guidance and supports in this process.

Special gratitude offered on behalf of the planning team and the UDA, to the Chairman **Nintavur Pradeshhiya Shaba** and members of the PS and the staff for their generous support given for the successful completion of this development plan.

Also, special appreciation on behalf of the UDA offered to Government and Non – Government agencies and Special gratitude offered on behalf of the planning team and the UDA, to the Hon.M.C.M.Faizal Cassim Former Deputy Minister of Health Nutrition and Indigenous Medicine and Chairman of Nintavur Pradeshhiya Shaba Hon. M.A.M Thahir, Nintavur Welfare council (NWC) who has provided the relevant data and other support for the plan for giving data and directives required for the preparation of this plan.

Appreciatively thankful to Chairman of UDA Archt. Harshan De Silva, Director General of UDA Plnr. N.P.K. Ranaweera, Additional Director General of UDA Plnr. H.A. Dayananda, Deputy Director General (Planning) of UDA Plnr. M.P.Ranatunga, Director, Plnr.L. J.Liyange Director, Plnr. Lalith Wijayarathne (Eastern Province), Director Plnr E.M.S.B Ekanayake (Eastern Province), of UDA Consultant (Legal) of UDA Attorney at Law C. Jayawardena, Director (Strategic Planning) of UDA Plnr. PriyaniNawarathne on behalf of the planning team for their incomparable courage, guidance and welcoming support.

In the end, Director – Environment & Landscape division L.Arct. C.K.E. Kalupahana and the staff of the division and Director - Geographical Information System & ITS Plnr. J.P.S. Somasekara and Mrs Christeen Sudharshan, Mr. Praveen Kavinda. In addition, Miss.Kalani Design the Cover page, Mr. Milan Anjana and Mrs. Padmini Gamlath Page setup and staff members of all divisions are gratefully appreciate on behalf of the planning team for their support to the successful completion of this task.



HONORABLE MINISTER'S FORWARD



The Urban Development Authority was established under the Urban Development Authority Act No. 41 of 1978, for the systematic planned urban development in the declared urban areas and continue to actively contribute towards it.

Steps have been taken to formulate comprehensive development plans for each urban development area, based on the efficient and effective use of physical space so that all areas of Sri Lanka make an equal contribution to the development process of the country.

The Nintavur town provides services to the local and commuter population. Accordingly, Nintavur Pradeshiya Sabha Planning Area has the potential to become a town that continues to provide industrial and commercial services. This potential is further enhanced by protecting the paddy lands. These development plans aim to develop the Nintavur town by utilizing the potential of the area.

For the realization of His Excellency the president's vision "Vistas of Prosperity" the new Re-urbanization Programme has been formulated in wide consultation with Professionals, Specialists, Stakeholders & communities with strategies having an excellent technological methodology and innovative approach.

Accordingly, I commend the Chairman of the Urban Development Authority, the Director General, the planning teams and all the officers of the Urban Development Authority who assisted in making this work a success. Further, I also appreciate and believe through the support and contribution of the relevant Local Government Institutions, Public and Private Sector Institutions and the general public, Nintavur Development plan would be successfully implemented.

Hon. Mahinda Rajapaksa (M. P)

Minister of Urban Development & Housing



HONORABLE STATE MINISTER'S FOREWORD



As a pioneer in Sri Lanka in achieving modern sustainable development goals, the Urban Development Authority has a great responsibility. Accordingly, it is essential to prepare development plans for the Urban Development Areas declared by the Hon. Minister in charge of the subject in terms of the Urban Development Authority Amendment Act No. 04 of 1982 (Part II, Section 8A (1)).

The development plans thus formulated are primarily aimed at building a productive citizen, a happy family, a dignified society and a prosperous nation, which are the core aspirations of the vistas of prosperity. I also believe that these development plans will go a long way in achieving the objectives of urban development and regulation through a formal re urbanization plan that will bring economic stability to the urban population.

Therefore, I would like to express my heartfelt gratitude to the planning team and to all those who have played a very responsible role in preparing this plan and I hope that you will all contribute to the expectations of the vision of prosperity.

Dr. Nalaka Godahewa (M.P)

**State Minister of Urban Development, Coast Conservation,
Waste Disposal and Community Cleanliness**



HONORABLE CHAIRMAN'S FORWARD (UDA)



Throughout the last four decades, Urban Development Authority has been serving as the apex planning authority in Sri Lanka having the statutory powers to prepare and enforce urban development plans.

Urban Development Plans cover a number of fields including optimum, effective and efficient use of land and managing the quality of its environment. These development plans are prepared for the promotion and regulation of public well-being in urban areas and the people.

According to the present government's manifesto, it is compulsory to prepare development plans for areas which have been declared as urban development areas by the subject minister as per section 8 A (1) under part II of Urban Development Authority Act No. 04 of 1982 (Amendment).

The Development Plan for Nintavur Pradeshiya Sabha area has been prepared for the period 2021 – 2030 considering the physical, economic, social and environmental factors, while successfully overcoming the challenges in preparing the development plan through tools and methodologies with which the Urban Development Authority is equipped.

Therefore, I extend my heartfelt gratitude to the planning teams who dedicatedly worked for ensuring successful completion of this plan and to those who contributed in numerous ways. At the same time I also expect that all parties who contributed for the preparation of this plan will also effectively contribute in future as well for successful implementation of the plan.

Archt. Harshan De Silva

Chairman

Urban Development Authority



HONORABLE CHAIRMAN'S FORWARD (NINTAVUR PS)



We extend our gratitude towards Urban Development Authority for the initiative taken to prepare a Development plan Nintavur Predeshiya Sabha Area and we appreciate UDA's attempt to make Nintavur Development Plan a collaborative and participatory exercise by incorporating the recommendations, suggestions and criticisms given by us, the representatives of general public.

Hence, we declare it as our plan and ensure our future collaboration and support in the implementation of Nintavur Development Plan - within the next eleven years. Also, we request all public and stakeholders of Nintavur to act at individual and corporate levels to lead the Town towards the shared vision as envisaged by the Nintavur Development Plan – 2030.

Hon. M.A.M Thahir
Chairman
Nintavur Predeshiya Sabha.



PREFACE

The entire Nintavur PS area has been declared under the UDA Act No. 41 of 1978 by a special gazette bearing no 1399/16 of 30th June 2005 by the Minister in charge of the subject of Urban Development as an urban area. Accordingly, attention was drawn to prepare a development plan for the Nintavur area.

The basis for the preparation of development plan can be identified as the data collection in relation to the years 2012 – 2019 and the data collected from the field surveys carried out. And analysis of collected data by using the scientific methods of analyzing and coming to the conclusions upon them. Accordingly, development plan for Nintavur PS area has been prepared for the 2021-2030 period, by utilizing the results and the decisions have been taken at various times in the development planning process and with the practical process and mixing of the same with the practical aspects of the Nintavur PS area.

Nintavur Development Plan 2021-2030 consists of three main parts such as part I, part II, and part III. The part I consists of the background study. Preliminary studies, the need of the plan, the planning framework, the SWOT analysis and the plan. Part II consists of the Planning and Building Regulations and zoning regulations pertaining to the planning boundary for the period of 2021 – 2030. The Part III consist of the zoning boundaries with the coordinates and all the annexures.

Part One - Chapter 1 of the plan detailed out the meaning of the term development plan, its legal context, the stakeholders of the plan, its context and the planning process followed. And chapter 2 & Chapter 3 respectively include the planning area, history of the area, boundary delineation of the area and need of the plan in detail. Chapter 4 consists Vision, Goals and Objectives and Strategic Plans while Chapter 5 include the detailed description on the baseline SWOT analysis for each Goal. Further, Chapter 6 of the plan describes the conceptual plan and proposed land use development plan. Under that the main strategic plans of the Nintavur Development Plan such as Road and Transport Development strategy, Sustainable Environment development strategy, Economic development strategy, Infrastructure development strategy and implementation strategy has been detailed out as sub sections.

Similarly, Part Two - Chapter 7 has been dedicated to describe planning & Building regulations and in chapter 8 described the identified zones and zoning regulations and Chapter 9 included proposed road width, building line and reservations.

Thus, the intention of this Authority and the Government of Sri Lanka is to implement the Nintavur Development Plan 2021-2030 in near future.



**APPROVAL OF THE DEVELOPMENT PLAN FOR THE NINTAVUR
PRADESHIYA SABHA AREA**

I, Mahinda Rajapaksa, Minister of Urban Development and Housing do hereby approve the development plan for the Nintavur Pradeshiya Sabha Area, having considered the recommendation made by the Board of Management of the Urban Development Authority on 24th September, 2020 by virtue of the powers vested in me under section 8 “F” of the Urban Development Authority (Amendment) Act No.4 of 1982.

Mahinda Rajapaksa (M.P)

Minister of Urban Development and Housing

Ministry of Urban Development and Housing,
17th and 18th Floors,
“Suhurupaya”,
Sri Subhuthipura Road,
Battaramulla.

Date: 30th March, 2021.

GAZETTE NOTIFICATION



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The Gazette of the Democratic Socialist Republic of Sri Lanka
EXTRAORDINARY

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PART I : SECTION (I) — GENERAL

Government Notifications

APPROVAL OF THE DEVELOPMENT PLAN FOR THE NINTAVUR PRADESHIYA SABHA AREA

I, Mahinda Rajapaksa, Minister of Urban Development and Housing do hereby approve the development plan for the Nintavur Pradeshiya Sabha Area, having considered the recommendation made by the Board of Management of the Urban Development Authority on 24th September, 2020 by virtue of the powers vested in me under Section 8 "F" of the Urban Development Authority (Amendment) Act, No. 4 of 1982.

MAHINDA RAJAPAKSA (M. P.),
Minister of Urban Development and Housing.

Ministry of Urban Development and Housing,
17th and 18th Floors,
"Suhurupaya",
Subhuthipura Road,
Battaramulla,
30th March, 2021.

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 PART I: SEC. (I) - GAZETTE EXTRAORDINARY OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA - 13.07.2021

NOTICE OF APPROVAL OF THE DEVELOPMENT PLAN FOR THE PRADESHIYA SABHA LIMIT OF NINTAVUR

NOTICE is hereby given to the General Public of the Democratic Socialist Republic of Sri Lanka under Section 8(G) of the Urban Development Authority Law No. 41 of 1978 as amended by the Act, No. 4 of 1982 that I, Mahinda Rajapaksa, the Minister in charge of the subject of Urban Development & Housing, by virtue of the powers vested in me under Section 8(F) of the said Act, have approved the Development Plan for the Pradeshiya Sabha Limit of Nintavur, prepared under Section 8(A) of the said Act on the 30th day of March, 2021.

MAHINDA RAJAPAKSA (M.P.),
 Minister of Urban Development & Housing.

Ministry of Urban Development & Housing,
 17th and 18th Floors,
 "Suhurupaya",
 Subhuthipura Road,
 Battaramulla,
 12th July, 2021.

07 - 542/2

APPROVAL OF THE DEVELOPMENT PLAN FOR THE PRADESHIYA SABHA LIMIT OF NINTAVUR

PUBLIC are hereby informed that the Development Plan prepared for the Pradeshiya Sabha Limit of Nintavur under Section 8(A) of the Urban Development Authority Law, No. 41 of 1978 as amended by the Act, No. 4 of 1982, has been approved on 30th March 2021, by Hon. Mahinda Rajapaksa, Minister of Urban Development & Housing by virtue of powers vested on him under Section 8(F) of the said Act.

Archd. HARSHAN DE SILVA,
 Chairman,
 Urban Development Authority.

12th July, 2021.

07 - 542/3



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PART I





Chapter 01

Background of the Study

1.1 Introduction

Future of an urban area will be decided by the integrated trends of social, economic, physical and environmental forces. Magnitude of the above forces can help to progress or destruct the development of an urban area. To enhance the Magnitude value in a progressive manner a planning intervention for any urban area is needed.

Urban Development Authority law no: 41 of 1978 is the law to provide for the establishment of an Urban Development Authority to promote integrated planning and implementation of economic, social and physical development of certain areas as may be declared by the minister to be urban development areas. Thus, the Urban Development Authority has been established and empowered to function as a key urban planning and implementing agency and regularity body of Urban Development of Sri Lanka. Under Section 3(1) where the minister is of opinion that any area is suitable for development, the minister may by order published in the gazette, declare such area to be an urban development area. Accordingly, Divisional Secretariat Division of Nintavur was declared as an “Urban Development Area” with effect from 30th June 2005 by the gazette notification No. 1399/ 16.

Under the section 8 of Urban Development Authority Act no: 41 of 1978 and under the section 3 of (Amendment) Act No 4 of 1982 to provides the legal provisions for the preparation of the development Plan.

Under the given provisions, preparation of Urban Development Plan for Nintavur Pradeshiya Sabha was started in 2017 and it will include the development strategy and guidelines for a period of next 10 years’. Then published in a gazette notification.



1.2 Stakeholders of the Plan

The following planning professionals have been engaged to preparing Nintavur Development Plan.

Main Stakeholder

- Nintavur Predeshiya Sabha

Main Consultancy Agencies

- Nintavur Welfare Council
- Divisional Secretariat Nintavur
- Superintendent of Survey Ampara
- Private Coordinator Deputy Ministry of Health, Nintavur
- Trustee Board Jummah Mosque, Nintavur
- Rice millers Association, Nintavur
- Farmers Association Nintavur
- Fisheries and Aquatic Resources, Kalmunai
- Agrarian Service Department, Ampara

Stakeholder Groups

- Electricity Board, Kalmunai
- Central Environmental Authority, Ampara
- Department of Irrigation, Ampara
- Geological Survey and Mines Bureau, Ampara
- Department of Agriculture, Nintavur
- Coconut Cultivation Board, Ampara
- Land Use Policy Planning Department Ampara
- National Water Supply Drainage Board, Ampara
- Department of Wild Life, Ampara
- Coastal Resources Management and Coastal Department, Kalmunai
- Medical Officer of Health, Nintavur
- Traders Association, Nintavur
- Fisheries Association, Nintavur
- Bricks Makers Association, Nintavur
- Road Development Authority, Kalmunai



- Assistant Commissioner of Local Government Office, Ampara
- Disaster Management Center, Ampara
- National Housing Development Authority, Kalmunai
- Urban Development Authority Planning Team

UDA Supportive Divisions

- Strategic Planning Division
- GIS Division
- Landscape Division

1.3 Scope of the Development Plan

Nintavur is famous location for high yield paddy fields and paddy related small scale industries. Accordingly, paddy is the key potential in Nintavur but at present the paddy land has been threatened by various natural and manmade forces. Therefore, an immediate planning intervention is much needed to protect the local potential.

According to the local context of Nintavur, the development plan attempts more focus only its Physical and Environmental setting.

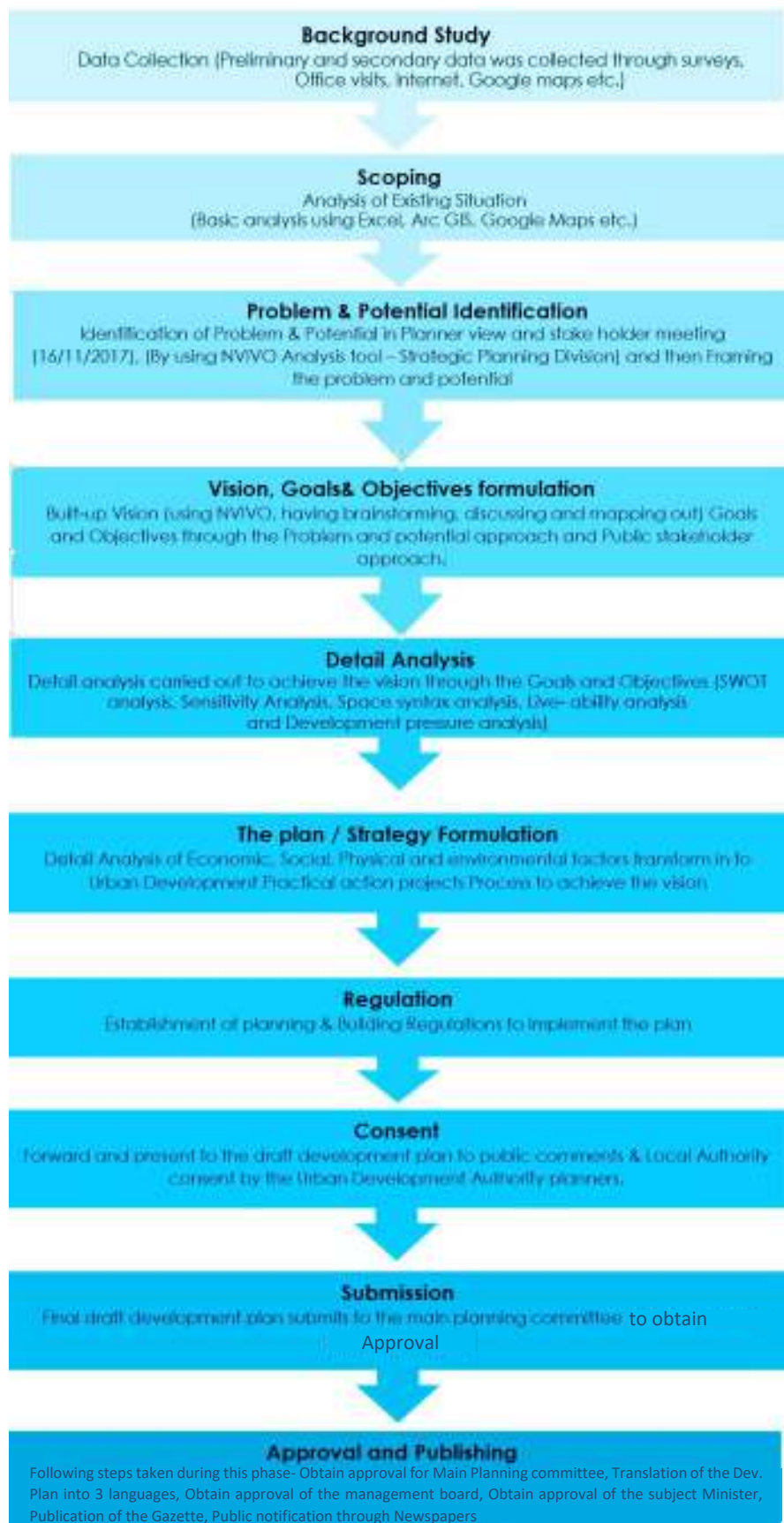
Also, Sea is one of the potentials in this locality but the resource has not been tapped in satisfactory level and this local development plan will not intervene to tap the potential due to the certain factors belong to the locality.

Although, Nintavur has strong linkages with many surrounding town centers in terms of getting raw material and supply the products, by this development plan it is expected to cover the entire Nintavur declared area only as the planning area and create the disaster resilient vibrant town center by 2030.

1.4 The Planning Process

Under the background study and framing Data and information are collected in several methods and then scopes collected data and information. Thereafter problems and potentials are framed out by planning team and stakeholders. Accordingly, the vision, Goals and Objectives are formulated through essential approaches. Then the detail analysis is done to emphasis the goals. Thereafter strategies are formulated to achieve the vision through goals.

A set of regulation are developed to implement the plan and the draft plan is forwarded to the Local Authority for consent and public comments while presenting to main planning committee of Urban Development Authority. After that final draft development plan is submitted to the main planning committee. After getting necessary approvals the plan is published.





Background Study:

Data Collection (Preliminary and secondary data was collected through surveys, Office visits, Internet, Google maps etc. Wind screen survey, Interview, and Question are survey)

Preliminary Survey:

Preliminary survey was started in April beginning 2017 as wind screen survey and land use survey. In the primary data we have collected rice mills annual product, average income and where they market their product by using questionnaire survey and interview. We have done Land use survey by field visit and observation.

Secondary Survey:

The data and information were gathered from various institutions from April 2017 – October 2017 especially from Nintavur DS office, Nintavur Pradeshiya Sabha, Ampara Kachcheri, Ampara Disaster Management Center and Nintavur Farmers Association.

In this stage we have collected many relevant data such as population, housing, employment, health data, infrastructure facilities, educational, etc.

Scoping:

The collected data was analysis the existing situation of local area by using Arc GIS, Excel, Google map such as Population prediction, Population density map, land use map, required basic infrastructure amenities (Housing, Water supply, Electricity)

Problem & Potential Identification:

Problem & Potential Identification: we have identified and finalized the problem and potential of the locality by having many discussions among the planning team as well as selected stake holder. In that case we had many stakes holder meeting.

- Famer Association meeting held on 26/ 09/ 2017
- Grand mosque trustee board meeting held on 10/ 10/ 2017
- Main Stake holder meeting held on 16/11/ 2017

**Vision & Goals, Objectives formulation:**

Built-up Vision while using NVIVO software report and having brainstorming, discussing and mapping out and then develop the Goals and Objectives through the Problem and potential approach and Public stakeholder approach to achieve the vision.

Detail analysis:

Carried out to achieve the vision through the Goals and Objectives such as SWOT analysis, Sensitivity Analysis, Space syntax analysis, Live- ability analysis and Development pressure analysis.

The Plan / Strategy formulation:

Detail Analysis of Economic, Social, Physical and environmental factors transform in to Urban Development Practical action projects Process to achieve the vision by 2030.

Regulation:

Establishment of planning & Building Regulations to implement the plan.

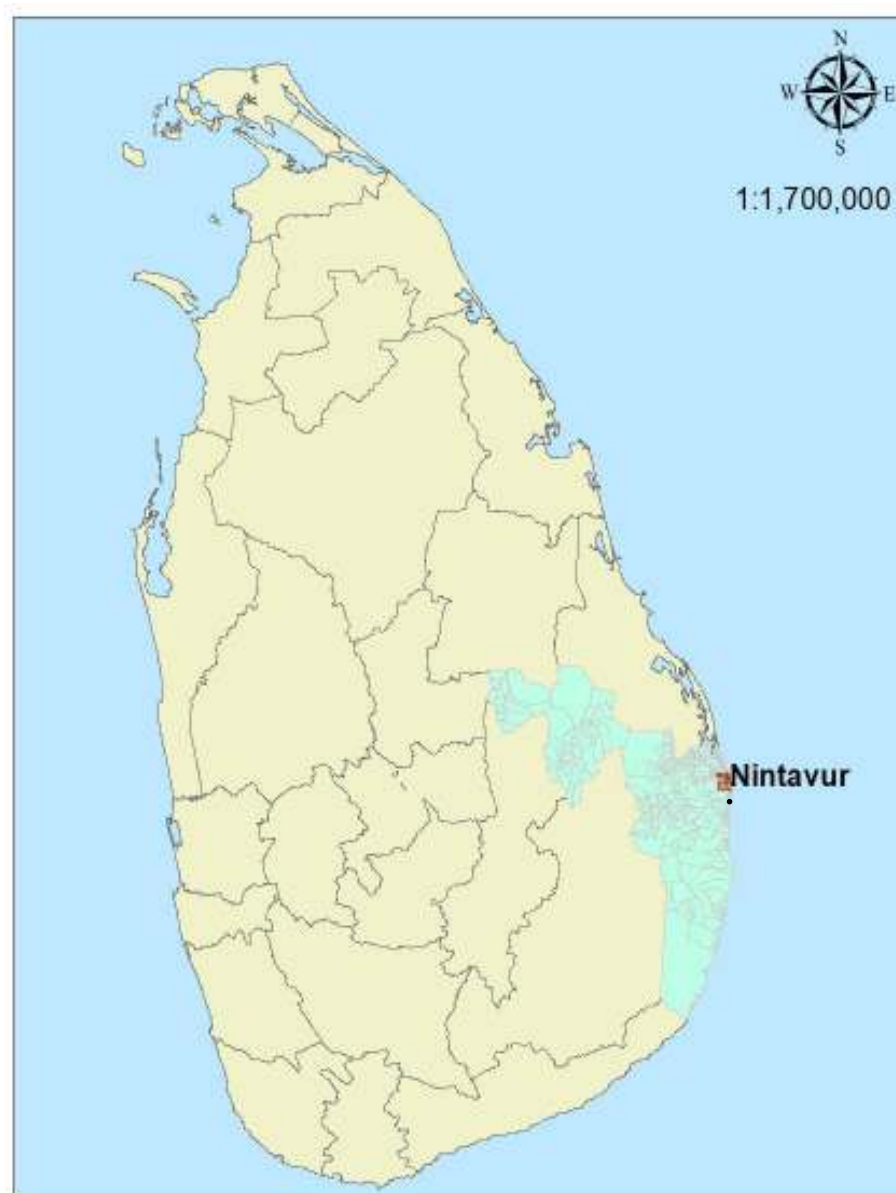


Chapter 02 Preliminary Study

2.1 The Planning Area

Both the boundaries of Nintavur Divisional Secretary and Nintavur Pradeshiya Sabha areas same and has been clearly demarcated by natural features in all directions. It is bounded in North by Vettaru River, in East by Indian Ocean, South by Kaliodai River and the west by paddy fields adjoins to Sammanthurai town. The total land area is approximately 36Sq.Km (3,600 Hectares).

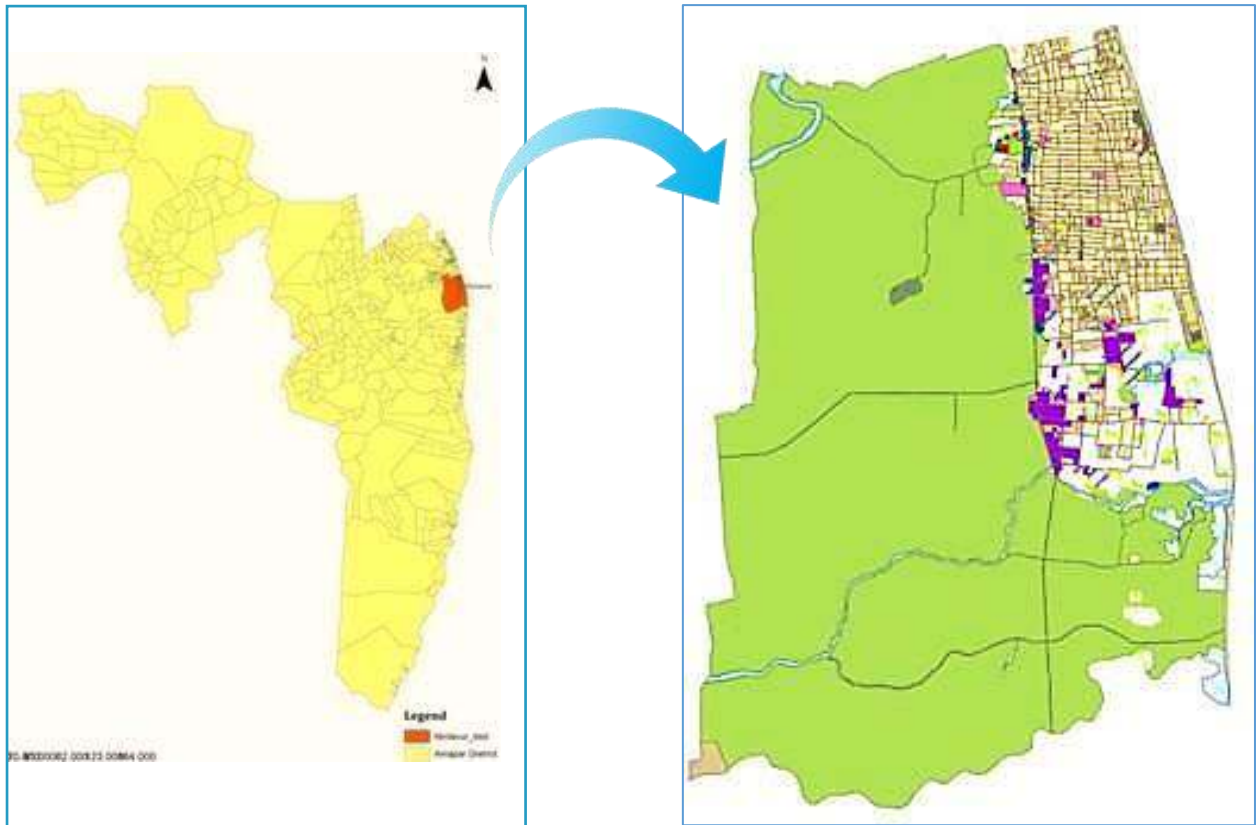
Map 2. 1 Location Map of Nintavur



Source: Ampara District Office, UDA. 2021.



Map 2. 2 Nintavur Pradesheeya Sabha area



Source: Ampara District Office, UDA. 2021.

In the existing land use pattern of the Nintavur 74 % is covered by the paddy fields and 9% of lands covered by residential, 7% of land coconut, 3% other buildup area and other portion of land covered by industries, waterbodies, and vacant lands. Accordingly, in Nintavur we have 12% of developed land and 2% of developable private land are available for future development.



2.2 Planning context and Situational context

Nintavur has a strong link with colonial era in terms of human settlement of Sri Lanka. During the colonial period Muslims who were living in the Western coast of Sri Lanka were forced to migrate to the Kandyan Kingdom by the Dutch rulers. Then the Kandyan King Senarath gave them asylum by helping them to settle down in the eastern region of Sri Lanka, especially in the hamlets of Nintavur, Sammanthurai, Kalmunai, Pottuvil and Akkaraipattu (Source: Mahawamsa). In that context the King Senarath donated several villages under the policy of ‘Nindagama’ and Nintavur was one of them. Later on, ‘Nindagama’ became Nintavur with the influence of their native language.

Nintavur town is well connected with the surrounding cities such as Kalmunai, Akkaraipattu, (through A4 Road which links Colombo and Batticaloa) and Sammanthurai, Ampara (through A31 Road Matara- Karaithivu) by road network as well as the Nintavur has strong linkages with its surrounding towns and other major cities in terms of importing and exporting paddy and rice.

The Eastern Provincial Physical Structure plan has been prepared by the National Physical Planning Department (NPPD) in 2030 (Refer Annexure Map1). In this plan Nintavur has been identified as a 3rd order town center of Ampara district and also Nintavur is falling within the proposed agricultural, industrial and tourism related development area.

Further, in National Physical Plan 2050 (Draft) prepared by the National Physical Planning Department (NPPD) (Refer Annexure Map.2) Nintavur is falling within proposed eastern economic corridor.

Nintavur has been included in the Master Plan on Integrate Township Greater Kalmunai, Sammanthurai Area which is being prepared under the Ministry of Water Supply and City Planning.

Framework preparation of Nintavur development plan mainly concentrate on national and regional linkages, the national physical planning policies and previous planning attempts.



Nintavur is a Pradeshiya Sabha in the east coast of Ampara district locates about 350 Kilometers away from Capital. And it is located close proximity to the major towns known as Kalmunai, Addalachchanai and Sammanthurai.

Considering the above-mentioned opportunities Nintavur has strong regional linkages and lie on a national level economic corridor and also planning agencies has identified that Nintavur is one of the major townships in the local context which need a necessary planning intervention.

Considering the physical, geographical and demography setting, Nintavur is well bounded by paddy fields in west side and other sides by water bodies and sea. The extent of the local area is 36 sq.km and the terrain is almost flat. Major portion of the land is covered by paddy field. Current population is recorded as 27,500 and ethnic wise 97% of population is Muslim and 3% is Tamil. Gross population density of Nintavur is 8 per Hec and net population density is 70 per Hec. Present population growth rate is 0.68% and predicted population 30000 by 2030 (Refer Annexure Table No: .1&.2).

Economic of this area predominantly depend on the paddy cultivation and related industries. In addition, fishing and commercial activities contribute in certain extents to economic context (Refer Annexure Table No.2). Total average paddy production is about 33,200 Mt per annum and its economic value is Rs. 1,260 Million per annum (Refer Annexure table no: 3&.4).

Especially rice mills significantly contribute to the economy of Nintavur. Due to the locational advantages about 81 rice mills have agglomerated as an industrial cluster. These industries collect large portion of paddy harvesting from Nintavur and its surrounding paddy cultivation areas and produce rice. They produce 65,500 Mt rice per annum and its economic value is approximately Rs. 5,240 million per annum.

This rice mill industrial cluster has attracted two different types of industries which are known as clay brick making yards and bio mass power plant to its surrounding due to the availability of raw materials paddy husk. Clay brick industry contributes to the economy by providing about 400 employment opportunities and supply the local brick demand. Bio mass power plant generates and adds 2.5 MW per day to the national electricity grid.



There is 7 km length of coastal belt which can be utilize to access to massive marine resource including fishing. But the coastal belt not utilize in satisfactory level in comparison to other coastal areas.

Existing urban form can be identified as linear. Basically, commercial establishment, financial institution, administrative institutions and educational institution are located beside the main road.

Eco-system of Nintavur consists with water bodies, marshy lands, paddy fields, coconut plantation and coastal belt. Nintavur Pradeshiya Shaba area which is located in dry zone of the country has a tropical climate and characterized by seasonal rainfall distribution.

However, the region frequently experiences intensive rainfall with relatively high temperature. Mean rainfall records 137mm and the temperature in the region records between 240 C and 340 C (Refer annexure Figure No: 1 &2). Soil type of Nintavur is commonly Reddish Brown and sandy.

2.3 Delineation of the Planning Boundary

Both the boundaries of Nintavur Divisional Secretary and Nintavur Pradeshiya Shaba areas same and has been clearly demarcated by natural features in all directions. It is bounded in North by Vettaru River, in East by Indian Ocean, South by Kaliodai River and the west by paddy fields adjoins to Sammanthurai town.

Administrative area of Nintavur Pradeshiya Shaba limits in North by Karaithevu Pradeshiya Sabha, East by Indian Ocean, South by Addalachchenai Pradeshiya Sabha and West by Sammanthurai Pradeshiya Shaba. In Nintavur divisional secretariat there are 25 GN division. The GN division named as GN 1, 2, 3, 4, up to GN No. 25.

When consider the functional boundary of this town with its other immediate town centers is limited in certain extent but the town has very close linkages in terms of getting raw materials, marketing and labour force.



Perusal of the development trend, local context and urban pressure (Refer Annexure Map No; 10) it's clear that the development is concentrating towards the existing built-up area (13% out of total land extent). By considering the above factors and limitation the planning boundary limited to administrative limits of Nintavur Pradeshiya Shaba.

Figure 2. 1 Natural Boundary of Nintavur



North - Vettaru River



East - Indian Ocean



West - Samanthurai PS

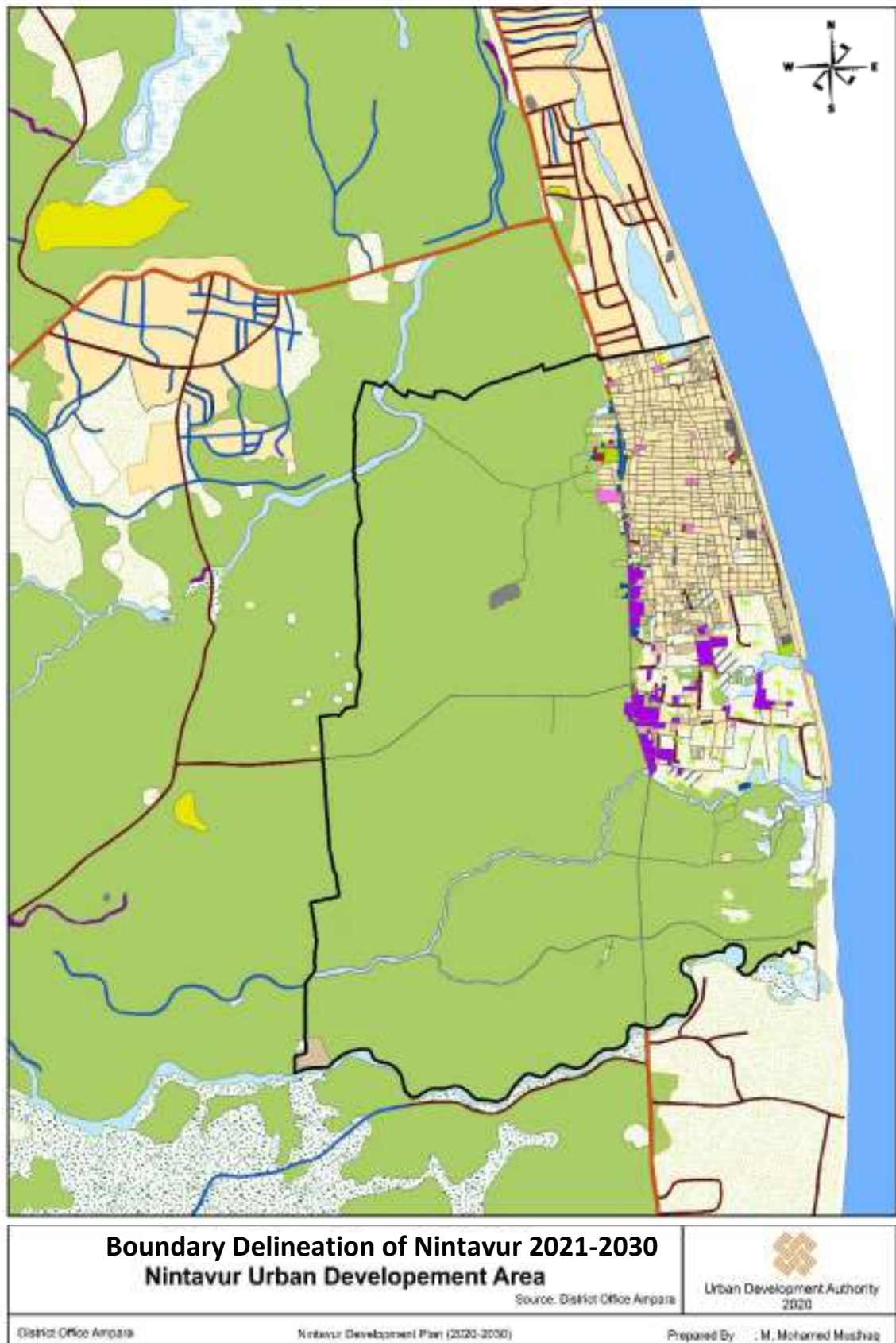


South - kahodai River

Source: Ampara District Office, UDA. 2021.



Map 2. 3 Boundary delineation of Nintavur



Source: Ampara District Office, UDA. 2021.



Chapter 03

Need of the Development Plan

With the rapid urbanization it creates many urban problems and issues in an urban area. But to experience the benefits of urbanization in sustainable manner a planning intervention is an unavoidable tool to challenge this common phenomenon. Thus, with the intention of develop the Physical, Environmental, Social and Economic level of the area an urban development plan should be prepared to solve the problems and issues while using the local potentials in optimal level.

Nintavur Township is currently experiencing the impact of urbanization. Existing built up area is 13% out of the total land extent and people have settled down in a dense manner (Refer Annexure Map No: .3). The possibility of further expansion of settlement is restricted due to certain factors such as flat terrain and higher building density of the local area it is affected by seasonal flashflood.

Nintavur is enriched with a large paddy portion (74%) (Refer Annexure 5) and it is the main potential of local area. In present it has been severely threatened due to sea erosion and wild elephants.

Agro related industries mainly rice mills have been agglomerated in Addapalam area in Nintavur as a cluster. It is one the main potential of the area therefore; the Nintavur got its identity as a rice bowl of Ampara.

The 7 km length of coastal belt in the eastern wing of Nintavur is a potential to accelerate the local economy. But currently the coastal belt not utilize in satisfactory level in comparison to other coastal areas.

Accordingly, Nintavur area has its own potential as a paddy field and industrial cluster but those resources severely getting affect by sea erosion. By taking in to account the above explained context of Nintavur Pradeshiya Sabha area, an immediate planning attempt is required to develop the area in a sustainable manner. In the context of Nintavur few main potentials have been identified which highly contribute to develop the local area such as paddy lands, Industrial cluster, bio mass power plant and coastal belt.



Major portion of Nintavur is covered by Paddy fields (74 % - 2634 Ha) and it is one of the main potentials. Nintavur people dominantly engage with paddy cultivation and it is highly contributing their livelihood. Also, Nintavur is famous for high yield paddy lands in comparison to other paddy lands in Ampara district. In that case Nintavur paddy land has recorded an average of 135 Busals per acre while other paddy lands records as 120 busals per acre. Total average paddy production is about 33,200 Mt per annum (contributes 6.6% in district paddy production) and its economic value is Rs. 1,260 Million per annum.

