



Kemaman

Voluntary Local Review 2023

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SUSTAINABLE GOALS



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This report is prepared for:

Majlis Perbandaran Kemaman



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Part A

Introduction

1.1 Malaysia SDG Cities

The Malaysia SDG Cities introduced by URBANICE Malaysia, as we recognize that cities and communities are crucial in determining its own set of priorities and deciding on the means of implementation to ensure that the SDG Goals and targets are met.

The framework is set to encourage a bottom-up approach in developing local action plans that will accelerate the SDGs achievement for Malaysia, where the 17 SDGs and 169 targets of the 2030 Sustainable Agenda must be achieved.

Localizing the global goals in cities and urban areas is essential for an urban nation like Malaysia and the Malaysia SDG Cities will ensure that vertical integration between national and state policies at all levels are aligned to the SDGs by realizing the aspirations and ensuring of its effective implementation locally.



Why Malaysia Need SDG Cities?

1

Raise local government awareness, commitment and capacities towards sustainable agenda.

2.

Set local priorities and focus attention on urgent urban challenges to harness future opportunities.

3.

Create a platform for Partnership to mobilize and empower stakeholders to identify practical integrated and innovative Solutions.

4.

Develop an Action Plan to match the SDG and synchronized and align with National, State and Local development agendas.

5

Facilitate local government access to funding resources and develop business models to finance SDGs actions.

6.

Strengthen role of Local Governments to monitor, evaluate and report SDG progress to national and state level.

1.2 Structure of the Report

Under the Malaysia SDG Cities Project, there are three steps involved in preparing the Voluntary Local Review (VLR) for Kemaman city. The first step focuses on writing the SDG Assessment Report, which serves as the initial interim report for the VLR. This report is based on the "My Local Statistic of Kemaman 2021," published by the Department of Statistics Malaysia (DOSM), the Local Plan Kemaman 2035, and insights gathered from Focus Group Discussions (FGD). The report is divided into two parts:

Part A

- Process and Framework of SDG
 Assessment Report
- 2 Kemaman City's Profiling
- 3 MPK's Sustainability Pathway

Part B

- 4 Overall SDGs Performance in Kemaman
- 5 Progress on 17 SDGs in Kemaman
- 6 Next Step for MPK

1.3 Process and Framework

Introduction

The SDG Workshop organized by Kemaman Municipal Council took place on April 18th, 2023. The event brought together representatives from various internal departments of MPK, council members, and technical agencies. The workshop aimed to review the progress of the Sustainable Development Goals (SDGs) in Kemaman and to set the agenda for the next phase of the SDGs journey. This initiative is part of the Malaysia SDG Cities framework, which supports cities in localizing the SDGs.

Key outcomes from the workshop have been documented and summarized in an SDG Assessment Report. This report will guide the strategic direction moving forward. It builds on and integrates existing efforts in Kemaman, ultimately laying the groundwork for the reporting of SDG performance in the upcoming Voluntary Local Review, which is the third stage of the Malaysia SDG Cities Project.

The workshop also examined the strengths and challenges associated with each SDG, providing a comprehensive overview of their status in Kemaman. This analysis was conducted by reviewing engagement sessions and analyzing relevant documents, including the local plan and strategic plan.

Workshop Objectives

- Assessing the role and functions of MPK towards achieving SDGs targets
- 2. Assessing the understanding and level of perception of stakeholders SDGs
- Inculcating the participants on how localization of SDGs improves efficiency and supports the City of Kemaman and the 2030 agenda
- 4. Establishing and maintaining momentum, engaging stakeholders and catalyzing political will







Workshop Modules

The one-day workshop began with a talk by Dr. Azmizam bin Abdul Rashid, Deputy CEO of URBANICE Malaysia. He introduced participants to the Sustainable Development Goals (SDGs) and their importance for cities, the Malaysia SDG Cities Framework, and relevant case studies from various Malaysian network cities. This introductory session aimed to enhance participants' understanding of what localizing the SDGs at the city level entails.

Following the introduction, participants were divided into three groups to engage in a module centered around three themes: social, governance, and environment. Each group was led by a facilitator paired with a co-facilitator. The facilitators utilized the indicators of each SDG as discussion points with two main objectives: (1) to assess the role and functions of the internal departments and agencies of MPK in achieving the Sustainable Development Goals targets, and (2) to identify the perceived issues and challenges faced by Kemaman in progressing towards each SDG.

At the end of the session, a representative from each group presented a summary of their outcomes to all participants. These facilitator-led activities contributed to a better understanding of the SDGs in the city of Kemaman.

The outcomes from the stakeholder engagement are detailed further in this report, organized according to the relevant indicators of each SDG. Supporting data have been extracted from My Local Statistics Kemaman 2021 and other supplementary documents provided by MPK.



Key Outcomes

The workshop sparked extensive discussions about the current state of Kemaman, existing efforts related to the Sustainable Development Goals (SDGs), and the areas where future localization of these efforts should focus. The insights gathered will serve as the foundation for the Kemaman SDG Roadmap.

This workshop was designed as a face-to-face session to promote open, informal, and interactive discussions among officers from the Kemaman Municipal Council (MPK) and other agencies. Conducted in three small groups, it aimed to facilitate the free exchange of ideas, perspectives, and contributions that are essential for establishing an effective path for SDG implementation in Kemaman. The sessions were organized into three groups based on the outcomes achieved, which are as follows:

3 Key Outcomes for Malaysia SDG Cities

Outcome 1

Ensure Inclusive Growth and Development for All SDG 1, SDG 2, SDG 3, SDG 4, SDG 6, SDG 7

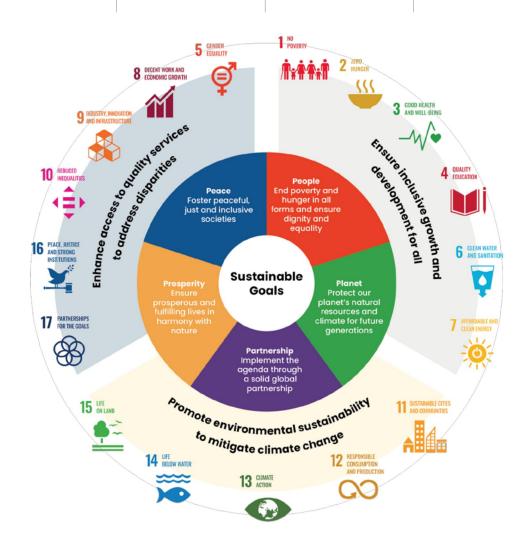
Outcome 2

Enhance access to quality services to address disparities SDG 5, SDG 8, SDG 9, SDG 10, SDG 16, SDG 17

Outcome 3

Promote Environmental Sustainability to Mitigate Climate Change

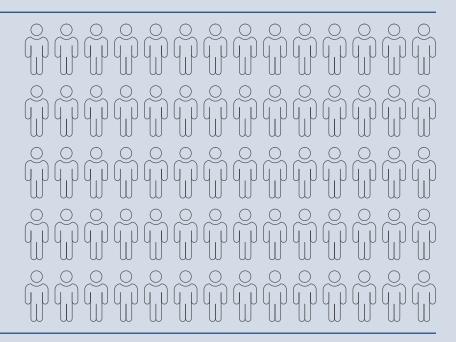
SDG 11, SDG 12, SDG 13, SDG 14, SDG 15



1.4 Stakeholder Engagement

Participants

70



Groups

3

Group 1: Outcome 1

- 1) Jabatan Perancang Bandar MPK
- **2)** Jabatan Bangunan MPK
- 3) Jabatan Pembangunan Komuniti dan Sosial MPK
- **4)** Pejabat Kesihatan Daerah Kemaman
- **5)** Jabatan Kejuruteraan & Penyelenggaraan
- 6) Ahli Majlis (2 persons)

Group 2: Outcome 2

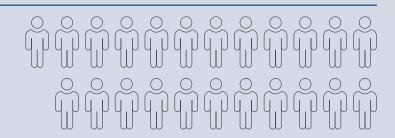
- Jabatan Perancang Bandar MPK (2 persons)
- **2)** Jabatan Pelesenan dan Penguatkuasaan MPK
- 3) Jabatan Pembangunan Komuniti dan Sosial MPK
- **4)** Unit Persuruhjaya Bangunan (COB) MPK
- 5) Unit Undang-undang & Integriti MPK
- **6)** Jabatan Penilaian dan Pengurusan Harta MPK

Group 3: Outcome 3

- **1)** Jabatan Perancang Bandar MPK
- 2) Jabatan Kesihatan Persekitaran dan Perkhidmatan Bandar MPK
- **3)** Persatuan Aktivis Sahabat Alam
- **4)** Jabatan Kejuruteraan & Penyelenggaran MPK
- 5) Jabatan Pengairan dan Saliran Daerah Kemaman

People in Each Group

23





Kemaman City Profile

^{2.1} Kemaman at a Glance

Kemaman is located in the southern part of the State of Terengganu and is bordered by Pahang state to the south and west, Dungun district to the north and facing the South China Sea to the east.

The total area of Kemaman district reaches 253,559.99 hectares. Kemaman District has 11 sub-district namely Kertih, Kemasik, Hulu Chukai, Kijal, Teluk Kalung, Tebak, Biniai, Pasir Semut, Banggul, Bandi and Hulu Jabar with its administrative and economic center concentrated in the Chukai.

Historically, Kemaman District Council was established on 1 January 1981 and gazetted on 6 December 1980 with an administrative area of 14,691.5 hectares. After that, the Terengganu state government gazetted the entire area of Kemaman district as an administrative area of 253,56.0 on July 18, 1996. The Kemaman Municipal Council was upgraded from a district council to a Kemaman Municipal Council under Terengganu State Enactment No. 5 of 2002 on January 1, 2002. and was promulgated on February 2, 2002.

Significant of Kemaman:

- → The existence of the East Coast Corridor and the presence of an important port, Kemaman Port.
- → The existing and large petroleum and gas industries have an impact on the local economy.
- → Natural resources based on agriculture, livestock and forests are very substantial.
- → The coastal route (Jalan Kuantan Kemaman - Dungun - Kuala Terengganu) and the East Coast Highway 2 (LPT2) are the main access and the great tourism potential of the east coast.



Administration Area

253,559.99

Control Area

146,643

Hectares

Operational Area

146,643

Hectares

Population in 2020

218,700

Population Density in 2021

86/km²

Demographic Profile

The population in Kemaman grows 31.15% from 2010 to 2020. It is also identified that the population average annual growth is 2%. Kemaman population contributed 19% into the state of Terengganu total population.

Based on data from the Department of Statistics Malaysia 2021, the sub-district under Kemaman Municipal Council with the highest population in 2020 was Chukai, Kertih, Teluk Kalung, Binjai and Kijal as the five most populous sub-districts.



Population in Kemaman, 2010

166,750

Population in Kemaman, 2021

218,700

Population Density, 2021

86/km²

Source: MyLocal Stats Kemaman Terengganu, 2021

65+ years

Population by Gender

52.4%



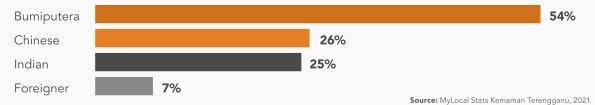
Population by Age Group





Source: MyLocal Stats Kemaman Terengganu, 2021

Population by Ethnic Group



Household Size & Gross Income

Average Household Size, 2020

40

The monthly household gross income in Kemaman was above the state level of Terengganu in 2016 and 2019 according to the data from MyLocal Stats Kemaman Terengganu 2021.

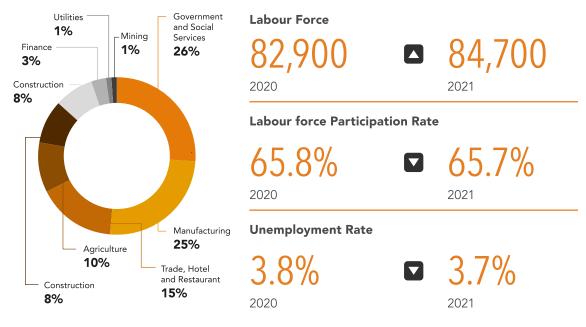
Monthly Statistics Household Gross Income

State/ District -	Median (RM)		Mean (RM)	
State/ District -	2016	2019	2016	2019
Terengganu	4,828	6,044	6,180	7,564
Kemaman	5,355	6,592	6,565	7,854

Economic Activities

In Kemaman, manufacturing, government and social services are the highest employment sector (Department of Statistics Malaysia, 2017).

Figure 2.1: Employment Sector in Kemaman in 2017

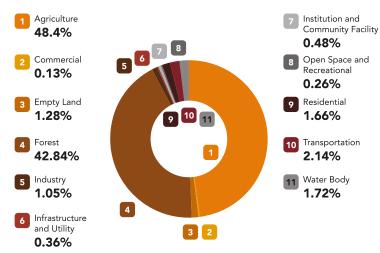


Source: MyLocal Stats Kemaman Terengganu, 2021

Physical Aspect

Agricultural land use is the largest land use in Kemaman with a total of 48% of Kemaman's total area. In addition, 42.84% of the total Kemaman Area is forest.

Figure 2.2: Land Use Distribution in 2017



The highest increase in the total area from land use analysis from 2003 to 2017 is the commercial land use of 106.13% (164.83 hectares) of addition, the second is the agricultural land use of 48.04% (24,032 hectares) of addition, followed by institutions and community facilities of 46.63% (385.25 hectares) addition.

Facilities

Health Facilities

Educational Facilities

Hospital

24 Secondary School (SMK)

Primary
School (SRA)

Private
Kindergarten

32 Clinics

Safety Facilities

15 Police Station

Fire and
Rescue Station

Community Facilities

Rural Community Centre

Source: MyLocal Stats Kemaman Terengganu, 2021

Transportation

6

Bus Operator Companies

2 Stop Bus Services The East Coast Highway (LPT2) is the heart of land transport in Kemaman where it facilitates travel between Kemaman district and the main areas in the north such as Kuala Terengganu and Kota Bharu, in the south such as Kuantan and west such as Kuala Lumpur.

Source: Analysis Report and Development Strategy (LASP), Kemaman District Local Plan 2035

Electricity Supply System

5

Total Main Incoming Substation (PMU)

100%

Households in Kemaman has accessed to electricity supply, 2019

Source: MyLocal Stats Kemaman Terengganu, 2021

There are a total of 5 main incoming substations (PMU) in Kemaman district including two in Kertih sub-district, one in Bandi sub-district, one in Telok Kalong and one in Chukai sub-district.

Solid Waste Management

Kertih Landfill (Open Dumping)

8

Hectares

Amount of Solid Waste by Area:

30 tons Kemasik

50 to Kerteh Out of 11 sub-districts, seven subdistricts have been covered by two main open dumps in Kemaman District namely Kertih and Bukit Takal dumping site.

Bukit Takal Landfill (Open Dumping)

15

Uactoros

Amount of Solid Waste by Area:

Binjai

67 Chukai

ons

(

6 tons
Banggol

25

Lons
Telok Kalong

Source: Analysis Report and Development Strategy (LASP), Kemaman District Local Plan 2035

Kijal

Telecommunication System and ICT

93.0%

Proportion of household in Kemaman subscribed to internet at home, 2019

83.9%

Individuals in Kemamar use Internet, 2019

According to the data released by the Department of Statistics Malaysia in 2021, the vast majority of Kemaman's area had internet coverage. Nearly all households, about more than ninety percent, had subscribed to internet services at home, while approximately ninety percent of individuals in Kemaman used the internet daily, highlighting a significant level of digitalization in the region.

Governance

The administration of Kemaman is overseen by the Kemaman Municipal Council (MPK), also known as the Kemaman Municipal Council. It was upgraded on January 1, 2002, from the Majlis Daerah Kemaman. MPK operates as a local council and local planning authority under the Local Government Act of 1976 (Act 171) and the Town and Country Planning Act of 1976 (Act 172).

Operating according to the regulations set by the Federal Government and the Ministry of Housing & Local Government (KPKT), MPK follows the policies outlined for all local councils in Malaysia. The Pejabat Setiausaha Kerajaan Terengganu (PSUK) serves as the State Secretary's Office for Terengganu and is responsible for implementing state policies determined by the State Government Meetings Council (MMKN) as well as overseeing local councils in Terengganu.

To promote community-centered policies, the annually elected Ahli Majlis (Council Members) actively engage in shaping and aligning MPK policies. They serve as intermediaries, mobilizing the community and practicing a participatory governance approach that represents the people's interests during the decision-making process.

MPK enhances its governance framework by establishing various committees within the Municipal Council. These committees are designed to promote sustainable development in the Kemaman District. They are made up of members from civil society, community leaders, council members, internal and external technical experts, marginalized groups, and the private sector. This inclusive approach allows these committees to systematically address specific issues and develop plans. By engaging all relevant stakeholders, MPK ensures a comprehensive and sustainable approach to the district's development.

Figure 2.3: MPK Governance Structure



MPK Roles and Responsibilities as a Local Council

On January 1, 2002, the Majlis Daerah Kemaman was established. Its authority is derived from its role as a local council and local planning authority, operating under the Local Government Act of 1976 (Act 171) and the Town and Country Planning Act of 1976 (Act 172).

Providing public facilities, such as markets, business premises, transit stations, streetlights, other basic amenities.

Supervising the construction of roads, drains, buildings, and other facilities in the city and district.

Preserving public health, safety, and cleanliness, and ensuring the prevention of public disturbance.

Developing, implementing, and monitoring the development of Structure Plans and Special Area Plans.

Providing recreational facilities, playgrounds, parks, green spaces, and open spaces.

Maintaining cemeteries, slaughterhouses, and public toilets for public health and cleanliness.

Maintaining cleanliness and beautification of open areas.

Ensuring sanitation and cleaning services, including waste management, drainage, roads, and grass around the MPK areas.

Disposing of sewage and sanitation materials.

Policies and Strategies Governing and Impacting the Development of Kemaman

National

- 1) Local Government Act 1976 (Act 171)
- 2) Road, Drains and Building Act 1974 (Act 133)
- 3) Town and Country Planning Act 1976(Act 172)
- 4) Strata Management Act 2013 (Act 757)
- 5) 12th Malaysia Plan Rancangan Malaysia ke -12 (RMK 12)
- **6)** National Physical Plan Rancangan Fizikal Negara (RFN)
- 7) National Policy for Rural Physical Planning Dasar Perancangan Fizikal Desa Negara
- **8)** National Urban Policy 2 Dasar Perbandaran Negara 2 (DPN2)

State

- **1)** Draf Rancangan Struktur Negeri Terengganu 2050
- 2) Dasar Perumahan Negeri Terengganu
- 3) Pelan Strategik Pendigitalan PSUKT
- 4) Pelan Strategik PSUKT 2019-2023







To bolster sustainable development governance in Kemaman, MPK has wholeheartedly adopted diverse governance and sustainability frameworks. Committed to operating with efficiency, effectiveness, responsibility, and equity, this approach aims not only to enhance the well-being of the municipality but also actively contribute to the progress and resilience of the community in Kemaman.

Sustainability Frameworks Adopted by MPKW





Local Agenda 21

Kemaman Municipal Council actively engages in the planning and management of its district areas towards sustainable development, fostering collaboration among the community, local council, and private sector. In pursuit of these goals, Kemaman embraces the LA21 Concept, incorporating its six essential elements.

Economic Environmental Protection Development and Conservation Protection

Stakeholder Engagement Consensus Clear Plan and Timeline

SUSTAINABLE DEVELOPMENT

Malaysia SMART City Framework

MPK has adopted KPKT's Malaysia SMART City Framework in its operations and management of urban development and city management.

Smart Economy	Smart Living	Smart Environment		
Smart People	Smart Government	Smart Mobility		
Smart Digital Infrastructure				

Standards Adopted by MPK



MS 9001:2015

Quality Management System to ensure the consistency in providing products and services that meets customer and regulatory requirements





Kemaman Sustainability Journey

3.1 Perception Assessment

Online Readiness Survey

Before the FGD took place on April 18th, 2023, an online survey was carried out to evaluate the preparedness and initial perception of residents, stakeholders and communities in Kemaman Municipal Council regarding the SDG knowledge and implementation by the city council.

The survey aimed to gather valuable information regarding the specific importance of SDGs within the Kemaman district and identify areas that require additional focus and attention.

A significant number of respondents actively participated in the Readiness Survey, providing valuable insights into the readiness and perception of MP Kemaman with regards to the SDGs and the city council's initiatives.

The following chart illustrates the outcomes of an MP Kemaman survey assessing the significance of the SDGs in the Kemaman district, ranked in order of importance. According to the survey,

- ➤ SDG 1: No Poverty, holds the highest level of importance among the SDGs in Kemaman
- → It is closely trailed by SDG 3: Good Health and Well-Being, which holds the second position in terms of significance
- ➤ Subsequently, Kemaman considers SDG 11: Sustainable Cities and Communities to have relatively lower levels of importance.



Source: Questionnaire Survey of Kemaman Municipal Council, 2023

3.2 Kemaman Sustainability Journey

Over the years, the council has been actively engaged in various initiatives aimed at promoting sustainable development and improving the overall well-being of the district's residents since its establishment in 1981.

1981

Kemaman District Council was established on 1 January 1981 and gazetted on 6 December 1980 with an administrative area of 14,691.5 hectares.

1996

The Terengganu state government gazetted the entire area of Kemaman district as an administrative area of 253,56.0 on July 18, 1996.

1983

The evolution of development in Kemaman is focused on the development of industrial areas. It started on March 9, 1983 through the opening of the first local oil refinery in Malaysia in Kerteh with an area of 66 hectares.

1998

Kemaman District Council, Kemaman Structure Plan 1998 -2020. Kemaman

2002

Kemaman Municipal Council was upgraded from a district council to Kemaman Municipal Council under Terengganu State Enactment No. 5 of 2002 on 1 January 2002 and was promulgated on 2 February 2002.

2017

Kemaman District Local Plan 2035

2003

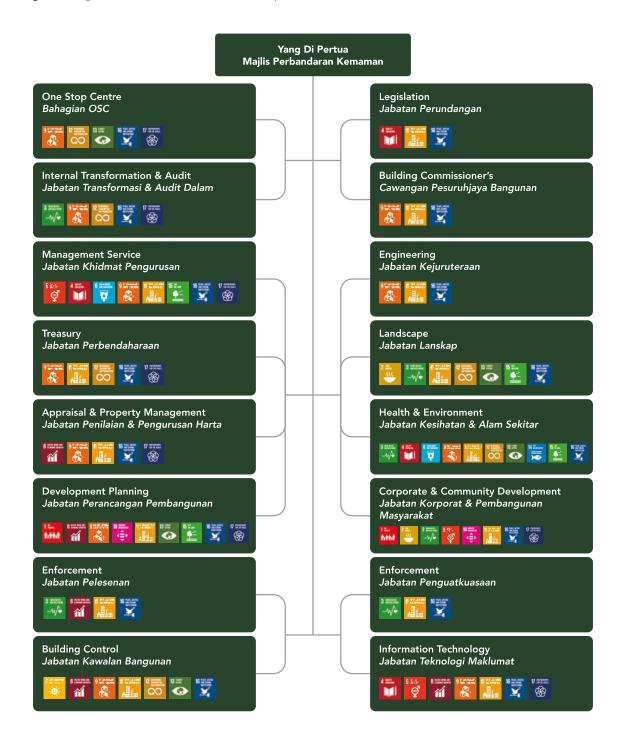
Kemaman District Local Plan 2003 - 2015 2023

Malaysia SDGs Cities 2023

3.3 Internal Department Roles and Functions

The alignment between the SDGs and the internal department roles and functions of the MPK was meticulously carried out across 14 internal departments, with the most aligned SDGs being **SDG 11, SDG 16, SDG 3, SDG 9, SDG 17 and SDG 12.**

Figure 3.2: Alignment between the SDGs and the internal department roles and functions of the MPK





Progress on 17 SDGs



1 NO POVERTY **M******

residents.

1.1

ERADICATE EXTREME POVERTY

RM1,367

Terengganu Food Poverty Line Index, 2022

In Malaysia, extreme poverty, also referred to as hardcore poverty, is defined as households with a monthly income that falls below the Food Poverty Line Income (PLI). A notable aspect of this issue is evident in Terengganu, where the Food PLI is the highest among the states, reaching RM 1,367. This indicates that the cost of fulfilling basic food needs in Terengganu is relatively higher compared to other states.

Incidence o	f Hardcore Poverty in Terengganu
	0.3
Ť	0.2

The incidence of hardcore poverty in Terengganu has improved, decreasing from 0.3 in 2019 to 0.2 in 2022. An analysis of household size reveals that the average number of people per household in the state is 7.5, with a higher prevalence of hardcore poverty found in rural areas compared to urban centers. This indicates that the challenges associated with extreme poverty are more pronounced in certain regions of Terengganu, highlighting the need for targeted interventions in these areas.

1.2

REDUCE POVERTY BY AT LEAST 50% IN KEMAMAN

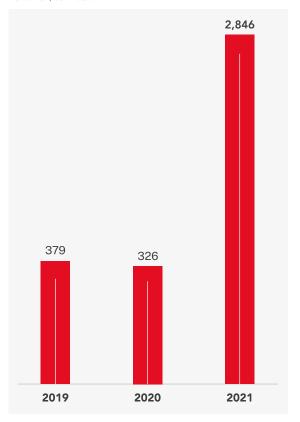
RM2,751

Terengganu Poverty Line Index, 2022

The average Poverty Line Income (PLI) in Terengganu was RM 2,751 in 2022, with an average household size of 6.3, showing no change in this measure.

Although there is no recent data available on the number of individuals registered under Ekasih for the year 2022, it is worth noting that the number of registered households increased significantly in 2021. A total of 2,846 households were identified as economically disadvantaged, which faced difficulties in accessing essential goods due to rising economic pressures and the increasing cost of living.

No of head of poor household registered with eKasih in Kemaman, 2019-2021





1.3

REDUCE POVERTY BY AT LEAST 50% IN KEMAMAN

The main organizations leading poverty eradication efforts in Terengganu and Kemaman are the *Unit Penyelarasan Pelaksana Jabatan Perdana Menteri (ICU JPM)* and the Terengganu State Government. These agencies allocate annual funds specifically for implementing comprehensive poverty eradication programs across the state. Among the projects and initiatives aimed at reducing poverty are:

1	House Repairing Projects
2	Construction of the MyHaus Inspirasiku Project
3	Upgrading Small Infrastructure
4	Road and Transportation Repairing Projects
5	Children Assistance
6	Elderly Assistance
7	Foster Children Assistance
8	Disabled worker Assistance
9	Assistance for the carer of the bedridden PWD / chronically ill patients

10

Loss of employment

11

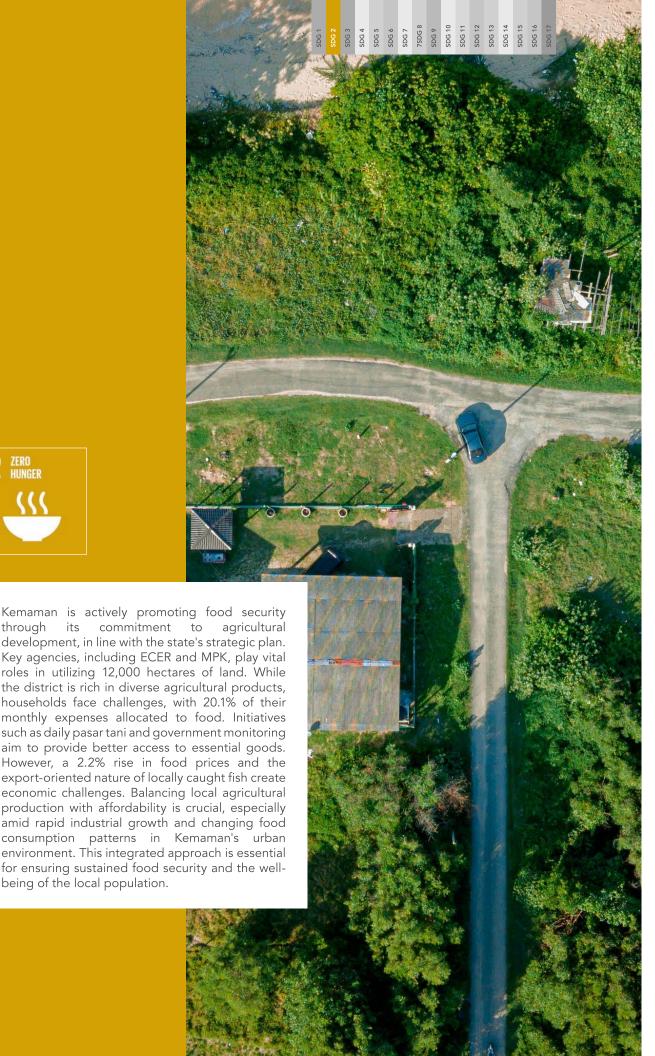
Disaster

Kemaman plays a crucial role in the Majlis Pembangunan Wilayah Ekonomi Pantai Timur (ECERDC), which is the regional development agency responsible for coordinating poverty eradication programs in Terengganu. This initiative aims to address the challenges posed by the pandemic and the pressing need to reduce unemployment by prioritizing human capital development. This includes comprehensive skills training and enhancement programs.