As aforesaid Nintavur area is predominantly covered by paddy lands, as well as the adjoining villages. Due to this locational advantage many rice mills have agglomerated within the Addapalam area. Targeting the huge paddy husk which is discharging from rice mills bio mass-based power plant has established in the same location.

According to the Central Environmental Authority's categorization there are three types of rice mills.

“A” Category: Wet processing production capacity over 5000kg/day rice.

“B” Category: Wet processing production capacity below 5000kg/day rice.

“C” Category: Dry processing and small-scale rice mills. (Domestic purpose)

There are 68 number of “B” category rice mills in Ampara district and 30 (45%) of them are located in Nintavur alone. In concerning of “C” category rice mills there are 470 in Ampara district and 51 (11%) of them are in Nintavur (Refer Annexure Table No: 6). especially rice mills significantly contribute to the economy of Nintavur. Due to the locational advantages about 81 rice mills have agglomerated as an industrial cluster.

These industries collect large portion of paddy harvesting from Nintavur and its surrounding paddy cultivation areas and produce rice. They produce 65,500 Mt rice per annum and its economic value is approximately Rs. 5,240 million per annum (Refer Annexure table No: 7). Within last ten years (2010- 2018) number of rice mills in Nintavur has increased gradually (Refer Annexure table No: 8).

Based on the field surveys, stakeholder meetings, brainstorming sessions and analysis methods few problems and issues have been identified in the local context. And the main problems have been prioritized as follows.



A bio mass power plant has been established based on the affordability of paddy husk in Nintavur. Currently the power plant is generating 2.5 MW per day and adding it to the national electrical grid. Earlier paddy husk was just burned or supplied to brick makers free of charge by the rice millers. But after the erection of power plant an economic has been created for the paddy husk (Rs. 2.5 per Kg).

There is a 7 km coastal belt which stretching from Vettaru in the North to Kaliodaaru in the South. It is a very resourceful coastal belt in terms of scenic beauty, recreation, local tourism and gate way to enter the sea.

Unlike the beaches in the surrounding coastal areas Nintavur has a beautiful and clean beach with shady lush green line of coconuts stretch. People of outskirts area are usually visited and enjoy the beach. There is a current tendency of developing hotels and restaurants along the coastal stretch especially from Wawvalodai to Nochchiyady estuary.

Apart from this fishing plays a vital role in the livelihood of the local community in Nintavur. There are 553 fishing families and 818 marine fishermen depend on the marine fishing in Nintavur where 30 numbers of Traditional – mechanized and 170 numbers of non-mechanized boats being use by the fisherman and the annual fish production is 1,492 Mt in Nintavur (Source: Fisheries Department, Kalmunai).

Accordingly, Nintavur has some its own potential but presently those potential has threatened due to some uncertainty. If this threat continues further the local potential will be lose in near future.

Those are following.

Sea Erosion and Sand Accumulation

Nintavur, being bounded by the Indian Ocean in the east, it is stretching from Vettaru in the North to Kaliodaaru in the South has a coastline of 7 km, therefore Nintavur is severely affected by the seasonal variations of the sea. In terms of Sea erosion and Stagnation of Sea Water around 125 acres of high fertile paddy lands have abandoned in Palankaddu, Nochiyaddi, Kurinchapitty and Pulpitty (Source: Agrarian Development Department and Divisional Secretariat Nintavur).



As well as around 150 acres of coconut estates abandoned due to the above problems. Apart from this it creates loss of soil fertility in certain paddy lands (around Kurinchapity and Pulpitty areas) when the sea is rough or during the period of high tides the sea water intrude and mixes with irrigated water and enters into paddy fields easily.

Figure 3. 1 Sea Erosion



Source: UDA District office, Ampara

Nochchiyady estuary is the Segnapadai river mouth which releases the excess irrigated water in to the sea. This Estuary is blocked with sand bar formation due the change of sea wave's pattern. As a result, around 5000 acres of paddy lands are more vulnerable to flood. If this scenario continues as it is, this will be affecting the paddy production and affect the farmer's livelihood.



Paddy Land Encroachment

The Nintavur area's main potential is paddy field and majority of the land covered by paddy field as mentioned above. The total area of Nintavur is around 36 Sq. Km and out of this 75% (2634 hectares) of the land use is covered by paddy fields. Therefore, the developable area is very limited (built up area 13%) (Source: Land use).

Due to the scarcity of developable land people tended to reclaim the paddy land gradually for development purposes. Land is a major problem in Nintavur Pradeshiya Saba. According to that the Nintavur has been lost 130 Hectares paddy land from 1981 to 2011 (Source: Agrarian Development Department, South Eastern University Research)

Wild Life elephant attack

Elephant damaging the paddy cultivation is another main problem in Nintavur. Especially in harvesting season elephants' encroach the paddy land for their foods and destroy the paddy cultivation frequently. According to the Department of Wildlife Conservation records paddy cultivation has been damaged in 20 times and 04 people has injured during 2012. Due to this uncertainty local farmers have to spend additional money (Rs. 3 Million per annum) to protect their paddy land as the wage of the paddy field guards for the whole area. Apart from that threat has been extended beyond paddy fields to the peoples' habitats.

Deficiencies in Infrastructure Facilities

Apart from certain sectors there are no significant deficiencies in basic infrastructure facilities in Nintavur. Some deficiencies can be identified in the areas like drainage system, solid waste management, local authority roads, open space and recreational facilities, public market. Accordingly, the above-mentioned deficiencies are discussed as follows.

Improper Drainage System

The existing drainage system has not been constructed considering the terrain and water flow. Further, for a long period it has been not properly maintained. As results it has been damaged and causes flood during the rainy season.



No proper waste management system

Daily collection of solid waste of Nintavur Pradeshiya Sabha is recorded as 5 Mt (Source: Pradeshiya Shaba Nintavur). Collected solid waste openly dumped at Pravatipity area which is located in the middle of the paddy fields. Because of this the immediate surrounding area is affected by mixing of leachate with irrigation water, bad odor and light weight waste spreading throughout the paddy fields.

Poor Condition Local Authority Roads

There are number of gravel roads which are in poor conditions and not connected with other main roads, especially in Addapalam rice mill industrial area and Thombokandam area.

Lack of Open Space and Recreational facilities.

Nintavur people have limited open recreational space (5.2 Ha) while they have lived in dense. Therefore, they need to be provided sufficient open and recreational space (PORS analysis 1000 People – 1.4 Ha). According to the PORS analysis Nintavur area need to provide 37 Hectares of open space in addition.

Underutilized Public Market

Nintavur town emerged based on the Grand Mosque which is located in main road and the commercial stretch has been developed in a linear manner besides the main road by targeting local residents and commuters. But the newly built-up public market is located away from the business area and isolated. Therefore, the public market is not functioning and venders have willingly moved back their businesses to Grand Mosque junction where they carried out their businesses earlier. At present the public market premises is used for Pola (once a week).



Chapter 04

The Planning Framework

4.1 The Vision

“Brimming Agro Hub” in Ampara



4.2 Vision Statement

In earlier Nintavur was just an agricultural village. Gradually Nintavur has attracted agricultural related industries such as rice mills, clay brick making yards, bio mass power plant and food manufacturing centers.

Being centrally located rice mills in Nintavur has a vast feeding area of collecting paddy from Ampara district. Nintavur has indicated that there are arrivals of number of new rice mills in the industry. The excess production of rice is distributed to many districts in the country. As a result, Nintavur's rice has got its own identity by producing and marketing the rice. Keeping the rice mills as the core industry there are directly depending varies industries like bio mass power plant, clay brick making yards and etc. have boomed in Nintavur. In addition, the coastal belt also (marine resource) a one of the potentials that can be harness to achieve the vision of “Brimming Agro Hub” in Ampara.

By Protecting, optimizing and harnessing the use of local resources and improving the disaster resiliency of Nintavur, it will be the emerging agriculture and agricultural based industrial center in Ampara by 2030.



4.3 The Goals

Goal 1 **Uplift the industries of the locality.**

- To Promote Value addition industries in 15 % by 2030.
- To Increase the rice production in 6% by2030.

Goal 2 **Create Disaster resilient locality.**

- To mitigate the sea erosion and sand accumulation in 100 % by 2030.
- To mitigate elephant attacking 100% by 2030.
- To Mitigate the Flood threatening 100% by 2030.

Goal 3 **Make Comfortable Convenient and livable town center.**

- To improve the greenery of town center to distance to 15 km by 2025.
- To Increase the recreational facilities by 5 hectares by 2025.
- To mitigate the paddy encroachment in 100% by 2030.





Chapter 05

SWOT Analysis

SWOT Analysis (Strength, Weakness, Opportunities and Threat)

To achieve the vision “Brimming Agro Hub” in Ampara the SWOT analysis has been used based on the goals.

Goal 01: Uplift the industries of the locality

Table 5. 1 SWOT analysis of the Goal 01

Strength	<ol style="list-style-type: none"> 1. Availability of 74% paddy land of total land extent. 2. High yield (135 Busals per acre) 3. Availability of Irrigation water for two seasons. 4. Agglomeration of 81 Rice mill Industries as a cluster. 5. Land availability for future expansion for industries. 6. Well established Market for the Rice. (Kandy, Badulla, Kahawaththa Galle, Colombo). 7. Availability of paddy husk-based industries located within the industrial cluster (brick making centers - 86, Bio mass power plant - Capacity - 2.5 MW per day). 8. Initiation of value addition industry. 9. Planning area located in coastal belt. 10. Industrial area fall in developable area. 	Weakness	<ul style="list-style-type: none"> • No high-quality rice production. • Lack of value-addition industries. • Limited paddy stores (only two stores are available). • Isolated and Null functioning public market. • Poor infrastructure facilities in the industrial area. • Industrial area located close to sensitivity area.
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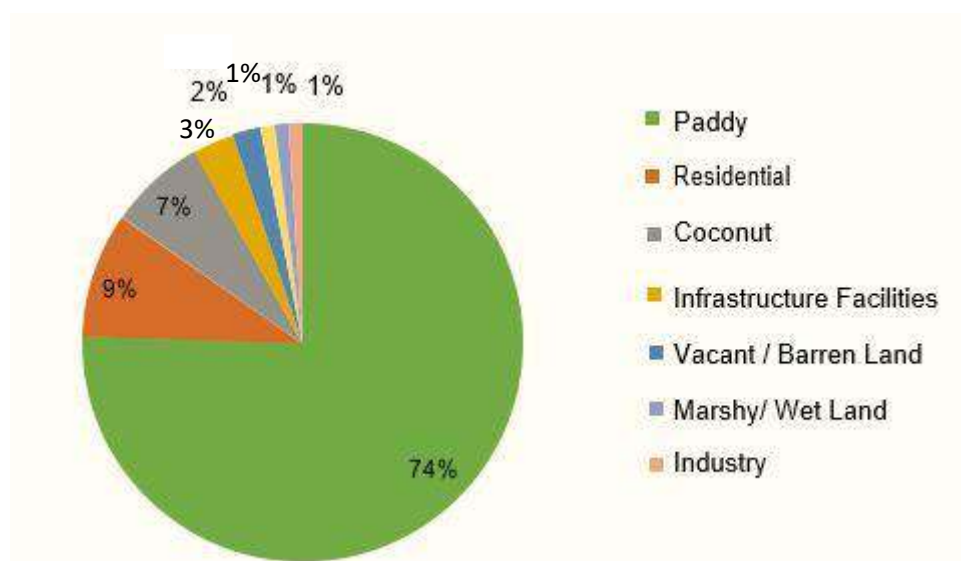
Opportunity	<ul style="list-style-type: none"> • Availability of paddy land in the surrounding area. • Irrigated water by Senanayake Samudraya at Inginiyagala. • Oluvil fishing harbor located close proximity to Nintavur. • Availability of local and regional market. • National Physical Planning Policy and the Plan 2050. 	Threat	<ul style="list-style-type: none"> • Natural Disasters • Paddy land Encroachment.
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STRENGTH

- **Availability of 74% (2635 Hectares) paddy land of total land extent.**

Nintavur land use major portion covered by the paddy field and local people dominantly engaged with paddy cultivation and it is highly contributing their lively hood. When look at the Nintavur locality paddy field is the main potential which is highly contribute the local economy and also paddy field is the main strengths because of this paddy field many rice mill industries and brick making yards have agglomerated and accelerated the local economy.

Graph 5.1 Land use Pattern



Source: Ampara District Office, UDA. 2021.

- **Fertile soil type (Reddish Brown):**

According to the department of Agrarian service and the local farmers Nintavur paddy field soil has high fertile which is one of the unique potentials accordingly, Nintavur has a reddish-brown soil type which has high fertile soil with clay. Due to this advantage the local farmers harvesting 135 Busals per acre hence other paddy field harvesting 120 Busals per acre.

- **High yield:**

Nintavur paddy field yields always more than other paddy field yield comparatively. According to the Agrarian service Center and the local farmers of Nintavur, Nintavur paddy field can produce 135 Busals (2767 kg) per acre while other area paddy field can harvest only 120 Busals per acre which is one of the main potentials of this locality.

- **Availability of Irrigation water for two seasons:**

Irrigated water for Nintavur comes from Senanayake Samudraya through Gal Oya. All the water canals start from Senanayake Samudraya cross the Nintavur before connect to the sea. Accordingly, Nintavur paddy fields receiving irrigated water from Senanayake Samudraya for two season which is one of the key strengths to the locality.

Figure 5. 1 Availability of Irrigation ways



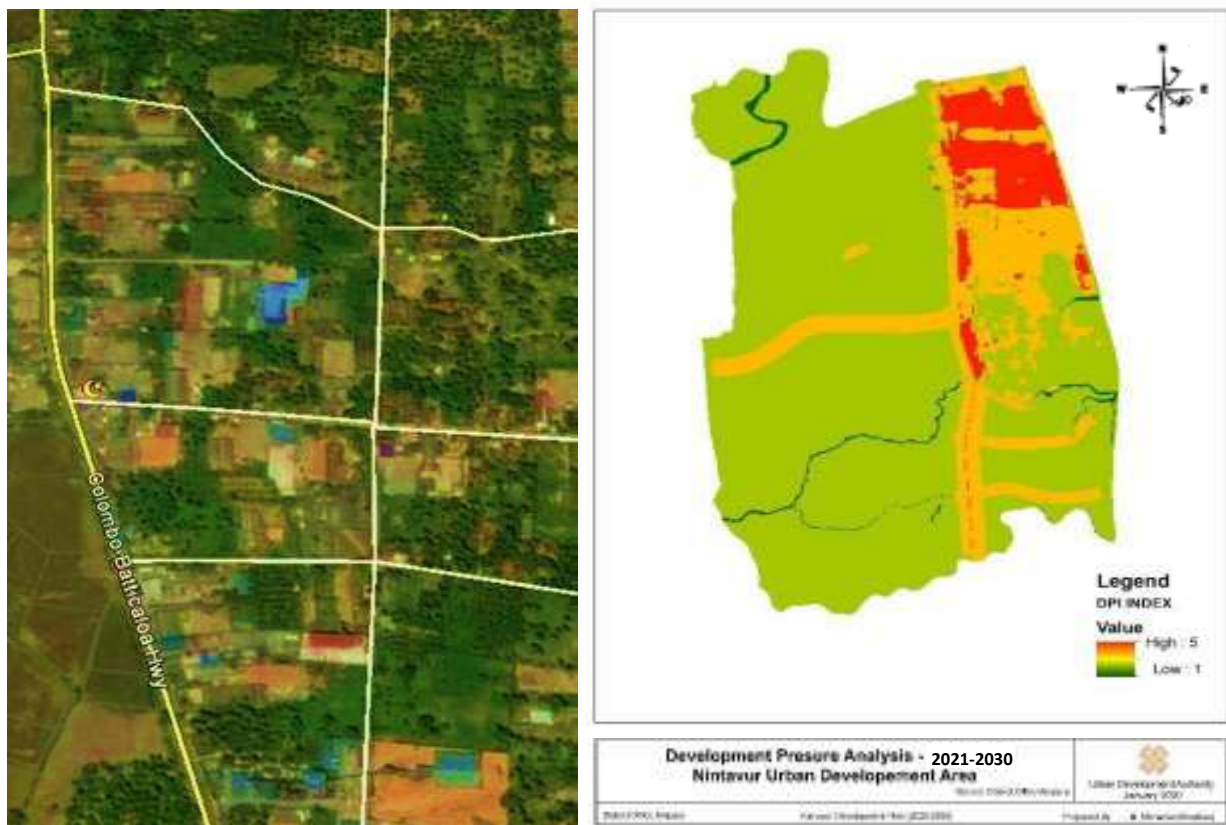
Source: Ampara District Office, UDA. 2021.

- **81 Rice mill industries have agglomerated as a cluster.**

According to Central Environmental Authority and Pradeshiya Sabha statistics 81 number of rice mills have registered in Nintavur (30 numbers of B category rice mills and 51 number of C category rice mills). It consists 45% and 11 % respectively out of all the rice mills in Ampara district which is one of the back bones of the locality. When consider the urban pressure of the locality the trend of development moves to Addapalam industrial area by developing industries and this trend has proved according to the development pressure analysis.

Industrial Cluster Development Pressure Analysis

Figure 5. 2 Industrial Cluster, Nintavur PS



Source: Ampara District Office, UDA. 2021.

- **Well established Market for the Rice.**

Nintavur well famous for rice mills and rice production in the local region where more than 81 numbers of rice mills located. Accordingly, Nintavur alone producing 65,500 MT rice per annum and marketing this product in to different part of Sri Lanka like Galle, Badulla, Kandy, Kahawaththa, Colombo and Vavniya and they have their own demand for rice.



- **Land Availability for future expansion:**

In the Addapalam industrial area there are enough vacant lands to expand the industries. Accordingly, additionally, 45 hectares of land has been allocated for future industrial expansion by declaring an industrial zone to uplift the existing industries and promote value added industries in the locality in near future.

Land Allocation for industries

Figure 5. 3 Land Allocation for industries in Nintavur PS



Source: Ampara District Office, UDA. 2021.

- **Paddy husk-based industries located within the industrial cluster (brick making centers, bio mass power plant - Capacity - 2.5 MW per day).**

Strong Connectivity among the industries.

Bio- mass power plant and brick making centers have established near to the rice mill industries for gaining benefits of raw materials (paddy husk).

Proper waste management system Practice by industries.

Waste of the rice mill (paddy husk) use by brick making centers and power plant again the waste of brick making centers and power plant (burned husk) use as the fertilizer for paddy cultivation. Therefore, all the industries are inter-connected and waste is managing properly Initiation of value addition industry.

- **Initiation of value addition industry:**

In the planning area there are three types of industries like rice mill, brick yards and bio mass power plant. Apart from these industries there are more than two numbers of food manufacturing (biscuit) industries running in locality by using rice as a raw material (25%). This value addition industry is a mile stone and beginning of future Nintavur value addition revolution.

- **Planning area located in costal belt:**

Nintavur east bounded by the Indian Ocean which is one of the resource full for fishing and transportation. Local people depend on fishing and they produce 1,492 Mt which is one of the potentials of the locality and contribute the local economy.

Figure 5. 4 Nintavur Beach



- **Industrial area falls in developable area:**

Existing industrial area falls in developable land area according to the live- ability analysis which is one of strength to develop this area in future.

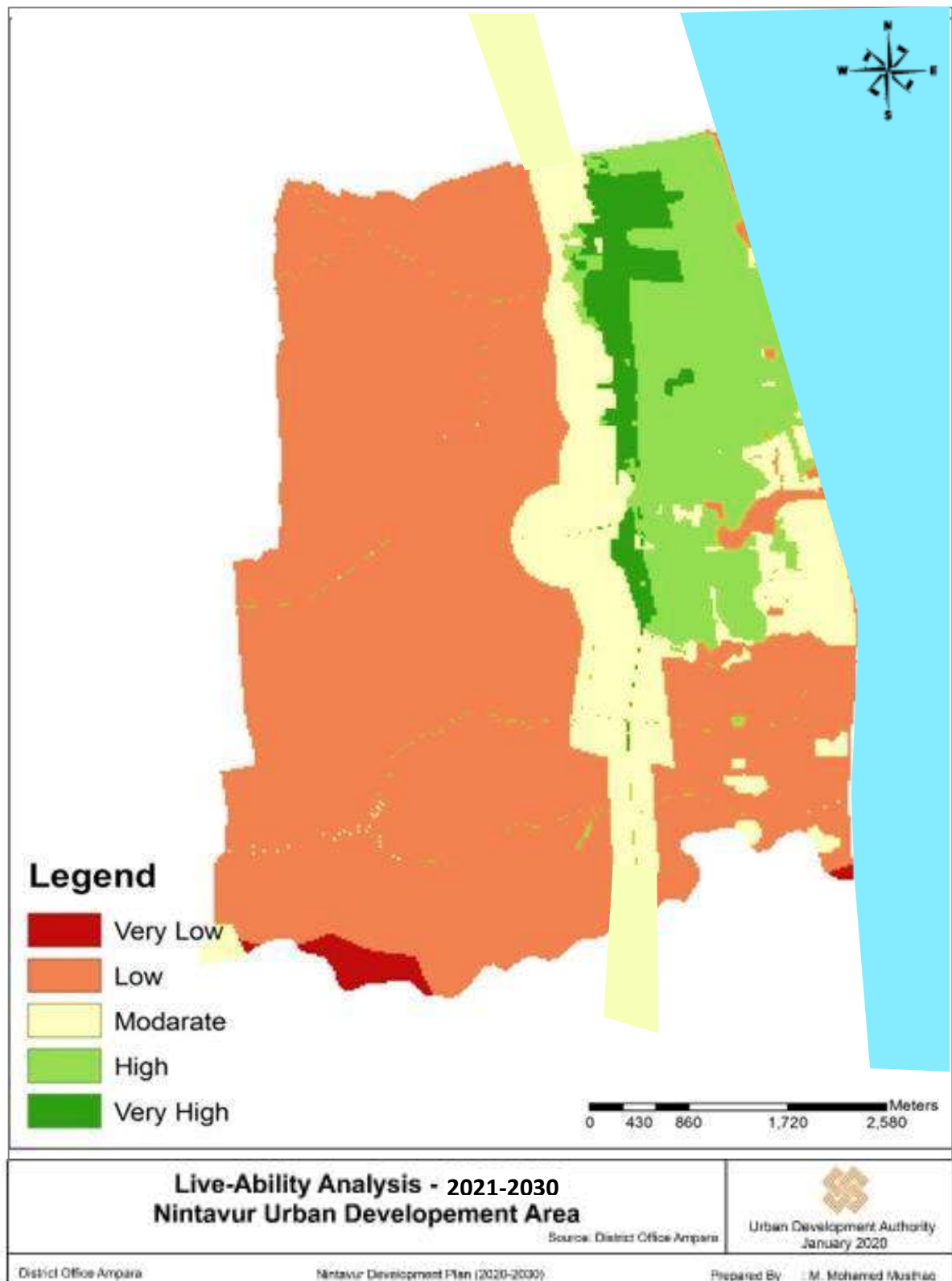
WEAKNESS

- **No high-quality rice production:**

Nintavur has more than 80 numbers of rice mills hence there is no any single export quality rice mill and production has producing to export to foreign market which is one of the key weakness of this industries to uplift into the next level.



Map 5. 1 Livability Analysis 2021



Source: Ampara District Office, UDA. 2021.



- **Traditional method of manufacturing process (technology and machinery) in Rice Mills.**

In Nintavur there are more than 81 rice mills but those rice mills area still function as a small scale and there is no any large scale ('A') category rice mills in Nintavur and many of the mills are still using traditional machineries which is not have enough efficiency.

Figure 5. 5 Traditional Machinery



Source: Ampara District Office, UDA. 2021.

- **No enough value-added products in Rice.**

Nintavur has large number of rice mills but there is no value-added products. But very recently only three biscuits manufacturing centers has introduced which use 25% of Rice flow. There is a potential to introduce by products such as Noodles, Rice bran oil etc.

- **Limited large paddy stores (only two stores available).**

Nintavur has limited paddy stores to stores the additional paddy in for the future needs. Nintavur alone has more than 80 numbers of rice mills but they have only two common paddy stores. And also, the individual rice mill has very limited paddy store capacity. If any adverse situation or paddy shortage occurred, they need to bring paddy form outside. Then it will make cost and time to product. This is one of the weakness of the locality to uplift the industry in the next stage.

- **Isolated public market:**

Market play a key role to sell the products but Nintavur public market not function properly due the locational disadvantage. The existing market located just away from the main town center. Therefore, local people not willing to go there due to this the market not function properly which seems as abounded.



Figure 5. 6 Existing Public Market building



Source: Ampara District Office, UDA. 2021.

- **Poor road facilities in the industrial area:**

In existing situation some roads are paved by gravel and some roads are narrow roads in the Addapalam industrial area. According to the space syntax analysis there are some roads which are not well connected with other roads which is affect the efficiency of the transport of goods.

Figure 5. 7 Local Authority Roads at Nintavur



Source: Ampara District Office, UDA. 2021.



Space Syntax Analysis

Map 5. 2 Space Syntax Analysis



Space Syntax Analysis - 2021-2030 Nintavur Urban Development Area

Source: District Office Ampara



Urban Development Authority
January 2020

District Office Ampara

Nintavur Development Plan (2020-2030)

Prepared By : M. Mohamed Muthuq

Source: Ampara District Office, UDA. 2021.

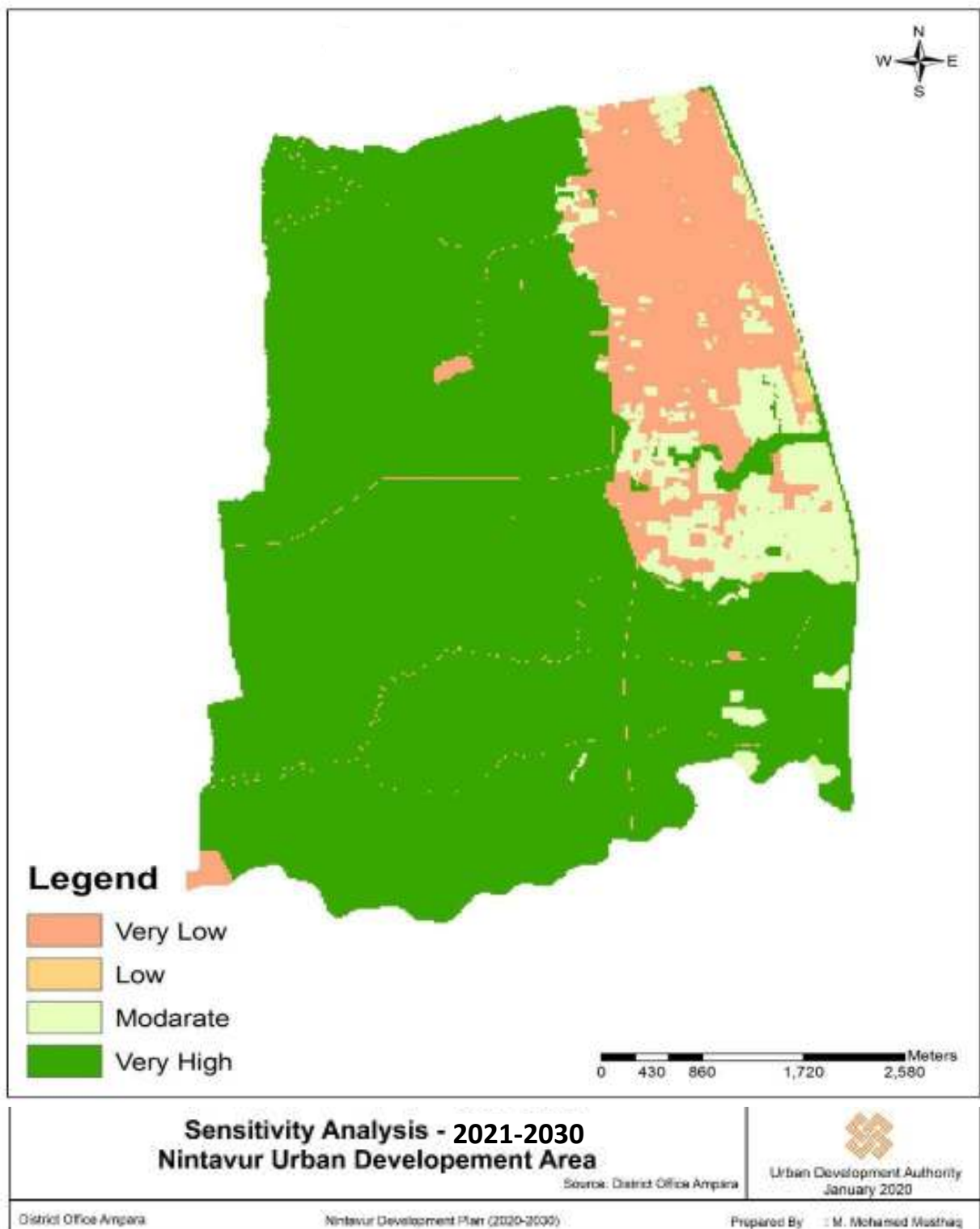


- **Industrial area located close to sensitivity area:**

Existing industrial area and industrial development consecrating towards close to the sensitivity especially in south boundary according to the sensitivity analysis which is one barrier for future industrial development.



Map 5. 3 Sensitivity Analysis 2021



Source: Ampara District Office, UDA. 2021.

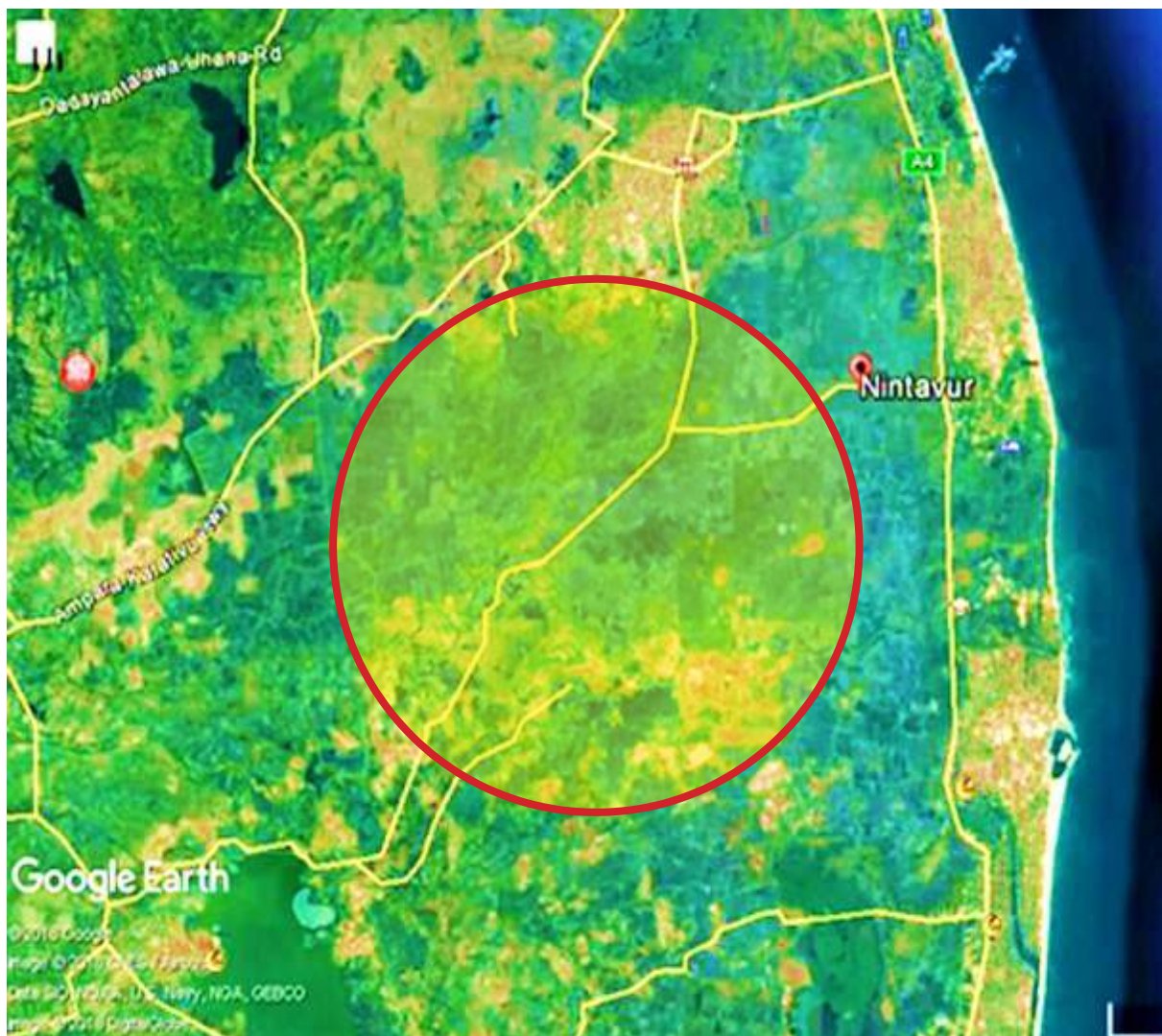
OPPORTUNITIES

- **Availability of paddy land in the surrounding area:**

Ampara district predominately covered by the paddy lands. Accordingly, Nintavur bounded by many agricultural towns which are have large portion of paddy lands such as Addalaichennai (7,321 Hect), Akkaraipattu (10,567 Hect), Pottuvil (6157 Hect) and Sammanthurai (22, 479). This is one of the main opportunities to collect the paddy which is actually need to products annually.

Surrounding Paddy Land

Figure 5. 8 Surrounding Paddy Land, Nintavur Area



Source: Ampara District Office, UDA. 2021.

- **Irrigated water by Senanayake Samudraya at Inginiyagala:**

Senanayaka Samudraya located in Ampara district which is providing water for entire agricultural lands in Ampara district for Yala, Maha Season. Accordingly, Nintavur agricultural lands receive water supply from Senanayaka Samudraya for two seasons continuously which is one of the main potentials of planning area.

Figure 5. 9 Irrigated ways, Senanayake Samudraya



Source: Ampara District Office, UDA. 2021.

- **Oluvil harbor located close proximity to Nintavur:**

Oluvil harbor located 4 km away from Nintavur which is one of the opportunities to transport the goods to one place to another especially market the output to Colombo and other foreign countries and presently Oluvil harbor play a big role in the region to supply the goods and services.

Figure 5. 10 Oluvil Harbor



Source: Ampara District Office, UDA. 2021.

- **Availability of local and regional market:**

Nintavur one of the famous places for rice production in the region and Nintavur alone 81 numbers of rice mills agglomerated Nintavur alone where producing 65,500 Mt rice per annum and market the rice production in several varieties in different part of the country. And also, they have established well market to sell their rice production such as Kalmunai, Kandy, Badulla, Kahawaththa Galle, and Colombo.

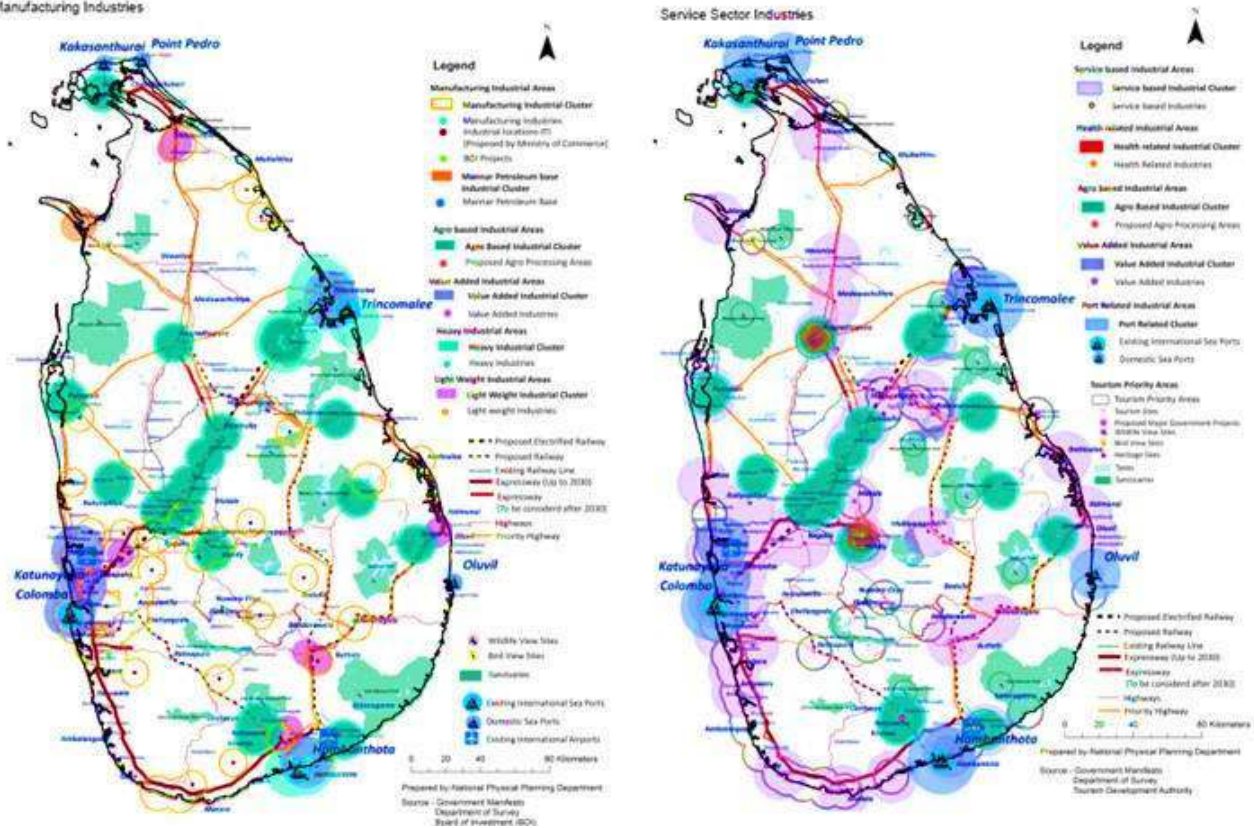
- **National Physical Planning Policy and the Plan 2050:**

Ampara district has identified as a light weight and agro based industrial cluster in National Physical Planning Policy and the Plan 2050 which one of the key opportunities in future to make the town as an Agro Hub.

Manufacturing Industries

Map 5. 4 Proposed Industrial Development Areas 2050

Figure 5.7 : Proposed Industrial Development Areas 2050
Manufacturing Industries



Source: National Physical Planning Department, 2050

THREATS

Disasters:

When the sea is rough or during the period of high tides the sea water over flows and mixes with drained water and enters into paddy fields easily. Because of the stagnation of sea water, the fertility of paddy lands is affected. The soil becomes loose so that the farmers face a lot of difficulties in plugging, harrowing and sowing. At present it is worse and as a result around 150 acres of high fertile lands have been affected.

Sea Erosion sand accumulation (GN1- GN 9: 52m and GN 10: 128m from 2008- 2016) especially, in Nochchiyadi estuary the statistic shows that 20m annually in land errored by sea. And the sea sand accumulated and fill the paddy lands which are located close to seashore.



Also, there are some other direct impact occurring due to this sea erosion like Flood, Siltation, and Salinization. The Nochchiyadi estuary is situated nearly 4 km away from the Oluvil Harbour in the North. This Estuary is blocked with sand due to high tides when the sea is rough waves. This sand block is usually removed or cut opened by few farmers (2-5) frequently. For the last 08-10 years, it is very severe for both seasons (Maha & Yala).

The drainage water of around 5000 acres and the excess water through Segnapadai River is blocked at the Nochchiyadi estuary.

There are nearly 125 acres of high fertile paddy lands that have been abandoned because of broken bunds by the last Tsunami. Because of above Problems around 492 Mt paddy products would be lost per year. The harvest of 150 acres of coconut estates around this area amounting Rs. 13,500,000.00 would be lost when these areas are abandoned due to the above problems.

Figure 5. 11 Sea Erosion and Stagnation of Sea water in paddy lands



Source: Ampara District Office, UDA. 2021.