Additionally, there will be a strong emphasis on poverty prevention through educational support for students, which addresses the immediate needs of the community. On the municipal council front, MPK is dedicated to ensuring that vulnerable individuals in Kemaman can benefit from its programs, contributing to holistic economic growth. This commitment also includes providing kiosks to support new entrepreneurs in launching their businesses.

However, the effectiveness of these kiosks is limited due to insufficient marketing efforts. The lack of robust marketing has resulted in a poor public reception, which in turn challenges entrepreneurs operating from these kiosks in generating sustainable income and establishing a stable customer base. Without adequate marketing strategies, the ability of these entrepreneurs to achieve long-term financial sustainability is significantly hindered.







through

its

2.1

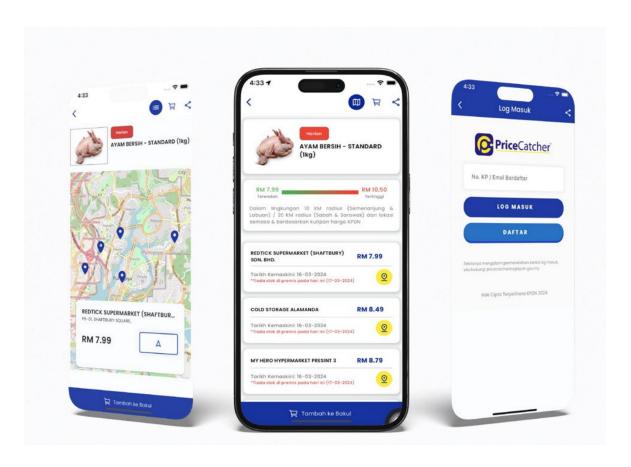
END HUNGER AND ENSURE ACCESS TO SAFE, NUTRITIOUS, AND SUFFICIENT FOOD

Ensuring access to safe and nutritious food in Kemaman is vital for the overall well-being of the local population. The district boasts a diverse array of key agricultural products, including ladyfinger, chili, long beans, cucumber, coconut, corn, and banana, which are available for both local consumption and export. These essential items can be easily accessed through various local markets, such as pasar tani (farmers' markets), night markets, and morning markets. Notably, initiatives like the establishment of daily pasar tani in areas like Chukai, facilitated by the Federal Agricultural Marketing Authority (FAMA), aim to provide a more permanent platform for small agricultural entrepreneurs to sell their produce. This not only boosts local economic opportunities but also enhances access to nutritious and affordable food options for residents.

However, despite the agricultural abundance, households in Kemaman face challenges in

managing affordable food expenses. On average, a household spends about 20.1% of its monthly expenditure, totaling RM933, on food. The Ministry of Domestic Trade and Consumer Affairs (KPDHEP) actively monitors the prices of essential goods (barang basah), with certain items subject to harga kawalan (controlled prices). Nevertheless, a 2.2% increase in food prices from 2020 to 2021, combined with rapid industrial growth in Kemaman, has resulted in higher prices for fresh produce like fish and water spinach. This situation creates economic strains compared to other parts of Terengganu.

Interestingly, while Kemaman is renowned for its local seafood delicacies, a significant portion of the fish caught in the district is exported rather than consumed locally. This dynamic adds to the challenge of ensuring affordable and accessible nutrition for the community. Additionally, the presence of fast-food chains in the urbanizing landscape influences food consumption patterns, emphasizing the need for strategic measures to align local agricultural production with affordability in order to promote the health and well-being of Kemaman's residents.



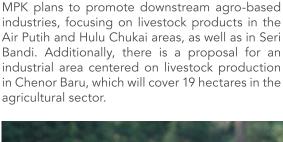
2.3

DOUBLE THE AGRICULTURE PRODUCTIVITY AND THE INCOME OF SMALL-SCALE FOOD PRODUCERS

The district of Kemaman places a strong emphasis on agriculture, which aligns with the Terengganu State Government's Strategic Agricultural Plan for 2019-2023. This plan aims to utilize 12,000 hectares of agricultural land to ensure the nation's food security. Several key agencies, including the East Coast Economic Region (ECER), Member of Parliament for Kemaman, the Terengganu State Agriculture Department, and the Terengganu State Ministry of Agriculture and Food Industry, play vital roles in achieving this vision.

MPK has expressed a commitment to agricultural development through the Kemaman District Rural Transformation Plan (RTD Kemaman). This plan identifies three primary targets for the agriculture and livestock sector in Kemaman:

- Integrating farming activities in the Bandi and Hulu Chukai areas
- 2 Establishing Kemaman as a hub for cattle and poultry production in the eastern region
- Opening up areas for corn and pineapple cultivation for food production and animal feed purposes







The East Coast Economic Region Development Council (ECERDC) plays a significant role in advancing the dairy industry by supporting infrastructure development and various initiatives. Continuous efforts are being made to promote agriculture as an appealing and profitable.



3 GOOD HEALTH AND WELL-BEING

In the Kemaman district, there has been a concerning increase in the maternal mortality ratio, neonatal mortality rates, and mortality rates for children under five in 2021 compared to the previous year. The primary contributors to premature mortality are non-communicable diseases (NCDs), with cardiovascular diseases being the leading cause. Notably, the rates of cardiovascular disease have been steadily rising since 2019, while cancer and chronic respiratory diseases have shown a decline during the same period. On a positive note, diabetes and suicide rates decreased in 2021.

Challenges in the district include a lack of healthy ecosystems, underutilization of the *Pusat Aktiviti Warga Emas (PAWE)* due to misconceptions among the elderly, and issues related to drug addiction. Additionally, there is an uneven distribution of health facilities, and traffic congestion in Kemaman leads to delays in accessing healthcare. Limited parking spaces at hospitals further exacerbate the situation due to the high volume of daily visitors and patients.

Despite these challenges, the national immunization program in Kemaman has successfully achieved full coverage for the third dose of the Diphtheria-Tetanus-Pertussis (DTP) vaccine and the second dose of the Measles, Mumps, and Rubella (MMR) vaccine across the entire population.

3.1

REDUCE MATERNAL MORTALITY RATE

47.9

Maternal Mortality Ratio, 2021
*Per 100,000 live births

In 2021, the Maternal Mortality Ratio (MMR) in the Kemaman District was impressively low at 47.9 per 100,000 live births, significantly better than the SDG target of 70 per 100,000 live births. This achievement reflects the commendable efforts and advancements in maternal healthcare within the district, contributing to a safer environment for expectant mothers.

However, it is important to note that when comparing the 2021 MMR to the previous year's data, there has been a concerning increase. The ratio nearly doubled from 24.2 per 100,000 live births in 2020. This rise emphasizes the need for a thorough examination of the factors contributing to this change. Understanding these factors is essential for guiding further improvements and maintaining the positive progress achieved in maternal healthcare outcomes. Addressing the fluctuations in maternal mortality ratios requires a nuanced approach that takes into account the complexities of healthcare delivery, access, and potential external influences on these outcomes in the Kemaman District.



REDUCE MATERNAL MORTALITY RATE

The Kemaman district has made significant progress in achieving SDG 3.2.2, with the neonatal mortality rate recorded at 7.2 per 1,000 live births in 2021, which is below the SDG target of 12 per 1,000 live births. However, it is important to address the concerning increase of 3.3 per 1,000 live births compared to the previous year. This rise indicates a potential challenge that requires focused attention and strategic interventions to maintain and improve the standards that have already been achieved.



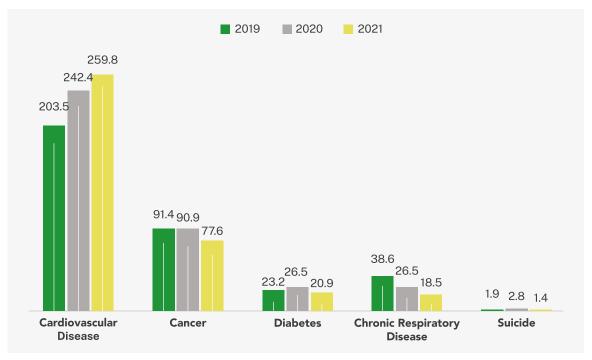
Neonatal Mortality Rate	
	3.9
	7.2

Under 5 y/o Mortality Rate	
	6.3
	10.1

The under-5 mortality rate in the Kemaman district rose by 3.8 per 1,000 live births, increasing from 6.3 per 1,000 live births in 2020 to 10.1 per 1,000 live births in 2021. This increase is significant and requires thorough examination; however, it is important to note that the current rate remains below the SDG 3.2.1 target of 25 per 1,000 live births. Recognizing this positive aspect, efforts should focus on understanding the factors that contributed to the recent rise and on implementing targeted strategies to reverse this trend, ensuring a continued decline in under-5 mortality.

REDUCE MORTALITY FROM NON-COMMUNICABLE DISEASES AND PROMOTE MENTAL HEALTH

Premature Mortality Rates of Major Non-Communicable Diseases (NCDs) per 100,000 Populations in Kemaman, 2019-2021



Source: MyLocal Stats, Kemaman, 2022

The observation of non-communicable diseases (NCDs) in Kemaman indicates a significant burden of premature mortality, particularly due to cardiovascular disease, which is the leading cause. Other serious health issues include cancer, diabetes, chronic respiratory disease, and suicide. Over the past two years (2019 to 2021), premature mortality rates linked to cardiovascular diseases have notably increased, rising from 203.5 per 100,000 to 259.8 per 100,000 in 2021. This alarming trend highlights the urgent need for targeted interventions and public health initiatives aimed at addressing the risk factors and enhancing awareness of cardiovascular health within the community.

The current health landscape in Kemaman reveals a lack of a healthy lifestyle ecosystem, particularly in terms of recreational spaces, with limited parks and playgrounds available in residential areas. Although community programs organized by the *Pejabat Kesihatan Daerah (PKD)* have received positive feedback, discussions with focus groups have pointed out the inadequacy of existing recreational facilities for disabled individuals and the elderly. This situation underscores the necessity for inclusive infrastructure planning that

accommodates diverse age groups and abilities, fostering a supportive health environment.

The identified risk factors for cardiovascular diseases in Kemaman include both pre-existing and lifestyle-related risks. Recent studies indicate a rising number of Malaysians being diagnosed with heart disease at a younger age, which stresses the need for early intervention and preventive measures. Smoking stands out as a significant risk factor, particularly for ischemic or coronary heart disease, further underscoring the importance of anti-smoking initiatives and awareness campaigns.

Despite the worrying increase in premature mortality rates related to cardiovascular diseases, there is a positive trend observed in other major NCDs, with declining rates from 2020 to 2021. This suggests potential successes in health interventions or awareness campaigns targeting diseases such as cancer, diabetes, chronic respiratory conditions, and suicide. Awareness campaigns targeting diseases such as cancer, diabetes, chronic respiratory conditions, and suicide.

3.5

PREVENT AND TREAT SUBSTANCE ABUSE

Number of Drug Addicts in Kemaman, 2019-2021
358
424
358

In 2021, Terengganu ranked as the fourth highest state in Malaysia for drug and substance abuse, with a total of 12,033 individuals reported. Within Terengganu, the district of Kemaman contributed 358 cases to this troubling statistic, highlighting the prevalence of substance abuse in the local community. With a population of 218,700, this means that approximately 0.16% of residents in Kemaman are reported substance abusers, indicating a significant challenge.

The high rate of drug use among locals in Kemaman is not just a statistical concern; it has serious implications for social issues within families and communities. Substance abuse can strain relationships, disrupt households, and contribute to a variety of societal problems. To address this issue effectively, a multi-faceted approach is required. This includes not only law enforcement but also social and health interventions to provide support for affected individuals and their families.

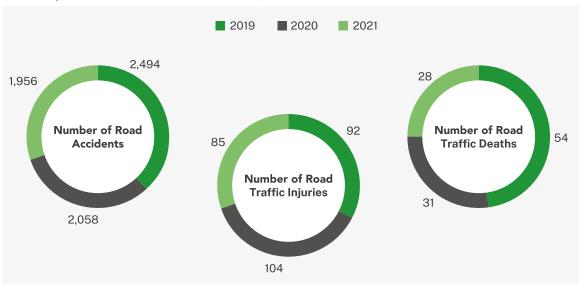
While the reduction in substance abuse cases from 2020 to 2021, by a certain percentage, is a positive development, continued efforts are necessary to sustain and build upon these gains. Collaborative initiatives involving agencies such as the National Anti-Drug Agency (AADK), along with local police and the Member of Parliament for Kemaman, demonstrate a coordinated effort to monitor and prevent substance abuse. Identifying high-risk areas and suspicious individuals who might be involved in drug dealing within residential neighborhoods is a crucial part of this collaboration to cut off the supply chain and prevent further spread of substance abuse.

Furthermore, ongoing community engagement, education, and rehabilitation programs have proven vital in addressing the root causes of drug abuse and fostering a healthier, more resilient society in Kemaman.



REDUCE ROAD INJURIES AND DEATH

Number of injuries and deaths from road accidents in Kemaman, 2019-2021



Source: MyLocal Stats, Kemaman, 2022

The road traffic situation in Kemaman has shown a fluctuating trend in recent years. In 2019, there were 2,494 reported road accidents, which decreased to 2,058 in 2020 and further to 1,956 in 2021. The number of injuries sustained from these accidents also declined, from 92 in 2019 to 85 in 2021. Fatalities nearly halved during the same period, dropping from 54 cases in 2019 to 28 in 2021.

However, challenges persist due to Kemaman's status as a hub for heavy industry. The shared use of roads by private and industrial vehicles, including large trucks, contributes to a high incidence of accidents involving pedestrians, private vehicles, and lorries. These accidents often result in severe injuries or fatalities. Moreover, the heavy loads carried by lorries lead to the rapid deterioration of roads, causing potholes to form. These potholes pose a significant threat to vehicles and motorcyclists and increase the overall risk of accidents, particularly during nighttime travel.