WILD ELEPHANTS ENCROACH AMPARAI VILLAGE

Three persons including a Wildlife official were hospitalized after they were attacked by a wild elephant in Nintavur Allimul area at Samanthurai in Amparai.

Police said that they had attempted to chase away a herd of wild elephants that had entered the village.

Then the wild elephants had attacked the injured persons, who were admitted to Amparai General Hospital.

However, as the condition of the wildlife official was serious, he was transferred to Kandy General Hospital.

Later, steps were taken to provide shelter to the villagers at a safe location.

Police said the wild elephants have been chased away to the jungle.

Source: Ampara District Office, UDA. 2021.

Apart from all aforesaid disasters there is wild life elephant attack is another threat in Nintavur area. Especially in the cultivation and harvesting time wild life elephants come and destroy the paddy fields and injured the people. Due to this uncertainty the local farmers facing many problems. Therefore, the local farmers decided to protect their paddy fields. To look after the paddy land, they spend 3m per annum by hiring the watchers and it will cost and reduce the profit.

Paddy land Encroachment:

The Nintavur area's main potential is paddy field and majority of the land covered by paddy field as mentioned above. The total area of Nintavur is around 36 Sq. Km and out of this 75% (2634 hectares) of the land use is covered by paddy fields. Therefore, the developable area is very limited (built up area 13%). Due to the scarcity of developable land people tended to reclaim the paddy land gradually for development purposes. Scarcity of developable land is a major problem in Nintavur Pradeshiya Sabha. According to the studies, Nintavur has lost 130 hectares paddy land from 1981 to 2011.



Goal 02: Create disaster resilient locality:

Table 5. 2 SWOT analysis of the Goal 02

Strength	<ul style="list-style-type: none"> • 65m Buffer zone declared by Coast Conservation Department • Precautionary measures taken by the local farmers to mitigate elephant attack. • Paddy land function as a water retention area. • Availability of natural water bodies to discharge the flood water. 	Weakness	<ul style="list-style-type: none"> • Improper drainage System, • Illegal Sand mining • Lowland filling in Ad hoc Manner
Opportunity	<ul style="list-style-type: none"> • Proposed project to mitigate elephant attack by Disaster Management Centre, Ampara. • Ongoing hydrological study carrying out by Ministry of Water Supply and City Planning. 	Threat	<ul style="list-style-type: none"> • Oluvil fishing harbor located close proximity to Nintavur (4km). • Natural Disasters.

STRENGTHS

- **65m Buffer zone declared by Coast Conservation Department.**

Sea erosion one of the burning issue in the locality and this issue need an immediate attempt. Accordingly, presently the Coast Conservation Department is maintaining 65 m Tsunami buffer zone in Eastern coastal belt apart from that 300 m buffer zone is also applicable in Nintavur coastal belt which will avoid the harmful and unnecessary activities in the coastal belt which is helpful to make the Nintavur disaster resilient town center.

- **Precautionary measures taken by the local farmers to mitigate elephant attack:**

Wild elephant attacks another issue of the locality but there is no any mitigation measures have taken by the relevant agencies. Hence the local people has been taken some precaution by them self to solve the problem which is more strengthen in the locality. In that case local farmers decided to build the watcher hut in the paddy field with watcher and they spend 3m Rs per annum to watchers. This shows the local people how face the issues with using their own local knowledge and the capability which is one of the strengths of the locality to face the challenge.

- **Paddy lands function as a water retention area:**

Flood is another issue in the planning area especially in the rainy season many area getting flood which disturbed the people day to day activities. As Nintavur land use major portion covered by the paddy field where some part of paddy field act as a water retention area in the rainy season. Due to this potential the impact of flood less considerably.

- **Availability of natural water bodies:**

Some channels which started through Senanayake Samudraya crossing Nintavur and connect to the sea which is one of the potentials specially to mitigate the flood which are contribute to discharge the storm water to sea. Accordingly, North of Nintavur bounded by Vettaru River and south bounded by Kaliodei River apart from this water bodies there are some irrigation channels.

Figure 5. 12 Availability of natural water bodies



Source: Ampara District Office, UDA. 2021.

WEAKNESS

- **Damaged Drainage System:**

Existing drainage systems has fully damaged and storm water not properly discharged. After the Tsunami some drainage network was disconnected and also the drainage system not technically constructed due to these reasons residential area gets flash flood. Due this local people daily activities disturbed and people gets inconvenience which is one of the weakness of the local area to make disaster resilient.

Figure 5. 13 Drainage Network and Damaged drainage system



Source: Ampara District Office, UDA. 2021.

- **Illegal Sand Mining:**

Illegal sea sand mining is one of the main reasons to Increase the impact of sea erosion in the coastal belt along the Nintavur. Second highest illegal sea sand mining occurring place is Nintavur in Ampara district according to the coastal conservation department. The local people getting sea sand for their building construction illegally especially in the Nochchiyaddi area.



Figure 5. 14 Sand Mining Location

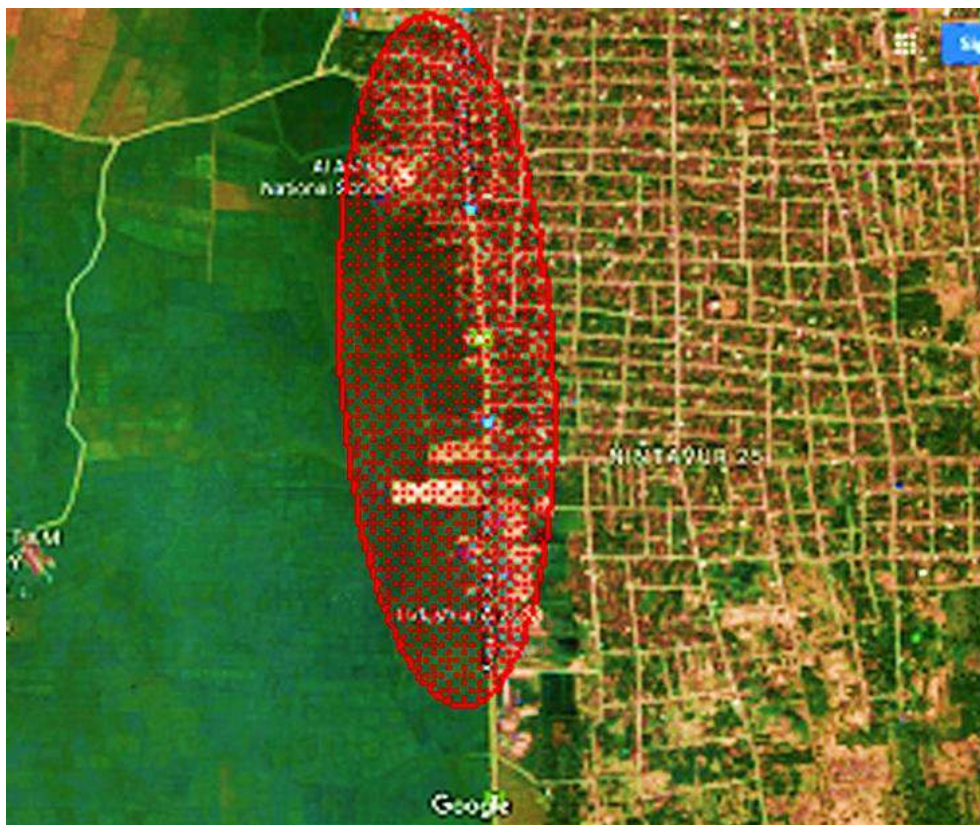


Source: Ampara District Office, UDA. 2021.

Lowland filling in ad hoc manner:

Lowland filling especially paddy land is one of the serious issues in the locality. As the land use major portion covered by the paddy land people don't have developable land. Therefore, local people have filling some land as an abandoned paddy land in ad hoc manner especially in the west wing of main road. It leads to flash flood in the surrounding area as paddy field act as water retention. Accordingly, the statistics Nintavur has been lost 130 Hectare paddy land from 1981 to 2011.

Figure 5. 15 Land filling Area



Source: Ampara District Office, UDA. 2021.



OPPORTUNITIES

- **Proposed project to mitigate elephant attack by Disaster Management Centre, Ampara.**

In Nintavur wild elephant attack is one of the headaches for farmers and to protect their paddy field harvesting the local farmers spend more than 3Million per annum. Hence the Disaster Management Center, Ampara has proposed 10Km elephant fence erection in Nintavur via Kaliodai Bridge to Vajirawattai area to mitigate the elephant attack which will support to mitigate the wild elephant attack in Nintavur. It is one of the opportunities for Nintavur farmers.

- **Ongoing Hydrological study has been carrying out by Ministry of Water Supply and City Planning.**

Hydrological study has been carrying out in Kalmunai, Sammanthurai and Nintavur area under the Ministry of Water supply and City Planning to mitigate flood and identified the land reclamation in future development in those cities which will more helpful to create sustainable cities.

THREATS

- **Oluvil harbor construction activities.**

Sea erosion is one of the burning issues in the planning area which is lead to many impacts in the locality. There are some studies clearly emphasis that after the construction of Oluvil harbor specially constructing of break water in to sea increase the consequence of sea erosion and sand accumulation in Nintavur.

- **Natural Disasters.**

There are few disasters disturbed and rapidly damaged the Nintavur area which are identified as Sea Erosion and sand accumulation especially in Nochchiyadi estuary due to this 20m land eroded annually. Also flood and wild elephant attacks are another disaster in local area.

Sea Erosion sand accumulation (GN1- GN 9: 52m and GN 10: 128m from 2008- 2016) especially, in Nochchiyadi estuary the statistic shows that 20m annually in land errored by sea. And the sea sand accumulated and fill the paddy lands which are located close to seashore.



Also the rear esomeother direct impact occurring due to this sea erosion like Flood, Siltation, Salinization. The Nochiyadi estuary is situated nearly 4 Km away from the Oluvil Harbor in the North. This Estuary is blocked with sand due to high tides when the sea is rough waves. This sand block is usually removed or cut opened by few farmers (2-5) frequently. For the last 08-10 years, it is very severe for both seasons (Maha & Yala). The drainage water of around 5000 acres and the excess water through Segnapadai River is blocked at the Nochchiya di estuary.

When the sea is rough or during the period of high tides the sea water over flows and mixes with drained water and enters into paddy fields easily. Because of the stagnation of sea water, the fertility of paddy lands is affected. The soil becomes loose south at the farmers face a lot of difficulties in plugging, harrowing and sowing. At present it is worse and as a result around 150 acres of high fertile lands have been affected.

There are nearly 125 acres of high fertile paddy lands that have been abandoned because of broken bunds by the last Tsunami. Because of above Problems around 492 Mt paddy products would be lost per year. The harvest of 150 acres of coconut estates around this a rea amounting Rs. 13,500,000.00 would be lost when these areas are abandoned due to the above problems (Source: Agrarian Development Department).

Apart from all aforesaid disasters there is wild life elephant attack is another threat in Nintavur area. Especially in the cultivation and harvesting time wild life elephants come and destroy the paddy fields and injured the people. Due to this uncertainty the local farmers facing many problems. Therefore, the local farmers decided to protect their paddy fields. To look after the paddy land, they spend 3m per annum by hiring the watchers and it will cost and reduce the profit.



Goal 03: Make Comfortable Convenient and livable town center.

Table 5. 3 SWOT Analysis of the Goal 03

Strength	<ul style="list-style-type: none"> • High aesthetic Quality. • Ongoing recreational development projects (Wawwalodai Play Ground). • Availability of abandon paddy lands in town center. • Higher accessibility and Regional Link- ages. 	Weakness	<ul style="list-style-type: none"> • Lack of public resting places. • Scattered establishment of administrative buildings. • High temperature and lack of shady trees. • Damaged drainage network.
Opportunity	<ul style="list-style-type: none"> • Ongoing Projects- Hospital Expansion Project, Town hall Development project, Play grounds. • Projects implementation through Ministry of Water Supply and City Planning. 	Threat	<ul style="list-style-type: none"> • Disaster (flood)

STRENGTHS

- **High esthetic Quality (Paddy field, river, canals, Sea and Beach)**

Nintavur has naturally enrich and covered by more vegetation cover and natural features such as paddy lands, Coconut lands, water bodies, wetlands and beach. So those natural amenities and feature emphasis and increase of the local esthetic quality. Those natural amenities one of the strengths to create the city as a comfortable and convenient city in near future.

Figure 5. 16 High esthetic Quality Places in Nintavur PS



Source: Ampara District Office, UDA. 2021.

- **Ongoing recreational development projects (Wawwalodai Beach Park):**

In Nintavur there is an identified project especially recreational Wawwalodai beach park projects activities have been carrying out which will be help to create the planning area more comfortable place for the people.

Figure 5. 17
Wawwalodai
Proposed Beach
Park



Source: Ampara District Office, UDA. 2021.



- **Availability of abandon paddy lands in town center.**

There are some one seasonal and abundant paddy lands has been identified in the west wing of main road in the town center (28 Hectares). Those lands are more suitable land to develop in the future and expand the town center. According the land use of Nintavur, it has very limited developable land which is one of the barriers to develop and expand the town. So aforesaid abandon paddy lands will be use to expand the town center.

- **Higher accessibility and Regional Linkage:**

Nintavur is a township which has higher accessibility in its settlement area. Further, Nintavur town is well connected with the surrounding cities such as Kalmunai, Akkaraipattu, (through A4 Road which links Colombo and Batticaloa) and Sammanthurai; Ampara (through A31 Road Matara- Karativu) by road network as well as the Nintavur has strong linkages with its surrounding towns and other major cities in terms of importing and exporting paddy and rice.

WEAKNESS

- **Lack of public resting places.**

Nintavur is a small and emerging township in the Ampara district and thousands of numbers of people commuted for full fill their daily needs to Nintavur but there is no public resting place in the town center since Nintavur falling under dry zone. As a town center people need resting places until full fill their needs.

Figure 5. 18 Beside area of the main road of Nintavur



Source: Google Earth, 2019

- **Scattered establishment of administrative building:**

Land scarcity is another issue in Nintavur town center to expand the township and improve the town quality since the major portion covered by the paddy land. Accordingly, 74% of land covered by the paddy field and they have very limited portion of developable land.

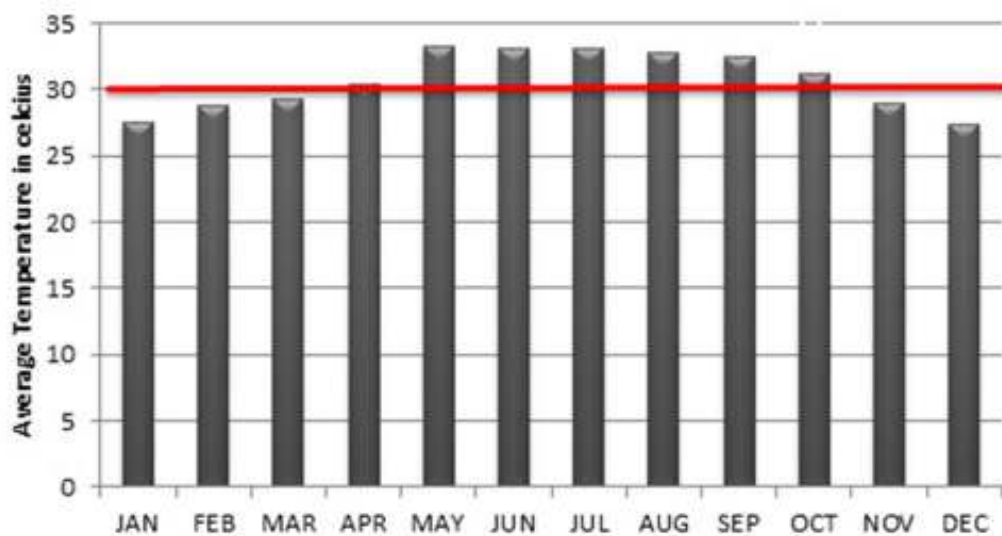


Therefore, many administrative buildings have been scattered located which lead to inconvenience to the local people.

- **High temperature and lack of shady trees.**

Especially in town center there is no shady trees to get some relaxation where people come for their daily needs since Nintavur falls under dry zone area. According to the statistic average temperature has recorded as more than 30 degrees Celsius. It is one of the weakness in the planning area to make the town as a Comfortable Convenient and livable town center.

Graph 5 2 Average temperature in Nintavur area.



Source: Ampara District Office, UDA. 2021.

OPPORTUNITIES

- **Ongoing Projects**

At present there are numbers of town improvement projects has been carrying out within the Nintavur locality such as Hospital Expansion Project, Town hall development project, Wawwalodai playground projects. Above mentioned projects will be support to create the township as a comfortable town center.

- **Projects implementation through Ministry of Water Supply and City Planning.**

Under the Ministry of Water Supply and City Planning Master plan has been preparing for the Kalmunai and Sammanthurai area which is one of the opportunities for Nintavur and Nintavur also has been identified as a planning area through the integrated township development in the



greater Kalmunai and Sammanthurai area. Through this master plan they have proposed many projects for Nintavur such as Environmental Conservation projects, Physical infrastructure development projects, Township improvement projects, Residential development projects, transport improvement projects and tourism development.

THREATS

- **Disasters (Flooding)**

Flooding is one of the threats in the planning area to make the township more comfortable and convenient especially in the rainy season. It creates inconvenient to commuters and local people and it will lead to destroy the quality of the town and residential area.

Map 5. 5 Flood map of Nintavur Area



Source: Ampara District Office, UDA. 2021.

Chapter 06

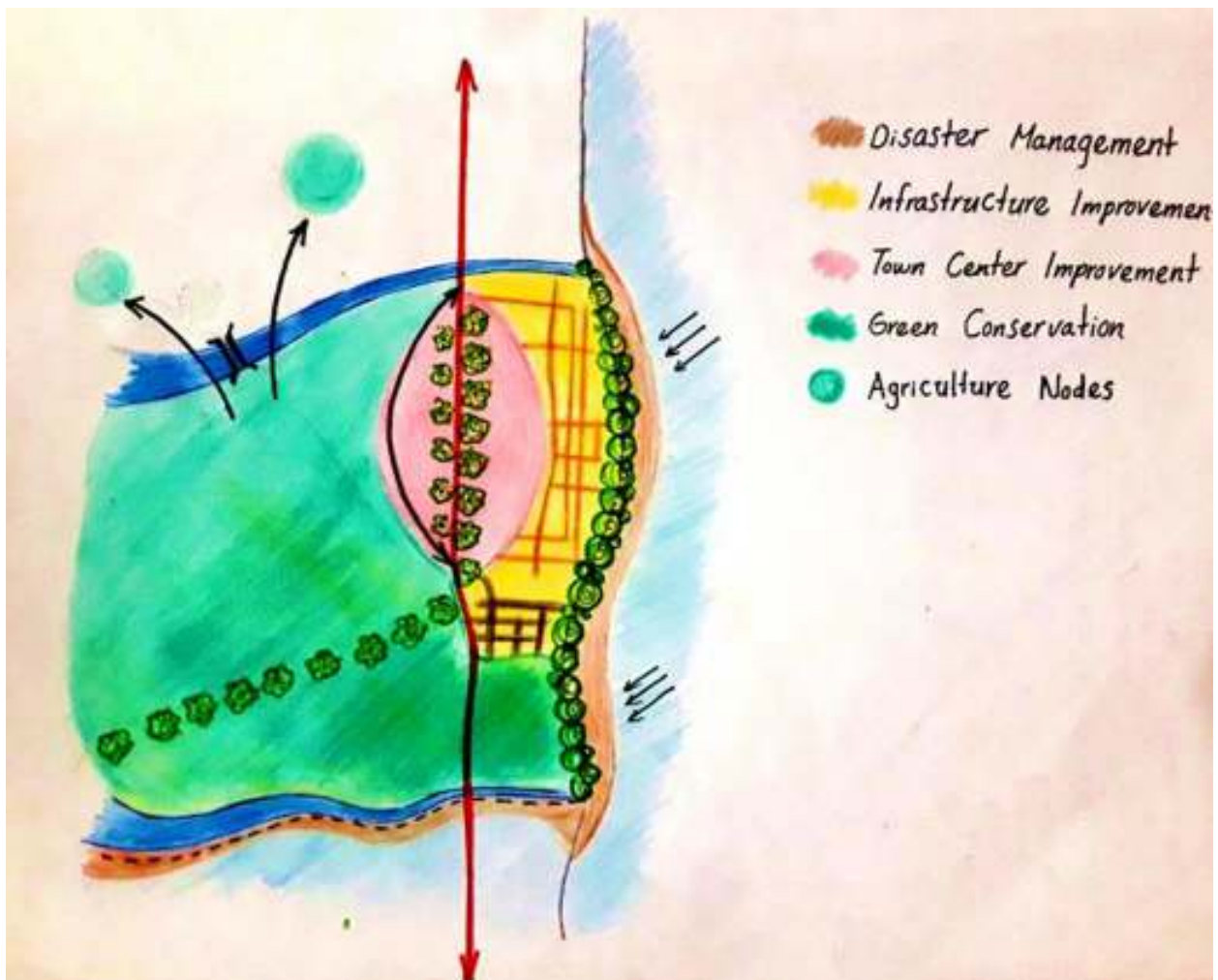
The Plan

6.1 Concept Plan

Introduction

Futuristic development of Nintavur local area will be demonstrated by the Concept plan and locality to be developed under four major components namely Green conservation, Disaster management, Town center improvement and Infrastructure improvement.

Figure 6. 1 Concept Plan - Nintavur PS



Source: Ampara District Office, UDA. 2021.

Paddy fields are the key components of local area in terms of contributing the local economy. With conservation and protection, the green area the local paddy harvesting will be increased in significant amount and it will boost the local agro base industrial sector. This attempt will support for keeping Nintavur as uninterrupted agro base industrial destination in Ampara district.



Also, with the development of new agro base industries Nintavur will be act as magnet for collecting the paddy harvesting in the surrounding agricultural towns. As a result, in future the local economy will be accelerated.

Eastern part of Nintavur will be protected from sea erosion and sand accumulation by various mitigation measures and drainage network will be improved, elephant fence will be erected as a consequence Nintavur will be a disaster resilient township in future.

Existing town center will be improved and expanded for create livable, convenient town for local people and the commuters. Therefore, the township will be developed and shaped by enhance the greenery and provide administrative service in the edge of the town in the future.

Infrastructure facilities such as roads, drains and bridge will be developed and improved especially in the industrial area and Sammanthurai and Mavadipalli agricultural nodes connected urban area and residential area in the future. Proposed Addapalam industrial area will be highly attract more industries due to the infrastructure development and it will uplift the industries in future.

6.2 Proposed Land Use Plan

6.2.1 Proposed Land Use Map and Description

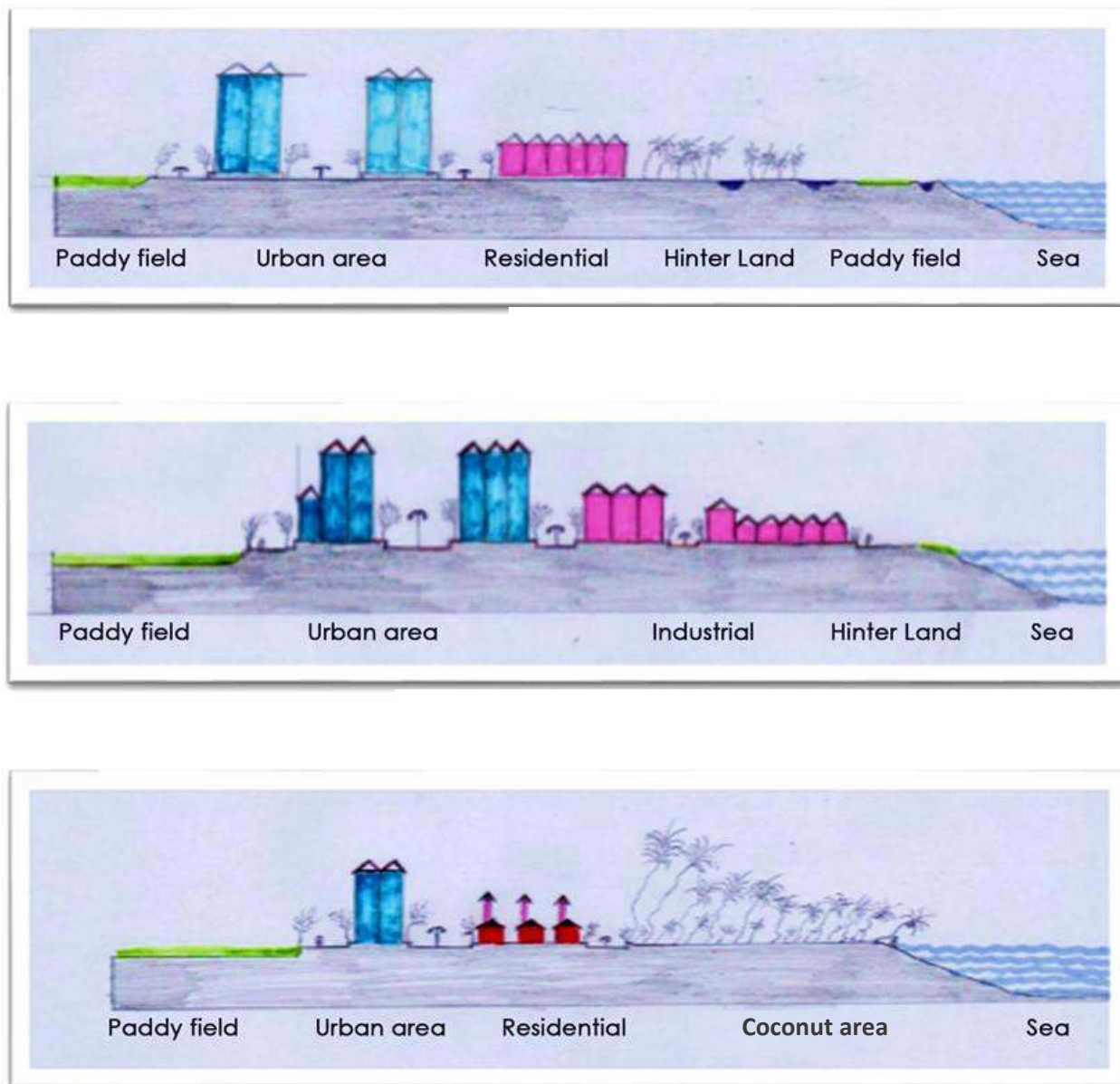
Nintavur is a one of linear spatial form town center in east cost of Ampara district in Sri Lanka. The planning area main pathway interchange of Kalmunai town to Akkaraipattu town center along the main road and Nintavur famous place for agro base activities. Therefore, the local area needs to be protected from hap hazard development and natural disasters in future to protect the uniqueness and identity of it.

Future urban form of Nintavur local area will be giving the image of the town and giving different characters with various activities when moving one patch to other. The main business area begins from North, Vettaru River in to South, up to Allimulai junction and East up to first cross, west expand up to existing Pradeshiya Shaba building block. This zone dominated by Commercial activities and Administrative activities and then this zone can be seen as a high density and high-rise building. Also, this area will be edge of the Nintavur and function as a CBD.



6.2.2 Future urban form and cross section

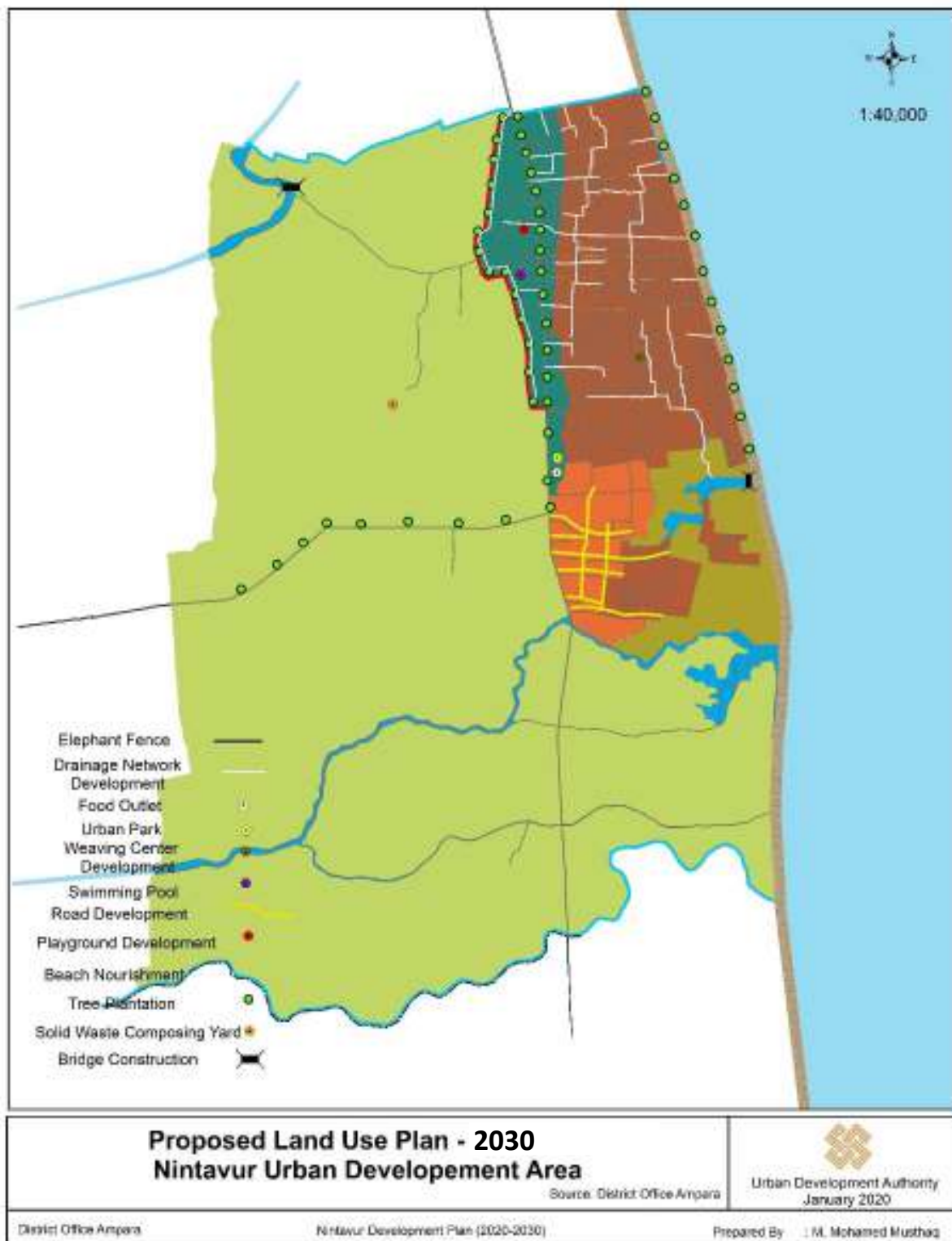
Figure 6. 2 Future Urban form and cross section of Nintavur area



Source: Ampara District Office, UDA. 2021.



Map 6. 1 Proposed Land use Plan 2030



Source: Ampara District Office, UDA. 2021.



Next to this business area in the East direction the residential activities dominated area can be seen and the density of this area gradually decreasing towards to the sea side from first cross road to beach road.

The paddy field cover the major portion of the area of Nintavur which can be seen precious natural beauty with lush green and its physical setting that provides different livelihood options for the local people. Within such context, the future development of the locality must conserve its assets and uniqueness without interrupting the natural assets.

In the down south area can be seen as “Green and blue” hinter land which is located on the outskirts of Nintavur CBD where the local people enjoy and experiencing the nature with green and blue environment while access the eco-friendly hotel facilities. Also, this area can be seen as a low-density zone of the Nintavur area.

Industrial area located in the bottom part of the area in the east wards from the main arteries where presently small-scale rice mills located as a cluster and it can be seen and emerged with new, varies type agro base industries where low rise and low-density building can be seen in future with the efficient infrastructure facilities. This area prominent with industrial activities with having residential activity covering a small portion of the area.

This chapter bring the brief idea about future development and the image, dominant character of Nintavur for next ten years to build a “Brimming Agro Hub” in Ampara district.

6.3 Social and Physical Infrastructure Development Strategies

Development plan for Nintavur looking forward to achieve the vision “Agro-Hub” through the goals and objectives. To achieve main target of the development plan there is a need of having a proper infrastructure plan should be fulfilled by 2030 to achieve the vision. Nintavur area currently has basic infrastructure facilities but it need to be develop in certain level to uplift the special industrial development in the region. Accordingly, there are certain physical development have been identified to develop Such as proper accessibility, drainage network and solid waste management system.



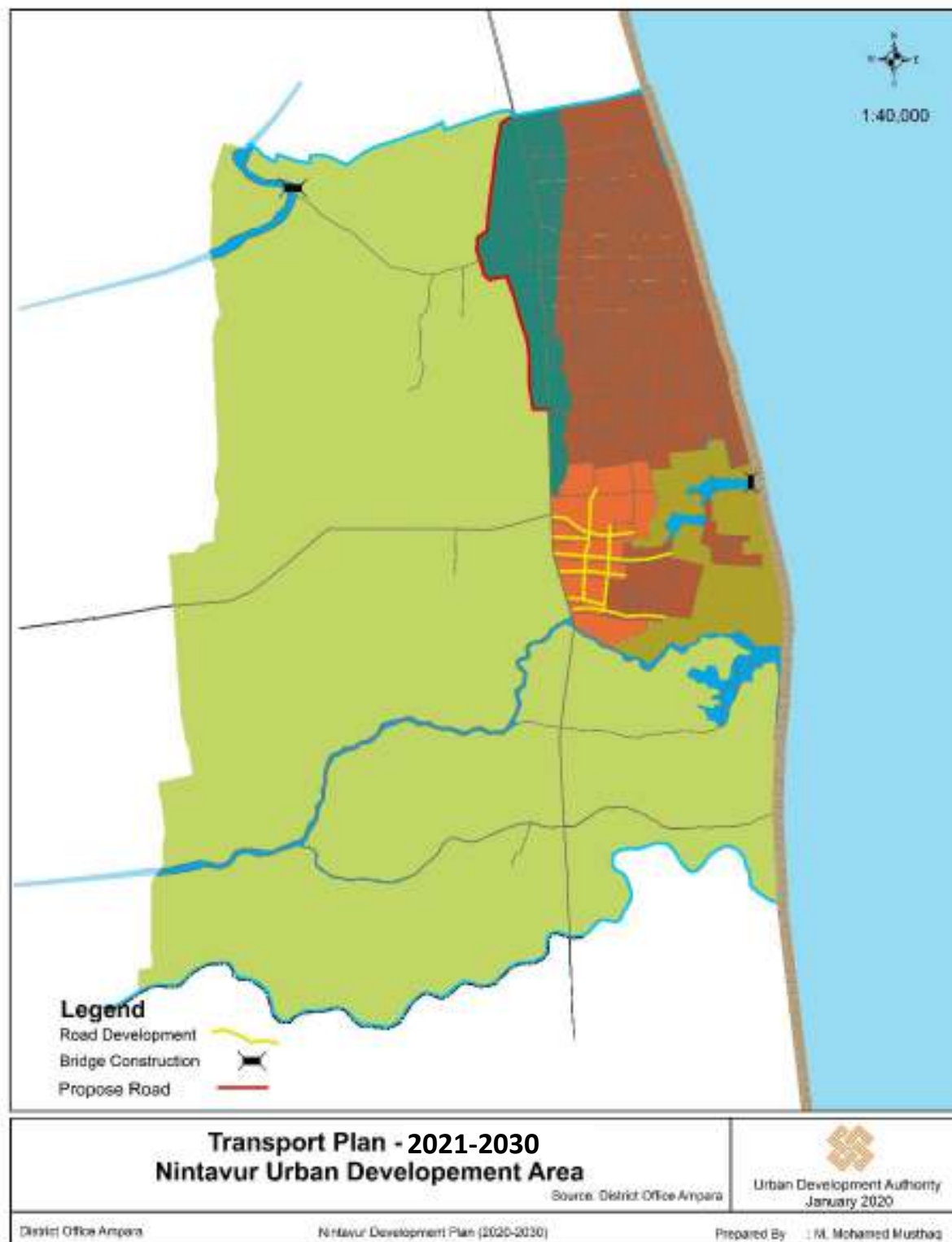
6.3.1 Transportation Plan

When considering the requirement of serving the current socio economic activities of the town transport is not a significant issue in Nintavur area in comparison to other sectors. Predicted population for year 2030 is about 30,000 and commuter population is about 5000-6000. Main commuting time to Nintavur area is from 6 am to 8 pm daily. They make the visit to the town in order to obtain some services like agriculture, business, and industrial, health, administrative and other purposes.

A more urbanized and vibrant township will emerge due to the new development initiatives such as improvement of infrastructure facilities and town center development. In order to provide access for the residential population and commuter population a proper Transportation Plan is needed.

Transport plan prepared to get maximum utilization from available resources while creating safe, convenient and well linked road network. This will improve accessibility to all parts of the area and ease the travelling. In addition to above controlling of paddy field encroachment in future also expected by the Transportation Plan.

Map 6. 2 Transportation Plan for Nintavur area – 2030



Source: Ampara District Office, UDA. 2021.



Akkaraipattu- Kalmunai A 4 road considered as the main transport way to and from Nintavur area. In addition, there are many internal roads which circulate the people of Nintavur. It's necessary to make a meticulous attention for transportation in the area since many projects and different activities are to be coming with this development plan. Therefore, several projects have been identified for the smooth functioning of the area.

Main project of the transport plan is development of an outer circular road. This road will start from in front of Divisional Secretariat office at main road and provide access to proposed administrative area which is located west wing of the A4 road, ongoing divisional hospital area and which connect to main road. One of the main objectives of the outer circular road is to restrict the paddy land encroachment in future around 43 Hectares while using abandoned paddy lands for town center development. Outer circular road will be connected with the main road at certain points by byroads. It will improve the accessibility within the proposed urban zone.

One of the other main projects is road network improvement in Addapalam industrial area where Agro related industries are to be agglomerated. It includes road expansions, road improvements, side drain development, and connectivity improvement. Road network improvement expects to improve the accessibility and uplift the industrial activities in future. This transportation plan aims to attract more investors to industrial area where ample infrastructure facilities have been provided. In future there are 55 additional hectares of land allocated for industrial purposes.

Construction of a bridge over the west river to connect the Sammanthurai P.S. area with Nintavur town and improve the Wellaskattu road is another project. It will enhance the local business between the two major agro based towns. This proposal ensures easy access to both areas and will cut down the cost of transport the raw material and final products and will avoid the unnecessary traveling time and wasting of energy. Beach road which runs parallel to the beach towards southern part of Nintavur is disconnected at Wawwalodai river mouth. Southern part [Hinter land zone] of the Nintavur area rich with natural features has no connection with Northern part - Wawwalodai area. A playground is under construction close to Wawwalodai river mouth. People have to travel about 2.5 to 3 Km. to reach each area due to the river mouth. Therefore, the connection between this two area need to be addressed and a bridge is proposed for that.