3.6

ACHIEVE UNIVERSAL HEALTH COVERAGE (UHC)

In Kemaman, healthcare services are managed by the Jabatan Kesihatan Terengganu, which operates under the Ministry of Health Malaysia. The district has one public hospital, 12 public health clinics, 18 village clinics, and 2 community clinics. These facilities play a crucial role in delivering a wide range of health services, including family and women's health.

However, challenges remain in achieving universal health coverage in Kemaman due to the uneven distribution of healthcare facilities. This creates disparities in access to essential services, resulting in some areas experiencing shortages while others have an excess of resources. Additionally, heavy traffic in Kemaman can cause delays for residents seeking medical care, negatively impacting the overall efficiency of healthcare services.

The single public hospital also faces issues with insufficient parking spaces, making accessibility difficult for the high volume of visitors and patients. While there are potential solutions, such as constructing a private hospital, these plans have not yet been realized.



In Kemaman, several challenges impact the ability to provide free, equitable, and quality education for youth. Limited access to digital devices hindered learning during the pandemic, particularly for adolescents from struggling families who have taken on breadwinner roles. Financial constraints also prevent some children from attending preprimary school, leading families to opt for more affordable alternatives like PASTI. Additionally, the undervaluation of agriculture reduces youth participation, which in turn affects sustainable growth. Furthermore, limited proficiency in English impacts employability opportunities for young people.

To address these challenges, comprehensive data collection and monitoring are essential. Despite these issues, there have been positive developments in Kemaman schools that could serve as potential models for improvement in the district.



FREE PRIMARY AND SECONDARY EDUCATION

Number of students by gender in primary and secondary schools in Kemaman, 2021 47 Primary Schools 12,363 11,772 24 Secondary Schools 7,605 7,750 Post Secondary School 149 286

In Kemaman, there are 47 public primary schools and 24 secondary schools, maintaining an equal enrollment ratio of 50:50 for female and male students. Notably, post-secondary institutions in Kemaman see a higher enrollment of girls. However, challenges persist in ensuring consistent attendance, particularly for youths from troubled families who often take on the role of primary breadwinners due to parental neglect, which leads to school absenteeism. Some students live with grandparents who struggle to afford their education, receiving assistance only on a one-time basis.

As Kemaman experiences population growth, the demand for educational services is increasing, surpassing the existing school capacity and creating a significant infrastructure gap. This challenge hinders the district's ability to meet the educational needs of the entire population. Additionally, frequent floods in the region obstruct students' access to schools, leading to closures and disruptions. Some schools are repurposed as temporary shelters during flood emergencies, further complicating efforts to maintain consistent educational access in Kemaman.

4.2

EQUAL ACCESS TO QUALITY PRE-PRIMARY EDUCATION

Access to early childhood education in Kemaman is supported by 46 public pre-schools and 33 private kindergartens. The increase in the number of private kindergartens can be attributed to the rising disposable income of young parents and

the perceived higher quality of education offered in private institutions. However, affordability remains a challenge for parents, particularly due to the high rental costs associated with private childcare centers.

In addition to publicly funded establishments, NGOs in the district, such as Pusat Asuhan Tunas Islam (PASTI), provide more affordable alternatives. PASTI charges RM70 per month for transit services and RM120 per month for full-day care. Despite operating 42 outlets, PASTI, like other establishments, struggles to meet the high demand for childcare services in Kemaman. This issue is further compounded by a shortage of trained teachers and caregivers.

The region continues to face challenges related to cost constraints and a lack of affordable options, which hinders parents in their quest for quality early childhood education for their children.

46	Pre-schools	493	Students	
33	Private kindergartens	1,475	Students	

Access to early childhood education in Kemaman is provided through 46 public pre-schools and 33 private kindergartens. The rise in the number of private kindergartens can be attributed to the increasing disposable income of young parents and their perception of the quality of education offered in private institutions. However, the affordability of private childcare centers remains a challenge for parents, primarily due to high lease payments.

In addition to publicly funded establishments, NGOs in the district, such as *Pusat Asuhan Tunas Islam (PASTI)*, offer more affordable alternatives, charging RM70 per month for transit and RM120 per month for full-day care. Despite having 42 outlets, PASTI also struggles to meet the high demand for childcare services in Kemaman, which is exacerbated by a shortage of trained teachers and caregivers. The region continues to face challenges related to cost constraints and a limited number of affordable options, which hinder parents in their pursuit of quality early childhood education for their children.uality early childhood education for their children.



EQUAL ACCESS TO AFFORDABLE TECHNICAL, VOCATIONAL AND HIGHER EDUCATION

In Kemaman, there is a wide range of options for affordable technical, vocational, and higher education, with offerings from both public and private institutions that cater to the district's industrial landscape. Many youth are drawn to the oil and gas industry for higher education due to its lucrative nature and attractive compensation packages.

However, there is a significant gap in technical and vocational training within the fishing industry, despite the existing demand. This gap is exacerbated by a shortage of manpower and the need for fishermen to develop modern technological skills, which contributes to lower yields in the sector.

Although there are incentives for skills training classes, some communities in Kemaman do not value careers in agriculture and fishing, which discourages young people from pursuing these occupations. This mindset limits interest and participation in these vital sectors, potentially hindering sustainable growth and development in the industry.



INCREASE THE NUMBER OF PEOPLE WITH RELEVANT SKILLS FOR FINANCIAL SUCCESS

In Kemaman, limited English proficiency among youth is hindering their employability in industries that prioritize advanced language skills. Although many graduates possess strong technical abilities and decent qualifications, some overlook opportunities to improve their language skills, which creates a barrier to better job prospects. Recruiters from private companies emphasize the significance of language proficiency for achieving financial success. There is a strong need for increased awareness to address this gap and enhance employability among youth, ultimately helping to overcome the challenges faced by the city in ensuring financial stability for its residents.

4.A

BUILD AND UPGRADE INCLUSIVE AND SAFE SCHOOLS

In Kemaman, limited proficiency in English among youth limits their employability in industries that prioritize strong language skills. Although some graduates have commendable technical skills and moderate qualifications, they often overlook opportunities to improve their language abilities. This creates a significant barrier to better job prospects. Recruiters from private companies emphasize the importance of language proficiency for achieving financial success. There is a critical need to raise awareness about this issue to enhance youth employability. By addressing this gap, we can help improve the financial prospects of residents in the city.

Proportion of schools offering basic services, 2021				
Electricity 100.0%				
Internet for pedagogical purposes	100.0%			
Computer for pedagogical purposes	97.2%			

Proportion of schools offering accesses to, 2021				
Basic drinking water 100.0%				
Single-sex washing facility	100.0%			
Washing facility	97.2%			
Washing facility	40.9%			

Source: Department of Statistics Malaysia, 2021

The data above shows that schools in Kemaman have provided excellent basic services and access to essential facilities. The adapted infrastructure and materials for special students also increased by 12.7% in 2021 compared to 2020.



END DISCRIMINATION AGAINST WOMEN AND GIRLS

Domestic Violence

Findings from FGD indicate a high prevalence of domestic violence cases; however, there is still a significant lack of data. These cases are often kept private, and reliable information is primarily available from the Royal Malaysian Police (PDRM).

Additionally, there is a noticeable gap in technical and vocational training within the fishing industry, despite a strong demand for such skills. The shortage of manpower and the need for fishermen to acquire modern technological skills contribute to lower yields in the sector. Although there are incentives for skills training programs, some communities in Kemaman undervalue careers in agriculture and fishing. This mindset discourages youth from pursuing these professions, ultimately hindering interest and participation in these critical sectors. As a result, the potential for sustainable growth and development in these industries may be limited.

5.4

VALUE UNPAID CARE AND PROMOTE SHARED DOMESTIC RENSPOSIBILITIES

Infrastructure for Women

Urban areas are struggling with inadequate hospitals and clinics. The existing facilities and services are often regarded as below standard.

HIV Transmission

Although there has been a decrease in drug requests, suggesting a decline in the HIV issue, concerns remain regarding potential transmission. This is particularly linked to an increase in relationships among transgender individuals, rather than through needle sharing among drug users.

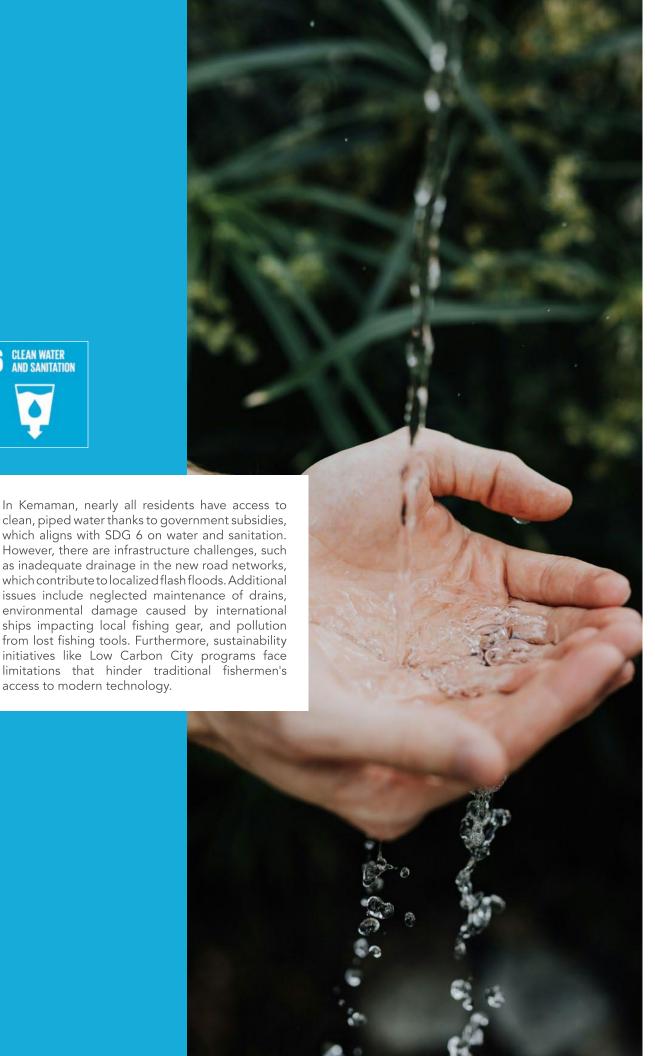


ENSURE FULL PARTICIPATION IN LEADERSHIP AND DECISION-MAKING

Women Participation and Opportunities in Leadership

The gender ratio at the local government level aligns with the guidelines established by the Ministry of Housing and Local Government (KPKT). In the MPK, there is a higher representation of female staff compared to male staff.





CLEAN WATER AND SANITATION



UNIVERSAL AND EQUITABLE ACCESS TO SAFE AND AFFORDABLE DRINKING WATER FOR ALL

98.8%

Households in Kemaman district has accessed to piped water in the house, 2019

In the Kemaman district, 98.8% of residents have access to clean piped water. The Malaysian government provides subsidies for water supply, recognizing its importance as an essential service.

6.2

ACCESS TO ADEQUATE AND EQUITABLE SANITATION AND HYGIENE FOR ALL

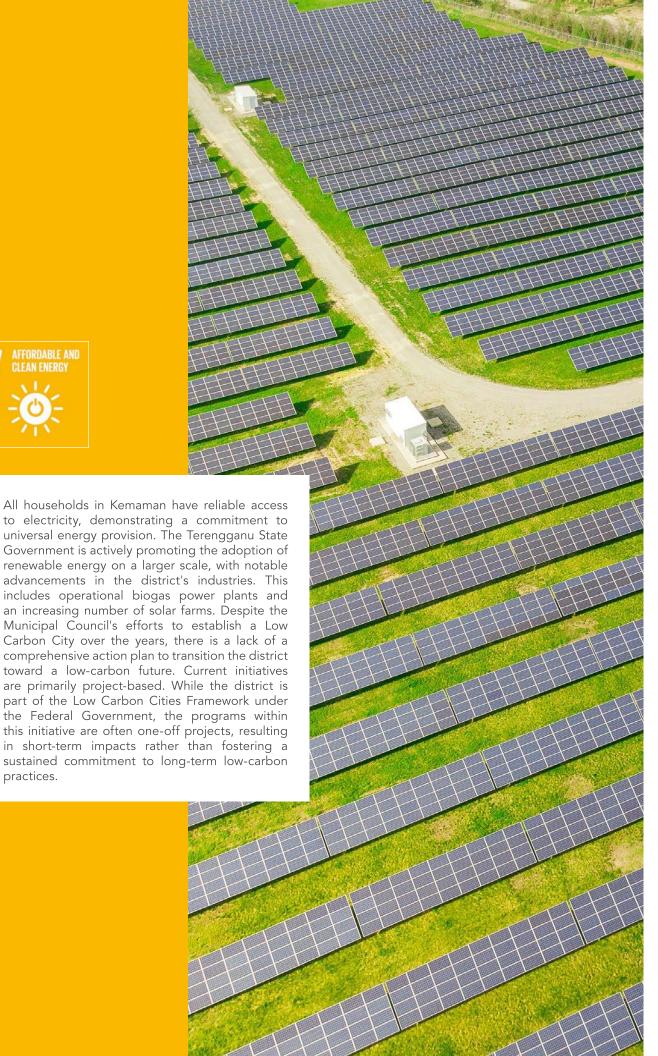
100.0%

Households in Kemaman district using safely managed sanitation services, 2019

All residents of Kemaman have guaranteed equitable access to sanitation and hygiene facilities, ensuring equal opportunities for maintaining proper sanitation practices and hygiene standards.

CITY GAPS AND CHALLENGES

- (1) A new main road network has been constructed from Air Putih to Pasir Gajah, elevated above the surrounding area. Despite the efforts of the Public Works Department (JKR) to implement effective road drainage for safety, the local landscape has been overlooked, resulting in flash floods in the vicinity.
- (2) Flooding in Kemaman is attributed to a shallow river and irregular maintenance of the drainage systems. Additionally, the irresponsible actions of international ships are damaging local fishing gear, specifically "jala" and "bumbu."
- (3) Low Carbon City programs are limited in sustainability and often viewed as one-off initiatives. Traditional fishermen lack access to schemes that would enable them to acquire technology and larger boats, which hinders their ability to scale up their operations. The loss of fishing tools, particularly nets, is also contributing to ocean pollution.
- (4) Frequent pipe bursts are a result of an outdated water pipe system in Kemaman. Ongoing pipe replacements are being carried out in stages to address this issue.



AFFORDABLE AND

practices.





UNIVERSAL ACCESS TO MODERN ENERGY

100.0%

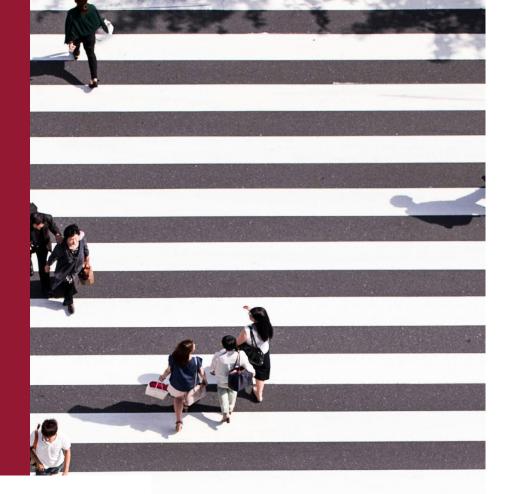
Households in Kemaman district has accessed to electricity supply, 2019

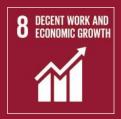
7.2

INCREASE GLOBAL PERCENTAGE OF RENEWABLE ENERGY

Terengganu State Government is actively promoting the larger-scale adoption of renewable energy within the state. The progress in renewable energy initiatives in Kemaman is evident through TDM Bhd, a subsidiary of the Terengganu state government. TDM Bhd successfully operates the state's first two biogas power plants in collaboration with Concord Group. These plants, which have a combined cost of RM50 million and have been operational since March and June 2021, aim to generate two megawatts of electricity each. They contribute to the Tenaga Nasional Bhd's grid and are estimated to generate RM28 million in revenue for TDM over 16 years. This initiative aligns with the government's focus on environmental sustainability, as the implementation of green technology also enhances the existing oil refinery treatment system.

The commitment to renewable energy in Terengganu goes beyond biogas, emphasizing the importance of solar and wind energy for technological development. The government is actively considering proposals for additional renewable energy projects from various companies, including international players, demonstrating a strong commitment to sustainable energy practices in Kemaman. Notably, Epic's large-scale solar photovoltaic plant in Kemaman, valued at RM86 million and capable of generating 18.5 megawatts, is recognized as the country's largest solar project, highlighting the region's significant progress toward a more sustainable and environmentally friendly energy landscape.



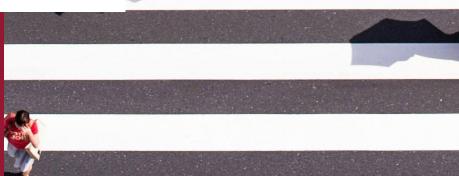


Kemaman is undergoing a significant economic transformation, playing a key role in Malaysia's oil, gas, and petrochemical industries. The district is actively diversifying its economic portfolio by entering emerging sectors such as bioeconomy and agribusiness, with initiatives like the Kertih Biopolymer Park and the Kemaman Heavy Industrial Park.

This strategic shift is supported by strong socioeconomic development initiatives, including the designation of Kijal as an aquaculture area and the planned expansion of Pelabuhan Kemaman in 2023. Over the past two years, the total labor force participation rate in the region has consistently increased, reaching 87.9% in 2021, highlighting Kemaman's capacity to attract and maintain a diverse workforce.

Moreover, the dynamic interplay between career choices, education, and family responsibilities, combined with the Kemaman Municipal Council's proactive approach to infrastructure development and tourism initiatives, positions Kemaman as a thriving economic hub with a promising future.





DIVERSIFY, INNOVATE AND UPGRADE FOR ECONOMIC PRODUCTIVITY

Kemaman is undergoing a significant economic transformation, benefiting from its established role in Malaysia's oil, gas, and petrochemical industry. The district is actively diversifying its economic portfolio by investing in bioeconomy and agribusiness, as seen in projects like the Kertih Biopolymer Park and the Kemaman Heavy Industrial Park. This shift represents a strategic move towards embracing emerging sectors and fostering a more resilient and diversified economic landscape.

The socio-economic development of the district is characterized by robust growth, driven by high-impact initiatives and programs. As part of the ZPP Sekunder Wilayah Selatan, which includes six existing corridors and two new ones—targeting areas such as Kawasan Pembangunan Hulu Jabur and the Koridor Air Putih—Binjai—Chukai—Kemaman is strategically positioning itself for sustained growth.

Furthermore, the identification and development of Kijal as an aquaculture area, supported by the LKIM jetty, demonstrate a commitment to diversifying economic activities and leveraging

the potential of the fisheries sector.

Importantly, Kemaman's economic trajectory enhanced planned infrastructure developments, including expansion Pelabuhan Kemaman in 2023. This expansion aims to increase the port's capacity to handle the rising demand for aligning with cargo, industrial broader advancements in the East Coast Economic Region (ECER) Peninsular Malaysia



and the East Coast Rail Link (ECRL) project. The proactive approach to infrastructure, along with efforts to attract new investors both locally and internationally, positions Kemaman as a dynamic economic hub with a promising future.

8.5

ACHIEVE FULL AND PRODUCTIBE EMPLOYEMENT AND DECENT WORK FOR ALL WOMEN AND MEN

Employment Statistics in Kemaman, 2019- 2020					
	2019	2020	2021		
Total Laboure Force ('000)	85.5	86.2	87.9		
Employed Person ('000)	82.7	82.9	84.7		
Unemployed Persons ('000)	2.8	3.3	3.2		
Outside Laboure Force ('000)	43.1	44.7	45.9		
Labour Force Participation Rate (%)	66.5	65.8	65.7		
Unemployment Rate (%)	3.3	3.8	3.7		

Source: MyLocal Stats 2021, Kemaman

The recent surge in economic activities and development initiatives in Kemaman has been supported by a notable increase in the total labor force over the past two years. Between 2019 and 2021, the district experienced a steady rise in the labor force participation rate, with figures climbing from 85.5% in 2019 to 86.2% in 2020, and reaching 87.9% in 2021. This growth in the labor force highlights the district's capacity to attract and retain a workforce, which aligns with its expanding economic landscape.

Analyzing the labor force participation rate (LFPR) provides further insights into the demographics of the workforce in Kemaman. In 2019, the LFPR was recorded at 66.5%, but saw a slight decline to 65.8% in 2020 and a marginal decrease to 65.7% in 2021. Men dominate the LFPR, making up approximately 75.2% of the workforce, while women account for about 41.9%, based on the Terengganu state LFPR. Additionally, the young labor force, particularly individuals aged between 25 and 49 years, constitutes a significant portion, representing 70% of the workforce. This demographic breakdown provides valuable insight into the diverse composition of the labor force that is driving Kemaman's economic growth.

The data reveals a significant increase in the number of individuals who are outside the labor force during this period. Many people are opting out of the workforce for reasons such as pursuing further education or taking on family responsibilities. This upward trend highlights a complex relationship between career choices, education, and family obligations. The simultaneous growth in both the labor force and those outside of it reflects Kemaman's evolving socio-economic landscape, as individuals make strategic decisions aligned with their personal and professional goals.

Additionally, the under-5 mortality rate in the Kemaman district rose by 3.8 per 1,000 live births, increasing from 6.3 per 1,000 live births in 2020 to 10.1 per 1,000 live births in 2021. This increase is noteworthy and requires careful examination. However, it is essential to recognize that the current rate is still below the SDG3.2.1 target of 25 per 1,000 live births. Building on this positive aspect, efforts should focus on understanding the factors contributing to the recent rise and implementing targeted strategies to reverse this trend, ensuring a sustained decline in under-5 mortality.

8.9

DEVISE AND IMPLEMENT
POLICIES TO PROMOTE
SUSTAINABLE TOURISM THAT
CREATES JOBS AND PROMOTES
LOCAL CULTURE AND PRODUCTS

The Kemaman District is fortunate to have a wide variety of tourism attractions, including beautiful beaches, waterfalls, forests, and a diverse selection of local products, featuring both culinary delights and marine offerings due to its proximity to the South China Sea. MPK has taken proactive steps to boost tourism in the district, aligning with its main goals of promoting urban development and economic growth in the region.

By strategically enhancing existing tourism products, MPK is committed to positioning the Kemaman District as a preferred destination for both Malaysian citizens and international visitors. This effort aims to unlock its potential to become a vibrant cultural and tourism hub.

To promote sustainable growth in the tourism sector—both economically and environmentally—MPK has identified key areas of attraction to enhance Kemaman's appeal as a premier destination on the East Coast and throughout Malaysia. To ensure the success of this vision, MPK has implemented five strategic initiatives to

oversee the comprehensive development of the tourism sector in Kemaman.

Tourism products and attractions identified under MPK Tourism Sector

1	Taman Rekreasi & Zoo Kemaman
2	Kelip-kelip Sg Yak Yan
3	Muzium Kemaman
4	Lemang Kijal
5	Pantai Geliga
6	Kuala Kemaman
7	Kuala Kerteh
8	Air Terjun Menderu

MPK Tourism Development Strategy

products for all groups

	an ion Development of a togy
1	Develop existing tourism products in the Kemaman District
2	Provision of complete tourism infrastructure
3	Efficient accessibility to tourism products
4	Develop adequate supporting facilities
5	Enhance the linkage between tourism

Development on Coastal Areas in Kemaman	Development Plans between 2023 - 2030			
Pantai Ma'Daerah	► Turtle conservation area and research centre			
Pantai Kuala Kerteh	 Wholesale marine produce hub Fisherman festivals and Water sports 			
Pantai Kemasek	 Homestays and chalets Traditional fisherman village Lagoon and rivers 			
Pantai Kijal	► Resort with 5-Star rating facilities			
Pantai Kuala Kemaman	 Seafood attraction such as Ikan Bakar, Keropok Lekor and Sata 			
Pantai Geliga	 Seafood attraction such as Ikan Bakar, Keropok Lekor and Sata 			





government.

DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURE

Kemaman aims to achieve city status by 2035 through careful planning and the development of high-potential sectors. MPK is committed to ensuring that the city has comprehensive and efficient infrastructure to support its ongoing development.

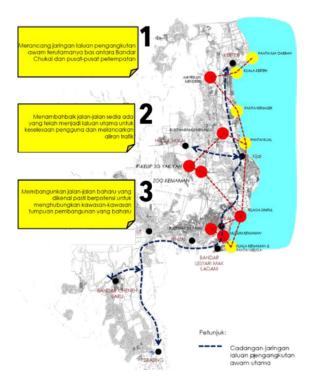
To accomplish this goal, MPK has developed a set of strategic initiatives designed to ensure that the evolution of Kemaman's infrastructure is robust, sustainable, resilient, and inclusive. These strategies include:

- Tailored Infrastructure and Utility Planning
 - Strategically planning infrastructure and utilities to align with the specific needs of the community.
 - Designing comprehensive access and mobility solutions to enhance connectivity throughout the city.
- 2 Strengthening Industrial Areas in Kerteh and Teluk Kalong
 - Enhancing the infrastructure and utilities in the industrial zones of Kerteh and Teluk Kalong.
 - Ensuring that available lots are fully operational, contributing to the overall economic vibrancy of these industrial hubs.
- 3 Upgrading Existing Infrastructure and Utilities
 - Elevating the quality of existing infrastructure and utilities in tandem with proposed new developments.

Aspartofa comprehensive development plan, MPK prioritizes innovative solutions for transportation infrastructure. Beyond proposing new roads, the plans involve a holistic approach to enhance accessibility. This includes targeted improvements to existing congested thoroughfares, fostering efficient connectivity between urban and suburban areas. The initiative aims to optimize the movement of people and goods, fostering economic activities and bolstering the city's resilience.

Moreover, MPK's strategic vision encompasses the integration of transportation systems supporting tourism products and facilitating convenient travel. This involves designing and implementing efficient public transportation options, vital for

the success of tourism initiatives. Through careful consideration of the interplay between urban development and transportation infrastructure, MPK is laying the groundwork for a thriving and interconnected city catering to the diverse needs of residents and visitors

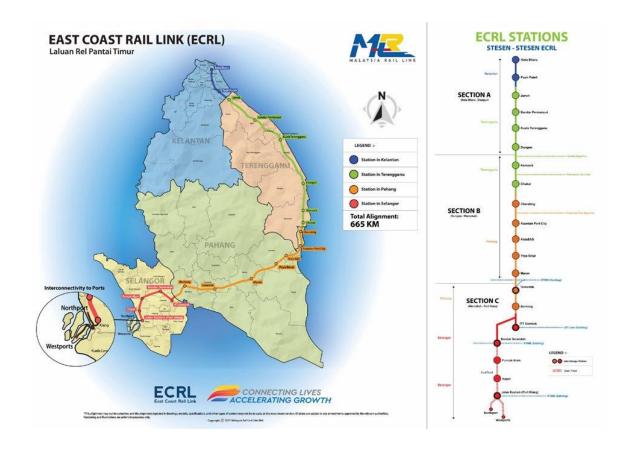


The economic development of Kemaman hinges significantly on the pivotal role played by the East Coast Rail Link (ECRL). Functioning as a crucial element in Malaysia's broader infrastructure development, the ECRL brings heightened connectivity to Kemaman, seamlessly linking it to both the East and West Coasts. This connectivity is paramount for Kemaman's sustainable economic growth, streamlining the efficient transportation of goods and people.