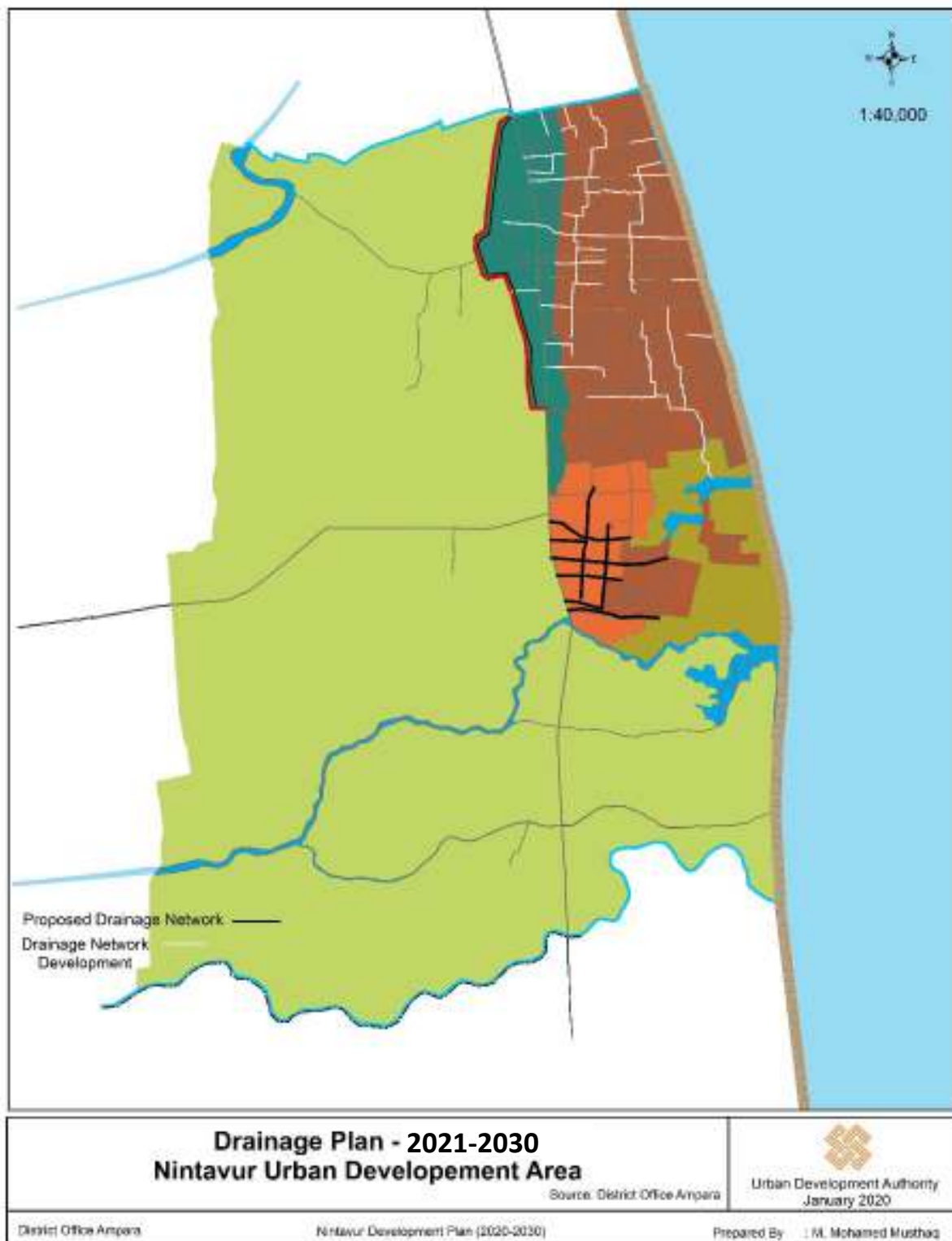
6.3.2 Drainage Plan

According to the recent records subject locality is highly vulnerable to flash flood due to improper drainage network. Specially the residential area is affected in the rainy season and creates inconvenient for the local people. Monthly mean rainfall is 137 mm in the area, but during north - east monsoon [November to February] it brings heavy rain to Nintavur and average monthly rainfall during the period about 330 mm. Existing central drainage will be improved since it acts as main drainage network of this area which discharge the storm water from Addapalam down south area to Wedduwaikkal canal. And apart from this other existing sub drainage network will be rehabilitated which are Veddaru Canal, Aliyar Moulavi road Drainage, Vanniyar Drainage, Abrar mosque drainage, Mavadi drainage, Manthoda Drainage, Vanniyar east drainage, Manikudu parisari drainage , Ahsraf squire drainage, Hospital road drainage, Buhari road drainage, Mirza lane drainage, Firoos lane drainage, Al ashraq school drainage, South drainage, Kiddanki drainage, Al Maslam North drainage, Theatre drainage, APC road drainage, Kanniyar drainage, Rahmaniya drainage, Pandiyan Mason drainage, and new drainage network will be developed in the west wing of the area to mitigate flood. Also some part of paddy fields especially in the west wing function as a water retention area. And proposed and rehabilitated drainage network existing will be connected to in land water bodies and finally storm water discharge to the sea.

This consequence, create flood free town and also support for people to engage daily routine without any interruption in future. Especially the people in the urban and residential zones will be benefited.



Map 6. 3 Drainage plan for Nintavur area – 2030



Source: Ampara District Office, UDA. 2021.



6.3.3 Waste Management Plan

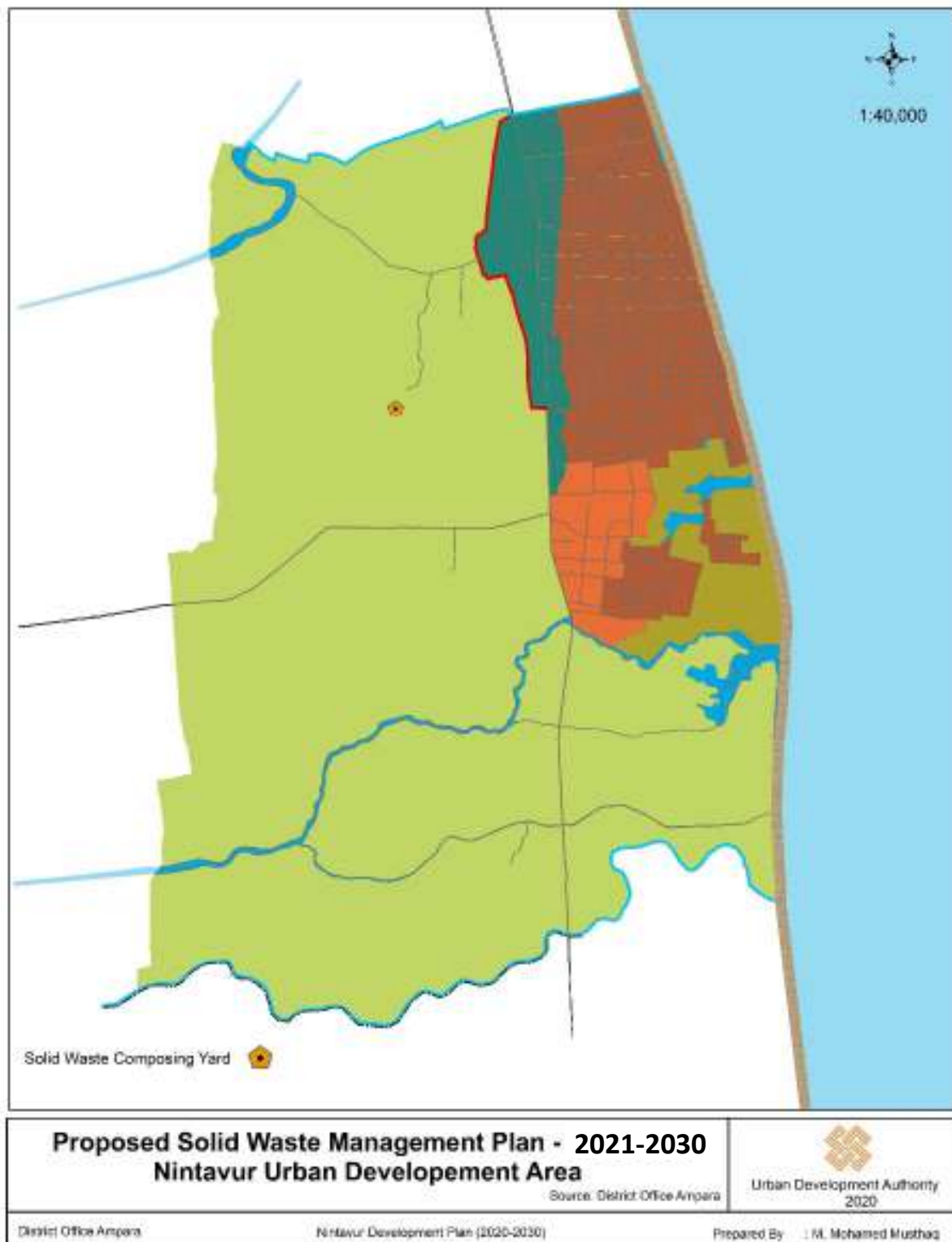
Solid waste Management is a considerable environmental problem in Nintavur area. Presently open dumping method is being followed and it will be a serious environmental problem in near future since the present dumping site Paravattipity is located in a sensitive area where paddy lands are existing is surrounding.

Present approximate daily solid waste collection is 05 tons from residential [3.3 metric tons] and commercial [1.7 metric tons].

Predicted solid waste generation is about 5.4. Tons per day by 2030. Solid waste management should be initiated from the source of origin and Local Authority should encourage public to adhere to 3R system. Apart from this existing Paravattipity open dumping yard will be converted into a composting yard to manage the solid waste of Nintavur. There solid waste will be segregated and degradable waste will be used to produce as organic fertilizer (Compost) in future which can be used for agricultural purpose since the Nintavur being agriculture based town. According to the reliable source by using 1000 Kg of bio degradable waste can be produced 200Kg of compost within three months. Non-biodegradable waste will be transferred to collection center of land fill site at Addalaichchennai and this attempts will be created the clean and convenient Nintavur town in the future. In addition, the role of Local Authority is compulsory for the success of solid waste management.



Map 6. 4 Location of proposed Solid Waste Composing Yards & Waste Collection Centers



Source: Ampara District Office, UDA. 2021.



6.4 Economic Development Strategies

6.4.1 Industrial Plan

In town industries plays a vital role in terms of economic development. To attract industries to a town at least one of the following factors should be consisted. They are raw materials, labor and market. In concern of Nintavur there are large extents of paddy lands and material based industries (paddy) have been agglomerated. Having that potential, the local industrial sector will be improved by providing infrastructure facilities. This industrial plan will be helped to make the Nintavur area to as an agro base industrial cluster in future.

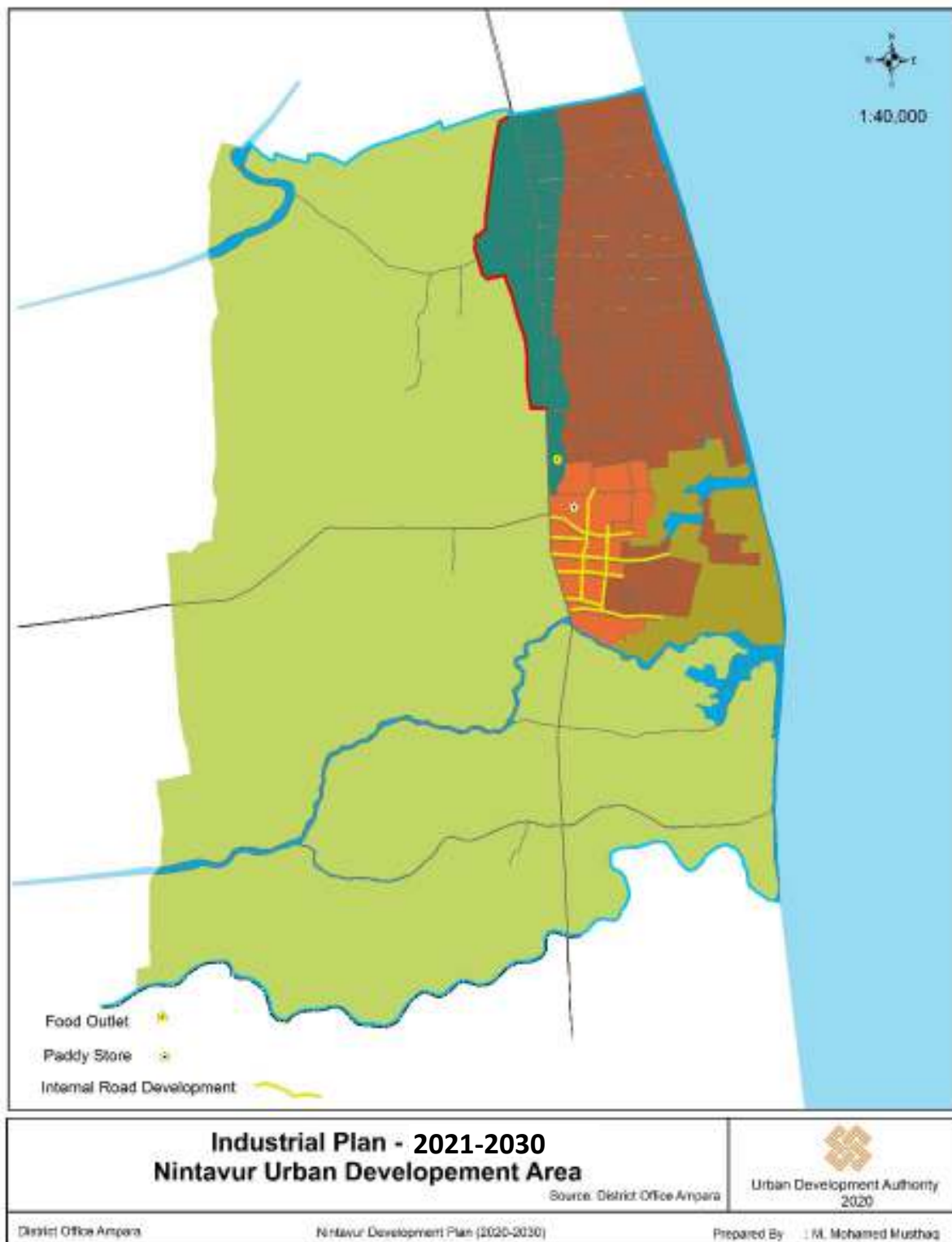
The rice mill industries have significant demand and it will be increased by 81 to 120 by 2030 according to the current market trend. Therefore, the industrial area should be facilitated with infrastructure to cater the future demands.

Initially agro base industrial zone will be declared to promote the agro base value addition activities in the local area. It's expected to allocate around 100 Hectares' land for industrial use for future industrial requirement and it will be will be support to produce around 32,750 MT paddy additionally. Infrastructure facilities such as road improvement, road widening, side drain development and road development will be carried out within the proposed industrial zone to meet the future expansion of industrial demand. As per the records per day around 5000Kg paddy requires for one rice mill to process the product providing paddy storage is one of the main strategy to meet the future paddy requirement to process the rice mills. Therefore, paddy storage will be provided within the industrial zone for interrupted business.

Also, paddy base local food stall or outlet will be provided to market and promote the local food products such as Hoppers, Sting Hoppers, and Local Sweets in the immediate boundary of the industrial zone. It will be providing employment around 50 numbers in the local people which will support economically some extent. In existing there is stable demand and market for the Nintavur paddy production in serval parts of Sir Lanka such as Colombo, Kandy, Ratnapura, Badulla, Kurunegala and Galle as well locality. In future Nintavur can be increased the quantity of the rice production and export top the aforesaid market continuously.



Map 6. 5 Industrial Development plan for Nintavur area – 2030



Source: Ampara District Office, UDA. 2021.



6.5 Environmental Sustainable Strategies

The vision for “Agro Hub “is to facilities environmentally & economically sustainable use of paddy, abandoned paddy fields, Other agriculture areas such as reed/rush fields, low-lying grasslands (often used as grazing grounds) “Keera-Kola” fields & certain “Ovita” areas and considering their intrinsic potential, their ecology and the needs of the surrounding population, while maintaining essential flood storage capacity and other environmental benefits. Apart from this creating a comfortable convenient and livable town center is one of the main goals of future Nintavur. Therefore, environment plan will be increased the paddy productivity, enhancing our natural scenic beauty and maintain the local character.

6.5.1 Conservation Plan

Nintavur major portion covered by the natural amenities like Paddy land, Water bodies, Coconut patches and Beaches which are highly contributes to alive the local area along. Therefore, those natural features will be conserved and protected for continuation of locality without disturbing the function and make the “Agro Hub” in future in terms ensure the environmental and economic sustainability. In that line around 6000 acres of paddy area, 240 acres of Coconut patched water bodies will be declared as an Agricultural zone. It will be monitor by imposing the regulation and strictly control the development within the limited zone.

6.5.2 Landscape Management Plan

Cities and its Environment is important for all of us because they are home to over half of the worlds population. Urban Development Authority is committed to making Sri Lanka’s cities healthy, attractive and sustainable and to improve citizen’s quality of life now and for the future. Landscape Management plan is one such tool used to achieve these concepts.

The main objective of the Landscape Master plan is to conserve and intensify the existing natural landscape and salient features of the area. This will protect the exiting city identity. In addition, an environmental conservation base systematic landscape aims at the sustainable landscape development of various ecosystems scattered in the city and streetscapes.

Adaptation of cities is needed for global climate changes in future and integrated in to all urban plans. Accordingly the landscape master plan will be foamed for the following purposes.



- a) Increasing urban forest cover to mitigate disasters such as rising urban temperatures, increased of carbon footprint, increased air pollution, and increased flooding.
- b) Separate sidewalks and cycle ways with shade and seating for pedestrian safety. Will be provided to encourage walking & cycling to promote healthy city concept.
- c) Eco friendly recreation and wise use will be integrated while protecting the ecosystem to mitigate the unauthorized activities in sensitive areas.
- d) Urban squares and public parks. Will be designed with infrastructure to provide well designed open spaces for the inhabitants & city users to relax & enjoy.
- e) Increase of Economic development with beautification of the city will be achieved by adding various parks, walkways lighting and suitable billboards, name boards and sign boards.

In the proposed urban zone west wing of the area, along the Beach road and main road will be landscaped by planting trees, roundabout landscape in the mosque junction and providing walk ways to enhance the beauty of the town and create comfortable and convenient town for the local people and commuters. According to the future population forecasting 30,000 of local people and around 4500– 6000 commuters will be access to service to the town.

There are many identified project has proposed to the entire town to manage the landscape of the township to enhance the town in future such as tree plantation of either side of the main road, provide side walk along the main road, Develop Linear park, Flood Detention & Retention, Beach Park Development.

Develop Linear Parks

- Reservations of A & B category roads are proposed to build as linear parks to improve walk ability facilities & enhance the natural beauty of the area.
- Reservation of Wawalodai lagoon proposes to develop as linear park to mitigate flood hazard in the area & improve the natural beauty of the area.
- Roundabout landscaping in the Grand Mosque junction.



Proposed Tree Planting Areas

- Arasady - Malkampiddy Rd (from Malkampiddy junction to Arasadi junction)
- Colombo - Batticaloa Hwy (From South Eastern University to Nintavur border Bridge)
- Beach road (Wedduwaikkal to Wawvaloddai)

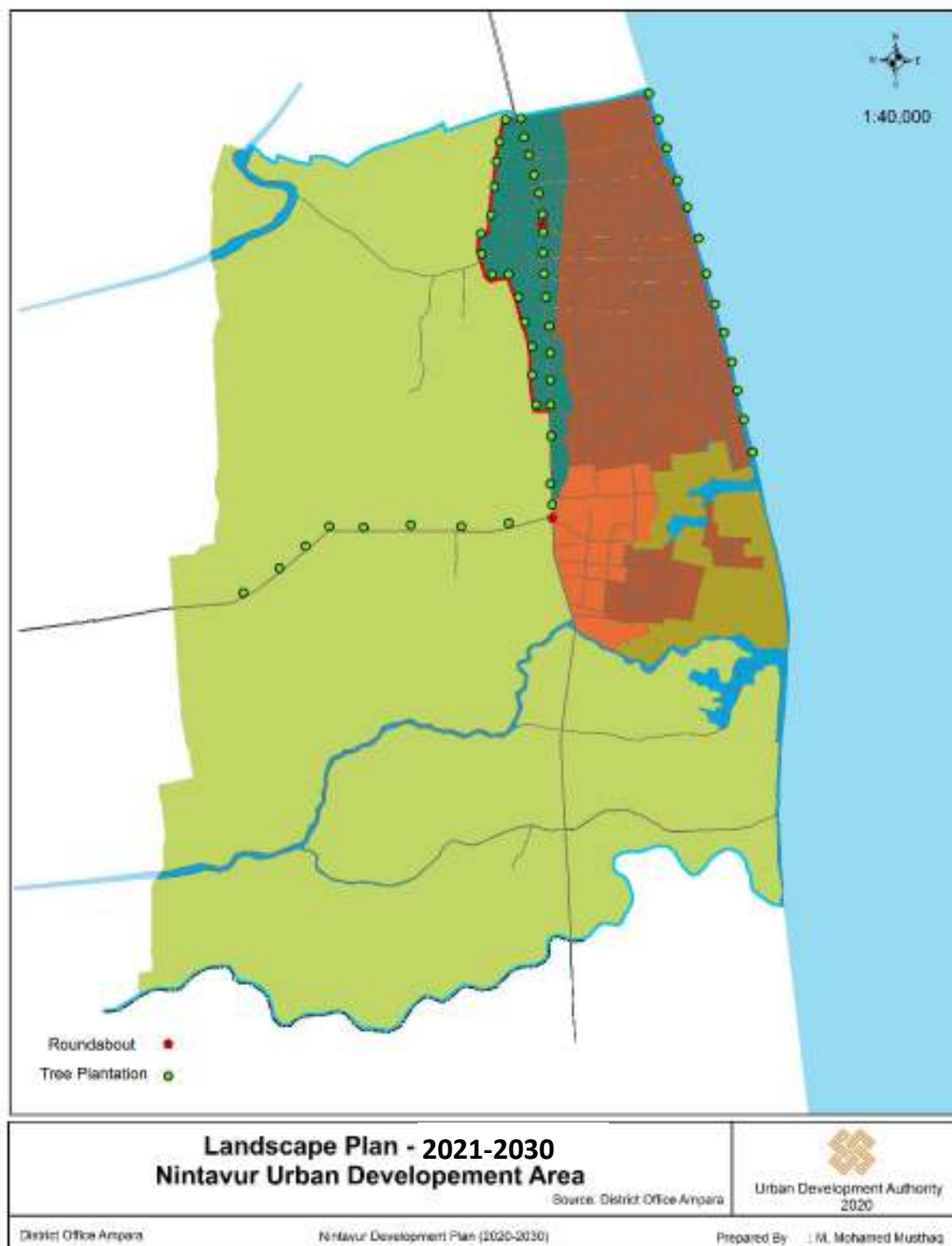
Flood Detention & Retention

This plan suggested reserving the existing paddy fields, abounded paddy fields as flood retention & detention areas and development activities of the adjacent areas must be done in compliance to the relevant laws & regulations under the recommendations of relevant institutes.

Beach Park Development

- Existing beach area of the Nintavur Pradeshiya Sabha should be design with a proper landscape plan.
- Create proper access & facilitate direct scenic views for the public to enhance the beach activity.
- Create a shady green belt in front of the demarcated (by CCD) beach line.
- Provide public facilities such as,
 - Seating
 - Drinking fountains
 - Beach lighting
- Small kiosks, souvenir shops, changing cubicles with showers along major pathways to generate more jobs for the local community while enhancing the beach setting.
- Children's park.
- Hotels, restaurants and cabanas in harmony with the coastal environment. (View of the beach and sea will not be obstructed by the constructions).
- Proper drainage system & garbage disposal mechanism to maintain a cleaner beach park.

Map 6. 6 Landscape Plan for Nintavur area – 2021



Source: Ampara District Office, UDA. 2021.



6.5.3 Disaster Risk Management Plan

Planning area currently severely affected by Sea erosion, elephant attack and flood. This consequence continues without any planning attempts the local area will be lost its own potential like paddy field and scenic beaches.

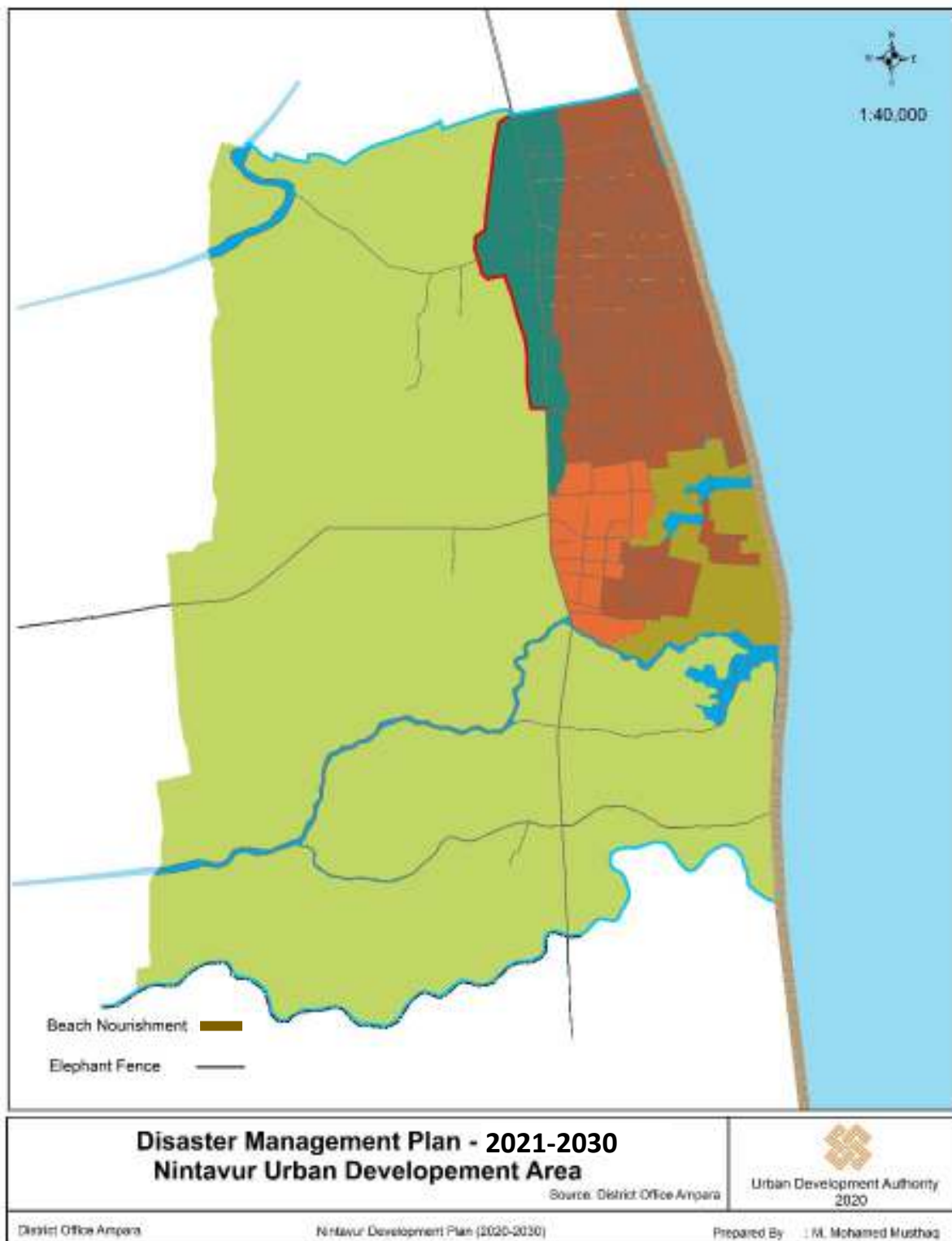
The coastal erosion is the one of major physical impact, identified in Oluvil area along the beach. There is a severe threat for more than 30 meters' area of Nintavur coastal belt have gone in to the sea. Department of Coast Conservation and Coastal Resource Management study suggested that suitable mitigation method for sea Erosion is beach nourishment. Beach nourishment is a mitigation technology which is primarily used in response to sea erosion by supply of sand to the shore to mitigate the impact of immediate coastal belt and secure the beach against sea erosion by feeding sand on the beach which is a soft engineering approach to coastal protection which involves the artificial addition of sediment of suitable quality to a beach area that has a sediment deficit. Beach nourishment technique will be applied the North Wawvaloddai to Kalliodai in the South. As a result of this around 250 acres of abundant paddy land and 60 meters of beach area will be protected from the sea erosion which will increase the productivity and profit of the local farmers in the future. This planning intervention will be highly support to create the Nintavur as an Agro Hub in 2030.

Elephant attack is another threat in the local area which disturbed and cost the paddy cultivation. Presently local farmers spend around 3m per annum to mitigate and protect the paddy field and harvesting. Therefore, elephant fence erection will be erected Kalliodai Bridge to Theekawavi area. This action accepted to reduce the impact of paddy field and helped to save the additional cost 30m in the coming years which also, increased the local farmer's profit.

Nintavur area receives intensive rainfall during the northeast monsoon period of October to January as well as some rain in the inter-monsoon period. Average annual rainfall of is 1,592mm. The dry season occurs between the months of January to July where average monthly rainfall is less than 40mm due to this natural phenomenon gets the flood in Nintavur low-lying area. Therefore, to mitigate the flood existing drainage network will be rehabilitated and this plan has incorporated with drainage plan.



Map 6. 7 Disaster management Plan for Nintavur area – 2030



Source: Ampara District Office, UDA. 2021.



6.5.4 Public Open Spaces plan

Public Outdoor Recreational Space (PORS) Plan for Nintavur Pradeshiya Sabha Area 2021 – 2030

According to the accepted standards of Urban Development Authority, open spaces has to be provided at the rate of 1.4 hectares per 1000 persons. It has estimated that the population is 27,500 in the year 2017. According to the data analysis of the development plan it has forecasted that the population would be 30,000 by the year 2030. According to that it should be reserved 42 ha as Public Outdoor Recreation areas in 2030.

Details of the Existing Public Parks & Playgrounds in Nintavur PS Area

There are 4.7 has of existing Parks & Play grounds of the whole Nintavur PS Area. They have been categorized in table 6.1 & Annexure 03 accordance with UDA Public Outdoor Recreational Space concepts as follows,

Table 6. 1 Existing PORS – 2018 (Nintavur PS Area)

No	Type of Parks	Extent (ha)
1.	Existing Pocket Parks (EPP)	0.2
2.	Existing Mini Parks (EMP)	0.5
3.	Existing Local Parks(ELP)	4.0
	Total	4.7

Passive Recreational Places Nintavur PS Area

Public Library – 01. Colombo - Batticaloa Hwy, Nintavur (registered members - 4900)

Cultural Hall – 01. Near the PS building (seating capacity - 1500)

Forecasted population for year 2030 is 30,000 and PORS land requirement for the total population for the Nintavur PS area for year 2030 is approximately 42ha. (Table 02 & Annexure 04) Existing and Pro- Posed Public Outdoor Recreation Space Plan indicated in Map No: 6.8



Table 6. 2 Proposed Public Outdoor Recreation Space Plan for Nintavur PS Area 2021 – 2030

No	Type of Parks	Extent (ha)
1.	Proposed Pocket Parks	3.1
2.	Proposed Mini Parks	13.2
3.	Proposed Local Parks	12.5
4.	Proposed Community Parks	5.0
5.	Proposed Linear Park	3.8
6.	Proposed Beach Park	2.0
	Total	39.6
	Existing PORS	4.7
	Grand Total	43.3

PUBLIC OUTDOOR RECREATION SPACE (PORS) PLAN - PERMITTED ACTIVITIES

Table 6. 3 Public outdoor recreation spaces in Nintavur

No	Park Category	Extent	Permitted Uses	
1	Pocket Park	Less than 0.2 ha (0.5 acres)	a.	Scattered play spaces
			b.	Rest areas
			c.	Garden patches
2	Mini Park	0.2 – 1.0ha (0.5- 2.5	a.	Children's play area
			b.	Small grassed playground
		acres)	c.	Linear woodland park
			d.	Rest garden
3	Local Park	1.0-3.0 ha (2.5 – 7.5	a.	Football pitch combined with Children Play area and informal relaxation space
			b.	Large informal grassed area with Children play area



			c.	Small woodland park and an informal running practice area
4	Community Park	3.0 to 6.0 ha (7.5 to 15 acres)	a.	2 ha - Football/ Hockey + practice running track and athletics
			b.	1.0 to 1.5 ha - small cricket pitch
			c.	0.25 - 0.5 ha - Netball and/ or Basket Ball and /or Volley Ball
			d.	0.25 ha - Children's special play area
			e.	0.25 ha - Ornamental Garden.
			f.	0.5 ha - Naturalistic area for Relaxation & study
5	Beach Park	Depend on the	a.	Restaurants and cabanas
			b.	Small kiosks
			c.	Souvenir shops
			d.	Changing cubicles with showers
			e.	Children's park
			f.	Police post
			g.	Seating
			h.	litter bins
			i.	water fountains
			j.	play features
6	Linear Park	Depend on the existing Oya/	b.	Jogging
		Ela/ Road/	c.	Cycling
		Lagoon reservations Walking	d.	Nature trails



Strategies

1. Develop Linear Parks

- 1) Reservations of A& B category roads are proposing to build as linear parks to improve walkability facilities & enhance the natural beauty of the area.
- 2) Reservation of Wawalodai lagoon propose to develop as linear park to mitigate flood hazard in the area & improve the natural beauty of the area.

2. Proposed Tree Planting Areas

- 1) Arasady - Malkampiddy Rd (B31)
(From Malkampiddy junction to Arasadi junction)
- 2) Colombo - Batticaloa Hwy (A4)
(From South Eastern University to Nintavur border Bridge)

3. Flood Detention & Retention

This plan suggested to reserve the existing paddy fields, abounded paddy fields as flood retention & detention areas and development activities of the adjacent areas must be done in compliance to the relevant laws & regulations under the recommendations of relevant institutes.

Beach Park Development

Existing beach area of the Nintavur Pradeshiya Sabha should be design with a proper landscape plan.

- Create proper access & facilitate direct scenic views for the public to enhance the beach activity.
- Create a shady green belt in front of the demarcated (by CCD) beach line.
- Provide public facilities such as,
 - 1) Seating
 - 2) Litter bins
 - 3) Drinking fountains
 - 4) Beach lighting
 - Small kiosks, souvenir shops, changing cubicles with showers along major pathways to generate more jobs for the local community while enhancing the beach setting.
 - Children's park.

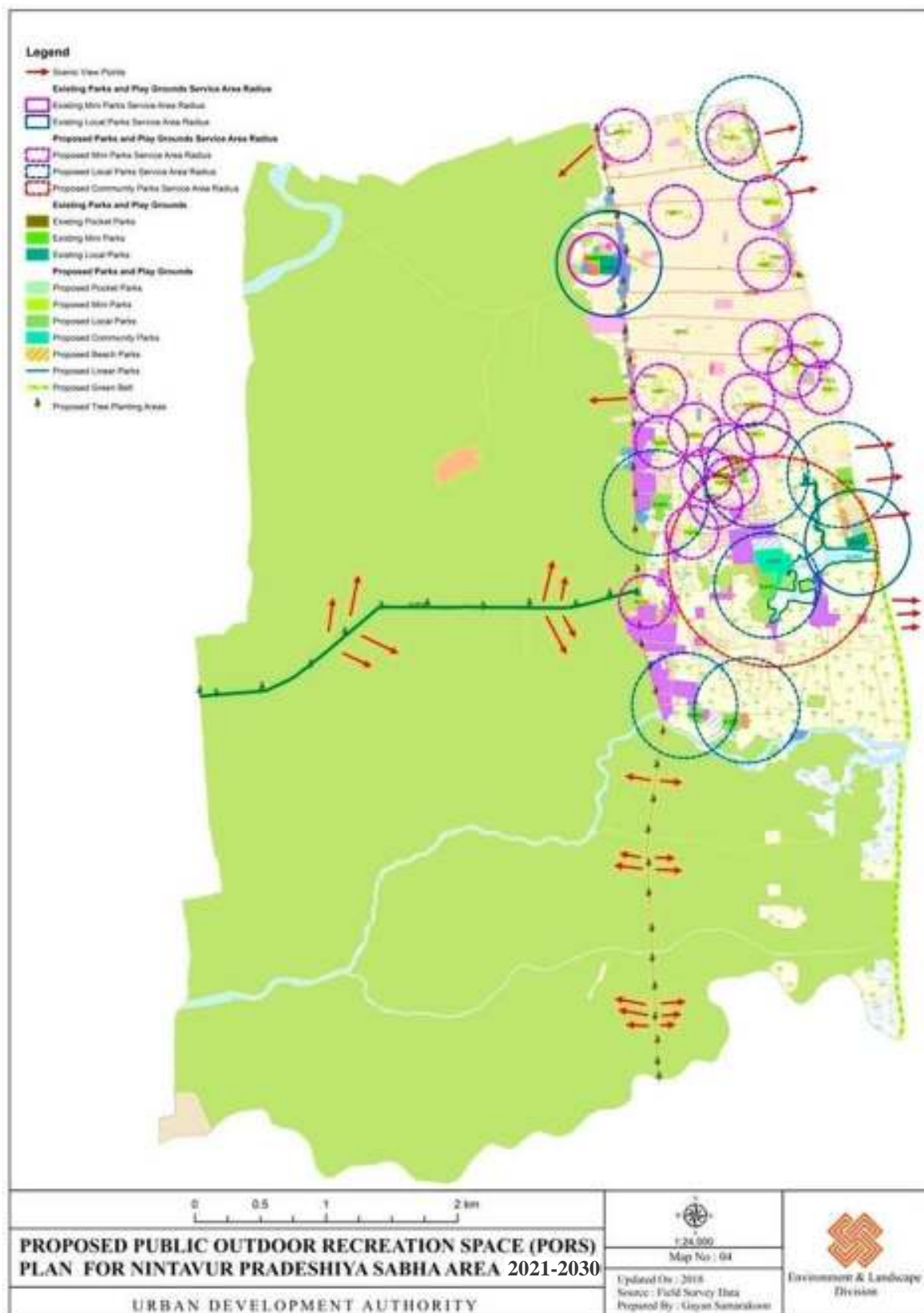


- Hotels, restaurants and cabanas in harmony with the coastal environment. (View of the beach and sea will not be obstructed by the constructions).
- Proper drainage system & garbage disposal mechanism to maintain a cleaner beach park.

Proposed Public Outdoor Recreation Space Plan for Nintavur PS Area – 2030

Apart from above PORS plans the existing public playground located in Pradeshiya Shaba area will be facilitated and proposed public Swimming pool behind the Al Ashar School also fulfill the local people recreational activities.

Map 6. 8 Proposed Public Outdoor Recreation Space Plan for Nintavur PS Area – 2030



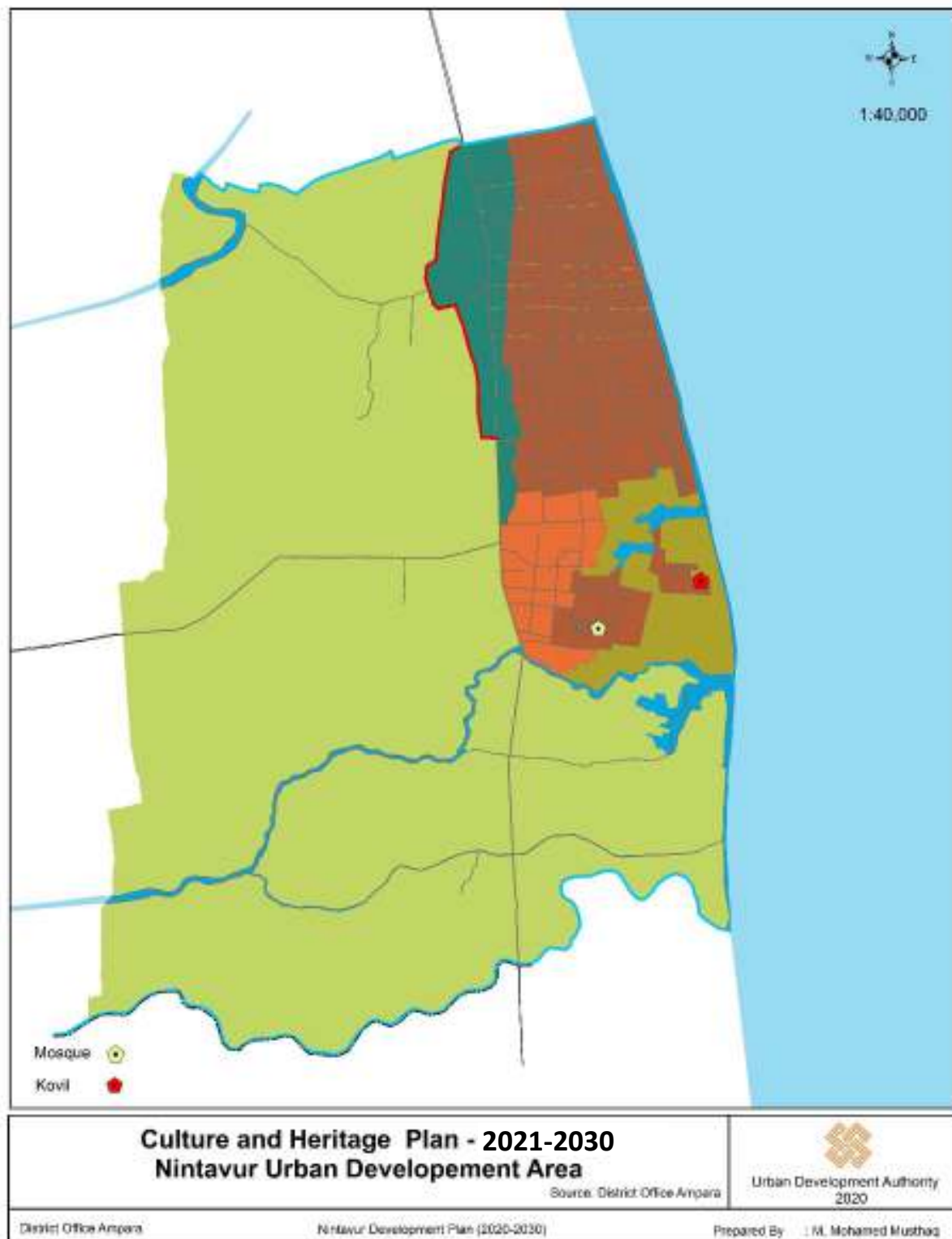
Source: Ampara District Office, UDA. 2021.