Strategically aligned with the objective of constructing resilient infrastructure, the ECRL makes substantial contributions to the establishment of robust, high-quality, reliable, and sustainable infrastructure in Kemaman. This enhanced connectivity serves as a catalyst for economic activities, propelling industrialization, and nurturing inclusive and sustainable growth within the region. The ECRL exemplifies Malaysia's unwavering commitment to investing in infrastructure that not only interconnects regions but also lays a steadfast foundation for long-term

SDG 6 SDG 7 7SDG 8

economic development. This commitment reflects a forward-looking approach, ensuring that the infrastructure not only addresses present needs but also safeguards the capacity of future generations to fulfill their own requirements



9.2 PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION

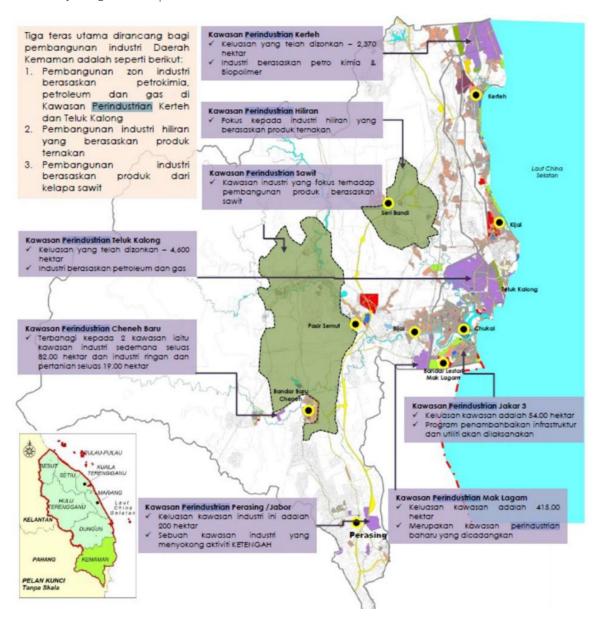
Kemaman, as a pivotal industrial hub in Terengganu, plays a central role in supporting and bolstering industrial activities within the broader Kuantan Conurbation. The region's commitment to industrial growth is evident through the development, enhancement, and expansion of two major industrial zones: the Kerteh Industrial Area and Teluk Kalong. These zones serve as critical centers for various industries, particularly those in the petrochemical, petroleum, and gas sectors. This strategic focus positions Kemaman as a key player in the energy industry, leveraging its natural resources for sustainable economic development.

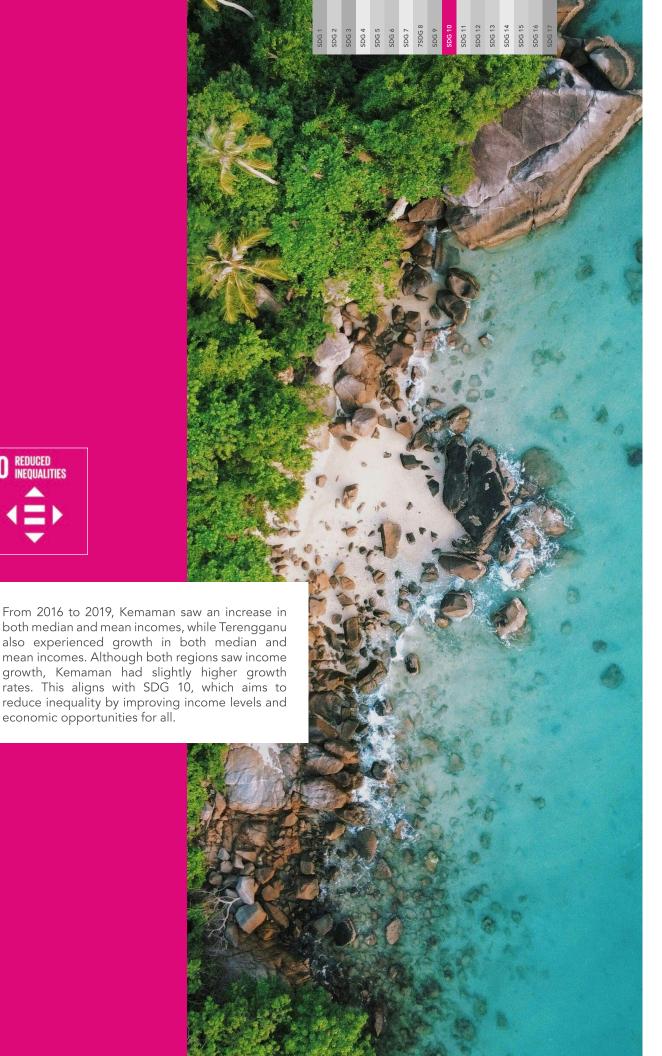
The Kemaman District outlines a comprehensive plan for industrial development, emphasizing three core areas. Firstly, there is a concerted effort to develop zones specifically tailored for petrochemical, petroleum, and gas industries, capitalizing on the region's rich energy resources. This not only enhances the district's economic resilience but also reinforces its role as a vital contributor to the national energy landscape. Secondly, the emphasis on downstream industries linked to livestock products demonstrates a commitment to diversification and value addition within the agricultural sector. This approach not only promotes sustainability but also creates new avenues for economic growth and employment opportunities.

Moreover, Kemaman recognizes the potential of its agricultural landscape by promoting industries based on palm oil products. This reflects a forward-thinking strategy, aligning with sustainable practices and emphasizing the importance of the entire production chain. The development of these industries not only contributes to economic prosperity but also underscores the region's commitment to environmentally conscious and socially responsible industrialization.

In tandem with industrial development, the implementation of Transit-Oriented Development (TOD) near ECRL stations in Chukai and Kemasik further reinforces the region's commitment to holistic development. This initiative aims to seamlessly integrate transportation infrastructure

withurbandevelopment, fostering connectivity and accessibility. Simultaneously, the empowerment of small and medium-sized enterprises (SMEs) and basic agricultural industries, oriented toward meeting both domestic and international demands, showcases Kemaman's dedication to inclusive industrialization. As part of the broader vision for the future, the Terengganu government is actively pushing for increased productivity in the energy sector, high-value-added growth in downstream industries, and the cultivation of emerging economic sectors. These proactive measures position Kemaman as a dynamic and sustainable industrial hub, ready to meet the challenges and opportunities of the evolving economic landscape.





10 REDUCED INEQUALITIES

REDUCE INCOME INEQUALITIES

Monthly Household Gross Income in Kemaman and Terengganu, 2016 and 2019					
Year	2019				
Kemaman					
Median 5,335 6,592					
Mean	6,565	7,854			
Terengganu					
Median 4,694 5,545					
Mean	5,776	6,815			

Source: MyLocal Stats Kemaman, 2019

From 2016 to 2019, Kemaman experienced notable increases in both median and mean incomes. The median income in Kemaman rose from RM5355 in 2016 to RM6592 in 2019, marking an increase of approximately 23.1%. Similarly, the mean income increased from RM6565 in 2016 to RM7854 in 2019, reflecting a growth of about 19.6%.

In comparison, Terengganu State also saw positive trends over the same period. The median income in Terengganu increased from RM4694 in 2016 to RM5545 in 2019, an approximate rise of 18.1%. The mean income rose from RM5776 in 2016 to RM6815 in 2019, an increase of about 18%.

While both Kemaman and Terengganu showed significant improvements in income levels, Kemaman exhibited a slightly higher growth rate in both median and mean incomes compared to the state of Terengganu.





SUSTAINABLE CITIES AND COMMUNITIES

promotion.

ENSURE EVERYONE HAVE ACCESS TO ADEQUATE, SAFE AND AFFORDABLE HOUSING

In accordance with the *Dasar Perumahan Mampu Milik Negara* (National Affordable Housing Policy), a house is deemed affordable if its maximum price does not exceed RM 300,000. As per the National Property Information Centre (NAPIC), the median housing price for the second quarter of 2022 in Terengganu stands at RM 300,000, remaining well within the affordability range.

For residents of Terengganu, the average price of an affordable house is approximately RM 145,000. Those situated in the city center typically find homes priced below RM 163,224, while suburban dwellings fall within the range of RM 120,000 to RM 145,000. When compared to housing prices in other states across Malaysia, Terengganu's real estate market is still considered affordable.

Median House Prices in Malaysian States, Q2 2022



Low Cost and Affordable Housing Provided
by Perbadanan Memajukan Iktisad Negeri
Terengganu (PMINT)

Terengganu (Pivilivi)				
Development on Coastal Areas in Kemaman	Development Plans between 2023 - 2030			
Low-cost house	 Rumah Kos Rendah (RKR) Gong Cengal 			
Public Affordable Housing Schemes	 Rumah Mampu Milik Perasing Jaya Rumah Mampu Milik Padang Kubu Rumah Mampun Milik Teluk Kalong 			
Private Affordable Housing Schemes	 Rumah Mampu Milik Bukit Mentok Rumah Mampu Milik Kg. Api Rokok Rumah Mampu Milik Kg. Paya Berenjut Rumah Mampu Milik Kg. Mak Cili (1) Rumah Mampu Milik Kg. Banggol Rumah Mampu Milik Kg. Mak Cili (2) Rumah Mampu Milik Kerteh Rumah Mampu Milik Kg. Mak Lagam 			

Currently, the provision of affordable and low-cost housing in Kemaman is spearheaded by Bahagian Perumahan, Pejabat Setiausaha Kerajaan Terengganu, through Perbadanan Mamajukan Iktisad Negeri Terengganu (PMINT). A total of 1,658 units have been constructed under this initiative.

In a concerted effort to further enhance homeownership among Terengganu residents, the Terengganu State Government has introduced a new and investor-friendly Dasar Perumahan Baharu. This policy aims to encourage active participation from private developers in the construction of Rumah Mampu Milik (RMM), aligning with the government's objective to provide more affordable housing options for the people.

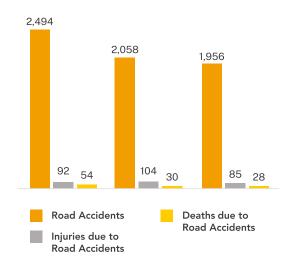
According to the Ministry of Local Council Development, home ownership for the Kemaman District have seen an increase between 2014 to 2019. In 2019, 87.8% of households in Kemaman owned a home, reflecting a substantial growth from the 73.4% recorded in 2014.

AFFORDABLE AND SUSTAINABLE TRANSPORT SYSTEM

The transportation infrastructure in Kemaman encounters specific challenges, primarily concerning intercity travel. While accessing Kemaman is relatively straightforward due to frequent flights to Kerteh Airport and express bus services within the city through Hentian Bas Express Kemaman, intercity mobility predominantly relies on private vehicles, taxis, or Grab services.

Notably, Kemaman has only one public bus system, primarily designed for tourism purposes and facilitated by the Terengganu State Government. These free tourist Heritage Buses operate on a hop-on hop off concept to transport tourists interested in visiting the Recreation Park and Mini Zoo within the city.

Road Accidents in Kemaman District



Source: Property Market Price & Rental Indices Q2,2022, NAPIC.





Being a hub for heavy industry, including oil and gas refineries, logging, and manufacturing, Kemaman experiences a shared usage of its main roads and highways by both private and public users, including industrial trucks and lorries. It is also observed that heavy vehicles frequently utilize alternative routes or rural roads, which serve as the main routes for village residents. This situation presents several challenges:

- (1) A high incidence of road accidents involving pedestrians, private vehicles, and lorries, often resulting in severe injuries or fatalities.
- (2) Rapid deterioration of roads is occurring due to the heavy loads carried by lorries on Kemaman's roads, leading to the formation of potholes. These potholes not only cause damage to vehicles and motorcyclists but also increase the risk of accidents, especially at night.

11.3

ENHANCE INCLUSIVE AND SUSTAINABLE URBANIZATION AND CAPACITY FOR PARTICIPATORY, INTEGRATED AND SUSTAINABLE PLANNING AND MANAGEMENT

MPK has prioritized the enhancement of participatory and integrated city planning and management through various stakeholder engagement initiatives. This commitment is deeply ingrained in the vision and mission of all MPK departments, aiming to guarantee that the development planning of Kemaman is inclusive. It also seeks to establish a well-informed and engaged Kemaman resident and community that comprehends and collaboratively manages the initiatives undertaken by MPK, along with the laws and policies governing the city.

It is noteworthy that the municipal council frequently organizes meetings and programs addressing various issues and topics, involving relevant stakeholders and experts. This approach ensures that initiatives and plans are thoroughly discussed, taking into consideration the input and expertise of those directly affected or involved.

EFFORTS TO PROTECT AND SAFEGUARD CULTURAL AND NATURAL HERITAGE

MPK strives for a harmonious blend of economic growth and sustainable development in the Kemaman district. A key challenge faced in the district's planning is the elevation of continuous preservation of Terengganu's heritage and culture, alongside the effective and balanced conservation and management of environmentally sensitive areas. This includes the protection of both terrestrial and marine habitats. MPK recognizes the importance of holistic and sustainable management of diverse, ecologically rich resources for comprehensive development in Kemaman—economically, socially, and environmentally.

To uphold and showcase local heritage values, MPK concentrates on promoting its cultural heritage through its tourism initiatives, including a dedicated tourism bus. Additionally, it strategically positions the Muzium Kemaman as a must-visit center in Bandar Chukai.

The museum serves as a focal point to illustrate the history and culture of Kemaman, particularly highlighting the district's development from the oil and gas industry, mining sector, to its present-day status.

11.6

REDUCE THE ADVERSE IMPACT PER CAPITA ENVIRONMENT IMPACT OF CITIES, ESPECIALLY TO AIR QUALITY AND OTHER WASTE MANAGEMENT

On Air Quality

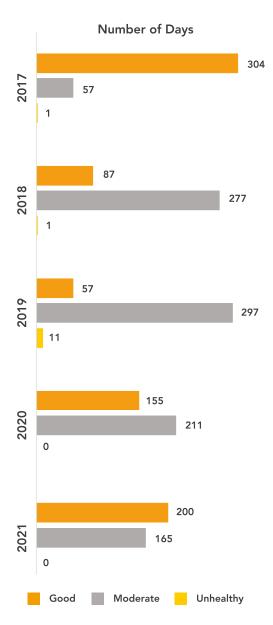
The Department of Environment monitors the ambient air quality nationwide, including in the Kemaman District. The Air Pollutant Index (API) is utilized to report the air quality status in Kemaman, considering various pollutants such as Ground-Level Ozone (O3), Carbon Monoxide (CO), Nitrogen Dioxide (NO2), Sulphur Dioxide (SO2), Particulate Matter less than 10 microns (PM10), and Particulate Matter less than 2.5 microns (PM2.5).

Overthe past five years, Kemaman has experienced an increase in the number of "good days" with an API reading of 0-50 since 2018. Moreover, in contrast to the four air quality stations, the

Kemaman station did not show an elevation in PM10 and PM2.5 levels in 2021 following the enforcement of the Movement Control Order and the National Recovery Plan.

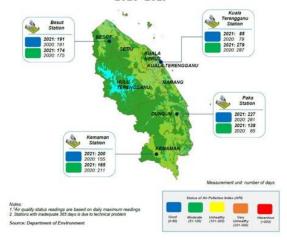
This positive trend may be attributed to the Department of Environment's implementation of more stringent Continuous Emission Monitoring (CEM) regulations on heavy industries in the region.

Air Quality Status in Kemaman District



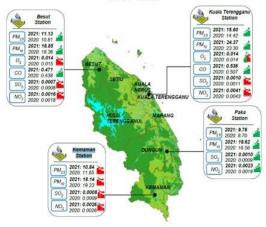
Source: Environment Statistics , Terengganu, 2022

Air Quality Status by Stations in Terengganu, 2020–2021



Source: MyLocal Stats, Kemaman, 2021

Air Pollutants Readings in Terengganu, 2020-2021



Source: Environment Statistics , Terengganu, 2022

On Municipal Waste

In the Terengganu State, the waste generation rate is considered moderate, producing approximately 500 tons per day. This contrasts with more developed states like Selangor and Kuala Lumpur, where the daily waste generation rates are 7,000 tons and 3,000 tons, respectively. Despite the moderate waste generation, there is room for improvement in the waste management and solid waste disposal systems to make them more organized and systematic.

For the Kemaman District, the management and disposal of municipal waste fall under the

jurisdiction of the Department of Health and Environment, Kemaman Municipal Council. Unlike some states, districts, and cities in Malaysia, Kemaman does not have a single contractor for waste collection and disposal. Instead, the Municipal Council contracts private service providers for a period of three years, with renewal based on fulfilled requirements and performance. Presently, there are four contractors servicing the MPK in its respective zones.

Regarding landfills in Kemaman, there are two landfills in use designated as dumping sites for municipal waste, namely Bukit Takal Landfill in Mak Chili and Gelugur Landfill in Kertih. However, both landfills are unsanitary and have reached their maximum capacity.

The unsanitary condition of these landfills has resulted in several issues for the Municipal Council and nearby residents. In 2020, the Bukit Takal Landfill caught fire, causing health problems for nearly 2,000 residents in nearby housing areas such as Taman Desa Solehah and Taman Sutera Emas.

Recognizing the gaps in waste management, the Municipal Council, in collaboration with relevant agencies, has worked to address these issues for a more systematic waste management approach.

- 1 E-Waste Collection Centre @ G-18 Binjai Souq
 Types of waste accepted:
 - ► E-Waste Collection Centre @ G-18 Biniai Soug
 - ► Types of waste accepted:
 - ► Electrical items such as refrigerators, TVs, laptops, fans, and car batteries.
 - Plastics.
 - ▶ Iron.
 - ▶ Boxes.
 - Used cooking oil.
- 2 Recycling Drive Thru Centre
 - MPK has identified specific prime areas that will facilitate the public in sending the collected recycling items.
- Bukit Jemalang
 - ► Capacity: 110 tonnes/day
 - With leachate treatment pant
 - ► Gas collection
 - Integrated Recovery Resources



MPK, in collaboration with governments, actively improves waste management in Kemaman for the upcoming landfill, residents' health, and Low Carbon City Status. In 2022, 220 tons of waste were collected from 30,000 houses, with recycling efforts yielding 39 tons and RM4,503.55 in savings. Challenges include chemical waste dumping and beach littering due to insufficient bins. Efforts continue for effective waste management, prioritizing environmental preservation and community well-being.

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SUBSTANTIALLY REDUCE WASTE GENERATION THROUGH THE PREVENTION, REDUCTION, RECYCLING AND REUSE

MPK, in collaboration with the federal and State Government, has been actively enhancing the waste management system in Kemaman. The primary goal is not only to serve as an early preventive measure, ensuring the prolonged effectiveness of the upcoming sanitary landfill in Bukit Jelamang, but also to enhance the overall health of residents and work towards achieving a Low Carbon City Status in Terengganu.

In 2022, the Kemaman Municipal Council, under the Department of Health and Environment, successfully collected 220 tons of waste from 30,000 houses within its residential areas.

To reduce the burden on landfills, the department has implemented various recycling programs and infrastructure projects aimed at encouraging the community in Kemaman to actively participate in recycling efforts.

In 2022 alone, these programs resulted in the collection of 39 tons of waste, contributing not only to environmental sustainability but also generating a revenue savings of RM 4,503.55 for the collected waste. The concerted efforts underline a commitment to effective waste management, aligning with broader objectives of environmental preservation and community

well-being.

MPK Recycling Initiatives			
Recycling Initiatives	Description		
E-Waste Collection Centre	Established in October 2020 at G-18 Binjai Souq, this recycling initiative has successfully collected various items, including electrical appliances, plastics, metal, paper, and used cooking oil. The collection point operates bi-weekly on the 2nd and 4th weeks of every month.		
Pengankutan dari rumah ke rumah	The Municipal Council of Kemaman (MPK) offers a convenient service for the pickup of recycled waste in selected housing areas, utilizing the Council's lorries and the AJK Penggerak vehicles		
Drive Through	MPK has taken steps to enhance e-waste recycling by establishing several e-waste centers in prime areas. These centers facilitate the delivery of e-waste and other recyclable items collected from homes.		
Trash to Cash Programs	Programs for exchanging waste for cash has been implemented in selected areas within the district, providing an incentive for residents to actively participate in waste management practices.		

Waste Collected (in kg) Through MPK Seperation of Waste Programs in 2022

	ELECTRONIC WASTE	COOKING OIL	PAPER	PLASTICS	IRON	ALUMINIUM	BOXES	OTHERS	TOTAL
JANUARY	625.45	114.5	261.05	262.23	123.6	17.4	207.55	21.1	1,632.88
FEBRUARY	1,232.50	79.65	137.05	122.45	336.2	23.6	189.9	35	2,156.35
MARCH	973.6	134.4	476.75	307.86	195.5	17	234.35	12.55	2,351.81
APRIL	24.7	36.1	476.75	70	1.5	2.5	4	-	615.55
MAY	921.75	183.15	1,451.65	208.4	86.1	52.75	164.75	11.3	3,079.85
JUNE	4,183.30	249.5	1,299.90	494.5	701.13	31.05	325.8	31.05	7,316.23
JULY	1,283.05	45.95	80.95	34.9	232	7.5	286.5	8.35	1,979.20
AUGUST	1,631.97	437	708.08	309.2	356.61	59.7	370.5	41,5	3,914.56
SEPTEMBER	1,141.85	72.8	532.5	225.83	243.25	12.95	214.95	3.25	2,447.38
OCTOBER	2,157.36	402.3	1,514.05	535.67	812.4	141.55	308.86	-	5,872.19
NOVEMBER	2,151.42	198.12	1,345.15	272.9	483.05	483.05	335.9134.4	44.84	4,965.78
DECEMBER	1,035.29	397.55	565.05	210	215.4	24.15	201.9	19.9	2,669.24
TOTAL COLLECTED	17,362.25	2,350.82	8,848.93	3,053.94	3,786.74	524.5	2,845.01	228.84	39,001.02

Source: 2022 Performance Report for the Department of Health and Environment, MPK



3 CLIMATE ACTION



STRENGHTEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE-RELATED HAZARDS

Kemaman is confronted with a significant climate risk, primarily characterized by frequent and severe flooding, which poses a considerable threat to both the district and the Terengganu State. The region is exposed to the Northeast Monsoon winds, resulting in widespread flooding.

According to the Department of Irrigation and Drainage (JPS), there were three phases of continuous heavy rainfall during the 2022/2023 period, leading to monsoon floods in Kemaman and other Terengganu districts on December 8-17, 2022, December 18-27, 2022, and February 6-8, 2023.

The escalating trend of flooding is attributed to significant and sustained heavy rainfall, causing river levels to surpass dangerous thresholds as existing drainage systems prove inadequate and outdated.

The situation is further exacerbated by:

- 1 Insufficient drainage systems unable to handle the increasing water volume Types of waste accepted
- Impact of development projects like the East Coast Rail Link (ECRL) and road construction, creating a disjointed planning approach among agencies such as JPS, PBT and JKR.
- The catchment area has become saturated and is not absorbing rainfall. The rain that falls turns into surface runoff, increasing the volume of the existing floodwater
- 4 Illegal logging in mangrove forests and timber areas in Kemaman contributes to murky and brown floodwaters.
- 5 The clash between rain and high tide sea levels

Highest Rainfall (mm)		
	821	
	1,267	

Source: JPS Terengganu, 2023

Number of People Transferred to Flooding Shelters 11,500 (2021/2022)

15,020 (2022/2023)

Source: JPS Terengganu, 2023

Projects and strategies that are planned or have been adopted to increase community resiliency facing flooding events in Kemaman

- Construction of artificial rivers to minimize water run-off of existing river and water catchment,
- 2 Identification of temporary flood relief centers (PPS) at flooding hotspots
- 3 Establishment of *Komuniti Bomba* among Komuniti Rukun Tetangga (KRT) at flood prone areas in Kemaman







IMPROVE EDUCATION, AWARENESS RAISING AND CAPACITY BUILDING ON CLIMATE CHANGE, MITIGATION, ADAPTION AND IMPACTION REDUCTION

The Terengganu State Government is taking decisive steps to bolster environmental awareness and education in the face of climate change challenges. Recognizing the urgent need to address climate-related issues, the government is prioritizing the reinforcement of environmental law enforcement. This initiative aims not only to mitigate the impact of climate change on the state's economy but also to foster a greater understanding of sustainable practices among the populace. The state's commitment to intensifying renewable energy sources, including solar and hydroelectric power, reflects a strategic effort to transition towards a more environmentally sustainable energy landscape. By promoting and investing in these cleaner energy alternatives, the government is not only working to reduce its carbon footprint but is also contributing to the larger global effort to combat climate change.

In tandem with the state's efforts, the Municipal Council of Kemaman (MPK) is actively engaged in raising awareness and promoting a culture of environmental responsibility within the community. Collaborative initiatives, such as the cleanliness and recycling campaign, involving various stakeholders including school students, demonstrate MPK's commitment to fostering a sense of environmental stewardship at the grassroots level. By targeting schools and educational institutions, MPK is ensuring that the younger generation is equipped with the knowledge and values necessary to contribute to sustainable practices. Moreover, the council's commitment to aligning its strategies and operations with SDGs underscores its dedication to a holistic and integrated approach towards climate change adaptation.

As part of their comprehensive approach, the Terengganu State Government and MPK are not only focusing on awareness and education but also on tangible adaptation measures. The government's plan to expand protected forest areas and implement conservation efforts demonstrates a commitment to preserving biodiversity and creating natural buffers against the impacts of climate change.

Furthermore, the State Forestry Department's call for residents to participate in the 100 Million Trees Planting Campaign through the Malaysia Greening app signifies a proactive step towards community engagement in climate change adaptation. By combining educational initiatives, community involvement, and strategic environmental policies, Terengganu and MPK are working in tandem to build a resilient and climate-ready community for the future.



14 LIFE BELOW WATER

Kemaman, with diverse water bodies, faces marine pollution challenges, notably in Sungai Kemaman and Sungai Kerteh. Multiple agencies oversee protection, maintaining moderate water quality despite industrial activities. Instances of regulatory action emphasize vigilance. Vulnerability is high in Kerteh, Cukai, and Banggul due to business intensity and coastal risks. Kemaman's sandy beaches boast excellent water quality, thanks to proactive measures and regular cleanups by the Municipal Council and stakeholders. These initiatives aim to raise environmental awareness. The Municipal Council, in collaboration with relevant authorities, implements safeguards for effective marine and coastal ecosystem management in Kemaman.

PREVENT AND SIGNIFICANTLY REDUCE MARINE POLLUTION

Kemaman, endowed with a diverse range of water bodies, including river basins, lakes, waterfalls, oceans, swamps, and hill waters, faces the critical task of managing marine pollution. The Sungai Kemaman and Sungai Kerteh, the two main river basins in Kemaman, flow into the South China Sea.

Several agencies, including the Kemaman Municipal Council, JPS, Lembaga Sumber Air Terengganu, Jabatan Perikanan, and the Department of Environment, collectively oversee water quality in the district. Due to the high density of economic activities along the main rivers, water quality is maintained at a moderate level, with strict enforcement of regulations on industrial water and chemical discharge. Instances have occurred where regulatory agencies had to take action against palm oil and iron processing mills for discharging chemical waste into Sungai Kemaman and Sungai Chukai, adversely affecting water quality and aquatic life.

Marine Water Quality Status in Kemaman, 2019 - 2021

Area				
	2019	2020	2021	Category
Pantai Kemasik	86	90	97	Excellent
Pantai Telok Kalong	94	94	95	Excellent
Kuala Sungai Kerteh	59	73	58	Moderate
Kuala Sungai Kemaman/ Chukai	59	60	58	Moderate

Source: Terengganu Environmental Statistics, 2022

Despite these challenges, the coastal areas of Kemaman boast excellent water quality, a testament to the proactive measures implemented by relevant agencies. Early prevention efforts ensure that pollutants are eliminated before reaching the shores and entering the sea. The municipal council plays a crucial role in removing floatables from rivers and preventing polluted discharges into drains. Furthermore, multiple stakeholders and agencies conduct regular beach cleanups as part of their activities or corporate social responsibility programs. These efforts not only maintain clean and safe beaches but also contribute to environmental awareness within the community. These initiatives, whether at waterfalls or beaches, aim to underscore the importance of environmental preservation and inspire the local populace to actively participate in safeguarding Kemaman's natural resources.



SUSTAINABLY MANAGE AND PROTECT MARINE AND COASTAL ECOSYSTEM

The coastal region of Kemaman is predominantly characterized by sandy beaches. Referencing the *Rancangan Fizikal Zon Persisiran Pantai Malaysia* (RFZPPN) or Malaysia's Coastal Zone Physical Plan, Kemaman is divided into five coastal development zones: Kerteh, Kemasik, Kijal, Teluk Kalung, and Cukai and Banggul. The RFZZN assesses the vulnerability of these coastal areas using the National Coastal Vulnerability Index (NCVI).

According to the study, Kerteh, as well as Cukai and Banggul, exhibit very high levels of vulnerability. This is attributed to various factors such as intense business and industrial activities, significant coastal erosion, and the presence of turtle landing areas (tuntung) that are at risk due to the impact of socio-economic activities in the region. For Cukai and Banggul, the NCVI is further intensified due to a high population density and susceptibility to geomorphological risks in addition to the aforementioned factors.