6.6 Culture and Heritage Management

Nintavur has possesses some tangible cultural and religious heritage properties. Presently the Addapalam historical mosque (Addapalam 40' Awliya mosque) and the Meenachchiamman Kovil in Oluvil are coming under the archeological, cultural and historical sites. Those Culture Heritage asset are should be conserved. The Mosque is located in Addapalam, Thompukondom area. It has more than 150 year's history. People believe this place as a religious and historical landmark and they strongly believe this is the place which Saint of god had been lived and died. Other heritage properties is Meenachchiamman Kovil in Oluvil which is located 4km away from Addapalam area and 500m away from Oluvil University. The Kovil located under the Banyan tree. The Hindu worshipers compare that canopy of Banyan tree in to the head of Meenachchiamman god. People believe that this Oluvil was built during the period of King Vanniya Irajasinghe. People come to worship this place on Fridays. Therefore, these two sites need to be conserve to maintain the local people faiths, beliefs and the local character.

Map 6.9 Culture and Heritage Management Plan for Nintavur area – 2030



Source: Ampara District Office, UDA. 2021.



6.7 Implementation Strategy

Table 6. 4 Identified projects under Nintavur Development Plan 2030

IDENTIFIED PROJECT UNDER THE NINTHAVUR DEVELOPMENT PLAN - 2030				
No	Project Name	Duration of the Project	TEC (Mn)	Funding source
1	Provide Beach Nourishment Mitigation System (Along the coastal belt)	Long term		CCD
2	Provide Erection of elephant fence.(Edge of the paddy land in south area)	Medium term		LA, Department of Wildlife conservation, Farmers Society
3	Redevelopment of existing drainage system.	Medium term	50	LA, , Irrigation Dept.,RDA,PRDA
4	Construction of New drainage system (Construct ditches and culverts).	Long term	100	LA, , Irrigation Dept.,RDA,PRDA
5	Preservation with Demarcation of reservation of all natural Drainage in Nintavur area.	Medium term	50	LA,Irrigation- Dept.,RDA,PRDA
6	Establishment of outer circular road(Western wing of A4 Colombo-Batticaloa Road)	Long term	180	LA , Irrigation Dept., CEA, Agrarian Service Dept. , SLLRDC, UDA
7	Land Development of Construct Value added product industries (Flour, Noodles, Biscuits, Bran oil etc.	Long term		Ministry Of agricultur- al Ministry of Industry , Public Private Partner- ship & BOI
8	Create and Improve accessibility within the agro based industrial Development zone	Medium term		RDA,PRDA, LAs



9	Develop urban park and industrial production outlet (Near the malkampitty junction)	Medium term	200	Ministry Of agricultur- al Ministry of Industry , Public Private Partner- ship ,RDA,UDA & BOI
10	Reclamation of identified abundant paddy land.(28 Hectares of Western wing of A4 parallel road Colombo- Batticaloa - CRWB Road)	Long term		LA , Irrigation Dept., CEA, Agrarian Service Dept, Agricultural Dept SLLRDC, UDA
11	Construction of bridge Wavvalodai Aru.	Long term		LA , Irrigation Dept.
12	Construction of bridge Kudamuruddi Aru.	Long term		LA , Irrigation Dept.
13	Construction of Paddy store, (Proposed Industrial zone)	Short term		LA, , Dept of Agricul- ture, Dept of Industry
14	City beautification Projects -Tree Plantation besides the identified roads walking path (Main road and Beach road, Urban zone)	Short term	50	LA, Public private partnership, RDA,UDA
15	Existing Public Market redevelopment	Short term		LA,
16	Vettaru Development-Improvement of Vettaru South Road. Construction of Gabion wall, Culverts	Long term		LA, Irrigation Dept. RDA,PRDA
17	Protection bund to avoid soil erosion along (Kaliyodai river)	Long term		LA, Irrigation Dept.,
18	Construction of gabion wall for Kaliyodaiaru and Senkkappadaiaru	Long term		LA, Irrigation Dept.,RDA,PRDA



19	City beautification Projects-Round aboard Development (Palli Junction, alimulai junction)	Medium term		LA, Public Private Partnership, RDA,UDA
20	Construction secretion center with composing yards at Paravattiyipitty	Medium term	60	LA, Public private partnership
21	Beach Park Development(Ninthavur-09,01,02)	Medium term		LA, CCD
22	Redevelopment of Ashraff memorial public play ground with all basic facilities	Medium term		LA/ PPP/ Sport Ministry
23	Construction of public Swimming pool (be- hand of the Al Ashraq Muslim Mahavidyalayam)	Medium term		LA / PPP/ UDA
24	Improving of Existing weaving center with modern facilities.	Short term		LA/ Industrial development Board
25	New Road construction at by linking German School housing at Addappallam.	Medium term		LA
26	New Road construction at Division-09 between 3rd cross and Ashamed Master coconut estate.	Medium term		LA
27	New Road construction at beside of engineer estate and linking to German school road	Medium term		LA
28	New road construction from 'Eelaiyanpalam' to beside the "Wavvalodai" river (north boundary)	Medium term		LA
29	Widening of Pullupiddi, Nochchiyadi, Maaddupplai and Thombukkandam.	Medium term		Irrigation Dept., Agrarian Service Dept, LA,


6.7.1 Strategic Action Projects

1) Redevelopment of Ashraf memorial public play ground with all facilities.

Table 6. 5 Project identification of Ashraf memorial public play ground

Project Title	Re Development of Ashraff memorial public play ground with all facilities
Project	Public Outdoor Recreational Space improvement development projects.
Project Proposal	Enhance the related basic Social infrastructure facilities for the general public

Table 6. 6 Project location of Ashraff memorial public play ground

Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Pradeshiya Sabha Road	Main access RDA Road	Existing resident	Pradeshiya Sabha ,Nintavur
Access	RDA Road Akkaraipattu Kalmunai, and LA Road			
Location Map				



Adjacent Land Uses (explain with map)	Ashraff memorial public play ground is the major Sports Playground located in the Nintavur area. Land Belongs to Ps Nintavur. It is maintained by the Ps Adjacent land is mostly owned by Nintavur UC and consisted with children park and Market. The west part of this land consists with small pavilion which are going to be remove and proposed to construct a sport complex in that land Nintavur PS was located closer to the proposed project area.
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Table 6. 7 Project justification of Ashraff memorial public play ground

Project Type	New		Improvement		Extension		Land Development only
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure
Project Aspect	Economic				Social		
Project Objective	<ul style="list-style-type: none">To provide Better Social Infrastructure facilities for Local communities for their living environment and commuting population.To provide leisure and recreational facilities to the public.Open spacious appearance, landscaping and quiet environment of can contribute to the amenity of the open space and the surrounding area.						
Rational of project	Ashraff memorial public play ground has identified and develop as a recreational area up grated one up to regional level sport complex with all sports Facilities. Apart from certain sectors there are no significant deficiencies in basic recreational facilities in Nintavur. According to the data analysis of the development plan it has forecasted that the population would be 30,000 by the year 2030. According to that it should be reserved 42 ha as						



	Public Outdoor Recreation areas in 2030 therefore we need develop this area as a public playground.
--	---

Table 6. 8 Project description of Ashraff memorial public play ground

Present Land Ownership	UDA			Private		State	√
Free Encumbrances	Yes		No		If No give details		
Details of the Ownership	Nintavur PS						
Survey Plan Detail	Survey Plan No.		Name of the Surveyor		Date		Land Extent
	On preparation		-		-	5 Acre	
Project Period	Short term (1> year)		Mid Term (1-3 year)		Long term (3< year)		Total Estimated Cost 150Million
Financing Method	Ministry of Sports, Public private partnership (PPP), PS						
Description of the Project (with map)	The Sport complexed development consists with 200m Rack, 100 seat with mod- ern pavilion building, and indoor stadium with all indoor game netball, volleyball court, football court, maintenance room, toilet and rest room.						
Infrastructure Availability		Required Capacity				Required Capacity	



	Water	Available Capacity		Electricity	Available Capacity	
	Solid waste Management system	Yes		No		If No give suitable SWM proposal
Zone	Zone 1 (Urban Zone)			Zoning compatibility	Yes	√ No

Project description

The site is already developed and people are using without any proper sport facilities. The site needs to be developed.

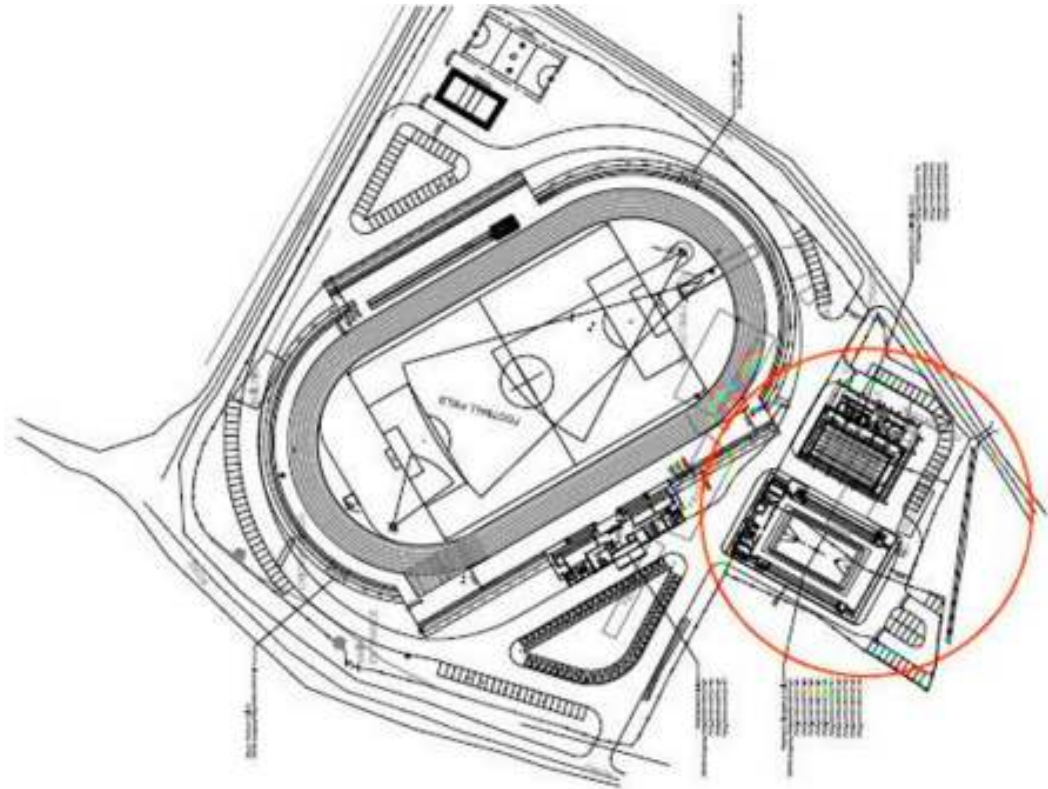
UDA has identified this project.

Table 6. 9 Existing situation of Ashraff memorial public play ground

Description	No. of units	length	width



Figure 6.
3 Layout
map



Source: Ampara District Office, UDA. 2021.

PHOTOGRAPHS

Figure 6. 4 Present situation of the location



Source: Ampara District Office, UDA. 2021.



Table 6. 10 Proposed Plan & Building Design Requirements (IF AVAILABLE)

Project Budget	
Activity	Cost (Mn)
Preliminaries	10
Site preparation	10
Construction of building s	100
Finishing works	18
Total	150.0 Mn

Approval Agencies		
Activity	Relevant Authority	Authorized person
	Urban Development Authority	Director General
	Nintavur PS	Chairman
	Nintavur Divisional Secretariat	Divisional Secretary
	Ministry of Sports	Director General

	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (urban zone)and general regulations and guidelines	
Details of Attachments		



2) Solid Waste composing yard in Paravaddai Pidli project

Table 6. 11 Project Identification of Paravaddai Pidli project

Project Title	Solid waste composing yard in Paravaddaipidli
Project	Construction Secretion center with composing yards as Paravaddaipoddi
Project Proposal	To mitigating impacts on the environment pollution, to enhance the social environmental status of the area

Table 6. 12 Project location of Paravaddai Pidli project

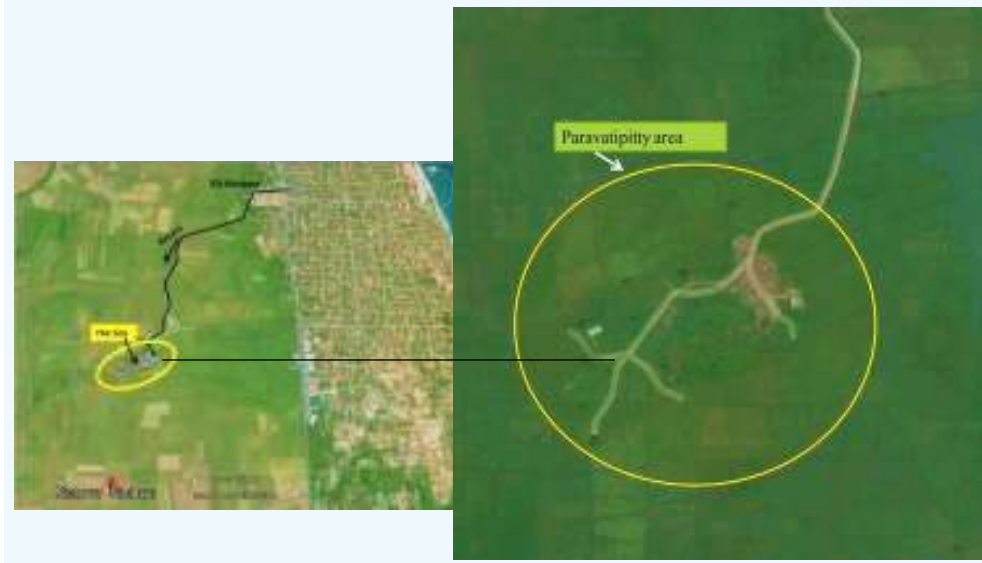
Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Adjoining land is paddy field	Adjoining land is paddy field	Adjoining land is paddy field	Adjoining land is paddy field
Access	Irrigation Bund Road			
Location Map				
Adjacent Land Uses (explain with map)	Pradavaddai Pidli located western part of the Nintavur Pradeshiya Sabha. The Boundary of this land are one seasonal paddy cultivation lands. This land 5msl high land, the main access to the irrigation department bound road.			



Table 6. 13 Project justification of Paravaddai Pididi project

Project Type	New		Improvement		Extension		Land Development	✓
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
Project Aspect	Economic			✓	Social		✓	
Project Objective	<ul style="list-style-type: none">• It is a clear, practical, efficient and cost-effective approach.• To mitigating impacts on the environment pollution,• Environmental sustainability.• To ensure long term safety and quality of life of people							
Rational of project	<p>Nintavur local authority practicing open dumping waste disposal method in Paravattiy Pitty highland which is located in the middle of paddy filed, at present the PS practices to open dump the collected waste and the rest is subjected to open burning causing serious environmental damage hence the location is more sensitive area.</p> <p>So the essential of considering a new proposal. In addition, that, the Lack of sanitary landfill dumping sites are the main issue faced by the Nintavur area. In that line Paravatipitty vacant land has been selected as composing yards and construction of proper composing yard system and using as temporary collecting center for establishing a new waste management procedure.</p>							



Table 6. 14 Property description of Paravaddai Pidli project

Present Land Ownership	UDA			Private		State	√
Free Encumbrances	Yes		No		If No give details		
Details of the Ownership	Nintavur PS						
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent		
	On preparation	-		-	4 Acre		

Project Period	Short term (1> year)		Mid Term (1-3 year)	√	Long term (3< year)		Total Estimated Cost	150Mil-lion
Financing Method	RDHS, Public private partnership (PPP), PS							
Description of the Project (with map)	Construction Secretion center Building with composing yards, using modern technologies with. Basic infrastructure facilities.							

Infrastructure Availability	Water	Required Capacity		Electricity	Required Capacity	
		Available Capacity			Available Capacity	
	Solid waste Management system	Yes		No		If No give suitable SWM proposal



Zone	Zone 5 (Agricultural Zone)	Zoning compatibility	Yes	√	No	
History (if it relevant)						
Present Status (Explain details with measurements)						

At present stage the land is using open waste dumping. Without any basic technologies.

Table 6.15 Existing situation of Paravaddai Pididi project

Description	No. of units	length	width

Photographs

Figure 6. 5 Present situation



Source: Ampara District Office, UDA. 2021



Table 6. 16 Proposed Plan & Building Design Requirements (IF AVAILABLE) of Paravaddai Pididi project

Project Budget	
Activity	Cost (Mn)
Preliminaries	5
Site preparation	10
Provide infrastructure facilities	20
Construction of buildings	40
Finishing works	10
Total	85.0 Mn

Approval Agencies		
Activity	Relevant Authority	Authorized person
	Urban Development Authority	Director General
	Environmental Development Authority	Director General
	Pradeshiya Sabha	Chairman
	Ministry of Health (RDHS)	Director

	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (urban zone)and general regulations and guidelines	
Details of Attachments		



Adjacent Land Uses (explain with map)	Adjacent Land use (Explain with map):- Adjacent land is consisted with one seasonal paddy land and the main access to the Agro Base Industrial Park is RDA road (CRWB Highway road).
--	--

Table 6. 19 Project justification of Outer Circular Road project

Project Type	New		Improvement		Extension		Land Development only	✓
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
Project Aspect	Environment			Economic		Social		✓
Project Objective	1) To provide Better Social Infrastructure facilities for Local communities for their living environment and commuting population. 2) To provide leisure and recreational facilities to the public. 3) Open spacious appearance, landscaping and quiet environment of can contribute to the amenity of the open space and the surrounding area.							
Rational of project	Ashraff memorial public play ground has identified and develop as a recreational area up graded one up to regional level sport complex with all sports Facilities. Apart from certain sectors there are no significant deficiencies in basic recreational facilities in Nintavur. According to the data analysis of the development plan it has forecasted that the population would be 30,000 by the year 2030. According to that it should be reserved 42 ha as Public Outdoor Recreation areas in 2030 therefore we need develop this area as a public playground.							



Table 6. 20 Property description of Outer Circular Road project

Present Land Ownership	Private		√		State	Other	State	ADB
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	Nintavur PS							
Survey Plan Detail	Survey Plan No.		Name of the Surveyor		Date	Land Extent		
	On preparation		-		-			

Project Period	Short term (1 > year)		Mid Term (1-3 year)		Long term (3 < year)	√	Total Estimated Cost	150Mil-lion
Financing Method	Road Development Authority, Irrigation Department, Agriculture Department,							
Description of the Project (with map)	<p>Outer Circular ROAD (OCR) to the Nintavur is one of the parallel road in the Ampara district proposed. On completion, this parallel will provide access to existing “A4” class roads and proposed parallel road at the interchanges, and as such will serve as the basis for the network of Highways in the country.</p> <p>Outer Circular Road details are as given below.</p> <p>Length: 3.5 km</p> <p>Width: 12 m</p> <p>Design speed: 40 kmph</p> <p>Lanes: Initially 2</p> <p>Proposed for parallel road at the following locations.</p>							



Infrastructure Availability	Water	Required Capacity		Electricity		Required Capacity	
		Available Capacity				Available Capacity	
	Solid waste Management system	Yes		No		If No give suitable SWM proposal	
Zone	Zone 1 (Urban Zone)			Zoning compatibility	Yes	√	No
History (if it relevant)							
Present Status (Explain details with measurements)							

History (If it relevant)

Existing Situation

The proposed project's land is one seasonal paddy land. In the present situation abandoned paddy land



PHOTOGRAPHS

Figure 6. 6 Present situation of the location



Source: Ampara District Office, UDA. 2021.

Table 6.21 Project budget of Outer Circular Road project

Project Budget		
Activity		Cost (Mn)
Land clearance		
Preliminaries work		
Site preparing		
Approval Agencies		
Activity	Relevant Authority	Authorized person
1. Site Preparation.	CEA//UDA/ Irrigation Department	
2. Designee.	Nintavur PS	



3.Infrastructure Development	SLLRDA.	
4. Implementation.	RDA	

	Regulations	Guidelines
Regulations and Guide- lines	Please refer guide plan, zone 1 (urban zone)and general regulations and guidelines	
Details of Attachments		



4) Re development of Public market with all facilities

Table 6. 22 Project identification of Public market

Project Title	Re Development of Public Market with all Facilities.
Project	Development of public amenities
Project Proposal	Enhance Social related infrastructure facilities

Table 6. 23 Project location of Public market


Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Pradeshiya Sabha Road	access RDA road	Existing resident	Pradeshiya Sabha ,Nintavur
Access	RDA Road Akkaraipatthu Kalmunai, LA Road			
Location Map				
Adjacent Land Uses (explain with map)	<p>Ashraff memorial public play ground is the major Sports Playground located in the Nintavur area. Land Belongs to Ps Nintavur. It is maintained by the Ps</p> <p>Adjacent land is mostly owned by Nintavur UC and consisted with children park and Market. The west part of this land consists with small pavilion which are going to be remove and proposed to construct a sport complex in that land Nintavur PS was located closer to the proposed project area.</p>			



Table 6. 24 Project justification of Public market

Project Type	New		Improvement		Extension		Land Development only	✓
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
Project Aspect	Economic				Social			
Project Objective	<p>Nintavur town emerged based on the Grand Mosque which is located in main road and the commercial stretch has been developed in a linear manner besides the main road by targeting local resident’s and commuters.</p> <p>Located at the newly built-up public market is located away from the business area and isolated Therefore, the public market is not functioning and venders have willingly moved back their businesses to Grand Mosque junction where they carried out their businesses earlier. At present the public market premises is used for Pola (once a week).</p> <p>This location can be regarded as the ‘Pinnacle on future’ of the Nintavur town. Developed as the central attraction of Nintavur for a variety of commercial + entertainment activities.</p>							



Rational of project	<p>Nintavur is located in the Ampara District in Eastern province and which is functioning as an Administrative Capital and main service centre in Ampara District. There are many economic activities has Consecrated in CBD area.</p> <p>which is currently function weekly Pola which is highly contribute to accelerate the local economic hence there are some problem has been identified which are affect the local people and the sellers.</p> <p>There are 27500 numbers of people living in Nintavur Pradeshiya Sabha and three thousands of people daily commutes to full fill their day to day activities to Nintavur.</p> <p>And also there are many people comes to industrial purpose in different part of the area therefore need to upgraded the existing marker.</p> <p>Hence there are some problem has been identified in the market which are need to addressed. Those are following.</p> <ul style="list-style-type: none"> • Lack of space to accommodate the sellers • Lake of the building complex. • Not using new techniques • Provide space for keep and sell the goods in a safety shelter. • Smoothing the movement of public (buyers). • Sorting the scattered goods selling places. • Improve the scenic beauty of the town. • Develop public facilities.
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Table 6. 25 Property description of Public market

Present Land Ownership	Private Land				State	√	DWL	
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	government							
Survey Plan Detail	Survey Plan No.		Name of the Surveyor		Date	Land Extent		
	Not Available		-				1.01 Acre	

Project Period	Short term (1> year)		Mid Term (1-3 year)	ü	Long term (3< year)		Total Estimated Cost	150Mil-lion
Financing Method	Ministry of Sports, Public private partnership (PPP), PS							
Description of the project (with map)	The Sport complexed development consists with 200m Rack, 100 seat with modern pavilion building, and indoor stadium with all indoor game netball, volleyball court, football court, maintenance room, toilet and rest room.							
Infrastructure Availability	Water	Req uired Capa city	.	Electricity	Required Capacity			
		Avai lable Capa city			Available Capacity			



	Solid waste Management system	Yes		No		If No give suitable SWM proposal	
Zone	Zone 1 (Urban Zone)		Zoning compatibility	Yes	√	No	
History (if it relevant)							

Existing Situation

The newly built-up public market is located away from the business area and isolated. Therefore, in the present situation public market is not functioning

Description	No. of units	length	width

PHOTOGRAPHS

Figure 6. 7 Present situation of the location



Source: Ampara District office, UDA. 2021.



Table 6. 26 Project budget of Public market

Project Budget		
Activity		Cost (Mn)
Preliminaries		10
Site preparation		10
Construction of buildings		100
Finishing works		18
Total		150.0 Mn
Approval Agencies		
Activity	Relevant Authority	Authorized person
	Urban Development Authority	Director General
	Nintavur PS	Chairman
	Nintavur Divisional Secretariat	Divisional Secretary
	Ministry of Sports	Director General

	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (urban zone)and general regulations and guidelines	
Details of Attachments		



5) Tree plantation besides the identified Roads Walking Path

Table 6. 27 Project identification of Tree plantation

Project Title	Tree Plantation besides the identified roads and walking path.
Project	Enrich the scenic view of landscape with environmental sustainability.
Project Proposal	Tree planning of public road and walk ways to Enhancement of Landscape Development of the area.

Table 6. 28 Project location of Tree plantation

Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Vettaru channel	access RDA road	Kaliyodai River	Paddy field
Access	RDA Road Akkaraipatthu Kalmunai, LA Road			
Location Map				



Adjacent Land Uses (explain with map)	Adjacent Land use (Explain with map):- Adjacent land is consisted with bounded by eastern coast and west site is paddy field, southern ward of the site is Kaliyodai river main access is RDA road (CRWB Highway road).
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Table 6. 29 Project justification of Tree plantation

Project Type	New		Improvement		Extension		Land Development only	✓
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
Project Aspect	Environment		Economic		Social			
Project Objective	<ul style="list-style-type: none"> • To improve greenery of town center to distance to 15KM by 2025. • To promote development while ensuring the sustainable balanced between green field & brown fields. • Improve walkability facilities & enhance the dramatically natural beauty of the area. • To provide better impression with fresh air circulation & cooling effect towards city of Nintavur area. • To avoid road reservation encroachment for incompatible activities. 							
Rational of project	In the present situation there is a need to enhance to develop greeneries of the areas. There are 4.7 ha of existing Open space of the whole Nintavur PS Area. Therefore, PORS land requirement for the total population for the Nintavur PS area for year 2030 is approximately 42 ha. Further this project							



	has proposed under the Environment Plan of 2030 for Nintavur Development Plan. And also there are some road encroachment is happening and also to mitigated to this situation.
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Table 6. 30 Property description of Tree plantation

Present Land Ownership	Private Land				State	√	DWLC	
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	LA, RDA, UDA, PRDD							
Survey Plan Detail	Survey Plan No.		Name of the Surveyor		Date	Land Extent		
			-		7Km			

Project Period	Short term (1 > year)		Mid Term (1-3	ü	Long term (3 <		Total Estimated Cost	150Mil-lion
Financing Method	Local Authority, RDA, UDA, PRDD							
Description of the Project (with map)	Beach belt tree plantation like Casuarina tree, Coconut trees will be planted 6Km. Outer Circular road Kumbuk Trees will be Planted to 4Km. Mara and Karantha trees will be planted in the Main road.							
Infrastructure Avail- ability	Water	Required Capacity		Electricity	Required Capacity	1000kw		
		Available Capacity			Available Capacity			



	Solid waste Management	Yes		No		If No give suitable SWM proposal		
Zone	Zone 1 (Urban Zone)			Zoning compatibility	Yes	✓	No	
History (if it relevant)								
Present Status (Explain details with measurements)								

History (If it relevant)

PRESENT STATUS (EXPLAIN DETAILS WITH MEASUREMENTS) EXISTING SITUATION

Nintavur has strong regional linkages there are some roads has identified as in a poor condition which are gravel roads and narrow roads Nintavur is a township which has higher accessibility in its settlement area. There are no greeneries on these roads. Further, Nintavur town is well connected with the surrounding cities such as Kalmunai, Akkaraipattu, (through A4 Road which links Colombo and Batticaloa) and Sammanthurai; Ampara (through A31 Road Matara-Karativu) by road network as well as the Nintavur has strong linkages with its surrounding towns and other major cities.



PHOTOGRAPHS

Figure 6. 8 Present situation of the location



Source: Ampara District Office, UDA. 2021.

Table 6. 31 Project budget of Tree plantation

Project Budget		
Activity		Cost (Mn)
Preliminaries		
Site preparation		
Construction of building s		
Finishing works		
Total		
Approval Agencies		
Activity	Relevant Authority	Authorized person
1. Site Preparation.		
2. Design.		
3.Infrastructure Development		
4. Implementation.		

	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (urban zone)and general regulations and guidelines	
Details of Attachments		



6) Proposed Traditional industrial food court

Table 6. 32 Project identification of Traditional industrial food court

Project Title	Proposed Traditional Industrial Food court.
Project	Increasing the self-employment opportunity.
Project Proposal	Ensure the market for the Local Traditional food.

Table 6. 33 Project location of Traditional industrial food court


Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Health Centre Road	Coconut Garden	A.U.Zain Road	Akkaraipatthu-Kalmunai RDA Road
Access	RDA Road Akkaraipatthu Kalmunai, RDD Addappalam Road			
Location Map				
Adjacent Land Uses (explain with map)	Adjacent Land use (Explain with map):- Adjacent land covered by many different land use pattern example coconut Garden, paddy, and Rice mill.			



Table 6. 34 Project justification of Traditional industrial food court

Project Type	New	✓	Improvement		Extension		Land Development only	✓
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
		✓					✓	
Project Aspect	Environment		Economic	✓	Social		✓	
Project Objective	1. To be increase low income people income. 2. To provide for market place for traditional food. 3. To Increasing the self-employment opportunity.							
Rational of project	Are Samurdhi recipient 90 families are in this area, there are identified the low income population, and also there are no any woman employment opportunity on this area therefore this projects is provide ensure the market facility for above families in the future .							

Table 6. 35 Project description of Traditional industrial food court

Present Land Ownership	Private Land		√		State	√	DWLC	
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	Private ownership.							
	Survey Plan No.		Name of the Surveyor		Date	Land Extent		



Survey Plan Detail	Not Available		-					
Project Period	Short term (1 > year)	√	Mid Term (1-3 year)		Long term (3 <)		Total Estimated Cost	150Mil-lion
Financing Method	Public private partnership (PPP)							
Description of the Project (with map)	Food courts with seating facilities. Landscaping parking areas. Sanitary facilities.							
Infrastructure Availability	Water	Required Capacity		Electricity		Required Capacity	1000kw	
		Available Capacity				Available Capacity		
		Solid waste Management system	Yes		No		If No give suitable SWM proposal	
Zone	Zone 1 (Urban Zone)			Zoning compatibility	Yes	√	No	
History (if it relevant)								
Present Status (Explain details with measurements)								



Existing Situation

Photographs

Proposed plan & building design requirements

Table 6 36 Project budget of Tree plantation

Project Budget		
Activity		Cost (Mn)
preliminary work		
Construction work		
Provide Infrastructural facilities		
Finishing work		
Total		
Approval Agencies		
Activity	Relevant Authority	Authorized person
1. Site Preparation.	PPP,	
2. Design.	Local authority.	
3. Infrastructure Development	UDA	
4. Implementation.		

	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (urban zone) and general regulations and guidelines	
Details of Attachments		



7) Sea erosion mitigation project

Table 6. 37 Project identification of Sea erosion mitigation project

Project Title	Sea Erosion Mitigation Project.
Project	Mitigate The Sea Erosion Along The Coastal Belt.
Project Proposal	Protect The Coastal Belt.

Table 6. 38 Project location of Sea erosion mitigation project


Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Vettaru channel	Coconut Garden	A.U.Zain Road	Akkaraipatthu Kalmunai RDA Road
Access	RDA Road Akkaraipatthu Kalmunai, RDD Addappalam Road			
Location Map				
Adjacent Land Uses (explain with map)	Surrounding Area consist with the sea sand and coconut patches.			



Table 6. 39 Project justification of Sea erosion mitigation project

Project Type	New	✓	Improvement		Extension		Land Development only	✓
Project Category	Conservatio	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructu	re
	✓						✓	
Project Aspect	Environment	✓	Economic		Social		✓	
Project Objective	1) To Protect the Coastal Belt. 2) To Protect the Paddy Field, 3) To Protect the Coconut 4) To Ensure the Fishing Activity's. 5) To Provide/Enhance the Reservation Activities							
Rational of project	<p>Sea is one of main potential Natural amenities in the Nintavur. Due to this Sea erosion around 30m of beach belt eroded 125-acre paddy land, coconut garden also destroys</p> <p>Since 2004 to up to now. and this consequence continue without any control measure taken the local area will be lost another 30M Beach land and 200acre of paddy area and coconut restoring 2030.The local fishing communities 700 families will be Lost. Presently the local people use the beach sand area as a recreational space this recreational space will be lost in the future. There for immediate planning intervention should be taking for this disaster.</p>							



Table 6. 40 Project description of Sea erosion mitigation project

Present Land Ownership	Private Land				State	√	DWLC	
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	Nintavur PS ,Divisional Secretariat							
Survey Plan Detail	Survey Plan No.	Name of the Surveyor		Date	Land Extent			
		-						

Project Period	Short term (1> year)		Mid Term (1-3	ü	Long term (3< year)		Total Estimated Cost	150Mil- lion
Financing Method	Department of Coast Conservation and Coastal Resource Management, Marine Environ- mental Protection Authority							
Description of the Project (with map)	Beach nourishment mitigation system is for the most suitability's mitigation methods .is the supply of sand to the shore to increase the recreational value a to secure the beach against shore erosion by feeding sand on the beach in the most suitability's future.							
Infrastructure Availability	Water	Required Capacity		Electricity		Required Capacity	1000kw	
		Available Capacity				Available Capacity		
	Solid waste Management t	Yes		No		If No give suitable SWM proposal		



	system						
Zone	Conservation Zone			Zoning compatibility	Yes	√	No
History (if it relevant)							
Present Status (Explain details with measurements)							

The projects land belongs to the CCD. Presently fishing people enhance small fishing activities.

Existing Situation

Description	No. of units	length	width

PHOTOGRAPHS

Figure 6. 9 Present situation of the location



Source: Ampara District office, UDA. 2021.



Table 6 .41 Project budget of Sea erosion mitigation project

Project Budget		
Activity		Cost (Mn)
Design and analysis.		
Site clearance.		
Construction work		
Finishing work		
Total		
Approval Agencies		
Activity	Relevant Authority	Authorized person
Land clearance and approval design	Department of Coast Conservation and Coastal Resource Management	Director General
	Marine Environmental Protection Authority	Director General

	Regulations	Guidelines
Regulations and Guidelines	UDA Planning And Building Regulation.	Clearance should be obtained from Urban Development Authority, Central Environmental Authority, Department of Coast Conservation and Coastal Resource Management, Fisheries Department,
Details of Attachments		



8) Road Development Project

Table 6. 42 Project identification of Road Development Project

Project Title	Road Development Project.
Project	Create and Improve the accessibilities in the industrial area and surrounding areas
Project Proposal	Provide proper service in the industrial area.

Table 6.43 Project location of Road Development Project

Location	Province	Eastern	District	Ampara
	DS Division	Nintavur	LA	Nintavur PS
Boundary	North	East	South	West
	Addappalam Road	Sea/Ocean	Nochchiyadi River	Kalmunai-Akkaraipattu road (RDA)
Access	RDA Road Akkaraipattu Kalmunai, RDD Addappalam Road			
Location Map				



Adjacent Land Uses (explain with map)	Adjacent lands area consists with industrial area and Coconut garden.
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Table 6. 44 Project justification of Road Development Project

Project Type	New	✓	Improvement		Extension		Land Development only	
Project Category	Conservation	Commercial	Landscape	Heritage	Housing	Relocation	Infrastructure	
							✓	
Project Aspect	Environment		Economic		Social			
Project Objective	<ul style="list-style-type: none"> To increase the access of industrial area. To Improve the industrial activities.in the area, To Interconnectivities with internal road networks. To be provide the better infrastructure service of the public. 							
Rational of project	<p>In the present situation Some roads are very narrows and poor condition and Some internal roads are no interconnectivities. Which is reducing the efficient service in the industrial activities as well as the local residential people. These projects have proposed under the transportation plan improve the industrial activities which will be support the industrial area.</p>							



Table 6.45 Project description of Road Development Project

Present Land Ownership	Private Land				State	√	DWLC	
Free Encumbrances	Yes		No	√	If No give details			
Details of the Ownership	Local authority, irrigation Department. Agrarian Service Dept.							
Survey Plan Detail	Survey Plan No.		Name of the Surveyor		Date	Land Extent		
			-					

Project Period	Short term (1 > year)		Mid Term (1-3 year)	√	Long term (3 < year)		Total Estimated Cost	150Mil-lion
Financing Method	Provincial council, irrigation Department. Agrarian Service Dept,							
Description of the Project (with map)	<p>Create new roads and, improving roads Within the Industrial zone area and following surrounding areas,</p> <ul style="list-style-type: none"> • New Road construction at by linking German School housing at Addappallam. • New Road construction at Division-09 between 3rd cross and E.ahamed Master Coconut estate. • New Road construction at beside of engineer estate and linking to German school road • New road construction from 'Eelaiyanpalam' to beside the "Wavvalodai"river (north boundary). • Widening of Pullupiddi, Nochchiyadi, Maaddupplai and Thombukkandam. 							



Infrastructure Avail- ability	Water	Required Capacity		Electricity		Required Capacity	1000kw	
		Available Capacity				Available Capacity		
		Solid waste Management system	Yes		No		If No give suitable SWM proposal	
Zone	Conservation Zone			Zoning compatibility	Yes	√	No	
History (if it relevant)								
Present Status (Explain details with measurements)								

Existing Situation

The projects land belongs to the CCD. Presently fishing people enhance small fishing activities.