NCVI Levels of Kemaman Coastal Area and Indicators 1

Development Areas	NCVI Level	Population Density	Public Facilities and Activities	Business and Industrial Activities	Coastal Erosion	Geomorphology Risk	Risk of Marine Biodiversity Extinction	Biodiversity Profiling
Kerteh (T19)	Level 5		Very High	Very High	Very High	Medium		► Turtle Landing Area► Mangrove Forest
Cukai & Banggul (T23)	Level 5	Very High	Very High	Very High	Very High	Very High	Medium	► Seagrass Bed ► Mangrove Forest
Teluk Kalung (T22)	Level 4	Very High	Very High	Very High	Very High	High		Turtle Landing AreaSeagrass BedMangrove Forest
Kemasik (T20)	Level 3	Low	Very High	Low	Very High	High	Medium	Seagrass BedMangrove Forest
Kijal (T21)	Level 3	High	Very High	High	Very Low	Very High		Turtle Landing AreaMangrove Forest

Source: Terengganu Environmental Statistics, 2022



Recognizing these risks and profiling the coastal areas in Kemaman, the Municipal Council (MPK), in collaboration with relevant authorities, has implemented several safeguards and strategies to effectively manage and protect the marine and coastal ecosystem in Kemaman.

	Main Implementor	Area	Implementation Period
Intensify the implementation of maintenance and conservation projects in the mangrove forest areas to minimize against risk of erosion and other risk associated with rising sea levels	JPSM	All	Medium Term(2026 -2030)
Preservation efforts for planting and rehabilitating mangrove forests.	JPSM	All	Medium Term (2026 -2030)
Undertake conservation activities for migratory routes, turtle nesting sites, and the feeding grounds of turtles and tuntung	Jabatan Perikanan	All	Short term (2022 – 2025)
Manage waste disposal effectively to prevent waste (floatable) from being carried by the river currents into the sea.	MP Kemaman	All	Short term (2022 – 2025)
Establish a conservation and research center for tuntung as part of environmental protection and tourism product development	MP Kemaman	Pekan Pasir Gajah	Short term (2022 – 2025)
Declare the mangrove forest areas as highly significant conservation zones, designated as forest reserves	JPSM	All	Short term (2022 – 2025)
Monitor and minimize the impact of physical development along the Kemaman River within a 5km radius of the Tungtung Conservation Center, including a strict prohibition on sand dredging and development over water bodies, particularly within the river reserve	MP Kemaman & JPSM	Pekan Pasir Gajah	Short term (2022 – 2025)
Prohibit the use of fishing gear that causes habitat destruction and enforce the use of Turtle Excluder Devices (TED) to protect turtles.	Jabatan Perikanan	All	Short term (2022 – 2025)
Enforce stricter laws against illegal hunting and trading of turtle and tuntung products.	Jabatan Perikanan	All	Short term (2022 – 2025)
Ensure the proper treatment of wastewater from industrial and urban areas before releasing it into rivers and seas	MP Kemaman & IWK	All	Short term (2022 – 2025)
Channel treated wastewater/effluents from restaurants and recreational centers along the coastal areas through well-maintained outlets.	MP Kemaman & IWK	All	Short term (2022 – 2025)
Advocate community awareness programs to enhance understanding and raise public awareness about the importance of conserving mangrove forests and the conservation of turtles and tuntung	MP Kemaman, JPSM and Jabatan Perikanan	All	Short term (2022 – 2025)
Ensure that all development must be resilience towards geo disasters	MP Kemaman	Cukai & Banggul, Teluk Kalung and Kemasik	Short term (2022 – 2025)



15 LIFE ON LAND

Preserving and protecting life on land is crucial in Kemaman, where nearly 50% of the land is dedicated to forests, including 14 Permanent Forest Reserves covering 38,500 hectares. Logging serves as a significant economic driver in the district. To prevent adverse environmental impacts, the Jabatan Perhutanan Negeri Terengganu (JPNT) prioritizes sustainable forest management, overseeing 540,308.80 hectares for Permanent Forest Reserves in Terengganu. JPNT enforces forest regulations through measures such as regular patrols and aerial monitoring. Additionally, other agencies, including Perhilitan and Jabatan Alam Sekitar, play roles in preserving and conserving flora and fauna in the district.

PROMOTE THE IMPLEMENTATION OF SUSTAINABLE MANAGEMENT OF ALL FORESTS, INCLUDING THE INCREASE OF AFFORESTATION AND REFORESTATION.

The protection and enforcement of flora and fauna in Terengganu are overseen by JPNT, which emphasizes the balance between resource conservation and economic needs in forest management, aligning with the concept of PHSB (Pemuliharaan Hutan dan Sarang Burung). Until 2022, JPNT has sustained 540,308.80 hectares for Permanent Forest Reserves (HSK) in Terengganu, including Kemaman, covering Dryland Forest (517,890.96 hectares), Peat Swamp Forest (19,775.16 hectares), and Mangrove Forest (2,642.68 hectares). To ensure continuous recognition of sustainable forest management practices, JPNT has implemented various quality assurance certifications.

In Kemaman, there are 14 Permanent Forest Reserves spanning 38,500 hectares. In 2022, JPNT conducted maintenance, rehabilitation, and reforestation activities in Hutan Simpan Bukit Bandi to ensure the ecological health and sustainability of the forest ecosystem, promoting biodiversity and mitigating deforestation impacts.

Permanent Forest Reserves in Kemaman District



26	Bukit Gong
29	Rambai Daun
31	Bukit Labuhan
32	Bukit Palus
33	Bukit Panjang
34	Sungai Mekelul
35	Sungai Nipah
36	Bukit Sal
37	Bukit Kambing
38	Bukit Bandi
39	Kuala Kemaman
40	Bukit Jemalang
42	Jabor

Source: Terengganu Department of Forestry 2022 Annual Report

Enforcing forest regulations is vital for organized forest operations. JPNT conducts regular patrols in each district and production area, along with integrated operations, aerial monitoring using drones, and inspections at the Forest Inspection Office to detect and combat illegal logging. These measures are part of JPNT's comprehensive approach to uphold proper forest management and preservation in the region.

The Malaysian Greening Program, part of the 100 Million Trees Planting Campaign, commenced nationwide on January 5, 2021, under the 12th Malaysia Plan. The Terengganu State Forestry Department exceeded its five-year target by successfully planting 472,686 trees in 2022, collaborating with MPK, the Department of Environment, schools, and industrial players. JPNT's role in identifying suitable trees is pivotal, contributing not only to Terengganu's greening but also as a carbon sequestration and reforestation effort, promoting sustainable development in Kemaman.

TAKE URGENT ACTION TO END POACHING AND TRAFFICIKING OF PROTECTED SPECIES OF FLORA AND FAUNA

Ban of Selling of Turtle Eggs

Starting from June 2022, the Terengganu State Government has implemented a ban on the sale of turtle eggs in public markets and restaurants throughout the state. This prohibition, enforced by the Agricultural, Basic Industry, and Agriculture Committee, is a essential measure adopted by the state government to safeguard and maintain the existence of all turtle species. This initiative is particularly well-received in Kemaman, where the district places significant emphasis on preserving the tuntung species at the beaches.

Individuals, including traders, who are found guilty of selling turtle eggs can now face fines ranging from RM50,000 to RM250,000, a substantial increase from the previous penalty of RM3,000 before the law amendment.

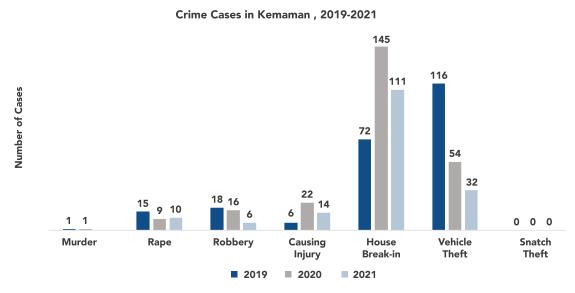
The comprehensive ban on the sale of all types of turtle eggs under the amended Turtle Act 1951 in 2021 marks a critical stride toward the conservation of endangered species in Kemaman. In the past, the consumption and sale of turtle eggs were considered a delicacy in Terengganu and were widely available in the state's wet markets. However, with the updated legislation, the state is taking a resolute stance to shield the vulnerable turtle population and champion the conservation of these vital marine creatures.





16 PEACE, JUSTICE AND STRONG INSTITUTIONS

REDUCE ALL FORMS OF VIOLENCE AND RELATED DEATH RATES



Source: MyLocal Stats, Kemaman, 2022

MPK's dedicated efforts towards crime prevention in the Kemaman district have manifested in commendable results, as evidenced by a gradual decline in overall crime rates throughout the year. Notably, significant reductions have been observed in violent crimes such as rape and robbery, as well as property crimes including house break-ins, vehicle thefts, and robberies. The Police Force (PDRM) reports underline the prevalence of house break-ins and motorcycle thefts as the most reported crimes in Kemaman. This shift towards lower crime rates is indicative of the effectiveness of MPK's proactive measures in curbing criminal activities, thereby contributing to an enhanced sense of security within the community

Furthermore, the positive trend extends beyond conventional crimes, encompassing a decrease in death cases attributed to road accidents, murders, and fire breakouts in Kemaman. This multifaceted improvement underscores the comprehensive nature of MPK's strategies, which not only address traditional criminal activities but also contribute to public safety in broader contexts.

The noteworthy reduction in such incidents reflects the success of the Municipal Council's initiatives in fostering a safe and secure environment for both residents and visitors. This accomplishment signifies the tangible impact of MPK's commitment to the well-being of the community, establishing a foundation for continued efforts towards sustained public safety and crime prevention.

Deaths Related To Public Safety in Kemaman, 2020 - 2021

Road Accidents		
*	30	
	28	

	Murder
	(2020)
Ť	1 (2021

Fire Breakouts		
¥	(2020)	
	2 (2021	

Furthermore, the Municipal Council has embraced innovative strategies for crime prevention, incorporating the concepts of Bandar Selamat (Safe City) and Crime Prevention Through Environmental Design (CPTED). These concepts center around strategic urban planning and the design of physical spaces to discourage criminal activities. Key elements include ensuring adequate lighting, unobstructed areas, and spacious pedestrian walkways, promoting clear visibility and reducing potential hiding spots for criminals.

To augment crime prevention efforts, the City Council has proactively collaborated with the police department to install closed-circuit television (CCTV) cameras in public spaces and high-crime areas. By integrating advanced technologies, such as face recognition, into these surveillance systems, the City Council has bolstered its crime prevention capabilities. The integration of CCTV aligns not only with the Bandar Selamat program but also with the city's vision to evolve into a SMART City under the principles of Smart Governance and SMART Living.

The City Council has implemented an extensive array of safety measures and amenities to ensure the overall safety of the city. Through collaborative efforts with key stakeholders such as the Royal Malaysia Police, the Malaysian Fire and Rescue Department, and the Military, a robust safety infrastructure has been established across the administrative area. This collaborative approach enables swift responses to emergencies and the effective maintenance of public order.

A noteworthy initiative, facilitated in partnership with the residents of MP Kemaman and the Fire and Rescue Department, is the establishment of Komuniti Bomba. This initiative is dedicated to delivering information on safety and fire prevention for residential premises, encompassing villages, housing estates, longhouses, and waterfront communities in Kemaman. In addition to its focus on fire prevention, Komuniti Bomba is actively engaged in disaster management and response, particularly in addressing flooding occurrences.

Public Safety Amenities in Kemaman, 2021

78	CCTV in MP Kemaman
1	Police Headquarters
6	Police Stations
8	Police Huts
5	Fire Stations
1	Army Base Camp

16.6

DEVELOP EFFECTIVE, ACCOUNTABLE AND TRANSPARENT INSTITUTIONS AT ALL LEVELS

MP Kemaman has played a pivotal role in advancing the development of effective, accountable, and transparent institutions within the Kemaman District. One notable initiative is the establishment of 12 Client Charters, a strategic move aimed at ensuring the Municipal Council's accountability. These Client Charters define specific targets that MP Kemaman commits to and rigorously monitors on a biannual basis to enhance its performance. Crucially, these targets are made publicly available on the MPK website, fostering transparency and providing the community with a tangible measure of the council's commitments and accomplishments.

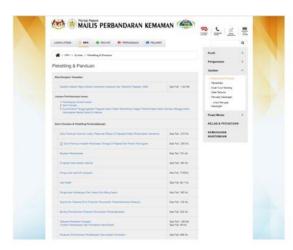
The implementation of the System Pengurusan Aduan Awam (SISPAA) by the Terengganu State Government has been a significant catalyst in enhancing the effectiveness, accountability, and transparency of MP Kemaman. SISPAA operates with a mission to perfect the public service delivery system through planning, implementation, coordination, monitoring, and a citizen-centric approach to administration and development. This system empowers citizens to report various types of complaints, addressing concerns ranging from delays to unfair treatment. By embracing SISPAA, MP Kemaman has demonstrated its commitment to proactive governance, utilizing technology to streamline citizen engagement and public service responsiveness.

In addition to these proactive measures, MP Kemaman has demonstrated its dedication to engaging with the public and addressing their concerns promptly. By implementing a citizencentric approach, MP Kemaman fosters a culture of responsiveness and inclusivity. Through regular interactions, town hall meetings, and community engagement initiatives, the Municipal Council ensures that the planning and implementation of programs are not only aligned with legal mandates but also resonate with the unique needs and preferences of the residents in the Kemaman District. These efforts collectively contribute to the creation of accountable and transparent institutions, ultimately enriching the overall governance landscape in the region.

ENSURE RESPONSIVE, INCLUSIVE, PARTICIPATORY AND REPRESENTATIVE DECISION MAKING AT ALL LEVEL

Recognizing the paramount significance of fostering a Municipal Council characterized by transparency, accountability, and public trust, MPK has implemented a series of measures designed to enhance openness and facilitate seamless public access to information. The establishment of a robust information dissemination system stands out as a cornerstone in this endeavor. Through user-friendly website portals, the Municipal Council ensures the regular dissemination of updates pertaining to guidelines, tender and procurement processes, public notices, as well as other essential council activities and circulars. In addition to these digital channels, MPK actively engages with the public on social media platforms such as Facebook, Instagram, YouTube, and X, fostering a more interactive and transparent communication approach.

Furthermore, MPK places a strong emphasis on inclusive decision-making processes by regularly organizing events that encourage public participation. This commitment aligns with legal mandates, as underscored in the Town and Country Planning Act 1976 (Act 172) and its subsequent amendments, which explicitly require public involvement in the formulation of development plans. Beyond mere compliance, MPK elevates the discourse through routine town hall meetings, community engagements, and public consultations involving diverse stakeholders. These initiatives serve as critical platforms for collaborative discussions, ensuring that the planning and implementation of programs are informed by a two-way communication dynamic, effectively addressing the unique needs and preferences of the municipality's residents.







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