Description	No. of units	length	width

PHOTOGRAPHS

Figure 6. 10 Present situation of the location



Source: Ampara District office, UDA. 2021



Table 6. 46 Project budget of the project

Project Budget		
Activity		Cost (Mn)
Design and analysis.		
Site clearance.		
Construction work		
Finishing work		
Total		
Approval Agencies		
Activity	Relevant Authority	Authorized person
Land clearance and approval design	RDA, PRDA, Irrigation department.	Chief Engineer
	PS Nintavur	Chairman
	Regulations	Guidelines
Regulations and Guidelines	Please refer guide plan, zone 1 (Indusial zone) and general regulations and guidelines	Please refer guide plan, zone 1 (Indusial zone) and general regulations and guidelines
Details of Attachments		



6.7.2 Institutional settings

Table 6. 47 Institutional settings

Sub Plans	Sub Plans and Action Projects	Relevant Institution (Refer Annexure 01)	Responsibilities of the instate for Implementing the project.
Physical/Social Infrastructure development plan			
Transport Plan	Action Project 01-	1. Local authority.	Consultation/approving/ Financial.
	Establishment of outer circular road(West- ern wing of A4 Colombo-Batticaloa Road)	2. Irrigation Department.	Consultation/site clearances.
		3. CEA//UDA.	Consultation/site clearances.
		4. SLLRDA.	Conducting Land filling clearance/ Recommendation.
		5.RDA	Designing /Financial/Maintains.
	Action Project 02-	1. RDA	Designing /Maintains
	Create and Improve accessibility within the Agro based industrial Development zone.	2. PRDA	Designing /Maintains
		3. .Local authority	Consultation/approving.
	Action Project 03-	1. .Local authority	Consultation/approving.
	Construction of bridges Wavvalodai Aru/ Kudamuruddi Aru	2.Irrigation Dept.	Conducting feasibilities analysis
	Action Project 04-	1. Local authority.	Design /implementation /Maintains
	New Road construction at Division-09	2. Provincial council.	Financial implementation.



	between 3rd cross and E.Ahamed Master coconut estate		
Action Project 05-		1. Local authority.	Design /implementation /Maintains
New Road construction at by linking German School housing at addappallam.	2. Provincial council.		Financial implementation.
Action Project 06-		1. Local authority	Design /implementation /Maintains
New Road construction at beside of engineer estate and linking to German school road.	2. Provincial council.		Financial implementation.
Action Project 07-		1. Local authority	Design /implementation /Maintains
New road construction from 'Eelaiyanpalam' to beside the "Wavvalodai" river (north boundary).	2. Provincial council.		Financial allocation.
Action Project 08-		1. Irrigation Department	Conducting feasibilities analysis
Widening of Pullupiddi, Nochchiyadi, Maaddupplai and Thombukkandam.	2. Agrarian Service Department,		Conducting feasibilities analysis
	3. Local authority.		Design /implementation /Maintains
	4. Provincial council.		Financial implementation.
Action Project 01-		1. Local authority	Design /implementation /Maintains



	Existing Public Market redevelopment.	2. Provincial council.	Financial implementation.
	Action Project 02-	1. Local authority.	Design /implementation /Maintains
	Improving of Existing weaving center with modern facilities.	2. Industrial development Board.	Conducting feasibilities analysis / Financial allocation.
	Action Project 01-	1. Local authority.	Land identification/Design /implementation /Maintains.
`	Reclamation of identified abundant paddy land.(28 Hectares of Western wing of A4 parallel road Colombo-Batticaloa - CRWB Road)	2. Irrigation Department..	Conducting feasibilities analysis.
		3. Agrarian Service Department.	Conducting feasibilities analysis.
		4. Agricultural Department.	Conducting feasibilities analysis.
		5. SLLRDC.	Conducting Land filling clearance/ recommendation
		6. UDA.	Consultation/site clearances.
		7. CEA.	Consultation/site clearances.
		8 .PPP	Land Development/finical implementation./ Maintains.
Drainage plan	Action Project 01-	1. Local authority.	Design /implementation /Maintains
		2. Irrigation Department.	Conducting feasibilities analysis.



	Redevelopment of existing drainage system.	3. RDA.	Design/finical implementation. / Maintains.
		4. PRDA.	Design /finical implementation / Maintains.
	Action Project 02-	1. Local authority.	Design /implementation /Maintains
	Construction of New drainage system (Construct ditches and culverts).	2. Irrigation Department.	Conducting feasibilities analysis.
		3. RDA.	Design/finical implementation. / Maintains.
		4. PRDA.	Design /finical implementation / Maintains.
	Action Project 03-	1. Local authority.	Design /implementation /Maintains
	Preservation with Demarcation of reservation of all natural Drainage in Nintavur area.	2. Irrigation Department.	Conducting feasibilities analysis.
		3. RDA.	Design/financial implementation./ Maintains.
		4. PRDA.	Design/financial implementation./ Maintains.
	Action Project 03-	1. Local authority.	Design /implementation /Maintains
	Vettaru Development-Improvement of Vettaru South Road. Construction of Gabion wall, Culverts	2. Irrigation Department.	Conducting feasibilities analysis.
		3. RDA.	Design/financial implementation./ Maintains.



		4. PRDA.	Design/financial implementation./ Maintains.
	Action Project 04-	1. Local authority.	Design /implementation /Maintains
	Construction of gabion wall for “Kalioldaiaru and Senkkappadaiaru	2. Irrigation Department.	Conducting feasibilities analysis.
		3. RDA.	Design/financial implementation./ Maintains.
		4. PRDA.	Design/financial implementation./ Maintains.
Waste Management Plan	Action Project 01-	1.LA,	Design/financial implementation./ Maintains.
	Construction secretion center with composing yards at ParavattiyPitty.	2.Public private partnership	Financial technical implementation.
		3.CEA	Consultation/site clearances
	Action Project 02-	1. LA .	Design /finical implementation / Maintains.
	Redevelopment of Modern slaughter House at Paravaddaipiddi.	2. Regional Development Health services	Conducting feasibilities analysis/ approving.
		3.CEA	Consultation/site clearances

Industrial Plan	Action Project 01-	1.Ministry Of agricultural	Conducting feasibilities analysis/site clearance /approving
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	Land Development for Construct Value added product industries (Flour, Noodles, Biscuits, Bran oil etc.)	2.Ministry of Industry ,	Conducting feasibilities analysis/site clearance/ approving
		3.Public Private Partnership	Financial investment/Processing.
		4.BOI	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
		5.LA	Land identification /Consultation/ Implementation/ advertising.
	Action Project 02-	1.Ministry Of agricultural	Conducting feasibilities analysis/site Clearance/ approving.
	Develop urban park and industrial production outlet(Near the malkampitty junction)	2.Ministry of Industry ,	Conducting feasibilities analysis/ site clearance/ approving/Financial investment./advertising agencies
		3.Public Private Partnership	Financial investment/Processing.
		4.BOI	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
		5.RDA	Conducting feasibilities analysis.
		6.UDA	Consultation/site clearances.
		7.LA	Land identification/advertising.



	Action Project 03-	1.LA, ,	Land identification
	Construction of Paddy store, (Proposed Industrial zone)	2.Department of Agriculture,	Conducting feasibilities analysis/ Site clearance/ approving/Financial investment.
		3. Department of Industry.	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
Land- scape Management Plan	Action Project 01-	1. LA.	Design/financial implementation./ Maintains.
	City beautification Projects -Tree Plantation besides the identified roads walking path (- Main road and Beach road, Urban zone).	2. Public private partnership.	Financial investment/Processing.
		3. RDA.	Design/financial implementation./ Maintains.
		4.UDA	Consultation/site clearances.
	Action Project 02-	1. LA.	Design/financial implementation./ Maintains.
	City beautification Projects-Round aboard Development (Palli Junction, Alimulai junction).	2. Public private partnership.	Financial investment/Processing.
		3. RDA.	Design/financial implementation./ Maintains.
		4.UDA	Consultation/site clearances.



Disaster Risk Management Plan	Action Project 01-	1. LA.	Design/financial implementation./ Maintains.
	Provide Beach Nourishment Mitigation Sys- tem (Along the coastal belt)	2.Department of Coast Conservation and Coastal Resource Management	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
		3. Marine Environment Protection Authority.	Consultation/site clearances.
		4 .CEA	Consultation/site clearances.
	Action Project 02-	1. LA.	Design/financial implementation./ Maintains.
	Provide Erection of elephant fence.(Edge of the paddy land in south area)	2. Wildlife conservation.	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
		3. Farmers Society.	Consultation
	Action Project 03-	1. LA.	Design/financial implementation./ Maintains.
	Protection bund to avoid soil erosion along (Kaliyodai river).	2. Irrigation Dept.	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
PORS Plan	Action Project 01-	1. LA.	Design/financial implementation./ Maintains.



	Beach Park Development (Nintavur-09,01,02)	2.Department of Coast Conservation and Coastal Resource Management	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
		3. Marine Environment Protection Authority.	Consultation/site clearances
		4.UDA	Consultation/site clearances.
	Action Project 02-	1. LA.	Design/financial implementation./ Maintains.
	Redevelopment of Ashraff memorial public play ground with all basic facilities	2. Public private partnership.	Financial investment/Processing
		3.Sport Ministry	Conducting feasibilities analysis/ site clearance/ approving/Financial investment.
	Action Project 03-	1. LA.	Land identification
	Construction of public Swimming pool (behind of the Al Ashraq Muslim Maha Vidyalayam)	2. Public private partnership.	Design/financial implementation./
		3.UDA	Consultation/site clearances.

Guidelines for obtaining approvals and permits from the relevant Institutions.

Review, updating and amendment process (refer Annexure 02)

Description regarding the Provisions under 8 H of UDA Amendment Act No. 04 of 1982 Time Period for review, updating and amend the development Plan



PART II





Chapter 07

Development Zones and Zoning Guidelines.

7.1 Introduction

In order to achieve formulated goals and objectives the density based zoning guidelines have been applied as the land and building development strategy in this plan prepared for Nintavur Pradeshiya Shaba area for the period of 2021 – 2030.

To prepare the Zoning Plan number of scientific analyses were carried out by considering existing and future land use pattern, population distribution, availability of infrastructure facilities, and demand of the land and level of sensitivity. Accordingly, Sensitivity Analysis, Space Syntax, Development Pressure Analysis and Live Ability Analysis were done.

Sensitivity analysis explores the environmental sensitive areas of the planning area according to the level of sensitivity and necessity of conservation of particular environmental area. Accordingly, paddy land and water bodies have been highlighted as sensitive areas in Nintavur planning area.

Development pressure analysis emphasizes the existing and future development trends and concentrated areas. As a result of this analysis planning boundary could be demarcated and development concentrated area in terms of level of development like high, moderate and low development areas could be identified.

Live - ability analysis shows the more suitable area for residential, commercial and industrial purposes according to the availability of infrastructure facilities within the particular zone. Also shows the area need to be protected and preserve for future generation.

Through these above mentioned series of analyses it could be identified the more suitable land areas for different lands uses. In addition to that the carrying capacity, demand and future development potentials also taken into account to achieve the vision of the plan. Considering the result of that, Nintavur urban area was categorized into five zoning areas such as Urban Zone, Residential Zone, Industrial Zone, and Hinterland Zone and Agricultural zone.



The density based zone has been prepared by using scientific method to calculate the total permissible floor area within the particular zone. In calculating total permissible area some basic standards of space allocation for existing and future predicted residential and commuter population for the particular zone for various uses like residential, commercial, open and recreational and administration space were taken into account.

And developable land area has been calculated for the particular zone and total permissible floor area also has been estimated for particular zone. Therefore, total permissible floor area is divided by total developable land area and the zone factor is obtained as a result.

7.2 Development Zones

The proposed development zones are following.

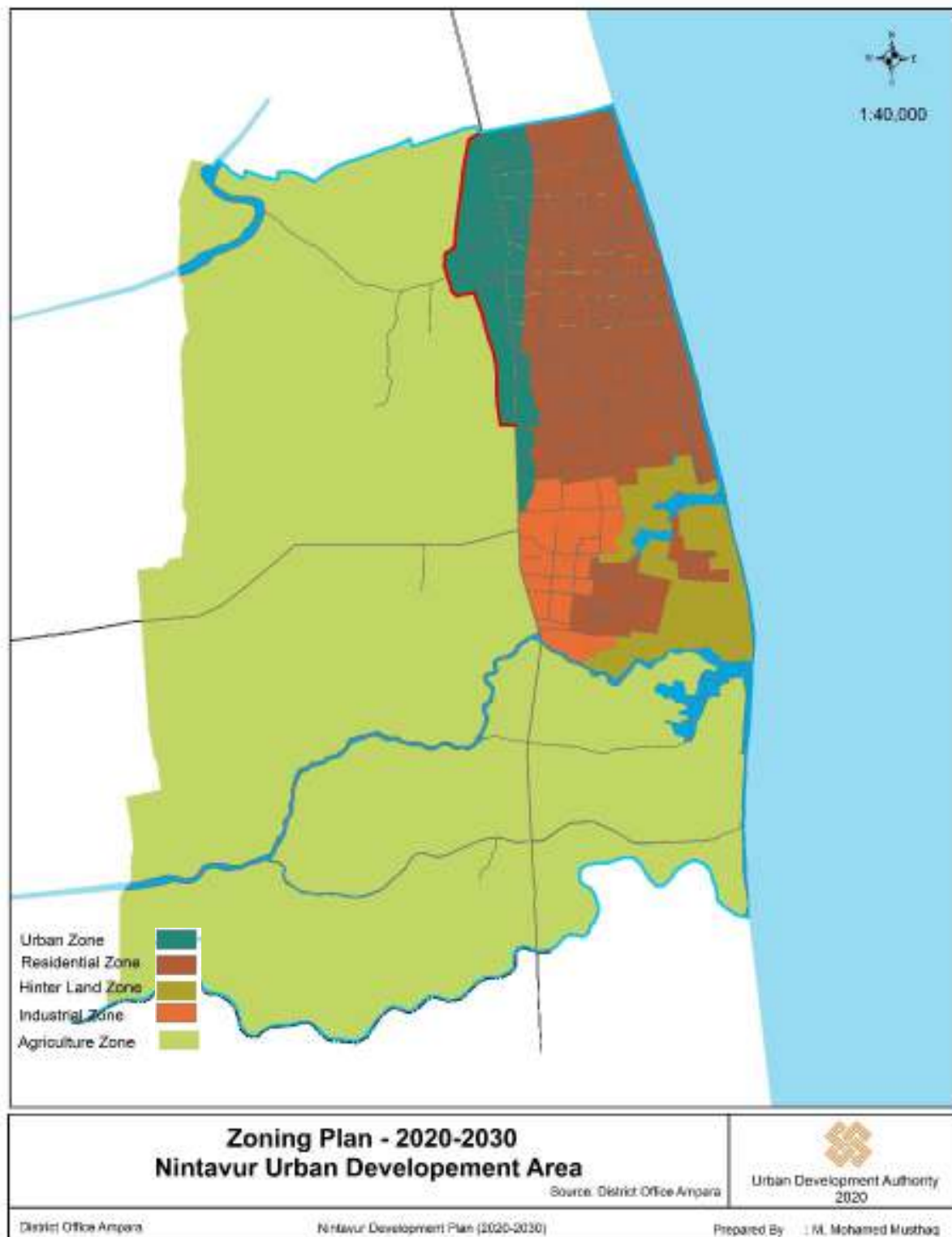
1. Urban zone
2. Residential zone
3. Hinter land zone
4. Industrial zone
5. Agriculture zone

The proposed zoning plan is shown in map no 7.1.



7.2.1 Zoning and Zoning guidelines.

Map 7. 1 Zoning map



Source: Ampara District office, UDA. 2021



7.3 Zone Factor

Zone factor is newly introduced concept in this development plan and it is one of the key factor to determine the floor area ratio of the particular zone. Zone factor has been developed by considering the demand of the development and expected density of the particular zone in the development plan to achieve the ultimate vision for Nintavur planning area by 2030. This density based zone has been categorized as high density, moderate density and low density.

Accordingly, Nintavur area has identified urban zone as high density, residential zone as a moderate density and hinter land and industrial zone as a low density zone. Zone factor is high in high density zone and zone factor low in the low density zone. And zone factor will lead to form the expected urban form by the development plan in 2030 of the planning area.

7.3.1. How the Zoning Factor is determined?

The zoning factor has been developed by considering the goals and objectives of the development plan, carrying capacity of the particular zone, expected urban form, availability of infrastructure and area need to be conserve. And the expected total floor area calculated for zone each proposed zone for various uses by considering the character and purposes of the zone such as commercial, residential, institutional and industrial.

Accordingly, the zoning factor is calculated to allow the development of the expected densities in each of the zone in the proposed zoning plan in the development plan. In that context zone factor is recorded maximum 2.0 for urban zone, residential zone recorded as 1.5, Industrial zone recorded 1.0 and minimum 0.5 for Hinter land zone. This zone factor is distributed based on the expected density in the development plan. In that context urban zone is identified as a high density zone as this zone function as a main service center and Hinter land zone identify as a low density zone as being natural and scenic beauty area of Nintavur area.

Determination of Permissible Floor area of Development Areas applicable to Nintavur Development Plan in table 7.1, 7.2 and 7.3 are accorded with Forms "A" "B" "E" in Schedule 6 of Part IV of the Extraordinary Gazette Notification No. 2235/54 dated Thursday 08th July 2021.



Permissible Floor Area Ratio

Table 7. 1 Form A - Permissible Floor Area Ratio

Form A - Permissible Floor Area Ratio (Applicable for the area having zoning factor based Development Plans)																								
Land extent (Sq.M)	Zone factor = 0.50 - 0.74				Zone factor = 0.75-0.99				Zone factor = 1.00-1.24				Zone factor = 1.25-1.49				Zone factor = 1.50-1.74				Zone factor = 1.75-1.99			
	Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width			
	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above
150 less than 250	0.8	0.9	0.9	0.9	1.3	1.3	1.4	1.4	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.4	2.6	2.7	2.8	2.8	3.0	3.2	3.3
250 less than 375	0.9	1.0	1.2	1.3	1.3	1.6	1.8	2.0	1.8	2.2	2.4	2.7	2.2	2.7	3.0	3.3	2.6	3.2	3.6	4.0	3.0	3.4	4.3	4.7
375 less than 500	0.9	1.0	1.2	1.4	1.3	1.6	1.9	2.1	1.9	2.2	2.5	2.8	2.3	2.8	3.2	3.4	2.7	3.3	3.8	4.2	3.2	3.5	4.5	5.0
500 less than 750	1.0	1.1	1.3	1.5	1.4	1.7	2.0	2.2	2.0	2.3	2.7	3.0	2.4	3.0	3.4	3.5	2.8	3.4	4.0	4.5	3.4	3.6	4.7	5.5
750 less than 1000	1.0	1.2	1.4	1.7	1.5	1.8	2.2	2.5	2.1	2.4	2.9	3.3	2.6	3.0	3.6	4.0	3.1	3.6	4.3	5.0	3.5	3.8	5.1	6.0
1000 less than 1500	1.1	1.3	1.5	1.8	1.6	1.9	2.3	2.7	2.2	2.5	3.0	3.6	2.7	3.1	3.8	4.5	3.2	3.8	4.6	5.5	3.6	4.0	5.4	6.5
1500 less than 2000	1.1	1.4	1.7	2.0	1.7	2.1	2.5	3.0	2.3	2.7	3.4	4.0	2.9	3.4	4.2	5.0	3.4	4.0	5.0	6.0	3.7	4.2	5.8	7.0
2000 less than 2500	1.2	1.5	1.8	2.1	1.8	2.3	2.7	3.1	2.4	2.8	3.5	4.2	3.0	3.5	4.4	5.4	3.5	4.2	5.2	6.5	3.8	4.4	6.2	7.5
2500 less than 3000	1.2	1.6	2.0	2.4	1.9	2.4	3.0	3.6	2.5	3.2	4.0	4.7	3.1	3.8	4.7	5.8	3.6	4.4	5.5	7.0	3.9	4.6	6.5	8.0
3000 less than 3500	1.3	1.7	2.1	2.5	2.0	2.5	3.1	3.7	2.6	3.4	4.2	5.0	3.2	4.0	5.0	6.2	3.7	4.6	6.0	7.5	4.0	4.8	6.9	8.5
3500 less than 4000	1.4	1.8	2.2	2.6	2.2	2.6	3.3	3.9	2.8	3.6	4.3	5.3	3.3	4.3	5.5	6.6	3.8	4.8	6.3	7.7	4.0	5.0	7.3	9.0
More than 4000	1.5	1.9	2.3	2.8	2.5	2.8	3.5	4.0	3.0	3.8	4.5	5.5	3.5	4.5	6.0	7.0	4.0	5.0	6.5	8.0	4.0	5.2	7.5	9.5
Land extent (Sq.M)	Zone factor = 2.25-2.49				Zone factor = 2.50-2.74				Zone factor = 2.75-2.99				Zone factor = 3.00-3.24				Zone factor = 3.25-3.49				Zone factor = 3.50-3.74			
	Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width				Minimum Road Width			
	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	**6m	9m	12m	15m or above	6m	9m	12m	15m or above	**6m	9m	12m	15m or above
150 less than 250	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0	3.0	3.4	3.6	4.0
250 less than 375	3.5	3.8	4.5	5.0	3.5	4.0	5.0	5.5	3.5	4.2	5.0	5.5	3.5	4.4	5.0	5.5	3.5	4.6	5.0	5.5	3.5	4.8	5.0	5.5
375 less than 500	3.6	4.5	4.7	5.5	3.6	4.6	5.2	6.0	3.6	4.7	5.2	6.0	3.6	4.8	5.2	6.0	3.6	4.9	5.2	6.0	3.6	5.0	5.2	6.0
500 less than 750	3.7	5.0	5.0	6.0	3.7	5.1	5.5	6.5	3.7	5.2	5.5	6.5	3.7	5.3	5.5	6.5	3.8	5.4	5.5	6.5	3.8	5.5	5.5	6.5
750 less than 1000	3.8	5.1	6.0	6.5	3.8	5.2	6.5	7.0	3.8	5.3	7.0	7.5	3.8	5.4	7.0	7.5	4.0	5.5	7.5	8.0	4.0	5.6	7.5	8.0
1000 less than 1500	3.9	5.3	6.5	8.5	3.9	5.4	7.0	9.0	3.9	5.5	7.5	9.0	3.9	5.6	7.5	9.0	4.0	5.7	8.0	9.0	4.2	5.8	8.0	9.0
1500 less than 2000	4.0	5.4	7.0	*10	4.0	5.5	7.5	*10.5	4.0	5.6	7.5	*10.5	4.0	5.7	8.0	*10.5	4.0	5.8	8.0	*11	4.2	6.0	8.0	*11
2000 less than 2500	4.0	5.5	7.5	*10.5	4.0	5.6	7.5	*11	4.0	5.7	8.0	*11	4.0	5.8	8.0	*11	4.0	5.9	8.0	*11.5	4.2	6.2	8.0	*11.5
2500 less than 3000	4.0	5.6	7.5	*11	4.0	5.7	8.0	*11.5	4.0	5.8	8.0	*11.5	4.0	5.9	8.0	*11.5	4.0	6.0	8.0	*12	4.2	6.4	8.0	*12
3000 less than 3500	4.0	5.7	8.0	*11.5	4.0	5.8	8.0	*12	4.0	5.9	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12	4.2	6.5	8.0	*12
3500 less than 4000	4.0	5.8	8.0	*12	4.0	5.9	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12	4.0	6.0	8.0	*12	4.2	6.5	8.0	*12
More than 4000	4.0	5.9	8.0	*UL	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL	4.0	6.0	8.0	*UL	4.2	6.5	8.0	*UL

UL - Unlimited

Floor area allocated for parking facilities are not calculated for FAR

Above Floor Area Ratio shall not be applicable for the zones where number of floors or FAR indicated under the zoning regulations

Above Permissible FAR may be restricted under the development plan based on the slope of the land

Clearance shall be taken from National Building Research Organization for the lands having slope more than 11°

* FAR more than or equal to 10.0 shall be permitted only for the roads having minimum of 12m (from road center) Building Line, if not maximum FAR shall be limited to 9.0

**Minimum road width of 7m shall be considered for the roads identified as 7m wide road in the particular development Plan



Table 7. 2 Form B - Number of floors for 3m & 4.5m wide roads

Form B - Number of Floors for 3.0m & 4.5m wide Roads						
(Applicable for the area having zoning factor based Development Plans)						
Minimum Road Width	Minimum Site Frontage	Plot Coverage*	Maximum Number of Floors			
			Zone Factor 0.5 - 0.74	Zone Factor 0.75 - 1.24	Zone Factor 1.25 - 3.49	Zone Factor 3.50 - 4.00
3.0m	6m	65%	1 (G)	2 (G+1)	3 (G+2)	3 (G+2)
4.5m	6m	65%	1 (G)	2 (G+1)	3 (G+2)	4 (G+3)
Number of floors are indicated including parking areas						
Number of units allowed for each road shall not be changed						
* Where no plot coverage specified under the zoning regulations						



Table 7. 3 Form C - Permissible Floor Area Ratio

Form C - Permissible Floor Area Ratio												
(Applicable for the declared urban areas except area having zoning factor based Development Plans or valid existing Development Plans)												
Land extent (Sq.M)	Low Density Zone (Control)				Medium Density Zone (Residential)				High Density Zone (Mixed)			
	Minimum Road Width				Minimum Road Width				Minimum Road Width			
	*6m	9m	12m	15m or above	*6m	9m	12m	15m or above	*6m	9m	12m	15m or above
150 less than 250	0.8	0.9	0.9	0.9	1.3	1.3	1.4	1.4	1.6	1.7	1.8	1.9
250 less than 375	0.9	1.0	1.2	1.3	1.3	1.6	1.8	2.0	1.8	2.2	2.4	2.7
375 less than 500	0.9	1.0	1.2	1.4	1.3	1.6	1.9	2.1	1.9	2.2	2.5	2.8
500 less than 750	1.0	1.1	1.3	1.5	1.4	1.7	2.0	2.2	2.0	2.3	2.7	3.0
750 less than 1000	1.0	1.2	1.4	1.7	1.5	1.8	2.2	2.5	2.1	2.4	2.9	3.3
1000 less than 1500	1.1	1.3	1.5	1.8	1.6	1.9	2.3	2.7	2.2	2.5	3.0	3.6
1500 less than 2000	1.1	1.4	1.7	2.0	1.7	2.1	2.5	3.0	2.3	2.7	3.4	4.0
2000 less than 2500	1.2	1.5	1.8	2.1	1.8	2.3	2.7	3.1	2.4	2.8	3.5	4.2
2500 less than 3000	1.2	1.6	2.0	2.4	1.9	2.4	3.0	3.6	2.5	3.2	4.0	4.7
3000 less than 3500	1.3	1.7	2.1	2.5	2.0	2.5	3.1	3.7	2.6	3.4	4.2	5.0
3500 less than 4000	1.4	1.8	2.2	2.6	2.2	2.6	3.3	3.9	2.8	3.6	4.3	5.3
More than 4000	1.5	1.9	2.3	2.8	2.5	2.8	3.5	4.0	3.0	3.8	4.5	5.5
Above Floor Area Ratio shall not be applicable for the zones where number of floors or FAR indicated under the zoning regulations												
Floor area allocated for parking facilities are not calculated for FAR												
Clearance shall be taken from National Building Reserach Organization for the lands having slope morethan 110												
*Minimum road width of 7m shall be considered for the roads identified as 7m wide road in the particular development Plan												



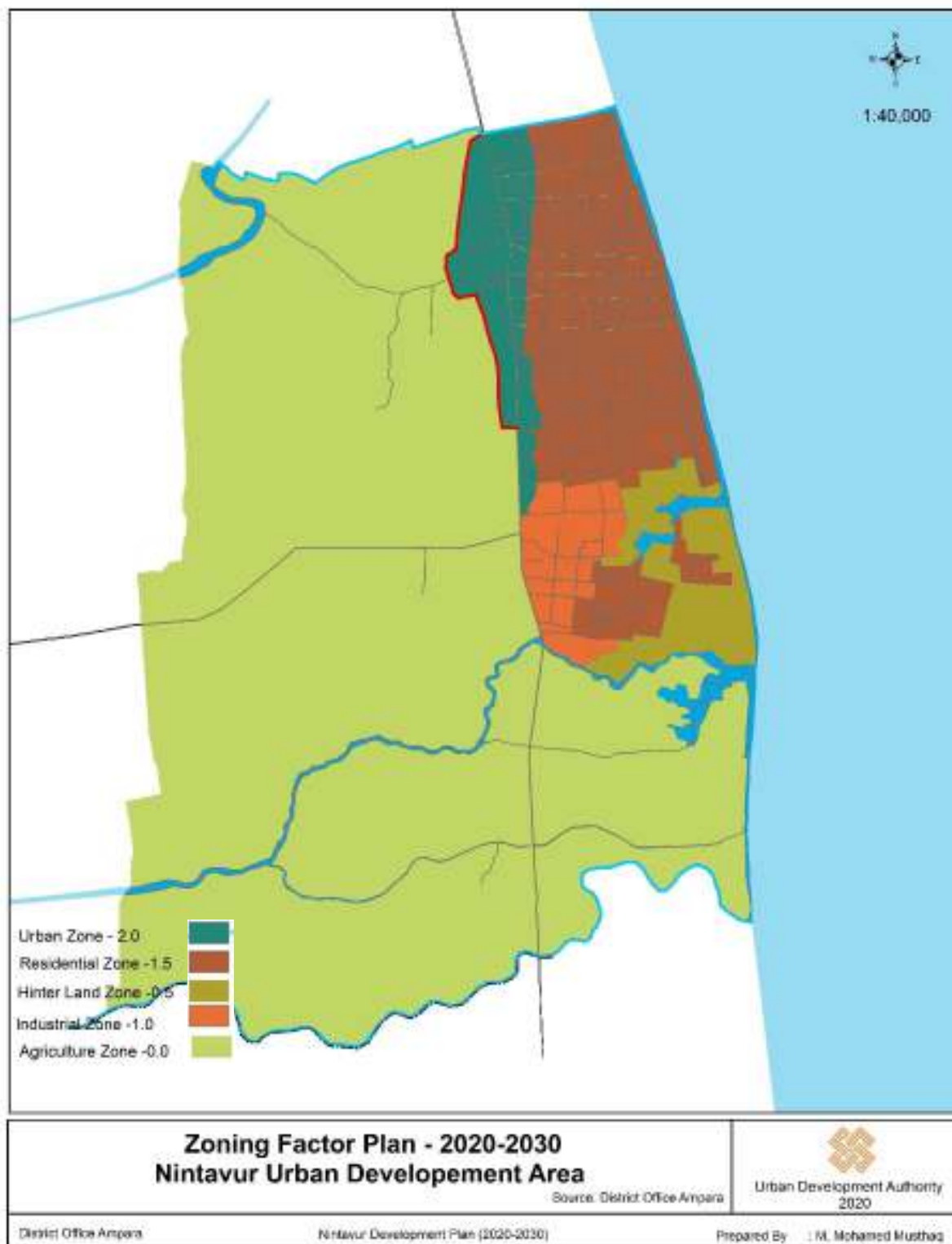
Table 7. 4 Form D - Number of Floors for 3.0m & 4.5m wide Roads

Form D - Number of Floors for 3.0m & 4.5m wide Roads (Applicable for the declared urban areas except area having zoning factor based Development Plans or valid existing Development Plans)					
Minimum Road Width	Minimum Site Frontage	Plot Coverage*	Maximum Number of Floors		
			Low Density Zone (Control)	Medium Density Zone (Residential)	High Density Zone (Mixed)
3.0m	6m	65%	1 (G)	2 (G+1)	3 (G+2)
4.5m	6m	65%	1 (G)	2 (G+1)	3 (G+2)
Number of floors are indicated including parking areas					
Number of units allowed for each road shall not be changed					
* Where no plot coverage specified under the zoning regulations					

Table 7. 5 Form E – Setbacks & Open Spaces

Form E - Setbacks & Open Spaces										
Building Category	Building Height (m)	Minimum Site Frontage (m)	Plot Coverage *		Rear Space (m)		Side Space (m)		Light Well for NLV	
			Non Residential	Residential	When no NLV is taking this end	When NLV is taking this end	When no NLV is taking this end	When NLV is taking this end	Minimum width	Minimum Area
Low Rise	less than 7	6	80%**	65%	2.3m	2.3m	-	2.3m	2.3m	5 Sq.m
	7 less than 15	6	65%	65%	3.0m	3.0m	-	3.0m	3.0m	9 Sq.m
Inter Mediate Rise	15 less than 30	12	65%	65%	4.0m	4.0m	1.0m and 3.0m	4.0m	4.0m	16 Sq.m
Middle Rise	30 less than 50	20	65%	65%	4.0m	5.0m	3.0m both side	5.0m	5.0m	25 Sq.m
High Rise	50 less than 75	30	50%***	50%***	5.0m	6.0m	4.0m both side	6.0m	6.0m	36 Sq.m
	75 and above	Above 40m	50%***	50%***	5.0m	6.0m	5.0m both side	6.0m	6.0m	****
NLV - Natural Light & Ventilation										
Building Height - Height between access road level to roof top or roof level (Including parking floors)										
* Where no Plot Coverage specified under the zoning regulations										
** The entire development is for non-residential activities										
*** 65% plot coverage can be allowed only for the podium level not exceeding 20% of the tower height or 12 floors which ever is less										
**** Minimum area shall be increased by 1 Sq.m for every additional 3m height										

Map 7. 2 Zone factor plan 2021-2030





7.4 Common Guidelines for planning area.

- 1) These zoning regulations are enforced to the Nintavur Pradeshiya Sabha area which has been declared as an Urban Development Area by the gazette notification no. 1399/16 dated 30th June 2005 under the Urban Development Authority Act. No.41 of 1978.
- 2) In addition to the provisions of this zoning plan, the Planning and Development Regulations applicable to any development work is regulated by the Gazette Notification No 2235/54 dated 08th July 2021. The said legalized Planning and Development Regulations also apply to the Nintavur Pradesiyashaba planning area.
- 3) This plan is implemented subject to the guidelines of the regional development plan which will be prepared by National Physical Planning Department.
- 4) Where the use of a site or property is designated for a specific use in the zoning plan, the same site or property should be used only for designated.
- 5) If any development activity which is not covered by the regulations of the development plan, Urban Development Authority has the sole power to take decision of such activity.
- 6) Notwithstanding the provisions of the Development Plan, it may be lawful of using of any block of land, prohibit or control or releasing of any regulation or introduction of new regulations or guidelines with the intension of achieving the objectives of the Development Plan.
- 7) If any block of land is fallen within two or more local authorities, it should be considered the particular land belongs to the local authority where access road belongs. If the access is from two roads the wider road should be considered and if the both roads are in same width the larger portion of land should be considered.
- 8) No person shall use any site or building for the purpose other than the use approved in the Development Permit.



- 9) The Urban Development Authority may define any area comprised in the development plan as a special development area by a gazette notification or circular notification.
- 10) Where a site or premises located adjoining river or lagoon or canals, the reservation should be kept as indicated in.
- 11) If any place or block of land is located adjacent or close to a water body its reservation should be according to relevant authority.
- 12) If any archeologically or architecturally importance site or building, national heritage site is there they should be conserved as it is and if any improvement, rehabilitation need to be carried out, it should be planned to print the said values subject to the recommendation of Department of Archeological.
- 13) If any existing use is not compatible to the proposed use of this development plan by the date of enforcing the Development plan, the extension of time period of approved plan, addition and alteration of buildings equipment's and machineries for such incompatible use will not be approved. In addition, if the continuation of such existing use is harmful or development plans it's fair to compatible stop such activity.
- 14) If any site or property has not been designated for any particular use by the Development plan, any proposed use for the particular land should not be contradicted to the permissible use of the zone.
- 15) In case of a property and building which faller within two Zones the relevant zone should be the zone of access road.
- 16) In case of a property and building fallen within more than two zones it will be lawful if it considered with the compatibility of the objectives of the Development plan.
- 17) The boundaries of the zoning plan are basically based on physical boundaries such as roads, by roads and water bodies. In case of unavailability of such physical boundaries the decimal degree of X, Y coordinates of Google Earth which have been included in the Development plan (Annexure No.II of Volume II) should be considered.



- 18) Guidelines and regulations of Cemeteries and Burial Grounds Ordinance should be followed in case of any development activity within a cemetery or burial ground.
- 19) Identified common open spaces, parks, play grounds and other recreational areas should be used only for such uses.
- 20) Permissible floor area within a particular zone should be calculated according to the equation given.
- 21) Proposed road width of a particular place and a block of land should be as per given guideline.
- 22) Urban Development Authority has the power of deciding reservation and buffer zones for protection and conservation of any environmentally sensitive area.
- 23) Approval should be obtained from a relevant authority nominated by Urban Development Authority for filling or reclamation of paddy fields, low line lands and environmentally sensitive areas.
- 24) All the buildings within the 300m coastal zone should be constructed with prior approval of Coastal Resources Management and Conservation Department.
- 25) Minimum land extent for any development activity should be Six Perches.



Chapter 08

Zoning Guidelines

8.1 Urban Zone

8.1.1 Zoning guidelines

Table 8.1 Zoning guidelines of Urban zone

Zone Number	01																										
Zone Name	Urban Zone																										
Definition of the Zone	The land use intensity of this zone is higher in comparison to other zones and uses of this zone is not highly restricted since within the zone it is expected to promote commercial and administrative activities. Also high rise buildings are promoted considering the future needs.																										
Zoning Boundaries	<p>The following Latitude and Longitudes coordinates are defined the boundaries of this Zone based on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on Kandawala – SL99 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country :(Refer Annexure: Zone Map)</p> <table> <thead> <tr> <th>Latitude</th><th>Longitudes</th></tr> </thead> <tbody> <tr><td>7°21'46.29"N</td><td>81°50'38.58"E</td></tr> <tr><td>7°21'43.79"N</td><td>81°50'34.91"E</td></tr> <tr><td>7°21'41.64"N</td><td>81°50'34.48"E</td></tr> <tr><td>7°21'38.75"N</td><td>81°50'35.09"E</td></tr> <tr><td>7°21'38.96"N</td><td>81°50'36.33"E</td></tr> <tr><td>7°21'37.27"N</td><td>81°50'36.65"E</td></tr> <tr><td>7°21'36.27"N</td><td>81°50'34.07"E</td></tr> <tr><td>7°21'34.14"N</td><td>81°50'34.60"E</td></tr> <tr><td>7°21'33.82"N</td><td>81°50'35.51"E</td></tr> <tr><td>7°21'31.40"N</td><td>81°50'36.09"E</td></tr> <tr><td>7°21'29.06"N</td><td>81°50'36.80"E</td></tr> <tr><td>7°21'26.29"N</td><td>81°50'36.05"E</td></tr> </tbody> </table>	Latitude	Longitudes	7°21'46.29"N	81°50'38.58"E	7°21'43.79"N	81°50'34.91"E	7°21'41.64"N	81°50'34.48"E	7°21'38.75"N	81°50'35.09"E	7°21'38.96"N	81°50'36.33"E	7°21'37.27"N	81°50'36.65"E	7°21'36.27"N	81°50'34.07"E	7°21'34.14"N	81°50'34.60"E	7°21'33.82"N	81°50'35.51"E	7°21'31.40"N	81°50'36.09"E	7°21'29.06"N	81°50'36.80"E	7°21'26.29"N	81°50'36.05"E
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7°21'26.29"N	81°50'36.05"E																										
Zoning Factor	2																										
Permissible Height	-																										
Permissible Plot coverage	0.8 For commercial and 0.65 other uses.																										
Common guidelines for the zone	<ul style="list-style-type: none"> Any other related uses which are compatible with the zone permitted and non-permitted and it will be decided by the UDA. The Master Plan for land reclamation of paddy land (24 Hectares) within the Urban Zone will be prepared by Urban Development Authority with the consultancy of Sri Lanka Land Reclamation and Development Corporation, Department of Irrigation and Department of Agrarian Development. Clearance should be obtained from UDA, Sri Lanka Land Reclamation and Development Corporation, Department of Irrigation and Department of Agrarian Development for paddy land reclamation. 																										



8.1.2 Permissible Uses

Table 8. 2 Permissible Uses of Urban zone

	Permitted Uses of Urban Zone	Minimum land extent (perches)
1	Residential	6 P
2	Apartments	40 P
3	Hostel	20 P
4	Children's Park	40 P
5	Government Hospital	160 P
6	Private Hospital	20 P
7	Medical Counseling Center	6 P
8	Medical Lab	6 P
9	Pharmacy	6 P
10	Ayurvedic Medical Center	6 P
11	Government and Semi Government school	160 P
12	Private school	80 P
13	International School	80 P
14	Government/ Private Campus	40 P
15	Industrial school / Vocational Training center	40 P
16	Parks	40 P
17	Pre School	12 P
18	Institution with a tertiary education course center	20 P
19	Private Tuition Classes (More than 100 students)	20 P
20	Government Offices	12 P
21	Government Office Complexes	40 P
22	Religious places	12 P
23	Vehicle Service Centers (Service Centers)	12 P
24	Banking, Financial Institution	10 P
25	Sales Outlets	6 P
26	Indoor Sports Center	12 P
27	Outdoor Gymnasiums	20 P
28	Community Centers and Cultural Centers	40 P
29	Library	20 P
30	Day Care Center	6 P
31	Cinema Hall	80 P
32	Grocery Stores	6 P
33	Consumer goods shop	6 P
34	Meat shops	6 P
35	Stores	6 P
36	Bakery	6 P
37	Fuel Filling Station	40 P
38	Gas and electricity (Filling Station for vehicle)	40 P
39	Auto parts store. (Body Parts)	6 P
40	Furniture shops	6 P
41	Tourist Hotels	20 P
42	Restaurant	6 P
43	Reception Hall	40 P
44	Eating places	6 P



45	Lodgings	20 P
46	Vehicle Repairs (garage)	12 P
47	Handicrafts products and indoor industries (Not harmful to the environment)	6 P
48	Telecommunication Tower	As per the Development regulation circulation number 19 of 31 st October 2007

	Non- Permitted Uses
1	Rice mills
2	Heavy industries
3	Cemetery



8.2 Residential Zone (I, II & III)

8.2.1 Zoning guidelines

Table 8. 3 Zoning guidelines of Residential zone

Zone Number	02																																
Zone Name	Residential Zone (I,II&III)																																
Definition of the Zone	Residential use is higher in this zone. It's expected to concentrate most of the residential activities while allowing compatible and required activities within the zone.																																
Zoning Boundaries	<p>The following Latitude and Longitudes coordinates are defined the boundaries of this Zone based on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on Kandawala – SL99 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country :(Refer Annexure: Zone Map)</p> <table> <thead> <tr> <th>Latitude</th><th>Longitudes</th></tr> </thead> <tbody> <tr><td>7°21'48.55"N</td><td>81°50'51.04"E</td></tr> <tr><td>7°21'48.97"N</td><td>81°50'53.47"E</td></tr> <tr><td>7°21'49.54"N</td><td>81°50'56.80"E</td></tr> <tr><td>7°21'50.72"N</td><td>81°51'4.26"E</td></tr> <tr><td>7°21'51.75"N</td><td>81°51'9.49"E</td></tr> <tr><td>7°21'52.94"N</td><td>81°51'12.79"E</td></tr> <tr><td>7°21'52.28"N</td><td>81°51'12.98"E</td></tr> <tr><td>7°21'52.23"N</td><td>81°51'13.97"E</td></tr> <tr><td>7°21'52.14"N</td><td>81°51'15.99"E</td></tr> <tr><td>7°21'46.24"N</td><td>81°51'17.54"E</td></tr> <tr><td>7°21'41.05"N</td><td>81°51'18.89"E</td></tr> <tr><td>7°21'38.75"N</td><td>81°51'19.40"E</td></tr> <tr><td>7°21'36.20"N</td><td>81°51'20.58"E</td></tr> <tr><td>7°21'32.62"N</td><td>81°51'21.18"E</td></tr> <tr><td>7°21'31.45"N</td><td>81°51'22.65"E</td></tr> </tbody> </table>	Latitude	Longitudes	7°21'48.55"N	81°50'51.04"E	7°21'48.97"N	81°50'53.47"E	7°21'49.54"N	81°50'56.80"E	7°21'50.72"N	81°51'4.26"E	7°21'51.75"N	81°51'9.49"E	7°21'52.94"N	81°51'12.79"E	7°21'52.28"N	81°51'12.98"E	7°21'52.23"N	81°51'13.97"E	7°21'52.14"N	81°51'15.99"E	7°21'46.24"N	81°51'17.54"E	7°21'41.05"N	81°51'18.89"E	7°21'38.75"N	81°51'19.40"E	7°21'36.20"N	81°51'20.58"E	7°21'32.62"N	81°51'21.18"E	7°21'31.45"N	81°51'22.65"E
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Zoning Factor	1.5																																
Permissible Height	-																																
Permissible Plot coverage	0.8 For commercial and 0.65 other uses.																																
Common guild lines for the zone	<ul style="list-style-type: none"> Any other related uses which are compatible with the zone permitted and non-permitted and it will be decided by the UDA. 																																



8.2.2 Permissible Uses

Table 8. 4 Permissible uses of Residential zone

	Permitted Uses	Minimum land extent (perches)
1	Residential Home	6 P
2	Apartments	40 P
3	Hostel	20 P
4	Housing Scheme	80 P
5	Medical Counseling Center	6 P
6	Pharmacy	6 P
7	Tuition classes (More than 100 students)	20 P
8	Religious Places	12 P
9	Library	20 P
10	Grocery shops	6 P
11	Consumer goods shops	6 P
12	Bakery	6 P
13	Fish sales outlets	6 P
14	Furniture shops	20 P
15	Restaurant	6 P
16	Cottage Industries not exceeding 100 sq.m and employment not more than 10 persons or machinery utilize not more than 5 H.P. subject to maximum decibel level of 55 in day time and 45 in night time stipulated for the primary residential zone by the Central Environmental Authority	20 P
17	Children's park	40 P
18	Parks	40 P
19	Telecommunication Tower	As per the Development regulation circulation number 19 of 31 st October 2007

	Non- Permitted Uses
1	Rice mills
2	Heavy industries



8.3 Industrial Zone

8.3.1 Zoning guidelines

Table 8. 5 Zoning guidelines of Industrial zone

Zone Number	03																														
Zone Name	Industrial Zone																														
Definition of the Zone	Industrial land use is higher in this zone and it's expected to promote value addition industries. All other ancillary activities also will be allowable within the zone.																														
Zoning Boundaries	<p>The following Latitude and Longitudes coordinates are defined the boundaries of this Zone based on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on Kandawala – SL99 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.</p> <table> <thead> <tr> <th>Latitude</th><th>Longitudes</th></tr> </thead> <tbody> <tr><td>7°19'57.18"N</td><td>81°50'48.98"E</td></tr> <tr><td>7°19'57.15"N</td><td>81°50'51.08"E</td></tr> <tr><td>7°20'4.37"N</td><td>81°50'53.29"E</td></tr> <tr><td>7°20'4.54"N</td><td>81°51'17.42"E</td></tr> <tr><td>7°20'7.22"N</td><td>81°51'16.77"E</td></tr> <tr><td>7°20'5.09"N</td><td>81°51'1.34"E</td></tr> <tr><td>7°20'7.11"N</td><td>81°51'1.43"E</td></tr> <tr><td>7°20'6.29"N</td><td>81°50'54.32"E</td></tr> <tr><td>7°19'43.71"N</td><td>81°51'9.91"E</td></tr> <tr><td>7°19'42.59"N</td><td>81°51'18.89"E</td></tr> <tr><td>7°19'42.53"N</td><td>81°51'20.76"E</td></tr> <tr><td>7°19'43.72"N</td><td>81°51'20.92"E</td></tr> <tr><td>7°19'44.01"N</td><td>81°51'23.00"E</td></tr> <tr><td>7°19'44.56"N</td><td>81°51'23.13"E</td></tr> </tbody> </table>	Latitude	Longitudes	7°19'57.18"N	81°50'48.98"E	7°19'57.15"N	81°50'51.08"E	7°20'4.37"N	81°50'53.29"E	7°20'4.54"N	81°51'17.42"E	7°20'7.22"N	81°51'16.77"E	7°20'5.09"N	81°51'1.34"E	7°20'7.11"N	81°51'1.43"E	7°20'6.29"N	81°50'54.32"E	7°19'43.71"N	81°51'9.91"E	7°19'42.59"N	81°51'18.89"E	7°19'42.53"N	81°51'20.76"E	7°19'43.72"N	81°51'20.92"E	7°19'44.01"N	81°51'23.00"E	7°19'44.56"N	81°51'23.13"E
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Zoning Factor	1																														
Permissible Height	Refer Annexure																														
Permissible Plot coverage	0.65																														
Common guild lines for the zone	<ul style="list-style-type: none"> Any other related uses which are compatible with the zone permitted and non-permitted and it will be decided by the UDA. Clearance should be obtained from Central Environmental Authority is compulsory for industrial uses. Further subdivision for residential purposes will not be allowed in this zone. In this zone residential activity will be discouraged. New industry will be allowed away from 50m radios from the existing residential building. Only existing residential building can be allowed to developed but no any new units will not be allowed within this zone. 																														



8.3.2 Permissible Uses

Table 8. 6 Permissible uses of Industrial zone

	Permitted Uses of Industrial Zone	Minimum land extent (perches)
1	Rice Mill	40 P
2	Stores	40 P
3	Fuel Filling Station	40 P
4	Gas and electricity (Filling Station for vehicle)	40 P
5	Auto parts store.	6 P
6	Furniture shops	6 P
7	Sales Outlets	6 P
8	Vehicle Repairs (garage)	20 P
9	Vehicle Service Centers (Service Centers)	20 P
10	Car parking	20 P
11	Handicrafts products are indoor industries (Not harmful to the environment)	6 P
12	Building materials Production Industries	20 P
13	Telecommunication Tower	As per the Development regulation circulation number 19 of 31 st October 2007

	Non - Permitted Uses
1	Public, Health, Education
2	Recreational
3	Religious
4	Professional Offices (Medical, surveying, Engineering)



8.4 Hinter Land Zone

8.4.1 Zoning guidelines

Table 8. 7 Zoning guidelines of Hinter land zone

Zone Number	04																										
Zone Name	Hinter Land Zone																										
Definition of the Zone	The land use intensity of this zone is low and uses of this zone restricted for certain uses only. This zone expected to use for nature based activities and uses.																										
Zoning Boundaries	<p>The following Latitude and Longitudes coordinates are defined the boundaries of this Zone based on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on Kandawala – SL99 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.</p> <table> <thead> <tr> <th>Latitude</th><th>Longitudes</th></tr> </thead> <tbody> <tr> <td>7°19'13.43"N</td><td>81°51'7.23"E</td></tr> <tr> <td>7°19'14.60"N</td><td>81°51'7.50"E</td></tr> <tr> <td>7°19'15.16"N</td><td>81°51'8.84"E</td></tr> <tr> <td>7°19'15.37"N</td><td>81°51'10.09"E</td></tr> <tr> <td>7°19'14.87"N</td><td>81°51'10.77"E</td></tr> <tr> <td>7°19'17.27"N</td><td>81°51'11.15"E</td></tr> <tr> <td>7°19'16.94"N</td><td>81°51'13.99"E</td></tr> <tr> <td>7°19'17.73"N</td><td>81°51'14.32"E</td></tr> <tr> <td>7°19'17.80"N</td><td>81°51'16.49"E</td></tr> <tr> <td>7°19'21.24"N</td><td>81°51'16.63"E</td></tr> <tr> <td>7°19'58.93"N</td><td>81°51'48.17"E</td></tr> <tr> <td>7°19'21.94"N</td><td>81°51'55.78"E</td></tr> </tbody> </table>	Latitude	Longitudes	7°19'13.43"N	81°51'7.23"E	7°19'14.60"N	81°51'7.50"E	7°19'15.16"N	81°51'8.84"E	7°19'15.37"N	81°51'10.09"E	7°19'14.87"N	81°51'10.77"E	7°19'17.27"N	81°51'11.15"E	7°19'16.94"N	81°51'13.99"E	7°19'17.73"N	81°51'14.32"E	7°19'17.80"N	81°51'16.49"E	7°19'21.24"N	81°51'16.63"E	7°19'58.93"N	81°51'48.17"E	7°19'21.94"N	81°51'55.78"E
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Zoning Factor	0.5																										
Permissible Height	15m																										
Permissible Plot coverage	<p>20% for other than residential uses.</p> <p>If residential only a building which is not Less than 1600 sq. ft floor area will be allowable.</p>																										



Common guild lines for the zone	<ul style="list-style-type: none"> Any other related uses which are compatible with the zone permitted and non-permitted and it will be decided by the UDA. Minimum lot size should not be less than 80 Perches except the existing lots. Development Clearance should be obtained from the Urban Development Authority and Coconut Cultivation Board prior to undertake any sort Development Activity within the land plots.
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8.4.2 Permissible Uses

Table 8. 8 Permissible uses of Hinter land zone

	Permitted Uses	Minimum land extent (perches)
1	Residential Home	6 P
2	Fish sales outlets	6 P
3	Meat shops (processed meat only)	6 P
4	Fish Processing Factory	40 P
5	Tourist Hotels	40 P
6	Restaurant	10 P
7	Holiday Resorts	80 P
8	Reception Hall	40 P
09	Lodgings	20 P
10	Children's park	40 P
11	Parks	40 P
12	Telecommunication Tower	As per the Development regulation circulation number 19 of 31 st October 2007

	Non - Permitted Uses
1	Rice mills
2	Heavy industries



8.5 Agricultural zone

8.5.1 Zoning guidelines

Table 8. 9 Zoning guidelines of Agricultural zone

Zone Number	05																										
Zone Name	Agricultural zone																										
Definition of the Zone	This zone purely expected to be Agricultural activities and which highly restricted zone is.																										
Zoning Boundaries	<p>The following Latitude and Longitudes coordinates are defined the boundaries of this Zone based on Transverse Mercator Projection prepared on 1:10000 the basis of Sri Lanka Grid based on Kandawala – SL99 coordinate system of 200000,200000 prepared by the Survey Department of Sri Lanka based on the geographical location of the country.</p> <table> <thead> <tr> <th>Latitude</th><th>Longitudes</th></tr> </thead> <tbody> <tr><td>7°21'47.47"N</td><td>81°50'37.27"E</td></tr> <tr><td>7°21'42.17"N</td><td>81°50'18.53"E</td></tr> <tr><td>7°21'43.91"N</td><td>81°50'18.19"E</td></tr> <tr><td>7°21'43.93"N</td><td>81°50'17.14"E</td></tr> <tr><td>7°21'41.73"N</td><td>81°50'11.91"E</td></tr> <tr><td>7°21'35.54"N</td><td>81°49'55.06"E</td></tr> <tr><td>7°21'32.34"N</td><td>81°49'50.67"E</td></tr> <tr><td>7°21'32.09"N</td><td>81°49'50.66"E</td></tr> <tr><td>7°21'33.49"N</td><td>81°49'47.70"E</td></tr> <tr><td>7°21'33.61"N</td><td>81°49'47.58"E</td></tr> <tr><td>7°21'34.46"N</td><td>81°49'45.76"E</td></tr> <tr><td>7°21'35.06"N</td><td>81°49'43.21"E</td></tr> </tbody> </table>	Latitude	Longitudes	7°21'47.47"N	81°50'37.27"E	7°21'42.17"N	81°50'18.53"E	7°21'43.91"N	81°50'18.19"E	7°21'43.93"N	81°50'17.14"E	7°21'41.73"N	81°50'11.91"E	7°21'35.54"N	81°49'55.06"E	7°21'32.34"N	81°49'50.67"E	7°21'32.09"N	81°49'50.66"E	7°21'33.49"N	81°49'47.70"E	7°21'33.61"N	81°49'47.58"E	7°21'34.46"N	81°49'45.76"E	7°21'35.06"N	81°49'43.21"E
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7°21'32.34"N	81°49'50.67"E																										
7°21'32.09"N	81°49'50.66"E																										
7°21'33.49"N	81°49'47.70"E																										
7°21'33.61"N	81°49'47.58"E																										
7°21'34.46"N	81°49'45.76"E																										
7°21'35.06"N	81°49'43.21"E																										
Zoning Factor	-																										
Permissible Height	-																										
Permissible Plot coverage	-																										
Common guild lines for the zone	<ul style="list-style-type: none"> • Use of Malinthatidal and Paravattypitty high land will be decided by UDA and Pradeshiya Sabha of Nintavur. • Any other related uses which are compatible with the zone permitted and non-permitted and it will be decided by the UDA. • If any existing building located within the zone it will be only allowed to develop in future. 																										



8.6 Coast Conservation Area

This area intent to conserve and protect form the development activities in future. Therefore, this area will be allowed only for the fishing activities while using temporary building structure and Development Clearance should be obtained from the Urban Development Authority and Coast Conservation Department prior to undertake any sort of development activity within the area. This area starts from Vettaru in North, East by Indian Ocean, South by Nochchicyadi River and West by Beach road.



Chapter 09

9.1 Building Line Widths of identified Roads

No	Road Name	Existing Road Width (m)	Proposed Road Width (m)	Building line (from the center line of the road) (m)
1.	Theater Road	4	-	5
2.	APC	3.6	-	5
3.	Beach Road	4.5	-	5
4.	1st cross	3.8	-	5
5.	2nd cross	4	-	5
6.	3rd cross	3.6	-	5
7.	Immam Roomy School road	3.5	-	5
8.	Ashraf Peace square	4.5	-	5
9.	Proposed outer circular road	-	15	5
10.	Industrial zone all road	3.5	-	5



PART III





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Population& Demography

Year	Total Population	Population Increase	Population growth %
2001	24,625	-	
2007	25,652	1027	0.66%
2011	26,361	709	0.67%
2016	27,500	1,139	0.68%

Source: Resource Profile Nintavur (2014)

Population Prediction

	Growth Rate	Predicted Population(Year)	
		2021	2030
Min. Growth rate	0.5%	27712	28987
Medium Growth rate	0.68%	28216	29996
Max. Growth rate	0.9%	28844	30000

Source: Resource Profile Nintavur (2014)

Present Economic Base of Nintavur

Agriculture Sector	Agriculture: Paddy, vegetable cultivations, coconut plantations Livestock production: Livestock, milk production Fishing: Coastal fishing, lagoon fishing,
Industry Sector	Rice mills and Saw mills, Brick Making
Service Sector	Whole sale and retail trade: Domestic trade Banking and insurance: Financial transaction. Administration and Institutions: public service.

Source: Resource Profile Nintavur (2014)



Paddy Production Nintavur Pradeshiya Sabha

Extent	Major	Minor	Total (Ha)			
	Yala	Maha	Yala	Maha	Yala	Maha
Target Extent (Ha)	2796	2594	--	-	2796	2594
Gross Extent Sown (Ha)	2796	2594	-	-	2796	2594
Gross Extent Harvested (Ha)	2796	2594	-	-	2796	2594
Extent Damaged (Ha)	-	-	-	-	-	0
Net Extent Harvested (Ha)	2796	2594	-	-	2796	2594
Average Yield (Ha)	109	109	-	-	109	109
Average Yield (Mt)	6.5	6.5	-	-	6.5	6.5
Production (Excluding) (Ha)	-	-	-	-	-	0
Production (Excluding) Mt	16541	16550	-	-	16541	16550

Source: Resource Profile Nintavur (2014)

Average Flood Height in Nintavur Pradeshiya Sabha

Area	Flood (Height)
Nellu Theewu	0.5' - 2.5'
Tharawai	0.5' - 2.5'
Centarl Drainage	3.0' - 5.0'
Thakwada Cause way	1.5' - 3.0'
Matheena Drainage	1.5' - 3.0'
Koonanda Tharawu	1.5 - 2.5
Arasadi Thoddam	2.5- 3.5
Keni Area	2.0' - 5.0'
Arasadi Thoddam 2	2.0' - 5.0'
Sakkath Kiramam	2.0 ' - 3.5'

Source: Disaster Management Center, Ampara



Details of Rice Mills in Ampara District

No	Local Authority	Categories and Number of Industries		
		A	B	C
1	Akkaraipattu MC		01	09
2	Kalmunai MC		13	33
3	Ampara UC	01		03
4	Alayadiwembu PS	02	07	09
5	Akkaraipattu PS		02	13
6	Addalachchenai PS			49
7	Karathivu PS		03	35
8	Lahugala PS			13
9	Nintavur PS		29	51
10	Pottuvil PS		06	
11	Sammanthurai PS	01	01	40
12	Thirukkivil PS		01	
13	Damana			38
14	Mahaoya			20
15	Uhana			103
16	Namaloya			07
17	Dehiattakandiya	03	02	13
18	Padiyathalawa			08
19	Irakkamam	01		
20	Navithanveli		03	26

Source: Central Environmental Authority, Ampara



Sample Survey of Rice Mills in Nintavur

No	Extent		Production Capacity (per day)	paddy collection per month	Market place	monthly	labor	
	Building	Total		Area	Amount	Area	Amount	6
1	4500 sq ft	1 acre	6500 kg*10	Battocaloa	65,000 kg	Kalmunai	48750 kg	
				Kokkadicholai		sainthamaruthu		
						Nintavur		
						Sammanthurai		
2	9000 sq ft	2.5 acre	13000 kg*15	Nintavur	195,000 kg	Colombo	2 1 0 ,0 0 0 kg	12
				Sammanthurai		Matara		
				Potuvil		Badulla		
				Ampara				
				Akkaraipattu				
3	3200 sqft	0.7 acre	6500 kg*25	Nintavur	162,500 kg	Badulla	1 0 0 ,0 0 0 kg	4
				Samanthura		Bandarawela		
				Akkaraipattu		Galle		
						Matara		
4			9750 kg*15	Nintavur	146,250 kg	Kalmunai	10968 8 kg	3



				Akkaraipattu		sainthamarut hu		
				Potuvil		Nintavur		
				Kokkadicholai		Sammanthur ai		
				Mannar				
				Warupathanch enai				
5			9750 kg*15	Nintavur	146,25 0 kg	Kalmunai	10968 8 kg	2
				Sammanthurai				
				Potuvil				
				Akkaraipattu				
6	13,140 sqft		6500 kg*15	Nintavur	97,500 kg	Colombo	73125 kg	7
				Sammanthurai		Ratnapura		
				Potuvil		Badulla		
				Akkaraipattu		Galle		
7	4500 sq ft	1 acre	3500 kg*20	Kokkadicholai	130,00 0 kg	Kalmunai	97,50 0	10_ 12
				Uhana		sainthamarut hu		
8	9000 sqft	1 acre	22750 kg*25	Nintavur	568,75 0 kg	Bandarawela		
				Sammanthurai		Passara		
				Potuvil		Ratnapura	426,5 62	12
				Polonnaruwa				
				Kinniya				
9	7500 sqft	1 acre	6500 kg*20	Nintavur	130,00 0 kg	Kalmunai		
				Akkaraipattu		Matara		
				Potuvil		Embilipitiya		



						Thangalle	97,500	12_13
								2_3
	7500 sqft	1.25 acre	20,000kg *20	Nintavur	390,000 kg	Colombo		
				Akkaraipattu		Balangoda		
				Potuvil		Kahawatta		12
				Mannar		Galle	292,500	7 off
				Kanthale		Ehaliyagoda		
						Avissawella		
	5000 sqft	1 acre	6500 kg*20	Nintavur	130,000 kg	Colombo	97,500 kg	12
				Akkaraipattu		Kandy		
				Potuvil		Badulla		
				Sammanthurai		Bandarawela		
				Kokkadicholai		Maruthamunai		
	13,140 sqft	1 acre	55000 kg*15	Nintavur	97,500 kg	Colombo	73,125kg	7
				Sammanthurai		Ratnapura		
				Akkaraipattu		Badulla		
				Potuvil		Galle		

Number of Rice Mills (2010-2018)

Year	Number of Rice Mill (Registered)
2010	45
2011	45
2012	51
2013	51
2014	57
2015	63
2016	63



2017	69
2018	81

Source: Central Environmental Authority and Nintavur Pradeshiya Sabha

Zoning Metrix Sheet

Use		Urban Zone	Residential Zone	Industrial Zone	Hinterland Zone	Agriculture Zone
Residential	Residential Home	✓	✓	✓	✓	
	Apartments	✓	✓			
	Hostel	✓	✓			
	Housing Scheme	✓				
Health	Government Hospital	✓				
	Private Hospital	✓	✓			
	Medical Counseling Center	✓	✓			
	Medical Lab	✓				
	Pharmacy	✓	✓			
	Ayurvedic Medical Center	✓				
Education	Government and Semi Government school	✓				
	Private school	✓				
	International School	✓				
	Government/ Private Campus	✓				
	Industrial school / Vocational Training center	✓				
	Vocational Training Institute	✓				
	Pre School	✓				
	Institution with a tertiary education course center	✓				
	Private Tuition Classes	✓				
	Government Offices	✓				
Institute						



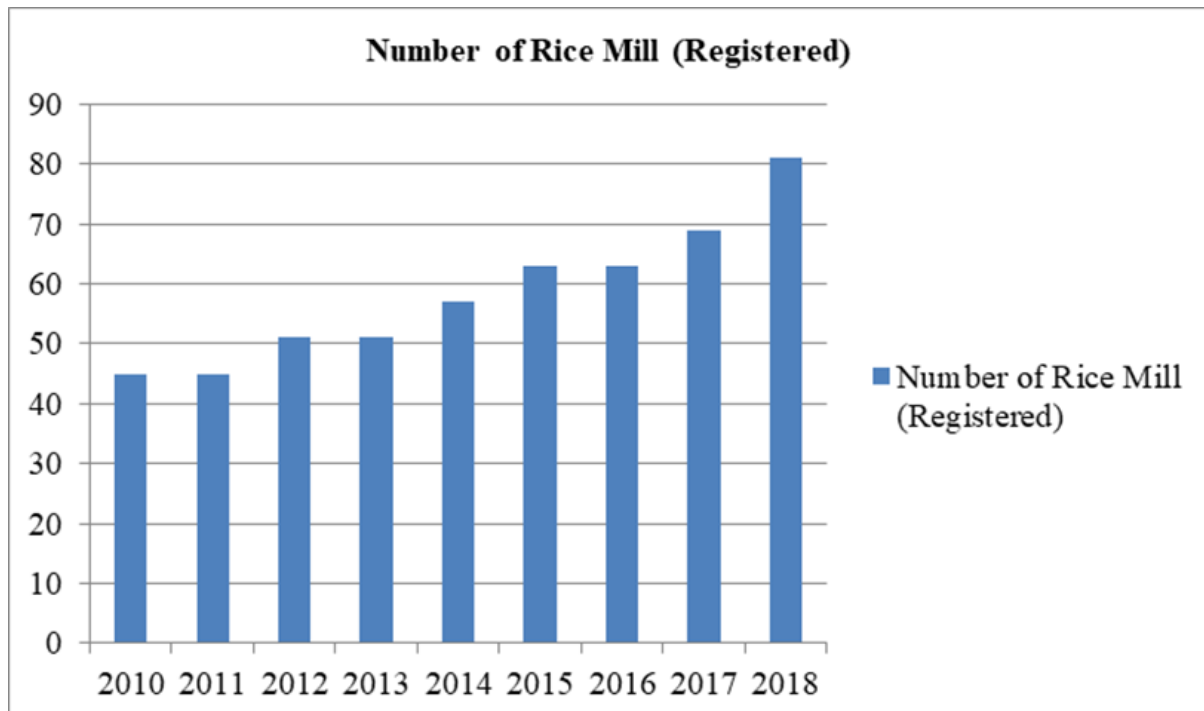
	Government Office Complexes	✓				
	Collages	✓	✓			
	Government Offices Complex	✓				
	Banking, Financial Institution	✓				
	ATM Center	✓	✓			
Use		Urban Zone	Residential Zone	Industrial Zone	Hinterland Zone	Agriculture Zone
Social Service	Indoor Sports Center ,	✓				
	Outdoor gymnasiums	✓				
	Community Centers and Cultural Centers	✓				
	Library	✓	✓			
	Day Care Center	✓				
	Cinema Hall	✓				
Commercial	Grocery Stores	✓	More than 25m ²			
	Consumer goods shop	✓				
	Fish sales outlets	✓	✓		✓	
	Meat shops (processed meat only)	✓			✓	
	Building Materials alike pipe, with material			✓		
	Fish Processing Factory				✓	
	Stores	✓		✓		
	Bakery	✓	✓	✓		
	Fuel Filling Station	✓		✓		
	Gas and electricity (Filling Station for vehicle)	✓		✓		
	Auto parts store. (Body Parts)	✓		✓		



	ii. other parts			✓		
	Furniture shops	✓	✓	✓		
Tourism	Tourist Hotels	✓			✓	
	Restaurant	✓	More than 25m ²		✓	
	Holiday Resorts	✓			✓	
	Reception Hall	✓			✓	
	Urban Hotel	✓			✓	
	Lodgings	✓			✓	
Vehicles	Sales Outlets	✓		✓	✓	
	Vehicle Car Repairs (garage)	✓		✓		
	Vehicle Service Centers (Service Centers)	✓		✓		
	Car wash center	✓		✓		
	Car parking	✓	✓	✓		
Industrial	Handicrafts products are indoor industries (Not harmful to the environment)	✓		✓		
	Building materials Production institutions (Bricks made)			✓		
Rest and Recreation	Children's park	✓	✓		✓	
	Parks	✓	✓		✓	
	Open Areas	✓	✓		✓	
	Landscapes Areas	✓	✓		✓	

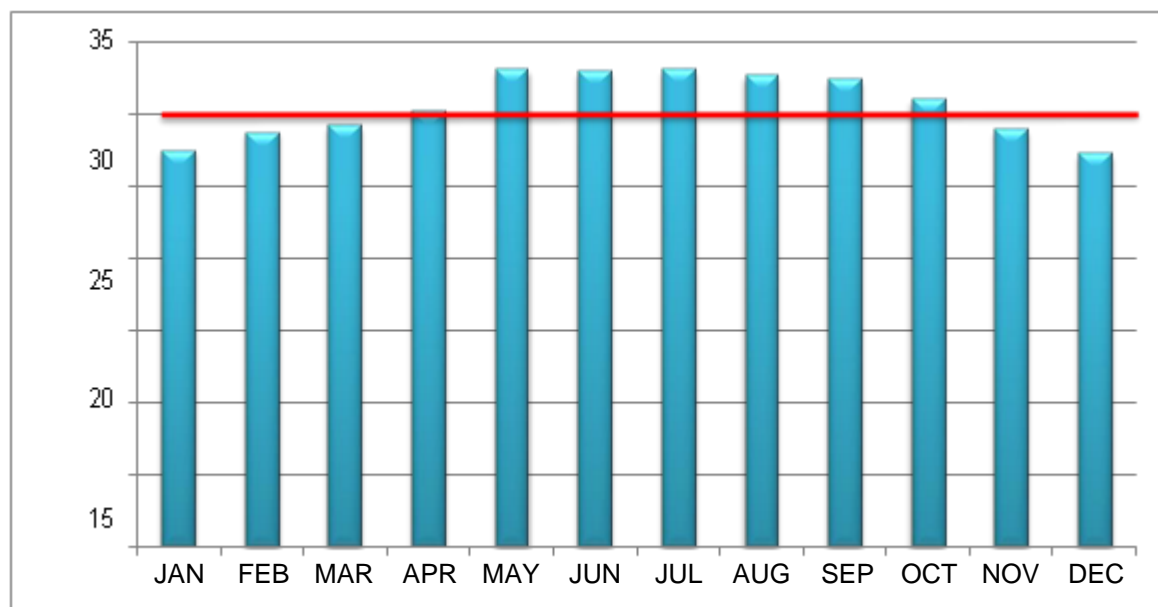


Figure No 1: Mean Temperature (maximum –monthly)



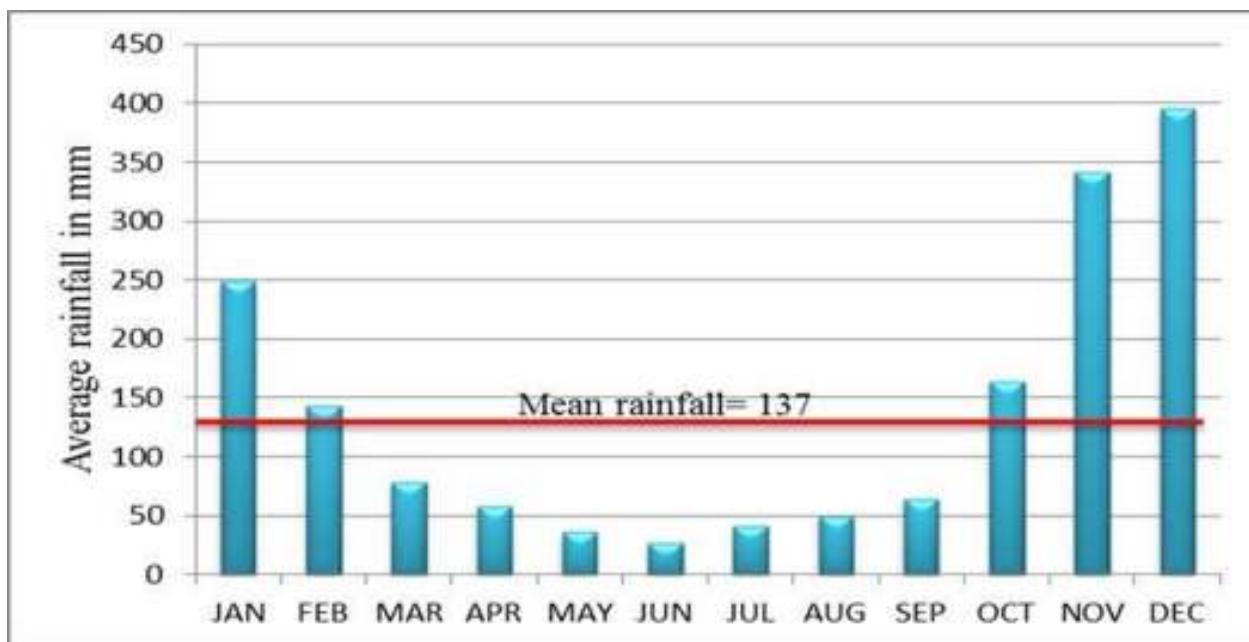
Source: Department of Meteorology

Figure No 2: Average Monthly Rainfall (mm) – 1950 to 2016



Source: Department of Meteorology

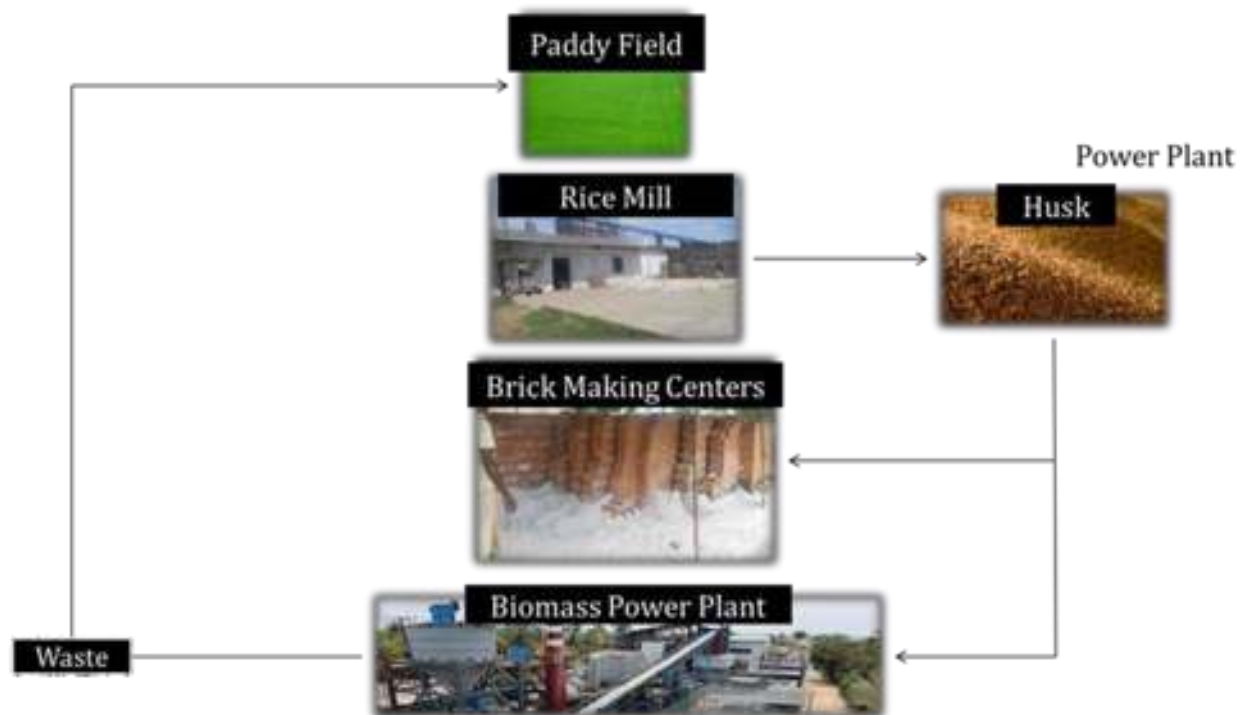
Figure No 3: Average Monthly Rainfall (mm) – 1950 to 2016



Source: Department of Meteorology

Figure No.4: Inter Connection of Industries

Internal Network





3 Zone factor Calculation Method (Summery)

Zone	Developable Land (Hactare)	Developable Land (sq. m)	Residential Population	Pop Dis within Zone	Commu ter population	Allowable Space Res i (Sq m)	Allowable Commercial Space (Sq m)	Dis of Commercial Space (Sq m)	Allowable Industrial Space (Sq m)	Open Space (Sq m)	Institution (Sq m)	Religious (Sq m)	Total Allowable Floor Area in Zone	Zone Factor	Plot Cover age
High Urban Zone	104.87	104870	5893	5000	5000+2400+2600	100,000	50,000	226,864		140,000	1228140	67810	1,813,950	2	0.8
Residential Zone	357.64	357640	24632	25581	25581	511,620	127,905	12,791		532,000		200,000	1,095,335	1.5	0.65
Industrial Zone	130.67	130670	400	350	350+12000	7,000	61,750		728,433				729,183	1	0.65
Hinter Land Zone	25.48	254800	86	80	80+1000	1,600	5,400	5,400		14,000			117,800	0.5	0.65
							245,055	245,055		686,000					

Residential Zone Pop Dis 24632 + 893 Urbanresi pop

Standard; WWW. Engineering toolbox.com



Commercial			HU Final		
Land_Use	Cnt_Land_U	Sum_Extent	Land_Use	Cnt_Land_U	Sum_Extent
	2	5.77246079124	Barren Land	3	2.52309877712
Barren Land	2	0.15576667045	Coconut	19	20.68415004580
Coconut	12	12.83969199170	Commercial	48	9.66776069172
Commercial	44	7.63168918084	Industry	7	8.34145275693
Industry	5	0.35492390106	Institutional	6	1.06880496441
Institutional	6	1.06880496442	Major Road	7	12.25619146380
Major Road	7	3.13773307155	Marshy/ Wet Land	5	2.95177594022
Marshy/ Wet Land	5	2.95177594021	Minor Road	80	10.17104704790
Minor Road	70	3.53735715180	Paddy	8	983.14767014200
Paddy	6	32.97485150110	Park/ Play Ground	2	2.73649098514
Park/ Play Ground	2	2.73649098512	Public Building	5	1.58971676775
Public Building	5	1.58971676773	Religious	7	0.97322463329
Religious	7	0.97233682935	Residential	74	45.76354097830
Residential	66	39.80252229360	School	4	4.33242540042
School	2	3.98331784165	Utilities	2	0.28814471396
Utilities	2	0.28813200376	Vacant Land	24	6.68971119972
Vacant Land	19	3.10406672974			



Hinter Land 1			Hinter land 2			Last Resi			KumrHiurban		
Land Use	Cnt_Land_U	Sum Extent	Land Use	Cnt_Land_U	Sum Extent	Land Use	Cnt_Land_U	Sum Extent	Land Use	Cnt_Land_U	Sum Extent
Barren Land	1	3.706970204	Barren Land	2	9.249330454	Barren Land	2	4.915635203		2	5.77246079124
Beach	1	3.746088846	Beach	1	3.134564779	Cocconut	16	121.4407992	Barren Land	2	0.15576667045
Cocconut	9	119.5285833	Cocconut	6	28.00595956	Housing Scheme	1	0.838858085	Cocconut	12	12.83969199170
Commercial	1	0.867005829	Housing Scheme	1	0.102764728	Industry	5	8.482391139	Commercial	44	7.63168918084
Housing Scheme	1	0.838858085	Industry	1	2.058101375	Mars hy/ Wet Land	1	4.049777035	Industry	5	0.35492390106
Industry	3	5.826249586	Mars hy/ Wet Land	4	8.216706173	Minor Road	23	3.974596296	Institutional	6	1.06880496442
Mars hy/ Wet Land	1	4.049777035	Minor Road	6	2.783790334	Paddy	1	0.883853044	Major Road	7	3.13773307155
Minor Road	6	2.270755234	Paddy	4	5.270175262	Religious	2	0.084278937	Mars hy/ Wet Land	5	2.95177594021
Paddy	2	5.430272669	Park / Play Ground	1	1.771000866	Residential	18	14.07619995	Minor Road	70	3.53735715180
Religious	1	0.027356591	Residential	1	0.976814115	School	1	0.54076873	Paddy	6	32.97485150110
Residential	1	0.910009032	Vacant Land	1	0.920097926	Vacant Land	2	0.594193924	Park/ Play Ground	2	2.73649098512
Water Body	2	15.28104927	Water	2	5.15451663	Water	1	4.426077471	Public	5	1.58971676773

			Bod y			Bod y			Build ing		
									Relig ious	7	0.9723 368293 5
									Resid ential	66	39.802 522293 60
									Scho ol	2	3.9833 178416 5
									Utilit ies	2	0.2881 320037 6
									Vaca nt Land	19	3.1040 667297 4



High Urban Zone				
Land_Use	Cnt_Land_U	Sum_Extent		
Barren Land	3	2.523098777	104.87	2.405929987
Coconut	19	20.68415005	104.87	19.72361023
Commercial	48	9.667760692	104.87	9.218804893
Institutional	6	1.068804964	104.87	1.019171321
Marshy/ Wet Land	5	2.95177594	104.87	2.814700048
Public Building	5	1.589716768	104.87	1.515892789
Religious	7	0.973224633	104.87	0.928029592
Residential	74	45.76354098	104.87	43.63835318
School	4	4.3324254	104.87	4.13123429
Utilities	2	0.288144714	104.87	0.274763721
Vacant Land	24	6.6897112	104.87	6.379051397
Industry	7	8.341452757	104.87	7.95408864
		104.8738069		
Major Road	7	12.25619146		
Minor Road	80	10.17104705		
Park/ Play Ground	2	2.736490985		



Hinter Land 1			Hinter Land 2						
Land _Use	Cnt_ Land _U	Sum_Ext tent	Land_ Use	Cnt _La nd_ U	Sum_Ext ent				
Barren Land	2	9.24933 0454	Barren Land	1	3.706970 20372	Land_ Use	Sum_Ext ent		
Housing Scheme	1	0.10276 4728	Commercial	1	0.867005 82884	Barren Land	12.956300 65756	25. 48	50.84 89
Industry	1	2.05810 1375	Housing Scheme	1	0.838858 08461	Commercial	0.8670058 2884	25. 48	3.402 692
Residential	1	0.97681 4115	Industry	3	5.826249 58574	Housing Scheme	0.9416228 1256	25. 48	3.695 537
Vacant Land	1	0.92009 7926	Religious	1	0.027356 59096	Industry	7.8843509 6123	25. 48	30.94 329
		13.3071 086	Residential	1	0.910009 03190	Religious	0.0273565 9096	25. 48	0.107 365
					12.17644 932577	Residential	1.8868231 4676	25. 48	7.405 114
						Vacant Land	0.9200979 26	25. 48	3.611 059
							25.483557 92397		100.0 14
Beach	1	3.13456 4779	Beach	1	3.746088 84620				



Coco nut	6	28.0059 5956	Cocon ut	9	119.5285 8334600				
Paddy	4	5.27017 5262	Minor Road	6	2.270755 23421				
Water Body	2	5.15451 663	Water Body	2	15.28104 927450				
Minor Road	6	2.78379 0334	Marshy / Wet Land	1	4.049777 03502				
Park/ Play Grou nd	1	1.77100 0866	Paddy	2	5.430272 66938				
Mars hy/ Wet Land	4	8.21670 6173			150.3065 2640531				
		54.3367 1361							



Industry				
Land_Use	Cnt_Land_U	Sum_Extent	Total Land	%
Barren Land	4	5.725520452	130.68	4.381328781
Coconut	21	66.63782406	130.68	50.99313136
Commercial	6	0.44833411	130.68	0.343077831
Housing Scheme	1	0.838858085	130.68	0.641917726
Industry	25	25.22038768	130.68	19.29934778
Paddy	9	14.38751364	130.68	11.00972883
Public Building	1	0.348752121	130.68	0.266874901
Religious	1	0.065474206	130.68	0.050102698
Residential	10	8.307335785	130.68	6.357006264
Utilities	1	0.213790844	130.68	0.163598748
Vacant Land	9	8.486185613	130.68	6.493867166
		130.6799766		99.99998209
Major Road	1	5.846725332		
Minor Road	21	5.261200383		
Water Body	2	11.1426085		



Residential Big			Residential Small						
Land_Use	Cnt_Land_U	Sum_Extent	Land_Use	Cnt_Land_U	Sum_Extent	Total Land use			
Barren Land	14	11.99267083550	Barren Land	2	4.915635203	Land_Use	Sum_Extent		%
Commercial	21	1.13914379382	Housing Scheme	1	0.838858085	Barren Land	16.90830603811	356.75	4.739539184
Health	4	1.23425302349	Industry	5	8.482391139	Commercial	1.13914379382	356.75	0.319311505
Housing Scheme	11	1.65427126708	Paddy	1	0.883853044	Health	1.23425302349	356.75	0.345971415
Industry	7	13.44212799070	Religious	2	0.084278937	Housing Scheme	2.49312935169	356.75	0.698844948
Institutional	4	0.15929809222	Residential	18	14.07619995	Industry	21.92451912971	356.75	6.145625544
Public Building	1	0.25744785203	School	1	0.54076873	Institutional	0.15929809222	356.75	0.044652584
Religious	20	3.17662919501	Vacant Land	2	0.594193924	Public Building	0.25744785203	356.75	0.07216478
Residential	399	259.89979878800			30.41617901	Religious	3.26090813153	356.75	0.914059743



School	9	3.31793 292375				Residen tial	273.9759 9874050	35 6.7 5	76.79 77571 8
Utilities	1	0.08715 501555				School	3.858701 65372	35 6.7 5	1.081 62625 2
Vacant Land	118	30.8597 6956310				Utilities	0.087155 01555	35 6.7 5	0.024 43027 8
		327.220 4983402 5				Vacant Land	31.45396 348664	35 6.7 5	8.816 80826 5
		30.4161 7901000					356.7528 2430901		100.0 00791 7
		357.636 6773502 5	Marshy/ Wet Land	1	4.049 77703 5				
			Coconut	16	121.4 40799 2				
			Minor Road	23	3.974 59629 6				
			Water Body	1	4.426 07747 1				



Commercial Space	Open Space	Institutional Space	Industrial Space	Religious Space	Allowable floor space	Developable land	Zone Factor
226,864	140,000	310110		67810	844,784	1048700	0.805553542
12,791	532,000			200,000	1,256,411	3576400	0.351305922
			728,433		735,433	1306700	0.56281702
5,400	14,000				21,000	254800	0.082417582



Residential Zone One		
Name	Latitude	Longitude
Res 1	7°21'48.55"N	81°50'51.04"E
Res 2	7°21'48.97"N	81°50'53.47"E
Res 3	7°21'49.54"N	81°50'56.80"E
Res 4	7°21'50.72"N	81°51'4.26"E
Res 5	7°21'51.75"N	81°51'9.49"E
Res 6	7°21'52.94"N	81°51'12.79"E
Res 7	7°21'52.28"N	81°51'12.98"E
Res 8	7°21'52.23"N	81°51'13.97"E
Res 9	7°21'52.14"N	81°51'15.99"E
Res 10	7°21'46.24"N	81°51'17.54"E
Res 11	7°21'41.05"N	81°51'18.89"E
Res 12	7°21'38.75"N	81°51'19.40"E
Res 13	7°21'36.20"N	81°51'20.58"E
Res 14	7°21'32.62"N	81°51'21.18"E
Res 15	7°21'31.45"N	81°51'22.65"E
Res 16	7°21'17.28"N	81°51'27.38"E
Res 17	7°21'12.47"N	81°51'28.86"E
Res 18	7°21'10.95"N	81°51'29.43"E
Res 19	7°21'9.92"N	81°51'30.11"E
Res 20	7°21'4.72"N	81°51'31.01"E
Res 21	7°20'42.14"N	81°51'37.36"E
Res 22	7°20'33.60"N	81°51'39.68"E
Res 23	7°20'31.87"N	81°51'40.38"E
Res 24	7°20'28.57"N	81°51'40.68"E
Res 25	7°20'22.89"N	81°51'41.67"E
Res 26	7°20'6.50"N	81°51'45.86"E
Res 27	7°20'4.98"N	81°51'41.44"E
Res 28	7°20'4.76"N	81°51'40.56"E
Res 29	7°20'13.27"N	81°51'38.53"E
Res 30	7°20'13.07"N	81°51'35.16"E



Res 31	7°20'13.10"N	81°51'34.52"E
Res 32	7°20'10.88"N	81°51'32.47"E
Res 33	7°20'10.28"N	81°51'32.50"E
Res 34	7°20'9.50"N	81°51'23.12"E
Res 35	7°20'5.01"N	81°51'23.34"E
Res 36	7°20'4.54"N	81°51'17.42"E
Res 37	7°20'7.22"N	81°51'16.77"E
Res 38	7°20'5.09"N	81°51'1.34"E
Res 39	7°20'7.11"N	81°51'1.43"E
Res 40	7°20'6.29"N	81°50'54.32"E
Res 41	7°20'9.05"N	81°50'53.98"E
Res 42	7°20'9.21"N	81°50'53.54"E
Res 43	7°20'12.04"N	81°50'53.48"E
Res 44	7°20'12.19"N	81°50'52.44"E
Res 45	7°20'15.84"N	81°50'52.41"E
Res 46	7°20'15.95"N	81°50'53.68"E
Res 47	7°20'20.65"N	81°50'53.58"E
Res 48	7°20'20.97"N	81°50'50.32"E
Res 49	7°20'21.55"N	81°50'50.25"E
Res 50	7°20'21.37"N	81°50'55.17"E
Res 51	7°20'22.23"N	81°50'55.17"E
Res 52	7°20'27.05"N	81°50'54.87"E
Res 53	7°20'27.27"N	81°50'53.52"E
Res 54	7°20'31.75"N	81°50'53.49"E
Res 55	7°20'33.21"N	81°50'52.18"E
Res 56	7°20'33.34"N	81°50'51.41"E
Res 57	7°20'33.80"N	81°50'51.36"E
Res 58	7°20'33.93"N	81°50'52.46"E
Res 59	7°20'32.20"N	81°50'52.25"E
Res 60	7°20'38.37"N	81°50'52.32"E
Res 61	7°20'38.38"N	81°50'52.43"E
Res 62	7°20'40.37"N	81°50'52.41"E



Res 63	7°20'40.36"N	81°50'52.27"E
Res 64	7°20'42.39"N	81°50'52.21"E
Res 65	7°20'42.55"N	81°50'49.30"E
Res 66	7°20'44.69"N	81°50'49.62"E
Res 67	7°20'44.71"N	81°50'49.75"E
Res 68	7°20'46.03"N	81°50'49.97"E
Res 69	7°20'59.26"N	81°50'51.02"E
Res 70	7°21'6.01"N	81°50'50.84"E
Res 71	7°21'17.88"N	81°50'52.62"E
Res 72	7°21'18.50"N	81°50'52.11"E
Res 73	7°21'25.89"N	81°50'52.85"E
Res 74	7°21'25.82"N	81°50'53.32"E
Res 75	7°21'35.01"N	81°50'53.49"E
Res 76	7°21'35.30"N	81°50'53.58"E
Res 77	7°21'41.75"N	81°50'52.70"E
Res 78	7°21'47.81"N	81°50'50.95"E
Res 79	7°19'22.95"N	81°51'3.67"E
Res 80	7°19'33.43"N	81°51'4.66"E
Res 81	7°19'32.85"N	81°51'9.89"E
Res 82	7°19'37.41"N	81°51'10.74"E
Res 83	7°19'37.64"N	81°51'9.32"E
Res 84	7°19'43.71"N	81°51'9.91"E
Res 85	7°19'42.59"N	81°51'18.89"E
Res 86	7°19'42.53"N	81°51'20.76"E
Res 87	7°19'43.72"N	81°51'20.92"E
Res 88	7°19'44.01"N	81°51'23.00"E
Res 89	7°19'44.56"N	81°51'23.13"E
Res 90	7°19'44.45"N	81°51'24.00"E
Res 91	7°19'39.48"N	81°51'23.22"E
Res 92	7°19'37.31"N	81°51'32.98"E
Res 93	7°19'31.50"N	81°51'30.83"E
Res 94	7°19'21.80"N	81°51'28.89"E



Res 95	7°19'22.45"N	81°51'23.59"E
Res 96	7°19'23.05"N	81°51'21.33"E
Res 97	7°19'20.92"N	81°51'20.80"E
Res 98	7°19'21.52"N	81°51'10.79"E
Res 99	7°19'37.55"N	81°51'35.00"E
Res 100	7°19'42.39"N	81°51'34.54"E
Res 101	7°19'43.51"N	81°51'31.66"E
Res 102	7°19'50.01"N	81°51'33.27"E
Res 103	7°19'53.76"N	81°51'32.80"E
Res 104	7°19'55.53"N	81°51'33.24"E
Res 105	7°19'56.65"N	81°51'35.00"E
Res 106	7°19'53.81"N	81°51'35.28"E
Res 107	7°19'50.13"N	81°51'35.26"E
Res 108	7°19'49.82"N	81°51'36.43"E
Res 109	7°19'46.19"N	81°51'36.41"E
Res 110	7°19'45.71"N	81°51'40.44"E
Res 111	7°19'45.70"N	81°51'45.96"E
Res 112	7°19'43.88"N	81°51'46.09"E
Res 113	7°19'43.72"N	81°51'43.81"E
Res 114	7°19'40.16"N	81°51'44.20"E
Res 115	7°19'40.49"N	81°51'49.05"E
Res 116	7°19'36.70"N	81°51'49.38"E
Res 117	7°19'37.14"N	81°51'45.96"E
Res 118	7°19'37.04"N	81°51'43.07"E
Res 119	7°19'37.35"N	81°51'40.81"E
Res 120		
Res 121		
Urbn 1	7°21'46.29"N	81°50'38.58"E
Urbn 2	7°21'43.79"N	81°50'34.91"E
Urbn 3	7°21'41.64"N	81°50'34.48"E
Urbn 4	7°21'38.75"N	81°50'35.09"E
Urbn 5	7°21'38.96"N	81°50'36.33"E



Urbn 6	7°21'37.27"N	81°50'36.65"E
Urbn 7	7°21'36.27"N	81°50'34.07"E
Urbn 8	7°21'34.14"N	81°50'34.60"E
Urbn 9	7°21'33.82"N	81°50'35.51"E
Urbn 10	7°21'31.40"N	81°50'36.09"E
Urbn 11	7°21'29.06"N	81°50'36.80"E
Urbn 12	7°21'26.29"N	81°50'36.05"E
Urbn 13	7°21'25.21"N	81°50'34.13"E
Urbn 14	7°21'23.06"N	81°50'33.28"E
Urbn 15	7°21'20.43"N	81°50'32.57"E
Urbn 16	7°21'18.31"N	81°50'33.66"E
Urbn 17	7°21'14.86"N	81°50'33.03"E
Urbn 18	7°21'12.71"N	81°50'32.55"E
Urbn 19	7°21'12.75"N	81°50'32.07"E
Urbn 20	7°21'13.17"N	81°50'31.46"E
Urbn 21	7°21'12.77"N	81°50'30.30"E
Urbn 22	7°21'11.26"N	81°50'28.14"E
Urbn 23	7°21'10.40"N	81°50'27.92"E
Urbn 24	7°21'7.92"N	81°50'27.69"E
Urbn 25	7°21'0.64"N	81°50'29.77"E
Urbn 26	7°20'59.23"N	81°50'31.26"E
Urbn 27	7°20'59.11"N	81°50'31.81"E
Urbn 28	7°21'0.15"N	81°50'36.29"E
Urbn 29	7°20'53.50"N	81°50'38.52"E
Urbn 30	7°20'50.14"N	81°50'38.54"E
Urbn 31	7°20'42.65"N	81°50'40.99"E
Urbn 32	7°20'36.22"N	81°50'42.36"E
Urbn 33	7°20'35.81"N	81°50'39.30"E
Urbn 34	7°20'35.53"N	81°50'37.27"E
Urbn 35	7°20'29.82"N	81°50'36.30"E
Urbn 36	7°20'28.42"N	81°50'37.02"E
Urbn 37	7°20'26.94"N	81°50'37.14"E



Urbn 38	7°20'25.43"N	81°50'38.03"E
Urbn 39	7°20'24.40"N	81°50'38.07"E
Urbn 40	7°20'21.80"N	81°50'39.01"E
Urbn 41	7°20'22.03"N	81°50'43.80"E
Res &Urbn boundary 40	7°20'6.29"N	81°50'54.32"E
Res &Urbn boundary 41	7°20'9.05"N	81°50'53.98"E
Res &Urbn boundary 42	7°20'9.21"N	81°50'53.54"E
Res &Urbn boundary 43	7°20'12.04"N	81°50'53.48"E
Res &Urbn boundary 44	7°20'12.19"N	81°50'52.44"E
Res &Urbn boundary 45	7°20'15.84"N	81°50'52.41"E
Res &Urbn boundary 46	7°20'15.95"N	81°50'53.68"E
Res &Urbn boundary 47	7°20'20.65"N	81°50'53.58"E
Res &Urbn boundary 48	7°20'20.97"N	81°50'50.32"E
Res &Urbn boundary 49	7°20'21.55"N	81°50'50.25"E
Res &Urbn boundary 50	7°20'21.37"N	81°50'55.17"E
Res &Urbn boundary 51	7°20'22.23"N	81°50'55.17"E
Res &Urbn boundary 52	7°20'27.05"N	81°50'54.87"E
Res &Urbn boundary 53	7°20'27.27"N	81°50'53.52"E
Res &Urbn boundary 54	7°20'31.75"N	81°50'53.49"E
Res &Urbn boundary 55	7°20'33.21"N	81°50'52.18"E
Res &Urbn boundary 56	7°20'33.34"N	81°50'51.41"E
Res &Urbn boundary 57	7°20'33.80"N	81°50'51.36"E
Res &Urbn boundary 58	7°20'33.93"N	81°50'52.46"E
Res &Urbn boundary 59	7°20'32.20"N	81°50'52.25"E
Res &Urbn boundary 60	7°20'38.37"N	81°50'52.32"E
Res &Urbn boundary 61	7°20'38.38"N	81°50'52.43"E
Res &Urbn boundary 62	7°20'40.37"N	81°50'52.41"E
Res &Urbn boundary 63	7°20'40.36"N	81°50'52.27"E
Res &Urbn boundary 64	7°20'42.39"N	81°50'52.21"E
Res &Urbn boundary 65	7°20'42.55"N	81°50'49.30"E
Res &Urbn boundary 66	7°20'44.69"N	81°50'49.62"E
Res &Urbn boundary 67	7°20'44.71"N	81°50'49.75"E



Res&Urbn boundary 68	7°20'46.03"N	81°50'49.97"E
Res &Urbn boundary 69	7°20'59.26"N	81°50'51.02"E
Res &Urbn boundary 70	7°21'6.01"N	81°50'50.84"E
Res &Urbn boundary 71	7°21'17.88"N	81°50'52.62"E
Res&Urbn boundary 72	7°21'18.50"N	81°50'52.11"E
Res &Urbn boundary 73	7°21'25.89"N	81°50'52.85"E
Res &Urbn boundary 74	7°21'25.82"N	81°50'53.32"E
Res &Urbn boundary 75	7°21'35.01"N	81°50'53.49"E
Res &Urbn boundary 76	7°21'35.30"N	81°50'53.58"E
Res &Urbn boundary 77	7°21'41.75"N	81°50'52.70"E
Res &Urbn boundary 78	7°21'47.81"N	81°50'50.95"E
agri 1	7°21'47.47"N	81°50'37.27"E
agri 2	7°21'42.17"N	81°50'18.53"E
agri 3	7°21'43.91"N	81°50'18.19"E
agri 4	7°21'43.93"N	81°50'17.14"E
agri 5	7°21'41.73"N	81°50'11.91"E
agri 6	7°21'35.54"N	81°49'55.06"E
agri 7	7°21'32.34"N	81°49'50.67"E
agri 8	7°21'32.09"N	81°49'50.66"E
agri 9	7°21'33.49"N	81°49'47.70"E
agri 10	7°21'33.61"N	81°49'47.58"E
agri 11	7°21'34.46"N	81°49'45.76"E
agri 12	7°21'35.06"N	81°49'43.21"E
agri 13	7°21'34.68"N	81°49'40.50"E
agri 14	7°21'34.33"N	81°49'40.00"E
agri 15	7°21'32.81"N	81°49'39.92"E
agri 16	7°21'32.90"N	81°49'38.57"E
agri 17	7°21'33.03"N	81°49'38.54"E
agri 18	7°21'34.50"N	81°49'32.41"E
agri 19	7°21'34.68"N	81°49'30.44"E
agri 20	7°21'33.21"N	81°49'30.05"E
agri 21	7°21'34.20"N	81°49'28.16"E



agri 22	7°21'35.24"N	81°49'26.16"E
agri 23	7°21'36.41"N	81°49'25.36"E
agri 24	7°21'38.40"N	81°49'22.91"E
agri 25	7°21'36.66"N	81°49'21.03"E
agri 26	7°21'37.68"N	81°49'19.25"E
agri 27	7°21'38.10"N	81°49'17.70"E
agri 28	7°21'38.31"N	81°49'15.06"E
agri 29	7°21'30.94"N	81°49'12.78"E
agri 30	7°21'26.18"N	81°49'11.35"E
agri 31	7°21'23.65"N	81°49'11.98"E
agri 32	7°21'21.45"N	81°49'11.56"E
agri 33	7°21'20.00"N	81°49'11.98"E
agri 34	7°21'6.89"N	81°49'11.39"E
agri 35	7°21'6.33"N	81°49'11.70"E
agri 36	7°21'5.38"N	81°49'11.42"E
agri 37	7°21'4.37"N	81°49'11.59"E
agri 38	7°21'2.73"N	81°49'12.33"E
agri 39	7°21'2.28"N	81°49'12.98"E
agri 40	7°21'1.24"N	81°49'12.54"E
agri 41	7°21'0.19"N	81°49'12.43"E
agri 42	7°20'58.73"N	81°49'12.74"E
agri 43	7°20'56.90"N	81°49'13.27"E
agri 44	7°20'49.54"N	81°49'14.10"E
agri 45	7°20'48.46"N	81°49'13.66"E
agri 46	7°20'47.95"N	81°49'12.99"E
agri 47	7°20'37.80"N	81°49'11.88"E
agri 48	7°20'31.94"N	81°49'12.16"E
agri 49	7°20'3.88"N	81°49'12.78"E
agri 50	7°19'58.74"N	81°49'12.26"E
agri 51	7°19'58.28"N	81°49'12.36"E
agri 52	7°19'57.80"N	81°49'12.80"E
agri 53	7°19'55.80"N	81°49'13.56"E



agri 54	7°19'51.61"N	81°49'13.15"E
agri 55	7°19'50.38"N	81°49'12.61"E
agri 56	7°19'49.50"N	81°49'12.46"E
agri 57	7°19'48.78"N	81°49'12.50"E
agri 58	7°19'47.88"N	81°49'12.22"E
agri 59	7°19'44.19"N	81°49'12.03"E
agri 60	7°19'44.20"N	81°49'11.08"E
agri 61	7°19'43.19"N	81°49'10.76"E
agri 62	7°19'42.94"N	81°49'7.98"E
agri 63	7°19'42.19"N	81°49'6.97"E
agri 64	7°19'41.45"N	81°49'6.58"E
agri 65	7°19'40.94"N	81°49'5.86"E
agri 66	7°19'41.42"N	81°49'4.41"E
agri 67	7°19'40.79"N	81°49'1.33"E
agri 68	7°19'40.47"N	81°48'59.24"E
agri 69	7°19'31.59"N	81°49'0.61"E
agri 70	7°18'50.61"N	81°49'3.29"E
agri 71	7°18'44.58"N	81°49'6.55"E
agri 72	7°18'40.56"N	81°49'5.39"E
agri 73	7°18'37.47"N	81°49'5.72"E
agri 74	7°18'37.28"N	81°49'5.11"E
agri 75	7°18'36.63"N	81°49'5.05"E
agri 76	7°18'35.42"N	81°48'56.10"E
agri 77	7°18'27.76"N	81°48'56.99"E
agri 78	7°18'27.14"N	81°48'57.41"E
agri 79	7°18'26.31"N	81°48'57.09"E
agri 80	7°18'24.79"N	81°48'57.59"E
agri 81	7°18'23.27"N	81°48'57.56"E
agri 82	7°18'18.55"N	81°48'57.42"E
agri 83	7°18'17.37"N	81°48'57.30"E
agri 84	7°18'5.63"N	81°48'53.82"E
agri 85	7°17'42.19"N	81°48'53.91"E



agri 86	7°17'41.56"N	81°48'53.24"E
agri 87	7°17'41.22"N	81°48'50.33"E
agri 88	7°17'35.08"N	81°48'50.11"E
agri 89	7°17'37.65"N	81°49'2.19"E
agri 90	7°17'43.44"N	81°49'15.99"E
agri 91	7°17'39.45"N	81°49'19.34"E
agri 92	7°17'29.11"N	81°49'28.97"E
agri 93	7°17'27.80"N	81°49'30.16"E
agri 94	7°17'27.64"N	81°49'34.23"E
agri 95	7°17'30.09"N	81°49'49.61"E
agri 96	7°17'25.75"N	81°49'54.94"E
agri 97	7°17'27.88"N	81°50'5.55"E
agri 98	7°17'35.04"N	81°50'12.82"E
agri 99	7°17'33.75"N	81°50'17.13"E
agri 100	7°17'38.04"N	81°50'23.38"E
agri 101	7°17'37.69"N	81°50'32.27"E
agri 102	7°17'43.32"N	81°50'39.21"E
agri 103	7°17'44.93"N	81°50'46.18"E
agri 104	7°17'52.14"N	81°50'50.12"E
agri 105	7°17'51.24"N	81°50'56.77"E
agri 106	7°17'55.53"N	81°51'3.37"E
agri 107	7°17'55.86"N	81°51'8.50"E
agri 108	7°18'5.85"N	81°51'10.93"E
agri 109	7°18'12.10"N	81°51'6.31"E
agri 110	7°18'17.53"N	81°51'21.58"E
agri 111	7°18'10.33"N	81°51'30.14"E
agri 112	7°18'16.49"N	81°51'40.35"E
agri 113	7°18'10.73"N	81°51'44.66"E
agri 114	7°18'1.08"N	81°51'52.32"E
agri 115	7°18'29.26"N	81°51'53.88"E
agri 116	7°19'13.65"N	81°51'56.24"E
agri 117	7°19'13.54"N	81°51'48.10"E



agri 118	7°19'17.02"N	81°51'36.98"E
agri 119	7°19'14.03"N	81°51'30.28"E
agri 120	7°19'13.63"N	81°51'22.81"E
agri 121	7°19'7.08"N	81°51'16.24"E
agri 122	7°19'10.14"N	81°51'13.38"E
agri 123	7°19'9.78"N	81°51'10.46"E
agri 124	7°19'19.18"N	81°50'55.49"E
agri 125	7°19'41.28"N	81°50'49.51"E
agri 126	7°20'16.05"N	81°50'48.40"E
agri 127	7°20'21.99"N	81°50'48.05"E
agri&Urbn boundary 1	7°21'46.29"N	81°50'38.58"E
agri& Urban boundary 2	7°21'43.79"N	81°50'34.91"E
agri&Urbn boundary 3	7°21'41.64"N	81°50'34.48"E
agri&Urbn boundary 4	7°21'38.75"N	81°50'35.09"E
agri&Urbn boundary 5	7°21'38.96"N	81°50'36.33"E
agri&Urbn boundary 6	7°21'37.27"N	81°50'36.65"E
agri&Urbn boundary 7	7°21'36.27"N	81°50'34.07"E
agri&Urbn boundary 8	7°21'34.14"N	81°50'34.60"E
agri&Urbn boundary 9	7°21'33.82"N	81°50'35.51"E
agri&Urbn boundary 10	7°21'31.40"N	81°50'36.09"E
agri&Urbn boundary 11	7°21'29.06"N	81°50'36.80"E
agri&Urbn boundary 12	7°21'26.29"N	81°50'36.05"E
agri&Urbn boundary 13	7°21'25.21"N	81°50'34.13"E
agri&Urbn boundary 14	7°21'23.06"N	81°50'33.28"E
agri&Urbn boundary 15	7°21'20.43"N	81°50'32.57"E
agri&Urbn boundary 16	7°21'18.31"N	81°50'33.66"E
agri&Urbn boundary 17	7°21'14.86"N	81°50'33.03"E
agri&Urbn boundary 18	7°21'12.71"N	81°50'32.55"E
agri&Urbn boundary 19	7°21'12.75"N	81°50'32.07"E
agri&Urbn boundary 20	7°21'13.17"N	81°50'31.46"E
agri&Urbn boundary 21	7°21'12.77"N	81°50'30.30"E
agri&Urbn boundary 22	7°21'11.26"N	81°50'28.14"E



agri&Urbn boundary 23	7°21'10.40"N	81°50'27.92"E
agri&Urbn boundary 24	7°21'7.92"N	81°50'27.69"E
agri&Urbn boundary 25	7°21'0.64"N	81°50'29.77"E
agri&Urbn boundary 26	7°20'59.23"N	81°50'31.26"E
agri&Urbn boundary 27	7°20'59.11"N	81°50'31.81"E
agri&Urbn boundary 28	7°21'0.15"N	81°50'36.29"E
agri&Urbn boundary 29	7°20'53.50"N	81°50'38.52"E
agri&Urbn boundary 30	7°20'50.14"N	81°50'38.54"E
agri&Urbn boundary 31	7°20'42.65"N	81°50'40.99"E
agri&Urbn boundary 32	7°20'36.22"N	81°50'42.36"E
agri&Urbn boundary 33	7°20'35.81"N	81°50'39.30"E
agri&Urbn boundary 34	7°20'35.53"N	81°50'37.27"E
agri&Urbn boundary 35	7°20'29.82"N	81°50'36.30"E
agri&Urbn boundary 36	7°20'28.42"N	81°50'37.02"E
agri&Urbn boundary 37	7°20'26.94"N	81°50'37.14"E
agri&Urbn boundary 38	7°20'25.43"N	81°50'38.03"E
agri&Urbn boundary 39	7°20'24.40"N	81°50'38.07"E
agri&Urbn boundary 40	7°20'21.80"N	81°50'39.01"E
agri&Urbn boundary 41	7°20'22.03"N	81°50'43.80"E
agri&Urbn boundary 40	7°20'6.29"N	81°50'54.32"E
agri&Urbn boundary 41	7°20'9.05"N	81°50'53.98"E
Indus zon 1	7°19'57.18"N	81°50'48.98"E
Indus zon 2	7°19'57.15"N	81°50'51.08"E
Indus zon 3	7°20'4.37"N	81°50'53.29"E
induszon& Res Boundary 36	7°20'4.54"N	81°51'17.42"E
induszon& Res Boundary 37	7°20'7.22"N	81°51'16.77"E
induszon& Res Boundary 38	7°20'5.09"N	81°51'1.34"E
induszon& Res Boundary 39	7°20'7.11"N	81°51'1.43"E
induszon& Res Boundary 40	7°20'6.29"N	81°50'54.32"E
Indus zon& Res Boundary 84	7°19'43.71"N	81°51'9.91"E
Indus zon& Res Boundary 85	7°19'42.59"N	81°51'18.89"E
Indus zon& Res Boundary 86	7°19'42.53"N	81°51'20.76"E



Indus zon& Res Boundary 87	7°19'43.72"N	81°51'20.92"E
Indus zon& Res Boundary 88	7°19'44.01"N	81°51'23.00"E
Indus zon& Res Boundary 89	7°19'44.56"N	81°51'23.13"E
Indus zon& Res Boundary 90	7°19'44.45"N	81°51'24.00"E
Indus zon& Res Boundary 91	7°19'39.48"N	81°51'23.22"E
Indus zon& Res Boundary 92	7°19'37.31"N	81°51'32.98"E
Indus zon& Res Boundary 93	7°19'31.50"N	81°51'30.83"E
Indus zon& Res Boundary 94	7°19'21.80"N	81°51'28.89"E
Indus zon& Res Boundary 95	7°19'22.45"N	81°51'23.59"E
Indus zon& Res Boundary 96	7°19'23.05"N	81°51'21.33"E
Indus zon& Res Boundary 97	7°19'20.92"N	81°51'20.80"E
Indus zon& Res Boundary 98	7°19'21.52"N	81°51'10.79"E
Indus zon& Hinter Land Zone Boundary 1	7°19'13.43"N	81°51'7.23"E
Indus zon& Hinter Land Zone 2	7°19'14.60"N	81°51'7.50"E
Indus zon& Hinter Land Zone 3	7°19'15.16"N	81°51'8.84"E
Indus zon& Hinter Land Zone 4	7°19'15.37"N	81°51'10.09"E
Indus zon& Hinter Land Zone 5	7°19'14.87"N	81°51'10.77"E
Indus zon& Hinter Land Zone 6	7°19'17.27"N	81°51'11.15"E
Indus zon& Hinter Land Zone 7	7°19'16.94"N	81°51'13.99"E
Indus zon& Hinter Land Zone 8	7°19'17.73"N	81°51'14.32"E
Indus zon& Hinter Land Zone 9	7°19'17.80"N	81°51'16.49"E
Indus zon& Hinter Land Zone 10	7°19'21.24"N	81°51'16.63"E
Hinter Land Zone 1	7°19'13.43"N	81°51'7.23"E
Hinter Land Zone 2	7°19'14.60"N	81°51'7.50"E
Hinter Land Zone 3	7°19'15.16"N	81°51'8.84"E
Hinter Land Zone 4	7°19'15.37"N	81°51'10.09"E
Hinter Land Zone 5	7°19'14.87"N	81°51'10.77"E
Hinter Land Zone 6	7°19'17.27"N	81°51'11.15"E
Hinter Land Zone 7	7°19'16.94"N	81°51'13.99"E
Hinter Land Zone 8	7°19'17.73"N	81°51'14.32"E
Hinter Land Zone 9	7°19'17.80"N	81°51'16.49"E
Hinter Land Zone 10	7°19'21.24"N	81°51'16.63"E



Hinter Land Zone 11	7°19'58.93"N	81°51'48.17"E
Hinter Land Zone 12	7°19'21.94"N	81°51'55.78"E
Hinter Land Zone 13	7°19'43.60"N	81°51'12.15"E
Hinter Land Zone 14	7°19'44.78"N	81°51'12.21"E
Hinter Land Zone 15	7°19'44.96"N	81°51'17.61"E
Hinter Land Zone 16	7°19'48.85"N	81°51'16.30"E
Hinter Land Zone 17	7°19'51.50"N	81°51'18.67"E
Hinter Land Zone 18	7°19'52.99"N	81°51'19.05"E
Hinter Land Zone 19	7°19'54.50"N	81°51'19.20"E
Hinter Land Zone 20	7°19'54.93"N	81°51'19.96"E
Hinter Land Zone 21	7°19'58.37"N	81°51'18.59"E
Hinter Land Zone 22	7°19'43.89"N	81°51'21.93"E
Hinter Land Zone 23	7°19'45.36"N	81°51'22.20"E
Hinter Land Zone 24	7°19'45.58"N	81°51'23.08"E
Hinter Land Zone 25	7°19'47.05"N	81°51'23.39"E
Hinter Land Zone 26	7°19'47.55"N	81°51'21.61"E
Hinter Land Zone 27	7°19'49.29"N	81°51'21.57"E
Hinter Land Zone 28	7°19'50.12"N	81°51'22.98"E
Hinter Land Zone 29	7°19'52.54"N	81°51'23.47"E
Hinter Land Zone 30	7°19'51.37"N	81°51'29.36"E
Hinter Land Zone 31	7°19'49.23"N	81°51'26.74"E
Hinter Land Zone 32	7°19'46.28"N	81°51'24.56"E
Hinter Land Zone 33	7°20'3.28"N	81°51'46.78"E
Hinter Land Zone 34	7°20'1.83"N	81°51'45.32"E
Hinter Land Zone 35	7°20'2.15"N	81°51'40.99"E
Hinter Land Zone 36	7°20'2.05"N	81°51'37.05"E
Hinter Land Zone 37	7°20'2.12"N	81°51'36.08"E
Hinter Land Zone 38	7°20'2.95"N	81°51'35.60"E
Hinter Land Zone 39	7°20'3.20"N	81°51'34.86"E
Hinter Land Zone 40	7°20'2.25"N	81°51'34.33"E
Hinter Land Zone 41	7°19'59.59"N	81°51'30.75"E
Hinter Land Zone 42	7°20'0.38"N	81°51'29.11"E



Hinter Land Zone 43	7°19'59.38"N	81°51'28.82"E
Hinter Land Zone 44	7°19'58.72"N	81°51'27.49"E
Hinter Land Zone 45	7°19'57.93"N	81°51'27.67"E
Hinter Land Zone 46	7°19'57.37"N	81°51'28.63"E
Hinter Land Zone 47	7°19'57.82"N	81°51'31.47"E
Hinter Land Zone 48	7°19'55.81"N	81°51'32.36"E
Hinter Land Zone 49	7°19'55.14"N	81°51'31.53"E
Hinter Land Zone 50	7°19'54.53"N	81°51'31.70"E
Hinter Land Zone 51	7°19'54.43"N	81°51'32.19"E
Hinter Land Zone & Res 92	7°19'37.31"N	81°51'32.98"E
Hinter Land Zone & Res 93	7°19'31.50"N	81°51'30.83"E
Hinter Land Zone & Res 94	7°19'21.80"N	81°51'28.89"E
Hinter Land Zone & Res 95	7°19'22.45"N	81°51'23.59"E
Hinter Land Zone & Res 96	7°19'23.05"N	81°51'21.33"E
Hinter Land Zone & Res 97	7°19'20.92"N	81°51'20.80"E
Hinter Land Zone & Res 105	7°19'56.65"N	81°51'35.00"E
Hinter Land Zone & Res 106	7°19'53.81"N	81°51'35.28"E
Hinter Land Zone & Res 107	7°19'50.13"N	81°51'35.26"E
Hinter Land Zone & Res 108	7°19'49.82"N	81°51'36.43"E
Hinter Land Zone & Res 109	7°19'46.19"N	81°51'36.41"E
Hinter Land Zone & Res 110	7°19'45.71"N	81°51'40.44"E
Hinter Land Zone & Res 111	7°19'45.70"N	81°51'45.96"E
Hinter Land Zone & Res 112	7°19'43.88"N	81°51'46.09"E
Hinter Land Zone & Res 113	7°19'43.72"N	81°51'43.81"E
Hinter Land Zone & Res 114	7°19'40.16"N	81°51'44.20"E
Hinter Land Zone & Res 115	7°19'40.49"N	81°51'49.05"E
Hinter Land Zone & Res 116	7°19'36.70"N	81°51'49.38"E
Hinter Land Zone & Res 117	7°19'37.14"N	81°51'45.96"E
Hinter Land Zone & Res 118	7°19'37.04"N	81°51'43.07"E
Hinter Land Zone & Res 119	7°19'37.35"N	81°51'40.81"E
Hinter Land Zone & Res 26	7°20'6.50"N	81°51'45.86"E
Hinter Land Zone & Res 27	7°20'4.98"N	81°51'41.44"E



Hinter Land Zone & Res 28	7°20'4.76"N	81°51'40.56"E
Hinter Land Zone & Res 29	7°20'13.27"N	81°51'38.53"E
Hinter Land Zone & Res 30	7°20'13.07"N	81°51'35.16"E
Hinter Land Zone & Res 31	7°20'13.10"N	81°51'34.52"E
Hinter Land Zone & Res 32	7°20'10.88"N	81°51'32.47"E
Hinter Land Zone & Res 33	7°20'10.28"N	81°51'32.50"E
Hinter Land Zone & Res 34	7°20'9.50"N	81°51'23.12"E
Hinter Land Zone & Res 35	7°20'5.01"N	81°51'23.34"E
Hinter Land Zone & Res 36	7°20'4.54"N	81°51'17.42"E

